

E. CHOOSING TOP VENT OR REAR VENT

Note: If the appliance is to be top vented, remove and discard the plate (Figure 5) and replace the screw you removed in Step 1.

1. TOP VENT

- a. Remove and discard four screws holding the cover plate to the top of the appliance. See Figure 5.

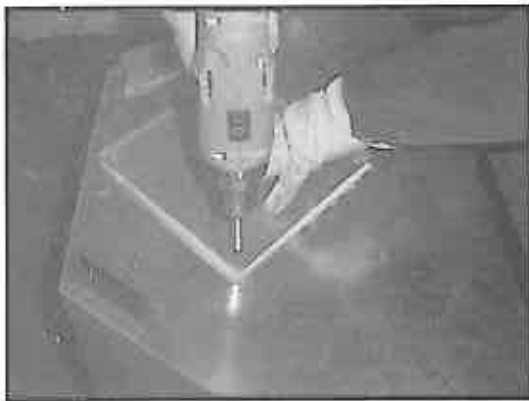


Figure 5 - Remove the Cover Plate

- b. Remove the center insulation plug. See Figure 6.



Figure 6 - Remove the Insulation Plug

- c. Cut the metal retaining band and fold the sides out. See Figure 7.



Figure 7 - Cut the Retaining Band

- d. Remove and discard the vent cap and insulation basket. See Figure 8.

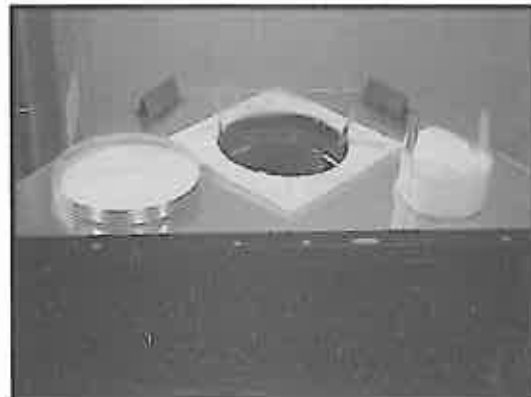


Figure 8 - Vent Cap and Insulation Basket

- e. Attach the first vent section. It will snap into place. See Figure 9.



Figure 9 - Attach the First Vent Section

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2. REAR VENT

- a. Cut the metal retaining band and fold sides out. See Figure 10.



Figure 10 - Cut the Retaining Band

- c. Attach the first vent section. It will snap into place. See Figure 12.



Figure 12 - Attach the First Vent Section

- b. Remove and discard the vent cap and insulation basket. See Figure 11.



Figure 11 - Vent Cap and Insulation Basket

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WARNING!

This appliance may only use the direct vent system designed for use with the appliance and must not be connected to a chimney flue servicing a separate solid fuel or gas burning appliance.

F. VENTING - HORIZONTAL TERMINATION

1. REAR VENT

a. Clearances

See Figure 13 for clearance information.

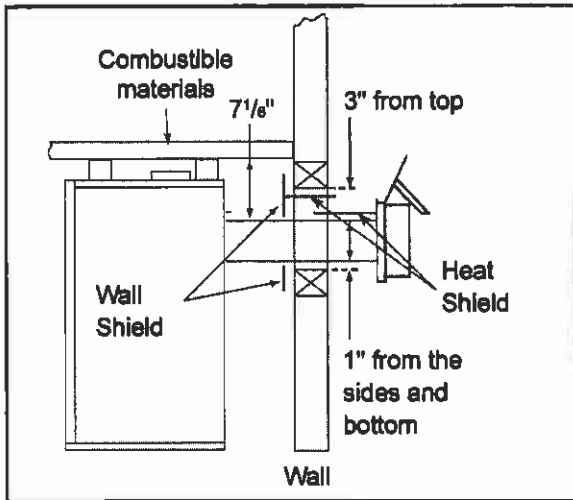


Figure 13 - Clearances

b. 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.

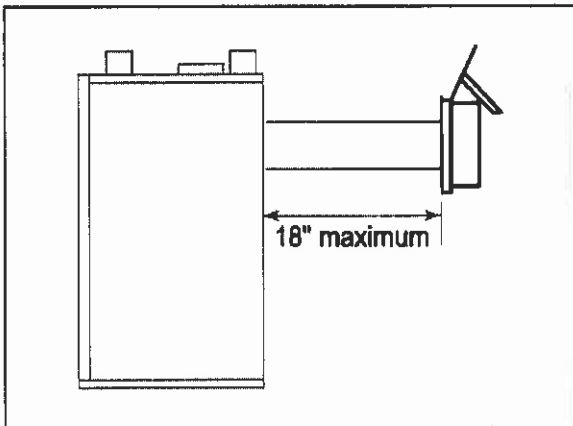


Figure 14 - No Elbows-Rear Vented Appliances

Note: Exterior wall thickness must be a minimum of 4" to a maximum of 17 1/2".

