

- o. Locate the outer shell cover that was removed in Step f. Place the cover on top of the appliance. See Figure 19. Replace the four screws that hold this plate in place. See Figure 20.

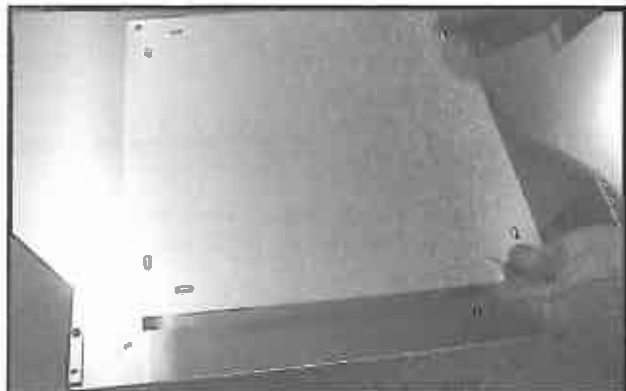


Figure 19 - Place Cover Plate on Top of the Appliance



Figure 20 - Screw Cover Plate into Place

- p. The appliance should look like the one shown in Figure 21 after it has been converted to a rear vent appliance.



Figure 21 - Completed Conversion

The first name in fireplaces

- VERTICAL TERMINATION - SEE PAGE 17
- HORIZONTAL TERMINATION - SEE BELOW

2. HORIZONTAL TERMINATION

a. Clearances

See Figures 22 and 23 for clearance information.

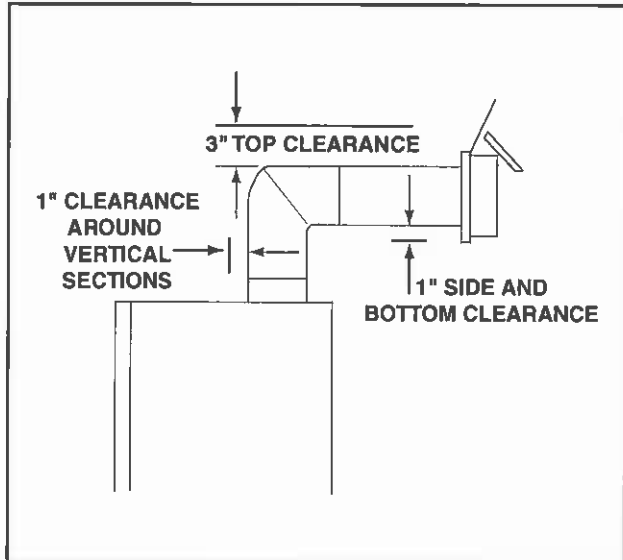


Figure 22
Venting Clearances to Combustible Materials
(top vent)

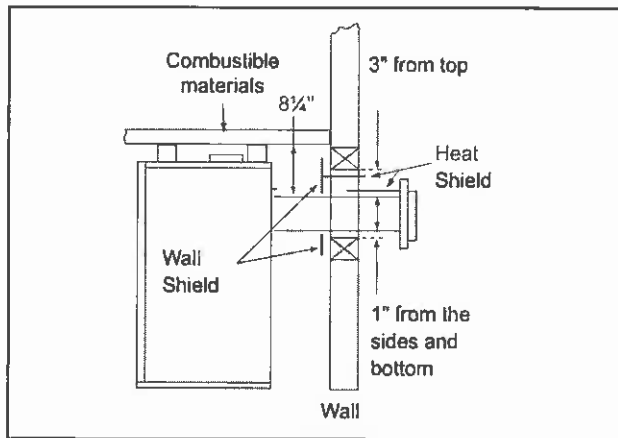


Figure 23
Venting Clearances to Combustible Materials
(rear vent)

CAUTION:

Provisions shall be made to provide adequate combustion and ventilation air.

b. Vent Lengths for Top Vent (for rear vent, see page 12)

Various venting configurations are shown in Figures 24-27 from which maximum vent lengths can be determined.

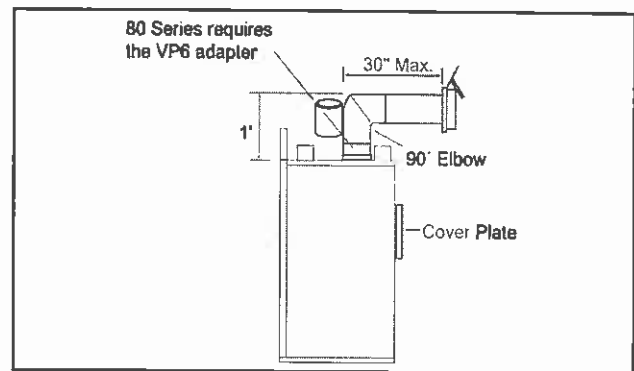


Figure 24
Vent Lengths with One Elbow
(minimum vertical)

