

**3. TOP VENTING**

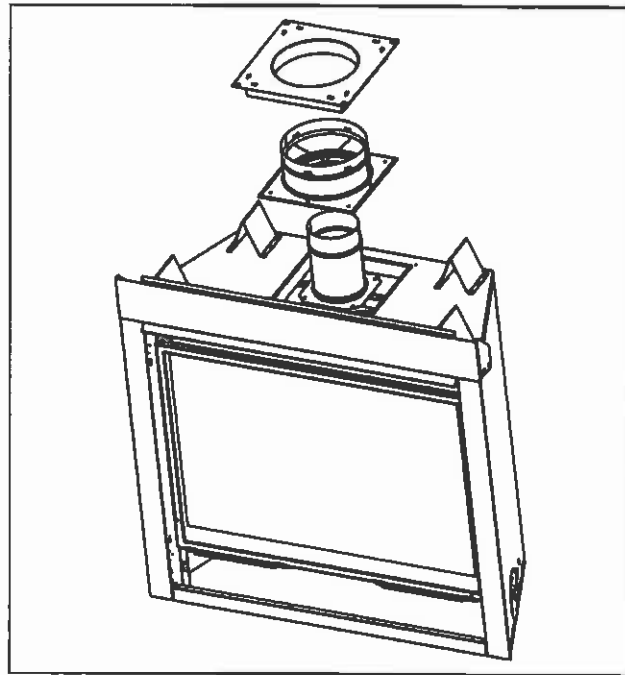
Remove the outer cover plate, then the inner cover plate by removing the screws. Place the 5" inner collar into the appliance with the screws removed from the cover plate. Attach the 8" outer collar to the appliance top using the screws removed. Make sure that the gaskets for the inner and outer collars seal tightly. Place the 12" top cover plate with insulation and an 8" hole over the outer collar and secure with screws from the parts bag. See Figure 7.

**4. HORIZONTAL VENTING TERMINATION**

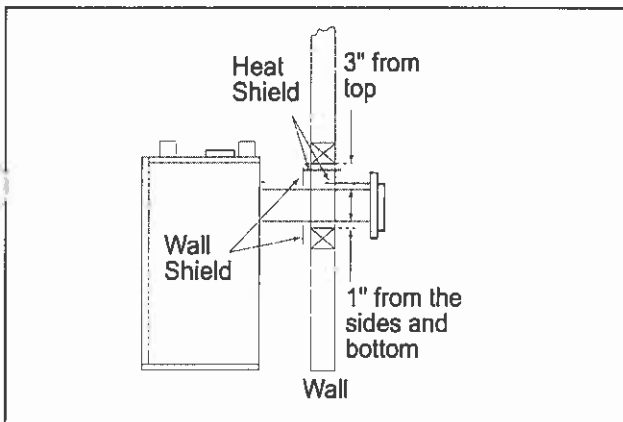
(Vertical Termination - see page 15)

**a. Clearances**

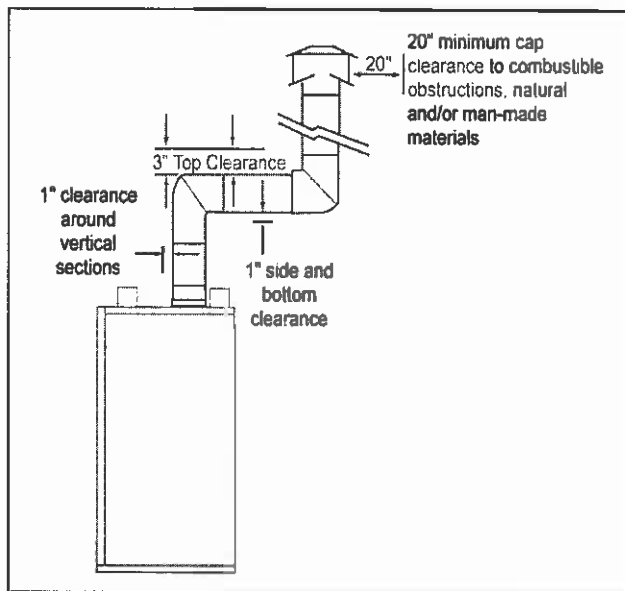
See Figures 8 and 9 for clearance information.