WARNING!

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

c. 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 15.

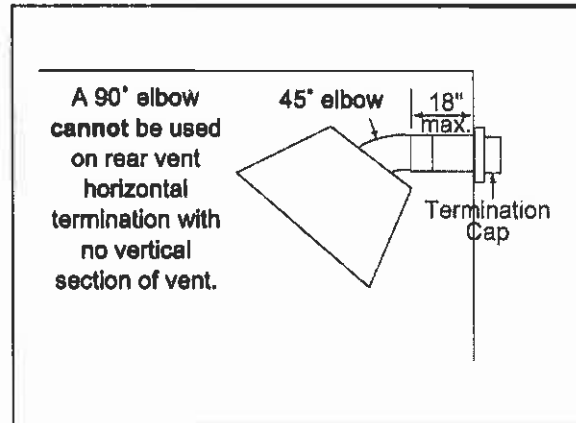


Figure 15 - 45° Elbow

Note: Starter elbows cannot be used in any rear vented configuration.

WARNING!

If you have chosen horizontal termination, be sure there are no future obstructions from trees, bushes, snow drifts, etc.

CAUTION:

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

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d. Two Elbows

Elbows used on rear-vented configurations should be either a 90° or a 45° elbow. **Starter elbows CANNOT be used in any rear-vented configuration.** Figure 16 shows various venting configurations using two elbows to terminate horizontally.

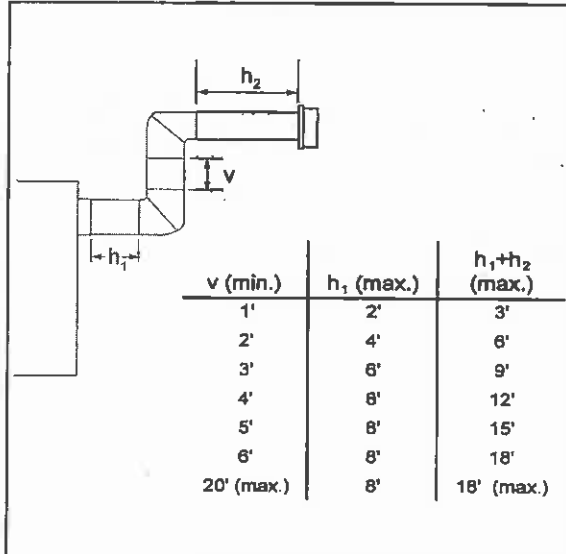


Figure 16 - Two Elbows

e. Three Elbows

Elbows used on rear-vented configurations should be either a 90° or a 45° elbow. **Starter elbows CANNOT be used in any rear-vented configuration.** Figure 17 shows various venting configurations using three elbows to terminate horizontally.

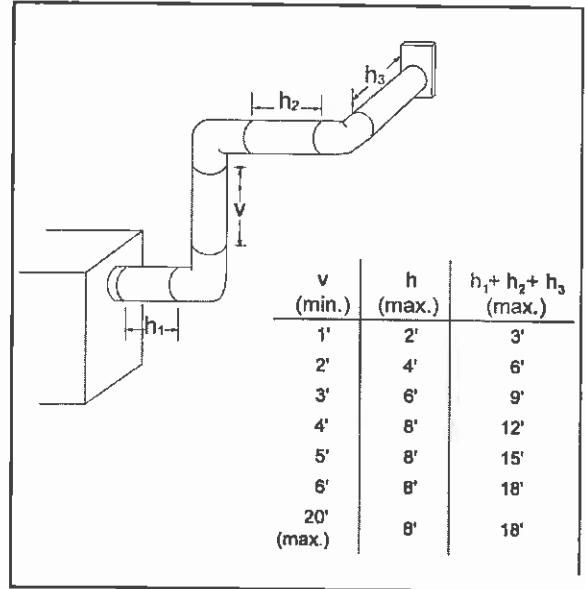


Figure 17 - Three Elbows

2. TOP VENT

a. Clearances

See Figure 18 for clearance information.

b. Vent Lengths

Various venting configurations are shown in Figures 19-21 from which maximum vent lengths can be determined.