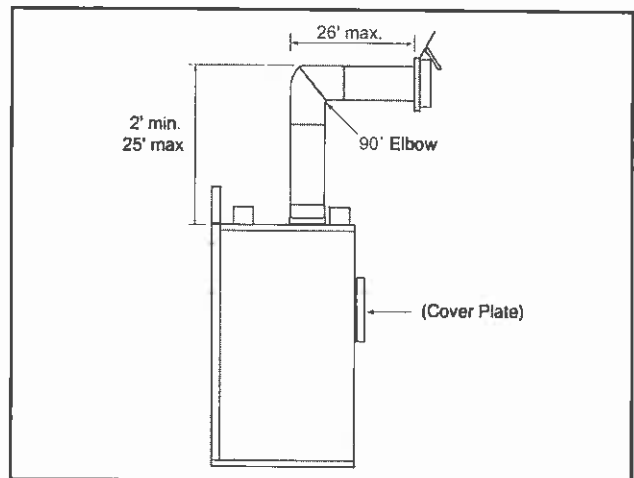


Figure 25
Vent Lengths with One Elbow
(2' vertical or more, 25' maximum)

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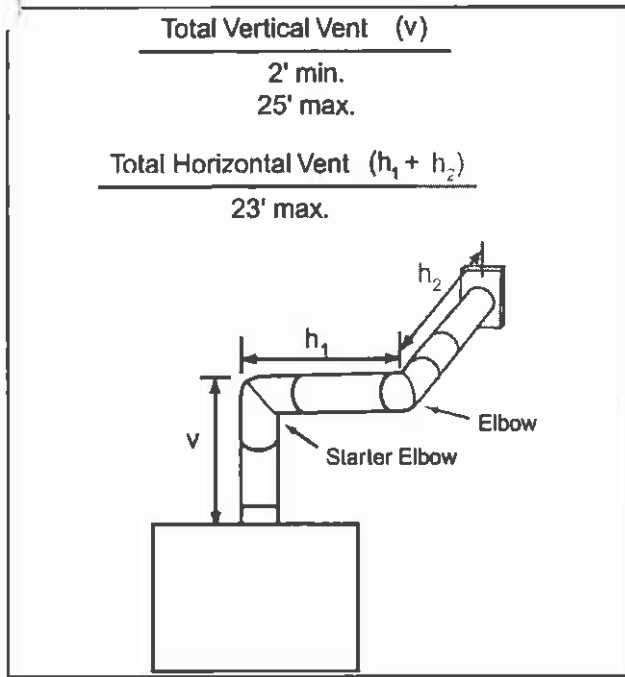


Figure 26
Vent Lengths with Two Elbows

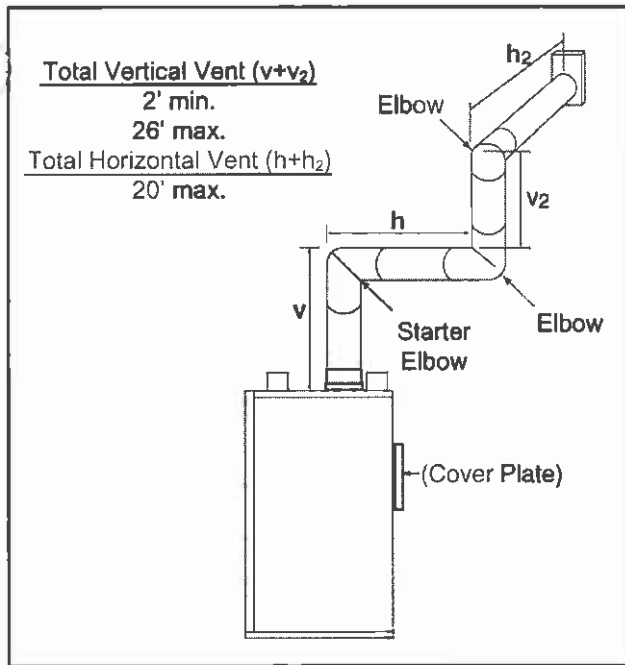


Figure 27
Vent Lengths with Three Elbows

WARNING - RISK OF FIRE!

The horizontal run of vent must have a 1/4" rise for every 1 ft. of run towards the termination. Never allow the vent to run downward. This could cause high temperatures and may create a fire hazard.

c. Vent Lengths for Rear Vent

1) No Elbows

The maximum horizontal run, with no vertical sections of vent, is 18 inches from the back of the appliance to the base of the cap. See Figure 28.

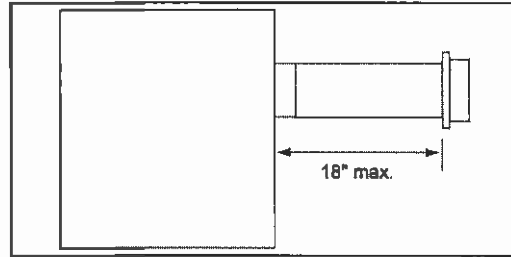


Figure 28
No Elbows

2) 45° Elbow

For corner installations with horizontal venting, a maximum of one 45° elbow may be used. The maximum horizontal run following the elbow is 18" to the base of the cap. See Figure 29.