**Figure 7**  
Placement of Inner and Outer Collars



**Figure 8**  
Venting Clearances to  
Combustible Materials - Rear Venting



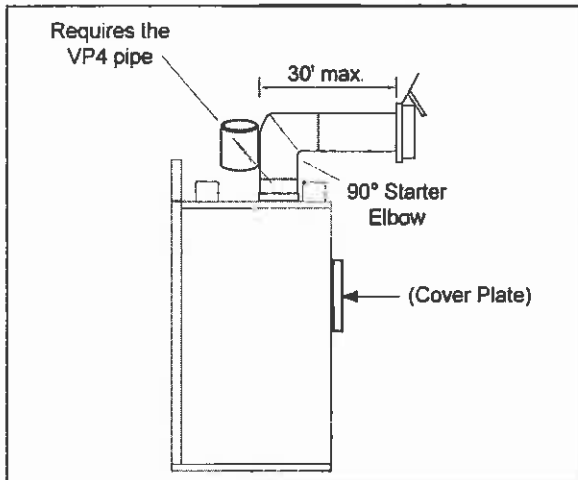
**Figure 9**  
Venting Clearances to  
Combustible Materials - Top Venting

**WARNING!**

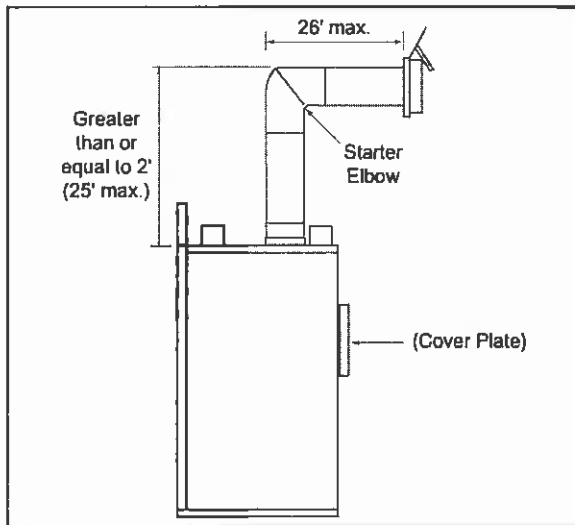
Always maintain minimum air space clearances or greater around the vent system. See Figures 8 and 9. Do not pack air spaces with insulation or other material.

**b. Vent Lengths for Top Venting** (For rear venting, see page 11.)

Various venting configurations are shown in Figures 10-13 from which maximum vent lengths can be determined.



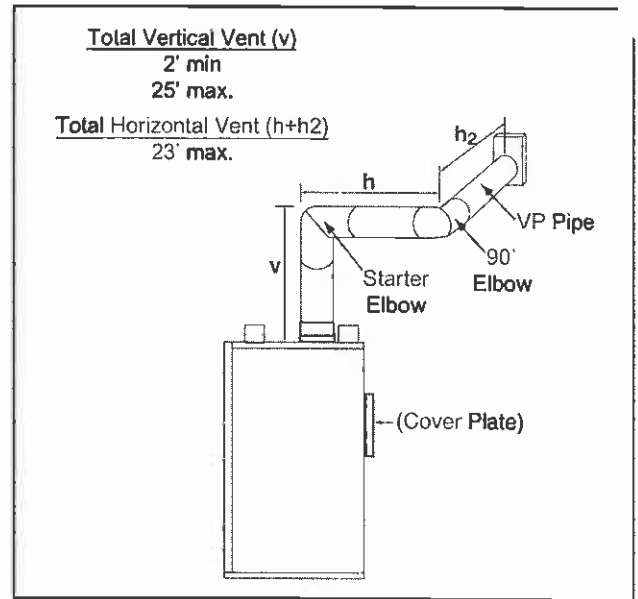
**Figure 10**  
**Vent Lengths with One Elbow**  
**(Minimum Vertical)**



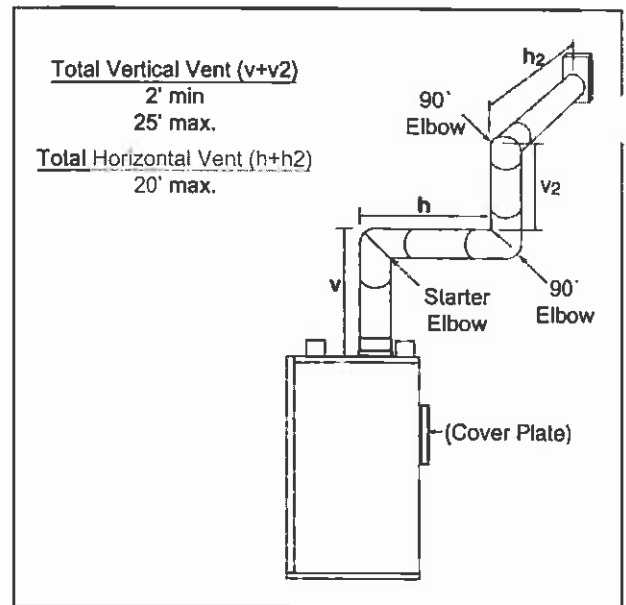
**Figure 11**  
**Vent Lengths with One Elbow**  
**(2' vertical or more, 25' maximum)**

**CAUTION:**

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



**Figure 12**  
**Vent Lengths with Two Elbows**



**Figure 13**  
**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" from the back of the appliance to the base of the cap. See Figure 14.