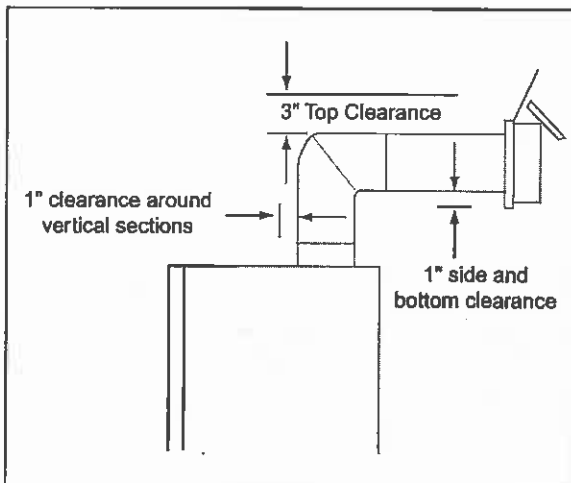


Figure 18 - Clearances

Note: Exterior wall thickness must be a minimum of 4" to a maximum of 23½".

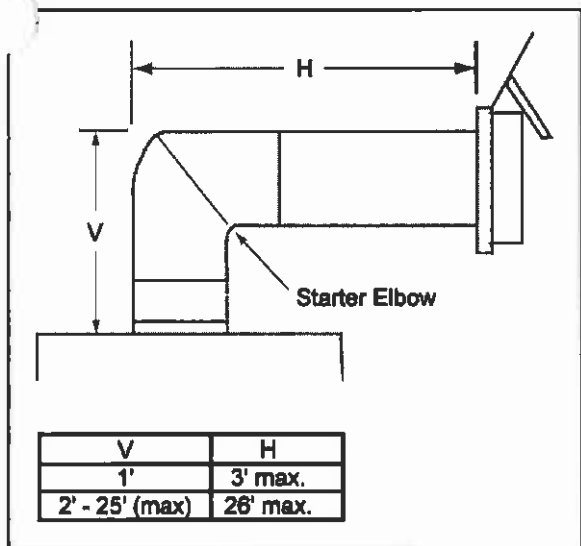


Figure 19 - Vent Lengths with One Elbow
(2' vertical or more, 26' maximum horizontal)

WARNING!
Always maintain minimum air space clearances or greater around the chimney system. See page 10. Do not pack air spaces with insulation or other material.