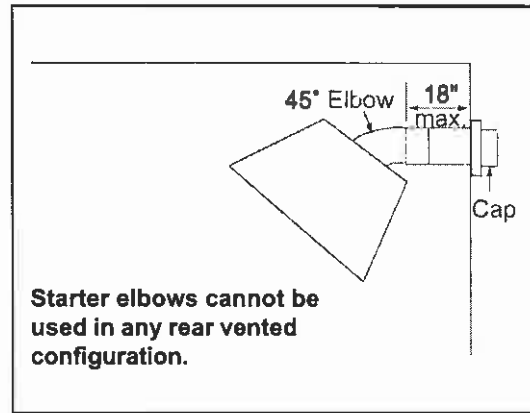


Figure 29
One 45° Elbow

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3) 2 Elbows

Elbows used on rear-vented configurations should be either a 90° elbow or a 45° elbow. **Starter elbows cannot be used in any rear vented configuration.** Figure 30 shows various venting configurations using two elbows to terminate horizontally.

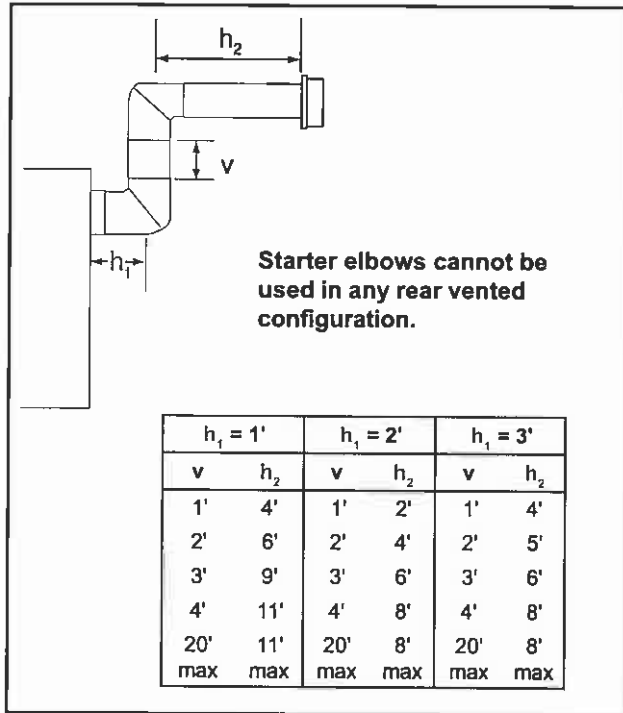


Figure 30
Two Elbows

Note: Exterior wall thickness must be a minimum of 4" to a maximum of 17½".

4) 3 Elbows

Elbows used on rear-vented configurations should be either a 90° elbow or a 45° elbow. **Starter elbows cannot be used in any rear vented configuration.**

Figure 31 shows various venting configurations using three elbows to terminate horizontally.

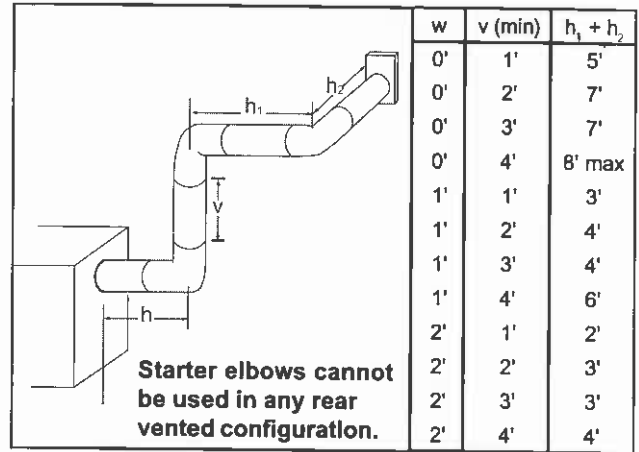


Figure 31 - Three Elbows

d. Installing the Interior Wall Shield

Whenever a combustible wall is penetrated, the hole must be framed (as shown in Figure 32) to receive an interior wall shield (see Figure 33). This shield maintains minimum clearances and restricts cold air infiltration.

The termination cap height must meet all local and national codes and not be easily blocked or obstructed.

If the wall being penetrated is of noncombustible materials, a 9" diameter hole is acceptable.

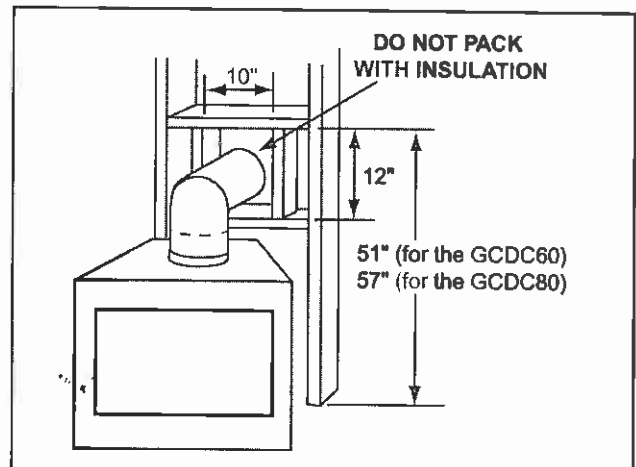


Figure 32
Exterior Wall Hole

Secure the shield to the framing as shown in Figure 33.

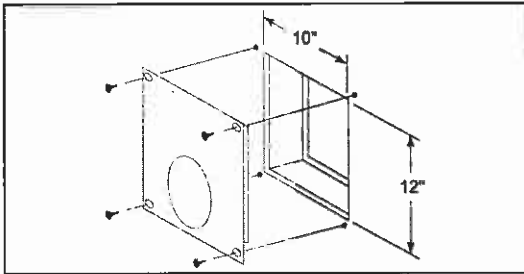


Figure 33
Interior Wall Shield

The last section of vent may require cutting, depending upon wall thickness and appliance location. The cap should overlap the vent sections by at least 1½". See Figure 34.