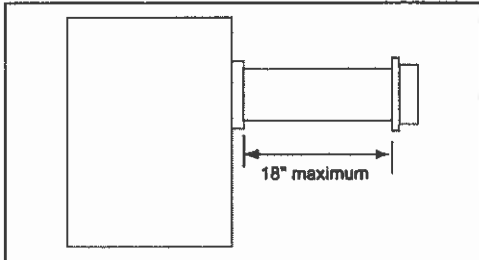


Figure 14  
No Elbows

2) A 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 and will include the 45° elbow, and a termination cap. See Figure 15.

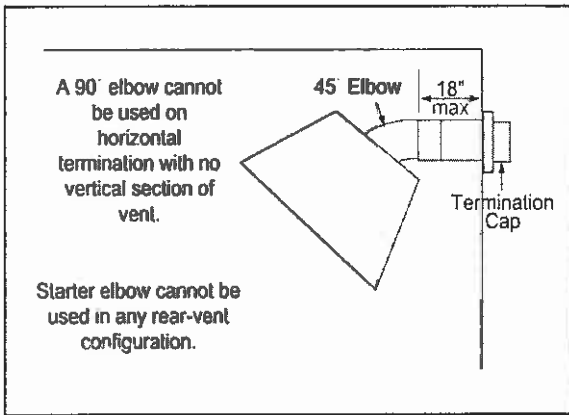


Figure 15  
One 45° Elbow

3) Two Elbows

Elbows used on rear vented configurations should be either a 90° elbow or a 45° elbow. A starter elbow cannot be used in any rear vent configuration. Figure 16 shows various venting configurations using two elbows to terminate horizontally.

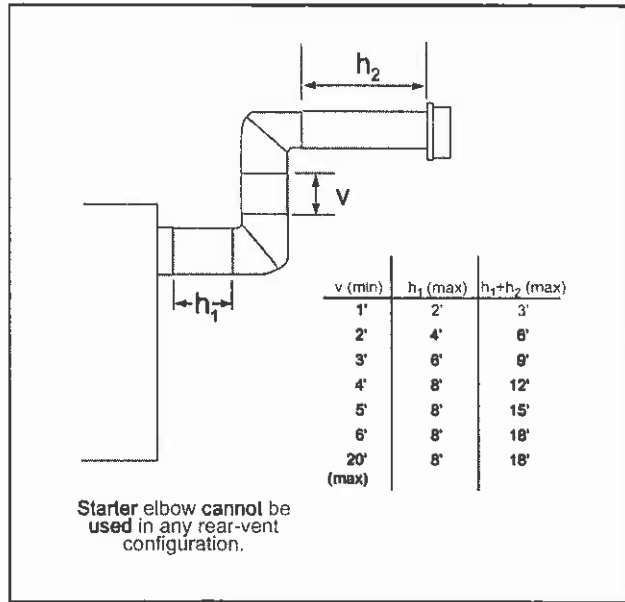


Figure 16  
Two Elbows

4) Three Elbows

Elbows used on rear vented configurations should be either a 90° elbow or a 45° elbow. A starter elbow cannot be used in any rear vent configuration.

Figure 17 shows various venting configurations using three elbows to terminate horizontally.

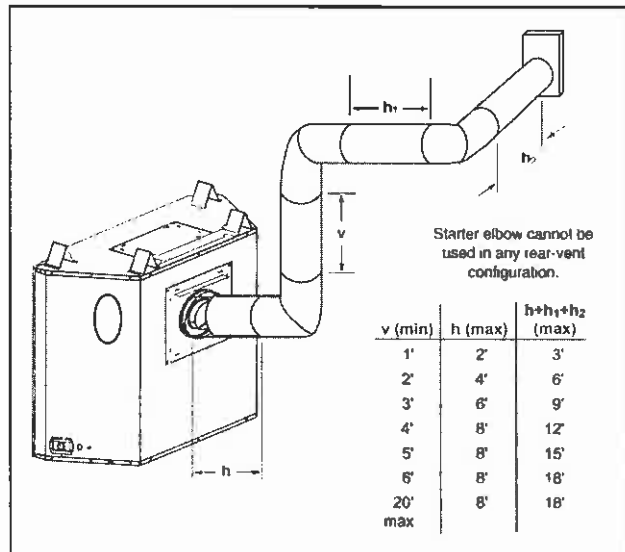


Figure 17  
Three Elbows

**d. Assembling Vent Sections**

Attach either a straight section from the rear vent kit or an elbow, depending on your specific installation.

**CAUTION:**  
Maintain minimum clearances or greater around the vent system.

Do not pack air spaces with insulation or other material.