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

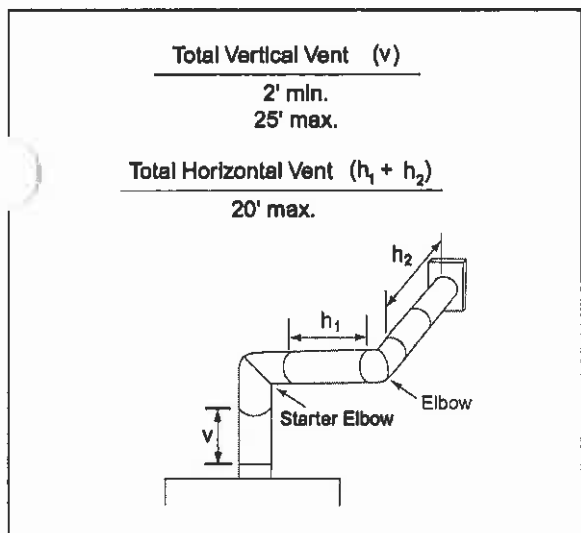


Figure 20
Vent Lengths with Two Elbows

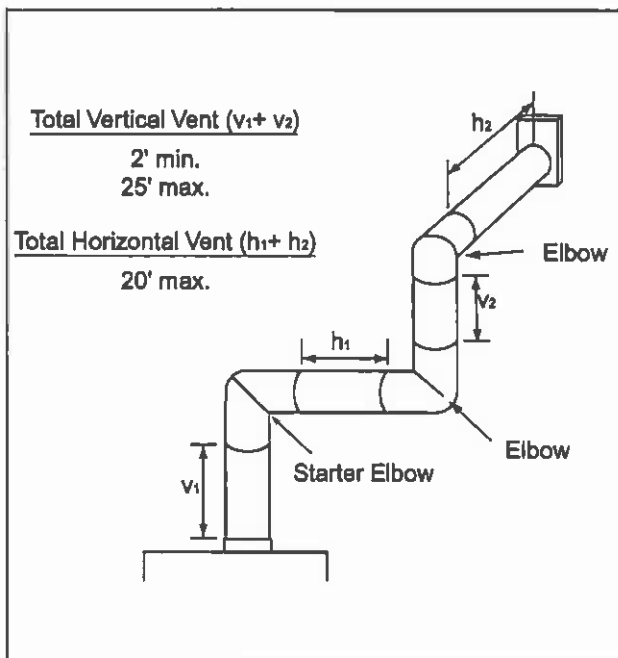


Figure 21
Vent Lengths with Three Elbows

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3. TERMINATION CAP LOCATION

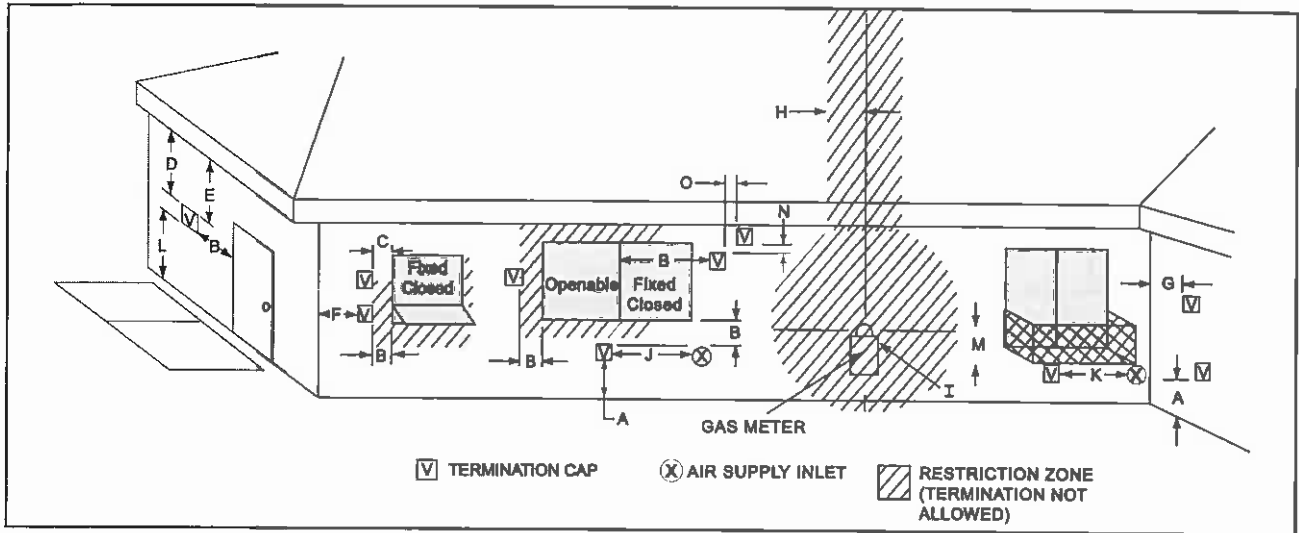


Figure 22

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.

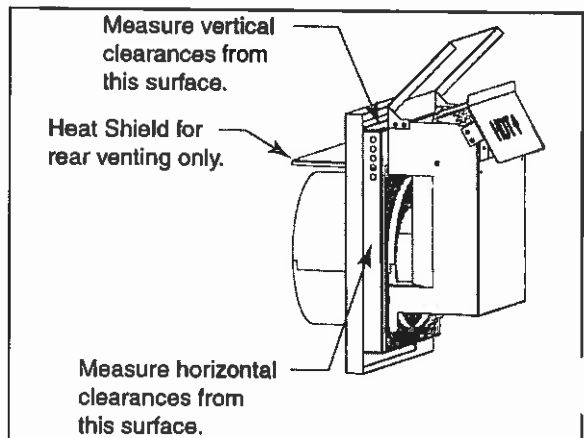


Figure 23 - Cap Clearances

G. VENTING - VERTICAL TERMINATION

1. REAR VENT

a. Clearances

See Figure 24 for clearance information.

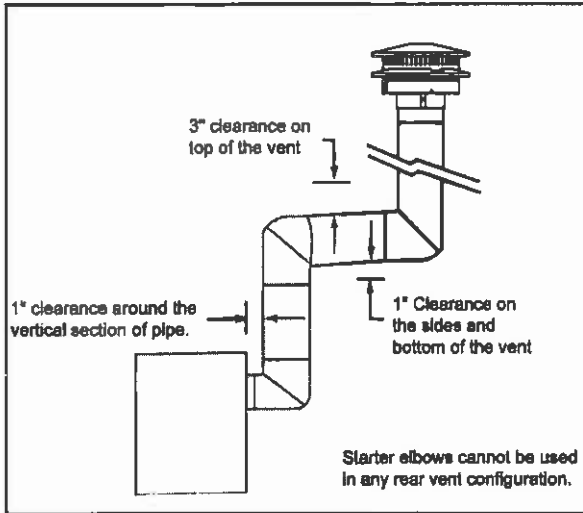


Figure 24 - Vertical Termination Clearances

WARNING!
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' 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.

b. Vent Lengths

Various venting configurations are shown in Figure 25 from which maximum vent runs can be determined.