Note: If cutting is necessary, you must use VP12MI and VP24MI pipe.

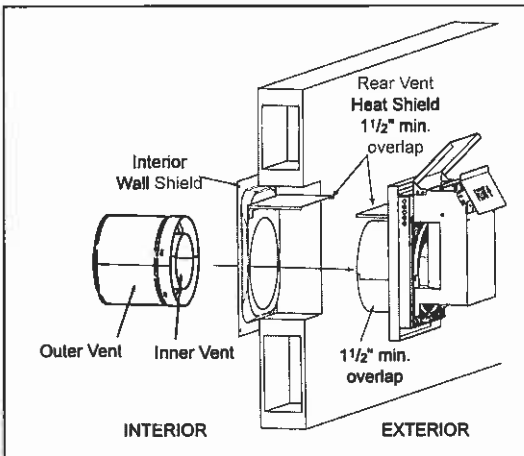


Figure 34
Venting Through the Wall

WARNING - RISK OF FIRE!
Be sure there are no future obstructions from trees, bushes, snow drifts, etc.

e. Installing the Rear Vent Heat Shield

For rear vented appliances a heat shield **MUST** be placed 1 inch above the top of the vent between the wall shield and the termination cap. There are two sections of the heat shield. One section attaches to the wall shield with two screws. The remaining section is attached to the cap in the same manner. The sections of the heat shield will overlap to match the wall thickness (depth). The small leg on the shield should rest on the top of the vent to properly space it from the pipe section. See Figure 35. This heat shield is not necessary on top vented appliances.

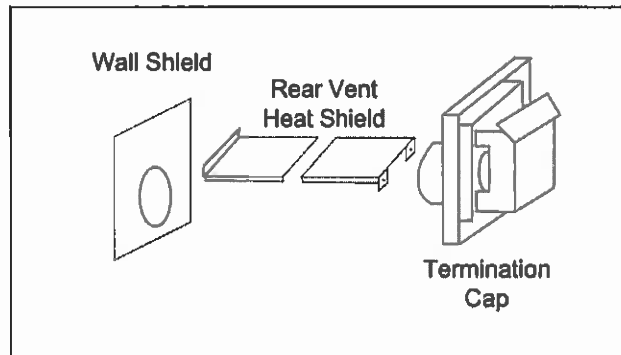


Figure 35
Rear Vent Heat Shield

WARNING - RISK OF FIRE!
Always maintain minimum air space clearances or greater around the appliance and vent system.

f. Termination

Vent termination must not be recessed in the wall. Siding may be brought to the edge of the cap base.

Install the cap as shown in Figure 34. Cap pipe sections should overlap the vent pipe by 1½ inches. Caulk outside edges of cap.

Local codes may require the installation of a cap shield which prevents anything or anyone from touching the hot cap.

Figure 36 illustrates cap locations prescribed by current ANSI Z223.1 and CAN/CGA-B149 Installation Codes.

CAUTION:
A vinyl soffit shield (VSS2) should be installed if a cap is within 30" of a vinyl soffit.

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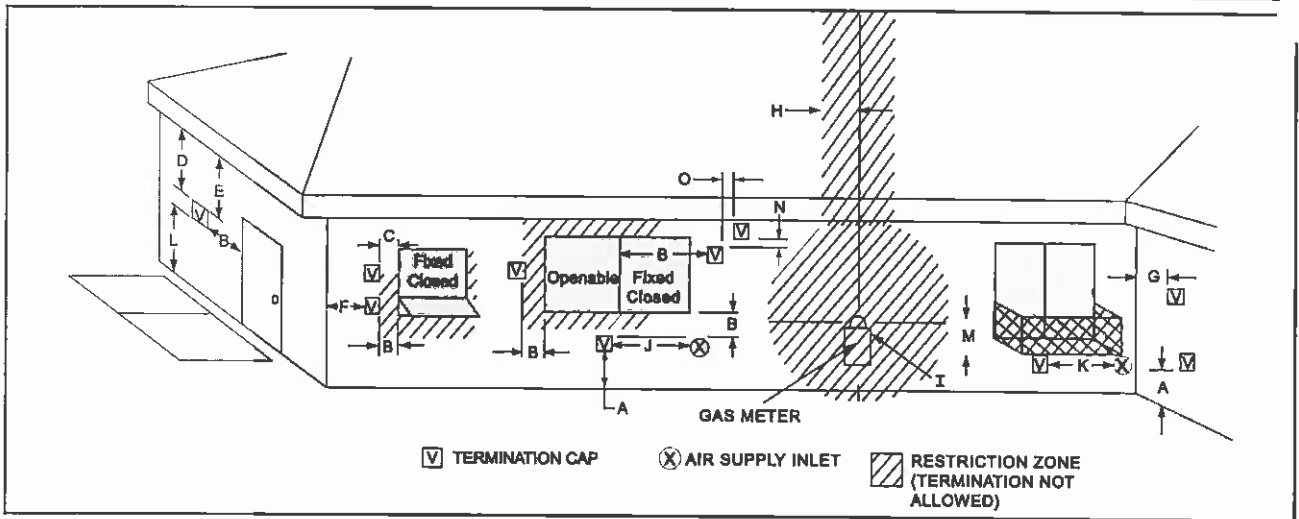