See Section F "ASSEMBLING THE VENT SECTIONS" on page 18 for specific instructions on each type of venting.

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

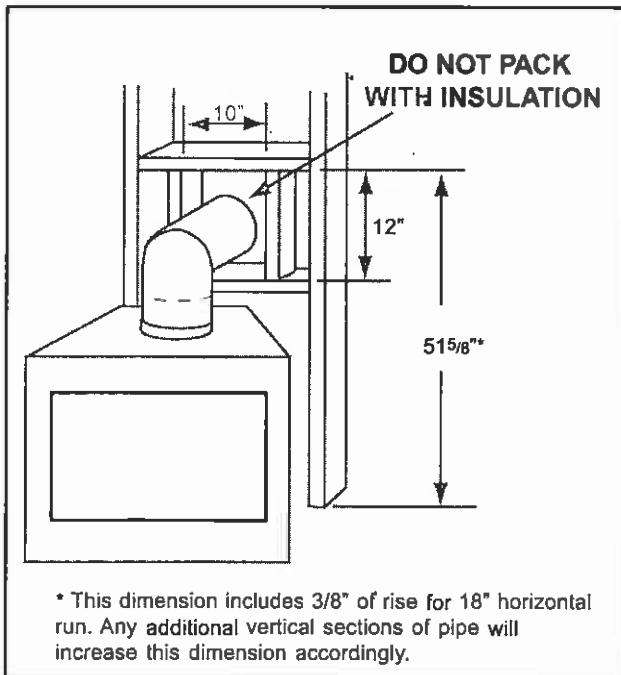
Figures 18 and 19 show how to install a typical vent system. Use only pipe supplied and listed for use with this appliance. See page 4 for a description of listed components.

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

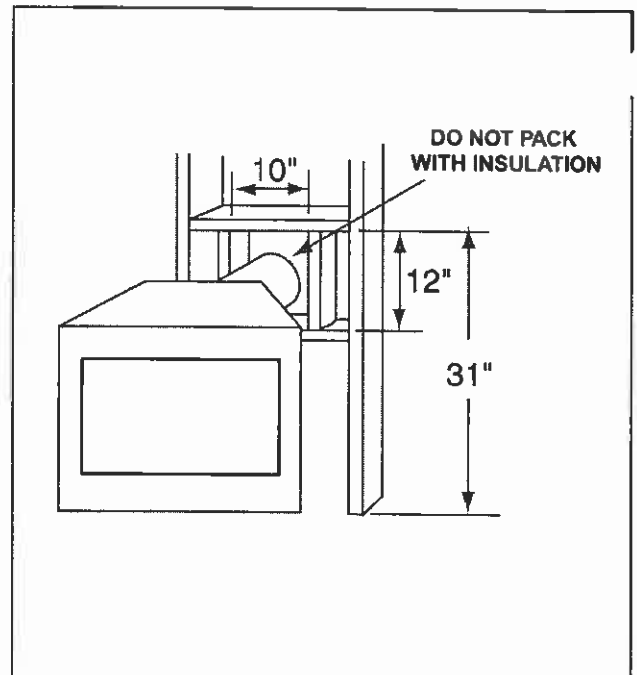
**e. Installing the Interior Wall Shield**

Whenever a combustible wall is penetrated, the hole must be framed with an interior wall shield as shown in Figures 20 and 21 on page 13. This shield maintains minimum clearances and restricts cold air infiltration.

**Note:** Exterior wall thickness must be a minimum of 4" to a maximum of 23-1/2".

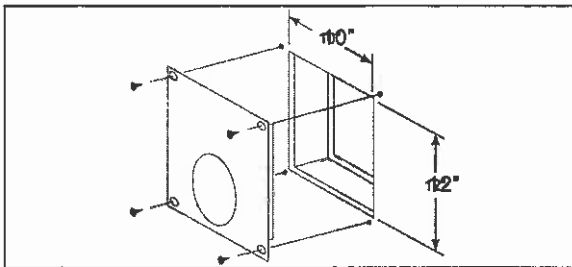


**Figure 18**  
**Exterior Wall Hole**  
**(Top Venting)**



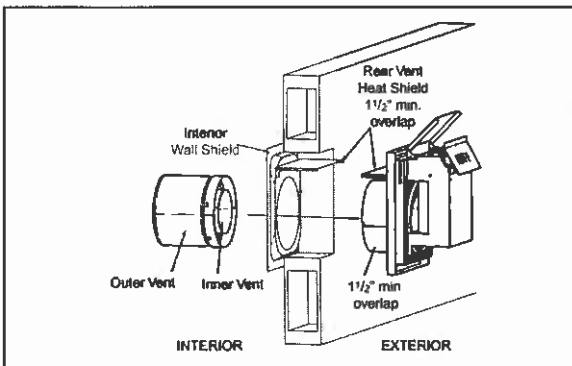
**Figure 19**  
**Exterior Wall Hole**  
**(Rear Venting)**

Secure the shield to the framing as shown in Figure 20.