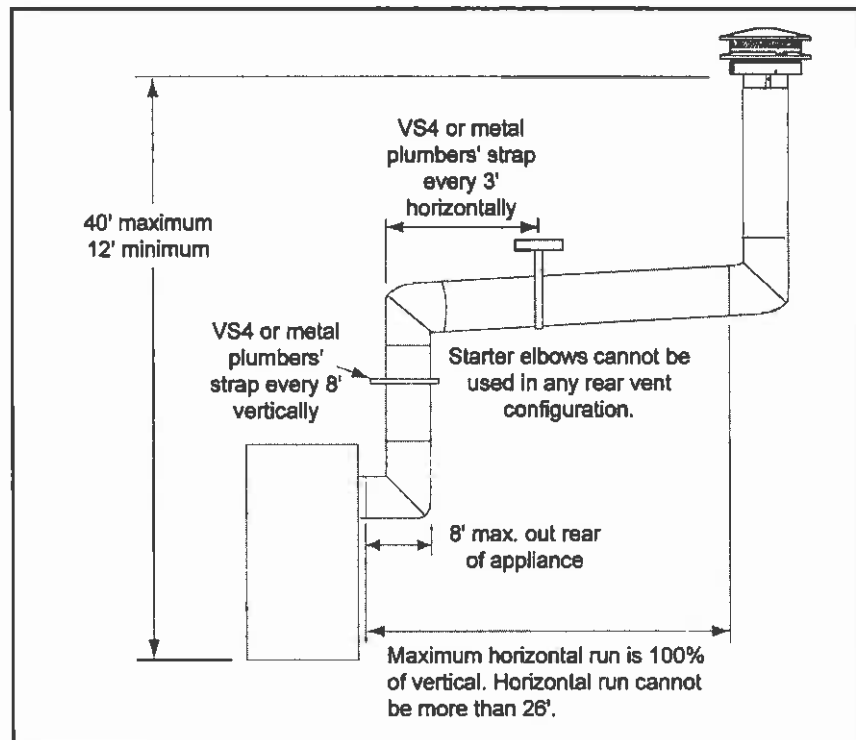


Figure 25 - Vertical Termination Vent Lengths

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2. TOP VENT

a. Clearances

See Figure 26 for clearance information.

b. Vent Lengths

Various venting configurations are shown in Figures 27 and 28 from which maximum vent runs can be determined.

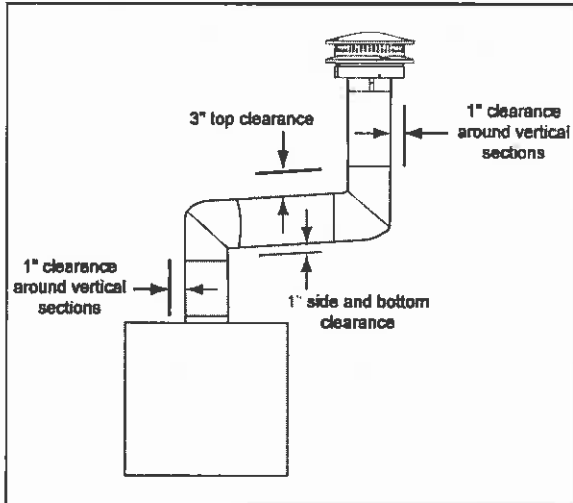


Figure 26 - Vertical Termination Clearances

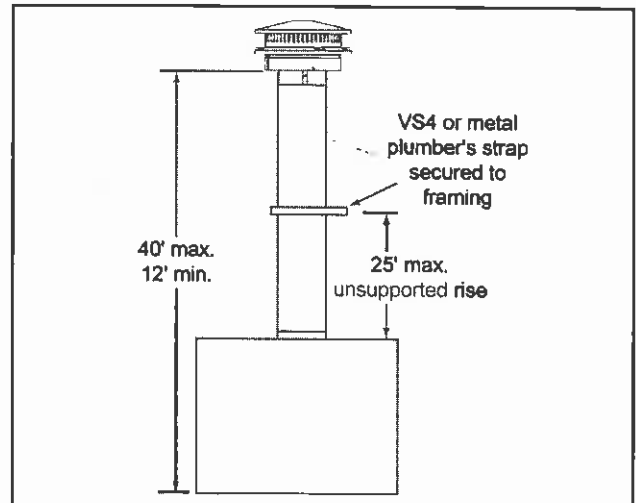


Figure 27 - Vertical Termination Vent Lengths

WARNING!