Figure 36 - Termination Cap Locations

Dimension Descriptions

- A** Clearance above the ground, a veranda, porch, deck or balcony - 12 inches (30 cm) minimum. *
- B** Clearance to window or door that may be opened - 10,000 BTUs or less, 6 inches (15 cm) minimum; 10,000-50,000 BTUs, 9 inches (23 cm) minimum; over 50,000 BTUs, 12 inches (30 cm) minimum. *
- C** Clearance to permanently closed window - 12 inches (30 cm) minimum - recommended to prevent condensation on window.
- D** Vertical clearance to ventilated soffit located above the termination within a horizontal distance of 2 feet (60 cm) from the centerline of the termination - 18 inches (46 cm) minimum. **
- E** Vertical clearance to unventilated soffit - 12 inches (30 cm) minimum. **
- F** Clearance to outside corner - 6 inches (15 cm) minimum.
- G** Clearance to inside corner - 6 inches (15 cm) minimum.
- H** Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally* from the center line of the regulator
- I** Clearance to service regulator vent outlet - 6 feet (1.8m) minimum. *
- J** Clearance to non-mechanical air supply inlet into building or the combustion air inlet to any other appliance - 12 inches (30 cm) minimum. *
- K** Clearance to mechanical air supply inlet - 6 feet (1.8 m) minimum. *
- L** Clearance above a paved sidewalk or paved driveway located on public property - 7 feet (2.1 m) minimum.
A vent may not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.
- M** Clearance under veranda, porch, deck or balcony - 12 inches (30 cm) minimum. * Recommended 30 inches (76 cm) for vinyl or plastic.
Only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor. *
- N** Vertical clearance between two horizontal termination caps - 12 inches (30 cm) minimum.

- O** Horizontal clearance between two horizontal termination caps - 12 inches (30 cm) minimum.
- * As specified in CGA B149 Installation Codes

Note: Local codes or regulations may require different clearances.

- ** Clearance required to vinyl soffit material - 30 inches (7 cm) minimum. With a vinyl soffit shield - 18 inches (46 cm) minimum.

WARNING!

In the U.S.: Vent system termination is NOT permitted in screened porches. You must follow side wall, overhang and ground clearances as stated in the instructions.

In Canada: Vent system termination is NOT permitted in screened porches. Vent system termination is permitted in porch areas with two or more sides open. You must follow all side wall, overhang and ground clearances as stated in the instructions.

Hearth & Home Technologies assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

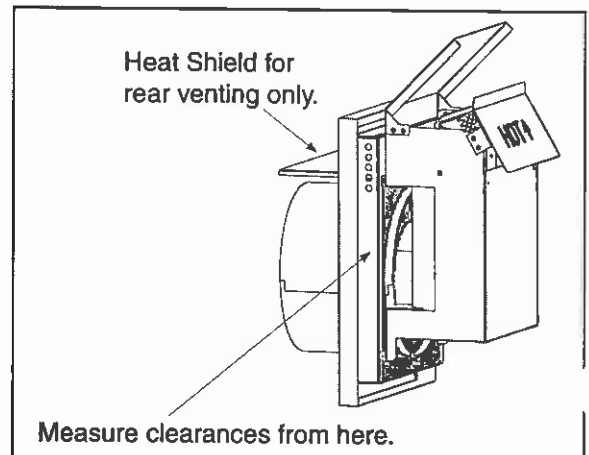


Figure 37 - Cap Clearances

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VERTICAL TERMINATION

a. Top and Rear Vent Clearances

See Figure 38 for clearance information.

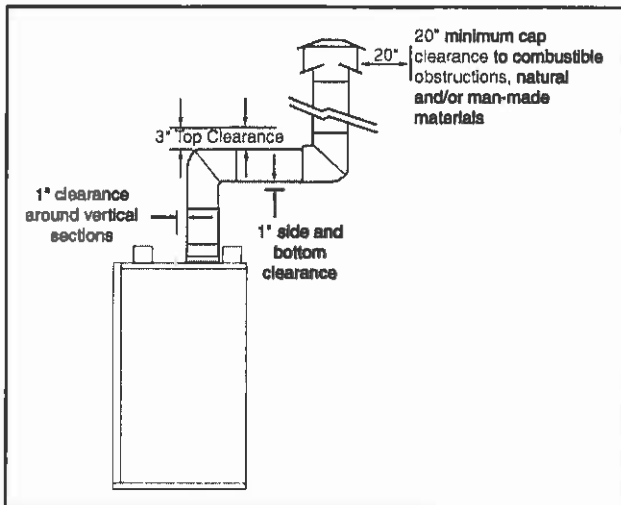


Figure 38
Vertical Termination Clearances
(top vent shown)

b. Top Vent Lengths

Various venting configurations are shown in Figures 39 and 40 from which maximum vent runs can be determined.