**Figure 20**  
Interior Wall Shield

The cap should overlap the vent sections by at least 1-1/2". See Figure 21.



**Figure 21**  
Venting Through the Wall

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

**f. Installing the Rear Vent Heat Shield**

For rear vented appliances, a heat shield **MUST** be placed one inch above the top of the vent between the wall shield and the base of 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 (this heat shield is not necessary on top vented appliances). See Figures 21 and 22.



**Figure 22**  
Vent Heat Shield and Termination Cap

**g. 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 Figures 21 and 22. Cap pipe sections should overlap the vent pipe by 1-1/2 inches. Caulk outside edges of cap.

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

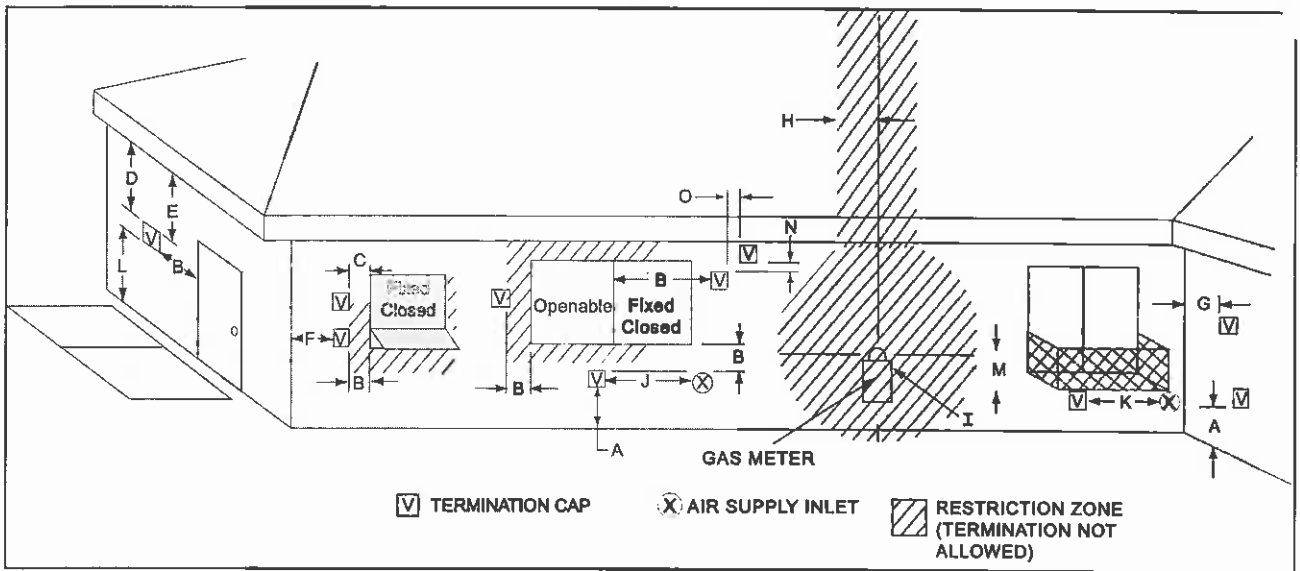
Figure 23 on page 14 illustrates cap locations as prescribed by current ANSI Z223.1 and CAN/CGA-B149 Installation Codes.

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

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

**WARNING - RISK OF FIRE!**  
Be sure there are no present (nor future) obstructions to the termination cap such as trees, bushes, snow drifts, etc.

*The first name in fireplaces*



**Figure 23 - Termination Cap Locations**

**Dimension Descriptions**

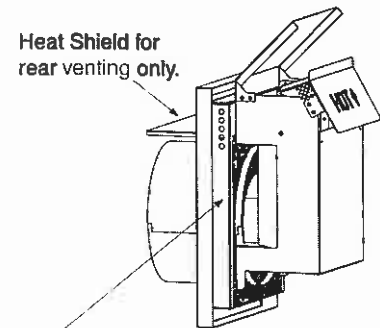
- A** Clearance above the ground, a veranda, porch, deck or balcony - 12 inches (30 cm) minimum. \*
  - B** Clearance to window or door that may be opened - 10,000 BTUs or less, 6 inches (15 cm) minimum; 10,000-50,000 BTUs, 9 inches (23 cm) minimum; over 50,000 BTUs, 12 inches (30 cm) minimum. \*
  - 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 (76 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.



Measure clearances from here.