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

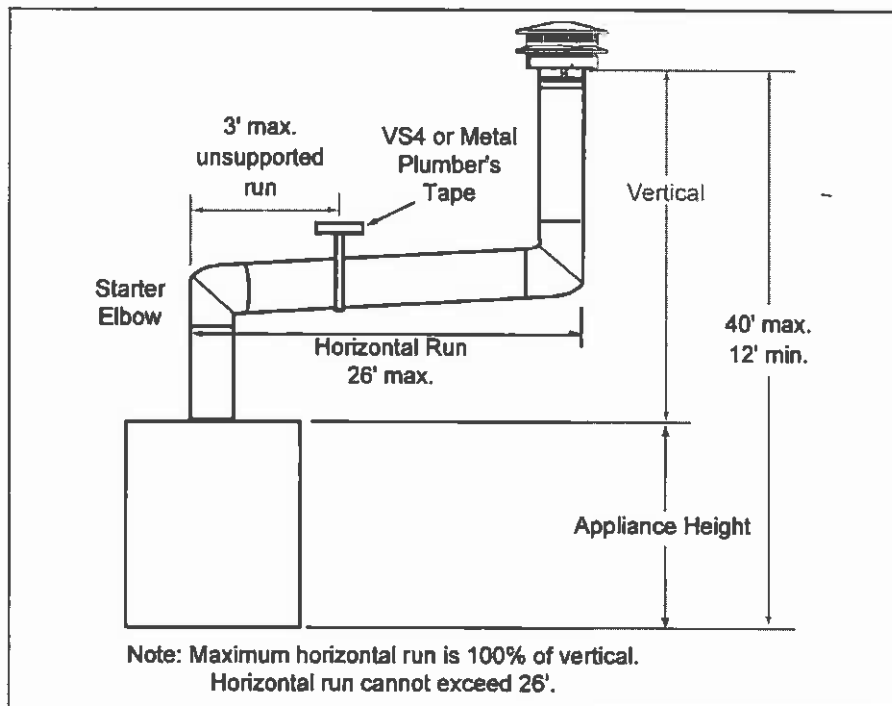


Figure 28 - Vertical Termination Vent Lengths

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H. VENTING - FRAMING & CONSTRUCTION

1. INSTALLING THE INTERIOR WALL SHIELD

Frame a hole in a combustible wall for an interior wall shield, as shown in Figure 29 (rear vent) and Figure 30 (top vent) whenever a wall is penetrated. This shield maintains minimum clearances and prevents cold air infiltration.

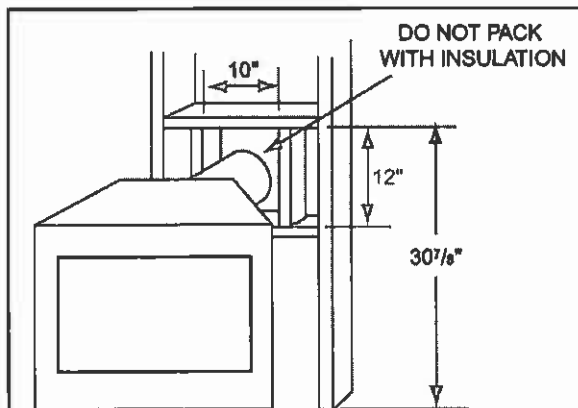
The termination cap location must meet all local and national codes and not be easily blocked or obstructed. See "Termination Cap Location."

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

Secure the shield to the framing as shown in Figure 31.

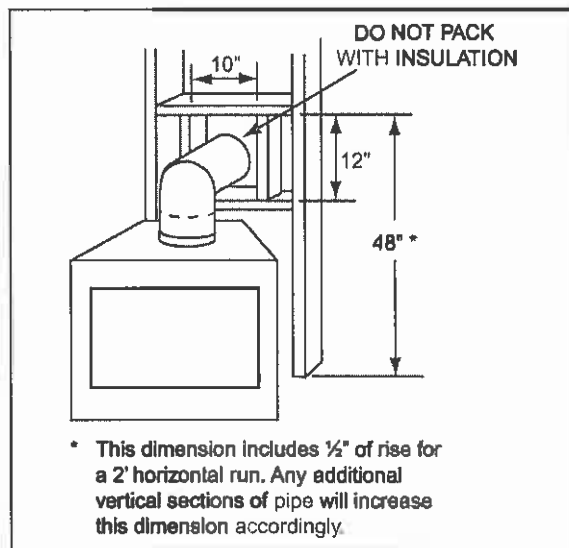
The last section of vent may require cutting, depending upon the wall thickness and appliance location. The cap should overlap the vent sections by at least 1 1/2". See Figure 32.