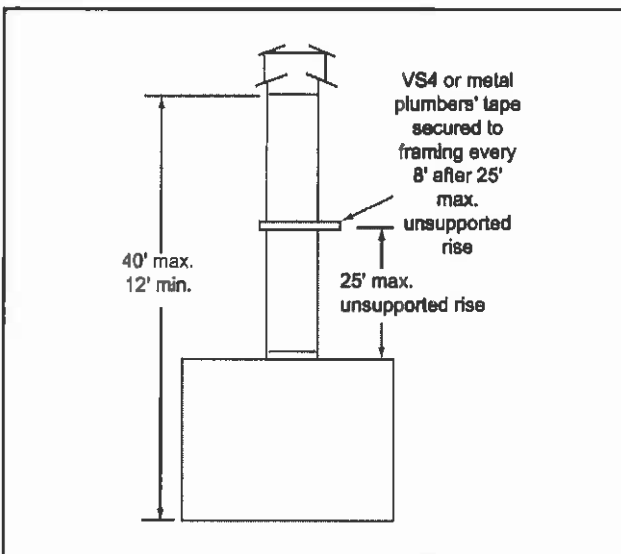


Figure 39
Vertical Termination Vent Lengths

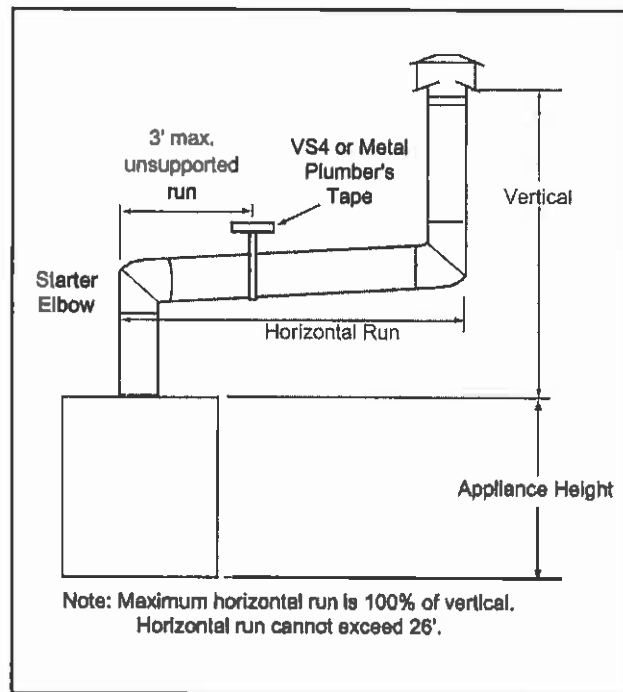


Figure 40
Maximum Horizontal Vent Lengths

Note: Horizontal runs will require the use of one vent support (or metal plumber's strap) for every 3' of vent.

WARNING!
The horizontal run of vent must have a 1/4" rise for every 1 ft. of run towards the termination. Never allow the vent to run downward. This could cause high temperatures and may create a fire hazard.

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c. Rear Vent Lengths

Attach either a rear vent kit straight section or an elbow (depending upon your specific installation) to the appliance. See Figure 41. **Starter elbows cannot be used in any rear vented configuration.** A maximum of three elbows are allowed in the vent system. Use only pipe listed with this appliance. **ALWAYS MAINTAIN MINIMUM AIR SPACE CLEARANCES OR GREATER AROUND THE VENT SYSTEM.** Do not pack air spaces with insulation or other material.

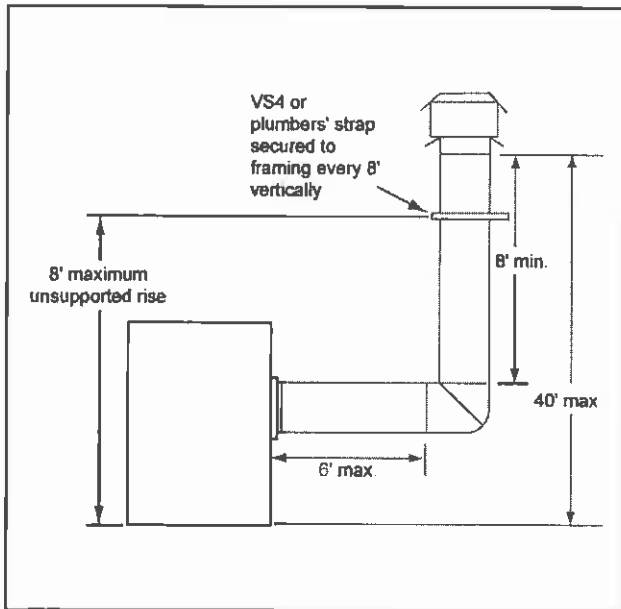


Figure 41
Rear Vent Length Allowances for Vertical Termination Only

CAUTION:

Provisions shall be made to provide adequate combustion and ventilation air.

WARNING - RISK OF FIRE!

Always maintain minimum clearances or greater around the vent system. Do not pack air spaces with insulation or other material.

d. Firestop Spacer/Vent Installation

Frame an opening and install a firestop spacer whenever the vent penetrates a ceiling/floor area, as shown in Figure 42. Frame the opening with the same sized lumber as used in the ceiling/floor joists. Unless the flue is offset, the hole should be directly above the appliance. **DO NOT** pack insulation around the vent.