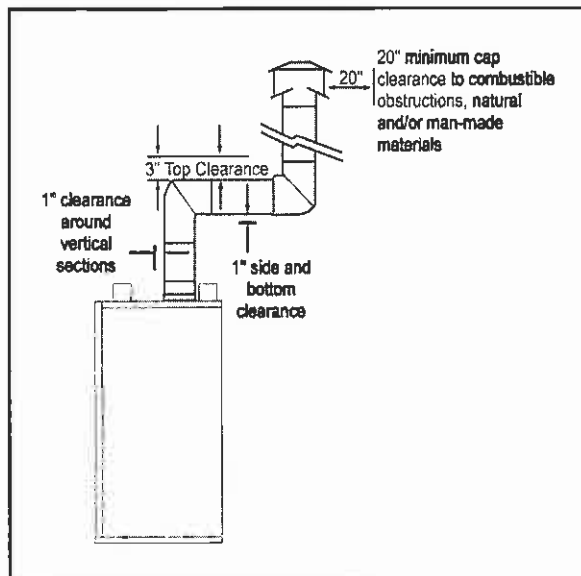
**Figure 24 - Horizontal Cap Clearance-Rear Vent**

**VERTICAL TERMINATION**

a. Top Vent (for rear vent, see page 16)

1) Top Vent Clearances

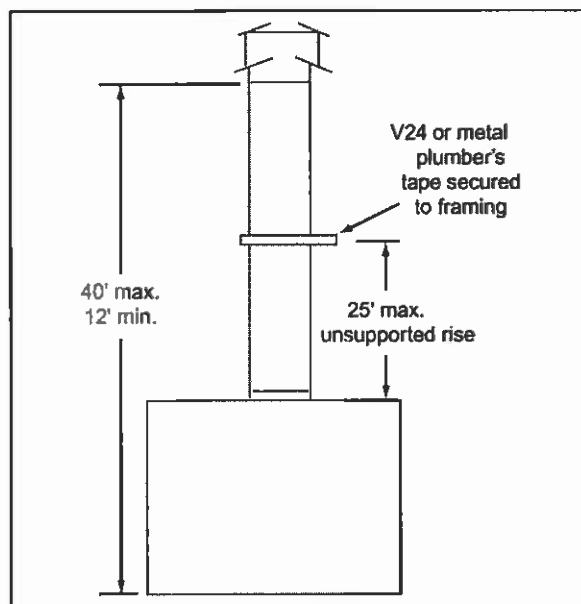
See Figure 25 for clearance information.



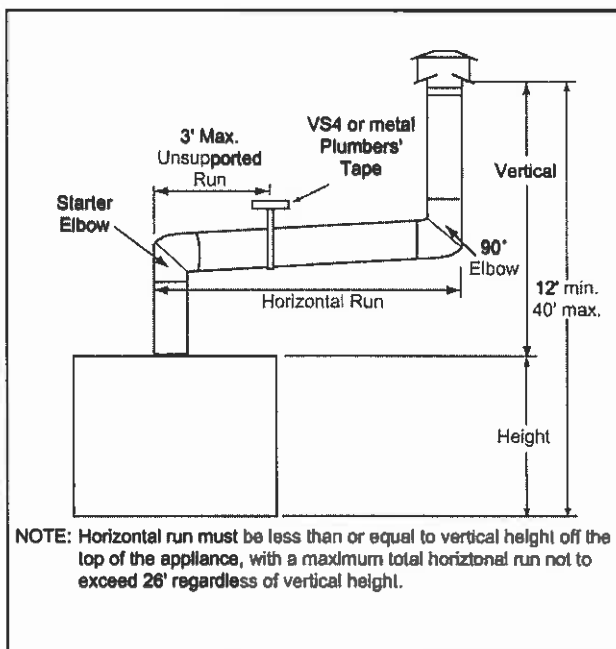
**Figure 25**  
Vertical Termination Clearances  
(Top Vent Shown)

2) Top Vent Lengths

Various venting configurations are shown in Figures 26 and 27 from which maximum vent runs can be determined.



**Figure 26 - Vertical Termination Vent Lengths**



**NOTE:** Horizontal run must be less than or equal to vertical height off the top of the appliance, with a maximum total horizontal run not to exceed 26' regardless of vertical height.

**Figure 27**  
Vertical Termination Vent Lengths

**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.

**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.

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

The first name in fireplaces

**b. Rear Vent Vertical Termination**

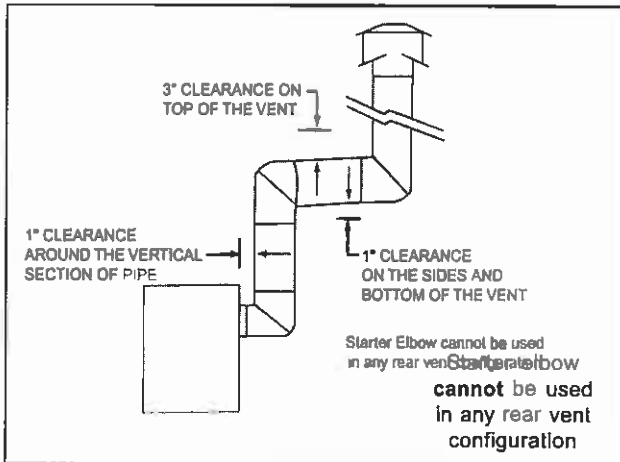
**1) Rear Vent Clearances**

See Figure 28 for clearance information.