Note: If cutting is necessary, you must use DVP12MI and DVP24MI pipe.



* This dimension includes 3/8" of rise for 18" of horizontal run. Any additional vertical sections of pipe will increase this dimension accordingly.

Figure 29 - Exterior Wall Hole - Rear Vent



* This dimension includes 1/2" of rise for a 2' horizontal run. Any additional vertical sections of pipe will increase this dimension accordingly.

Figure 30 - Exterior Wall Hole - Top Vent

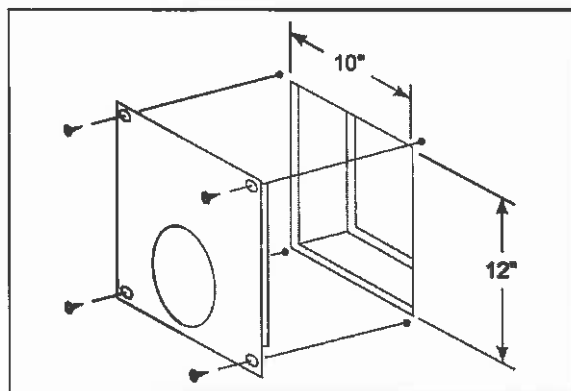


Figure 31 - Interior Wall Shield

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

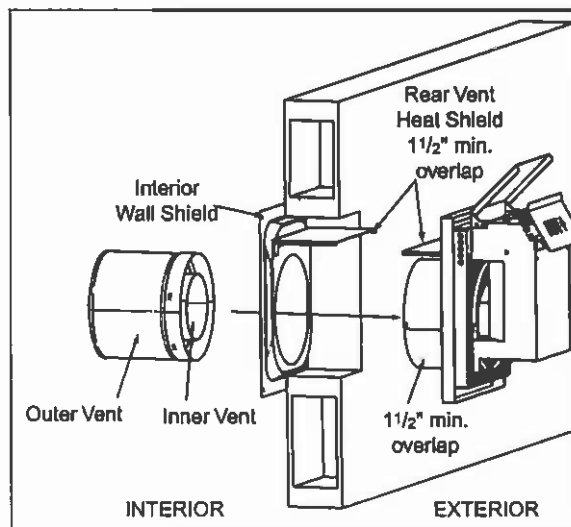


Figure 32 - Venting Through the Wall

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2. 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 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 33. This heat shield is not necessary on top vented appliances.

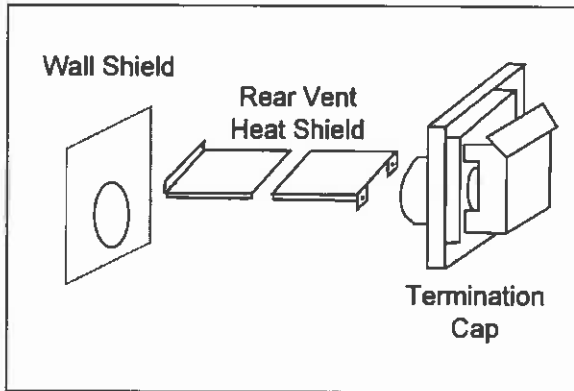


Figure 33
Rear Vent Heat Shield

WARNING! - RISK OF FIRE
Be sure there won't be any future obstructions from trees, bushes, snow drifts, etc.

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

3. 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 32. Cap pipe sections should overlap the vent pipe by 1/2". Caulk the outside edges of the cap.

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

Figure 22 illustrates cap locations prescribed by current **Z223.1** and **CAN/CGA-B149** installation codes.

4. FIRESTOP SPACER/VENT INSTALLATION

Frame an opening and install a firestop spacer (FS6) whenever the vent penetrates a ceiling/floor area, as shown in Figure 34. Frame the opening with the same sized lumber as used in the ceiling/floor joists. **When installing a top vent, vertical appliance, the hole should be directly above the appliance, unless the flue is offset. DO NOT** pack insulation around the vent.