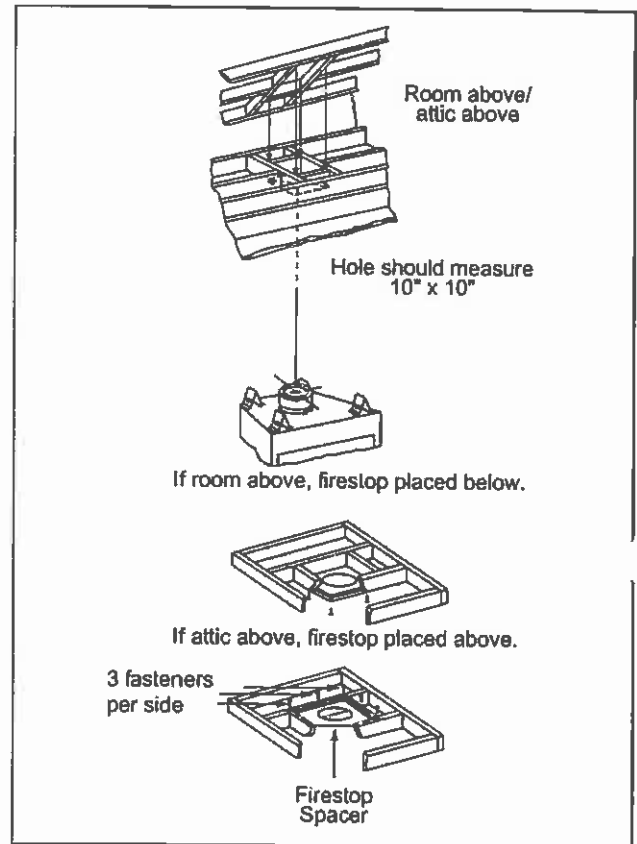


Figure 42
Installing the Firestop Spacer

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CALIBER DIRECT VENT INSTALLATION INSTRUCTIONS

e. Chase/Termination Installation

Figures 43 and 44, and Table 1 specify minimum vent heights for various pitched roofs.

These vent heights are necessary for safety and do not ensure draft-free operation. Trees, building, adjoining roof lines, adverse conditions, etc. may create a need for a taller vent should down drafting occur.

| Roof Pitch | H(Min.) Ft. |
|---------------------|-------------|
| Flat to 6/12 | 1.0 |
| 6/12 to 7/12 | 1.25 |
| Over 7/12 to 8/12 | 1.5 |
| Over 8/12 to 9/12 | 2.0 |
| Over 9/12 to 10/12 | 2.5 |
| Over 10/12 to 11/12 | 3.25 |
| Over 11/12 to 12/12 | 4.0 |
| Over 12/12 to 14/12 | 5.0 |
| Over 14/12 to 16/12 | 6.0 |
| Over 16/12 to 18/12 | 7.0 |
| Over 18/12 to 20/12 | 7.5 |
| Over 20/12 to 21/12 | 8.0 |

Table 1 - Vent Height

4. ASSEMBLING THE VENT SECTIONS

a. Attaching the Venting to the Appliance

To attach the first VP section to the appliance collars, simply slide the flared end of the inner vent of the VP section over the inner collar on the appliance. At the same time, insert the outer vent into the outer collar on the appliance. Push the vent section into the appliance collar until all the lances have snapped in place. Tug slightly on the vent to confirm it has completely locked into place.

b. Assembling Vent Sections

- 1) Start the flared inner flue of section "A" over the inner flue of section "B".
- 2) Insert the outer flue of section "A" into the outer flue of section "B". See Figure 45. Once both inner and outer flues are started, press section "A" into section "B" firmly until all lances have snapped into place. Tug slightly on section "A" to confirm it has completely locked into place. See Figure 46.

Note: Squeezing the pipe slightly to fit may be necessary.

Note: Make sure that the seams are not aligned to prevent unintentional disconnection.

Note: To ensure proper operation, verify all venting and the termination are unobstructed.