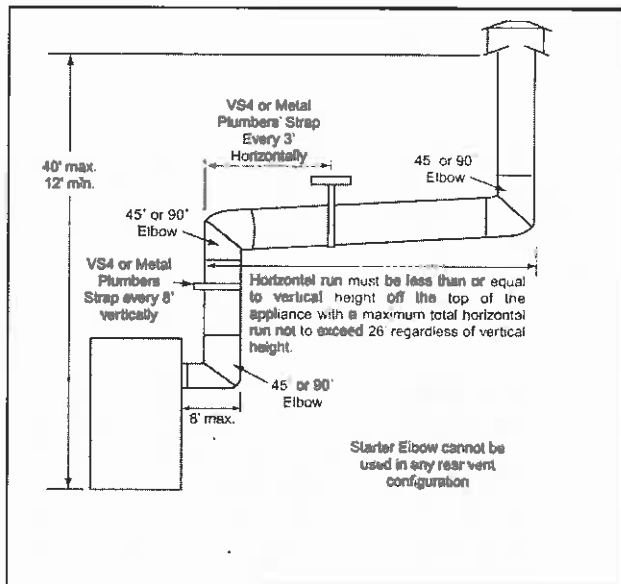
**2) Vent Lengths**

Various venting configurations are shown in Figure 29 from which maximum vent runs can be determined.

**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.



**Figure 28 - Vertical Termination Clearances**

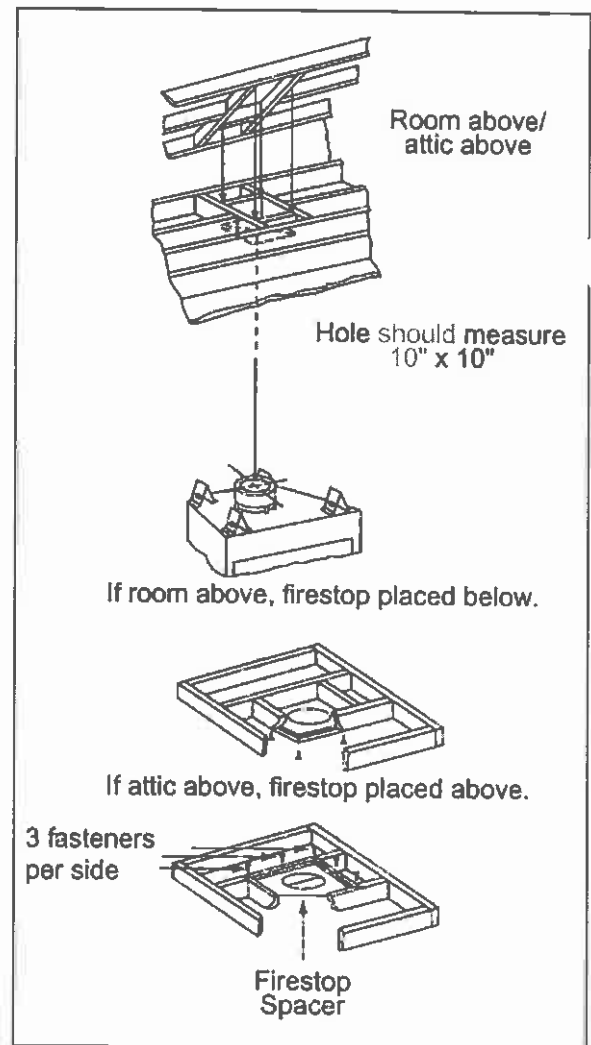


**Figure 29 - Vertical Termination Vent Lengths**

**WARNING - RISK OF FIRE!**  
Always maintain minimum clearances or greater around the vent system. Do not pack air spaces with insulation or other material.

**6. FIRESTOP SPACER/VENT INSTALLATION**

Frame an opening and install a firestop spacer whenever the vent penetrates a ceiling/floor area, as shown in Figure 30. 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.



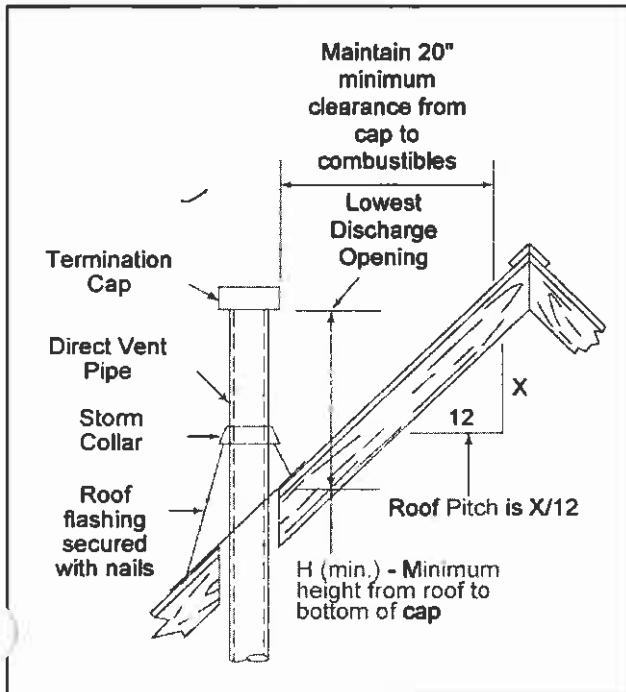
**Figure 30**  
**Installing the Firestop Spacer**



**CHASE/TERMINATION INSTALLATION**

Figures 31 and 32, 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, buildings, adjoining roof lines, adverse conditions, etc. may create a need for a taller vent should down drafting occur.

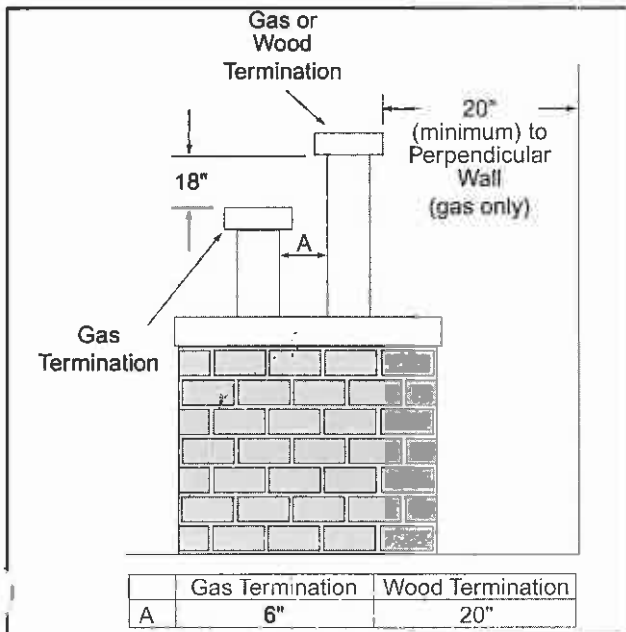


**Figure 31**  
**Vent Height for Vertical Termination**

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**

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



**Figure 32**  
**Multiple Vertical Termination Clearances**

## F. ASSEMBLING THE VENT SECTIONS

### 1. ATTACHING THE VENTING TO THE APPLIANCE

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

### 2. ASSEMBLING VENT SECTIONS

- Start the flared inner flue of Section "A" over the inner flue of Section "B".
- Insert the outer flue of Section "A" into the outer flue of Section "B". See Figure 33.

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

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 34.

**Note:** Make sure that the seams are NOT aligned in order to prevent unintentional disconnection.

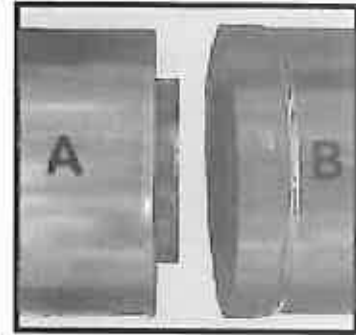


Figure 33



Figure 34

### 3. ASSEMBLING MINIMUM INSTALLATION (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 35. They can then be attached by first connecting the expanded end of the MI inner flue with the inner flue from the adjacent vent section and securing with three screws. The expanded portion of the MI inner flue must overlap completely with the untreated end of the adjacent vent section. The outer flue can then be inserted into the adjacent outer flue 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.

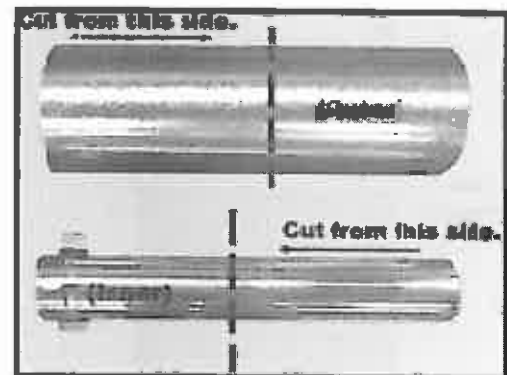


Figure 35