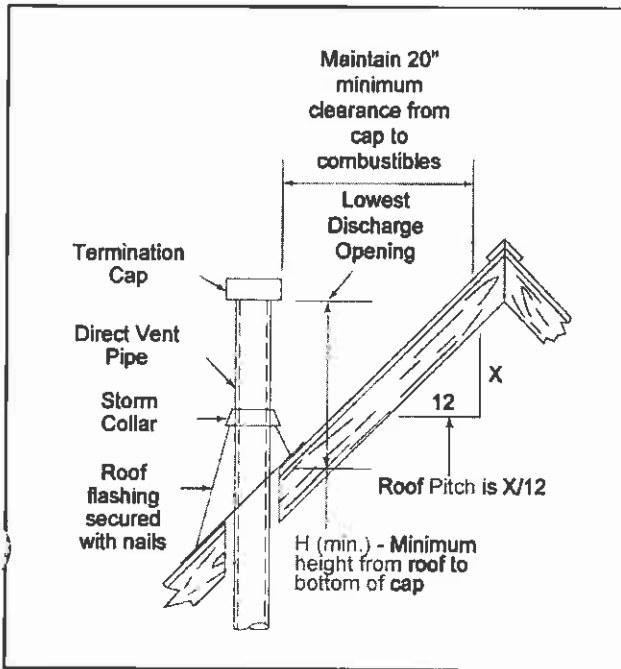


Figure 43 - Vent Height for Vertical Termination

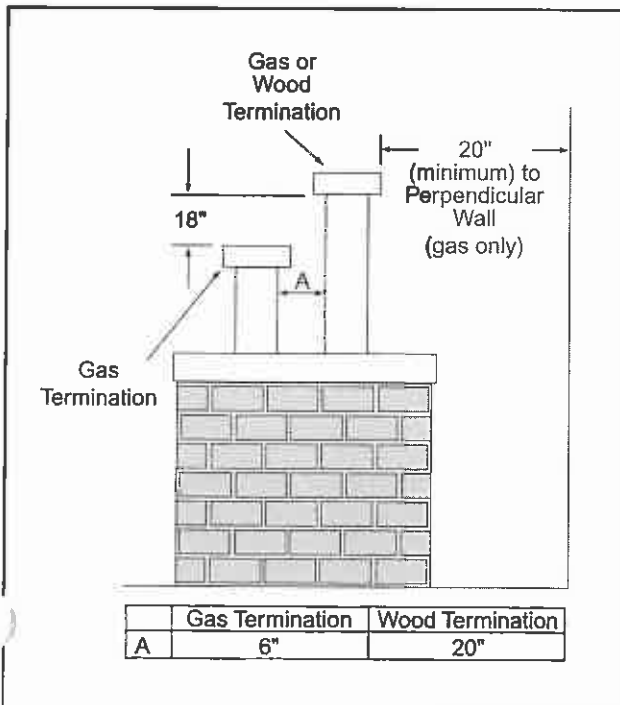


Figure 44 - Multiple Vertical Terminations

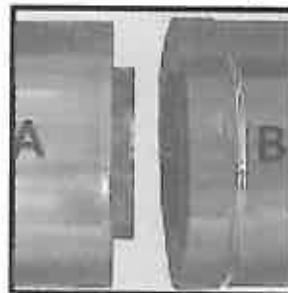


Figure 45



Figure 46

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The first name in fireplaces

c. Assembling Minimum Installations (MI) Sections

MI sections are non-unitized so that they can be cut to a certain length. To use these sections, they must be cut to length from the non-expanded end. See Figure 47. They can then be attached by first connecting the expanded end of the MI inner vent with the inner vent from the adjacent vent section and securing with three screws. The expanded portion of the MI inner vent must overlap completely with the untreated end of the adjacent vent section. The outer vent can then be inserted into the adjacent outer vent expanded end and attached to the next vent section with three screws. The other end of the MI vent section can then be attached by fitting a snap lock section to it and snapping it together as normal.

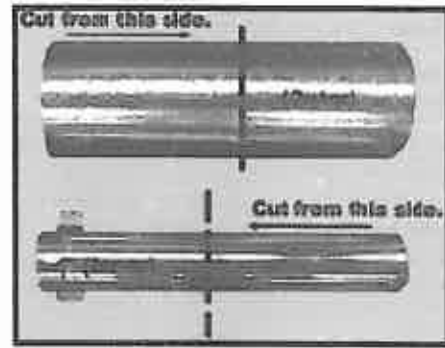


Figure 47

d. Assembling Slip Sections

Slip sections should be snapped into the first mating piece, then expanded to their desired length, making sure that a 1.5" overlap is maintained between the two sections of the slip section. The two sections of the slip section then need to be secured by driving two screws through the overlapping portions of the outer vent. See Figure 48. This will secure the slip section to the desired length and prevent it from separating. The slip section can then be attached to the next section of vent.

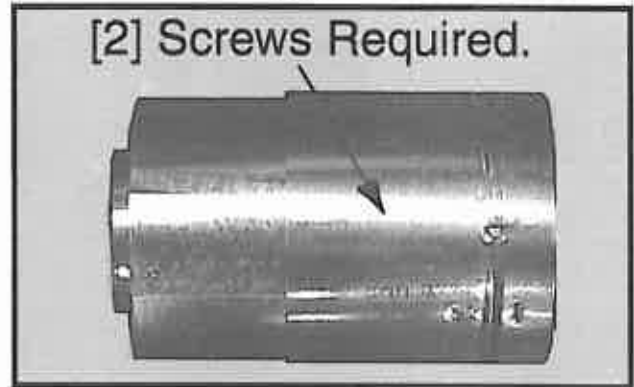


Figure 48

e. Disassembling Vent Sections (only if necessary)

To disassemble any two pieces of pipe, rotate one section so that the seams on both pipe sections are aligned as shown in Figure 49. They can then be carefully pulled apart.



Figure 49

F. UTILITIES

1. HIGH ALTITUDE INSTALLATION

For U.S. installation, appliances are tested and approved for elevations from 0-2000 feet. When installing this appliance at an elevation above 2000 feet, National Fuel Gas Codes require a decrease of the input rating by changing the existing burner orifice to a smaller size. Input should be reduced 4% for each 1000 feet above sea level. Check with the local gas utility for proper orifice size identification. The correct orifice is available from your Heatilator distributor.

For Canada, appliances are certified for elevations from 0-4500 feet. When installing this appliance at an elevation between 0-4500 feet in Canada, the input rating does not need to be reduced. When installing this appliance at an elevation above 4500 feet in Canada, check with local authorities.