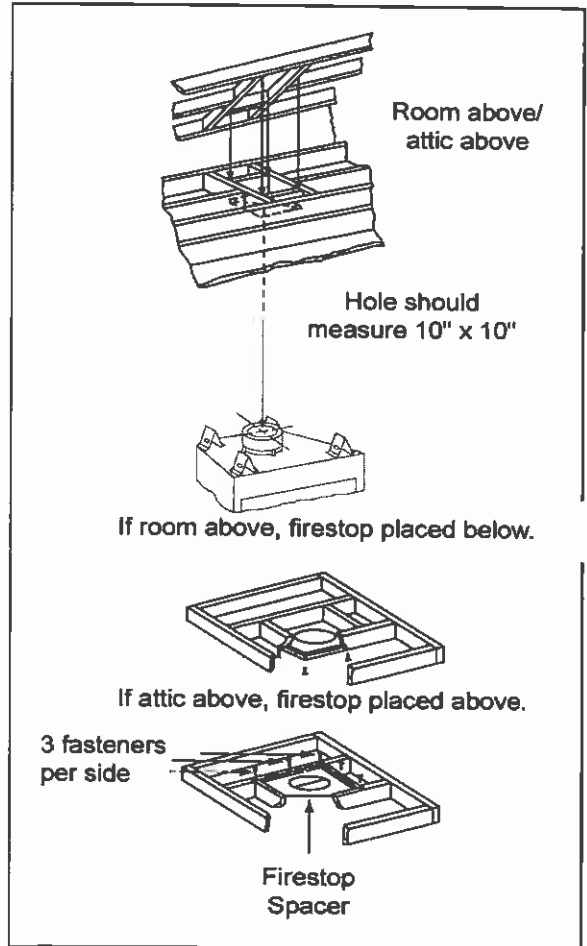


Figure 34 - Installing the Firestop Spacer

5. CHASE/TERMINATION INSTALLATION

Figure 35 and Table 1 specifies minimum vent heights for various pitched roofs. Vent sections may have to be cut to a certain length.

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. See Figure 36 for multiple vertical terminations.

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INSTALLING THE VERTICAL TERMINATION CAP

To install the vertical termination cap, simply slide the inner collar of the cap over the inner vent and place the outer collar of the cap over the outer vent. Secure with three screws into the outer vent.

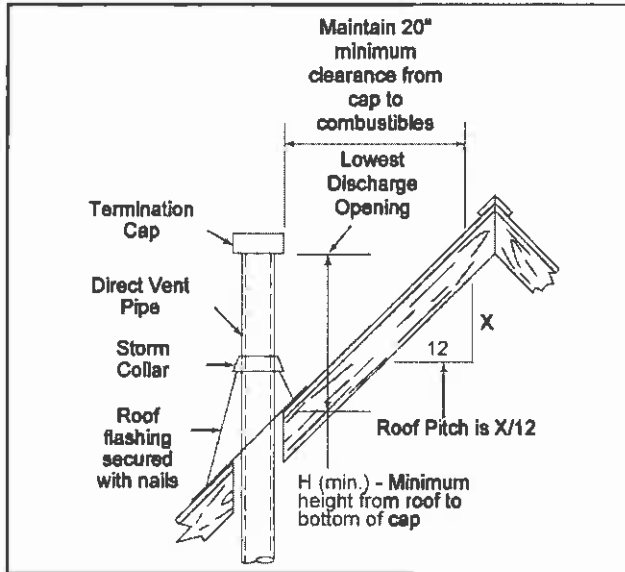


Figure 35 - Chimney Height for Vertical Termination

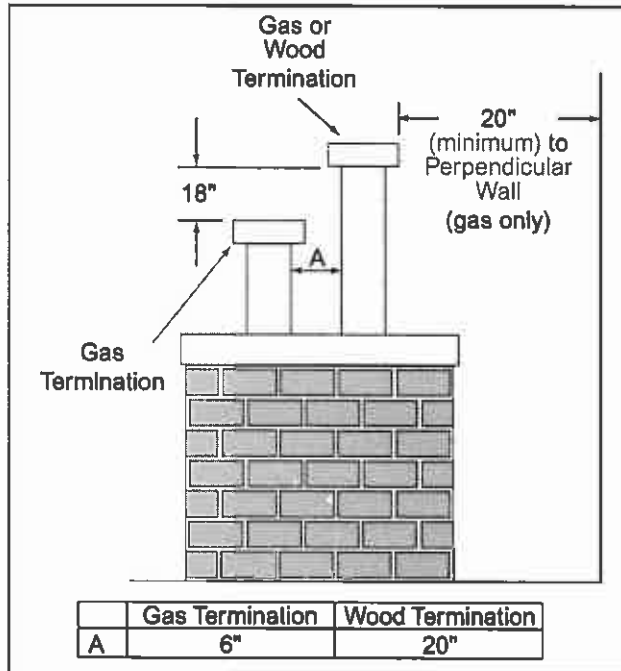


Figure 36 - Multiple Vertical Termination

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

I. VENT ASSEMBLY

1. ATTACHING THE VENTING TO THE APPLIANCE

To attach the first DVP section to the appliance collars, simply slide the flared end of the inner flue of the DVP 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.

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

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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 37.
- 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 38.

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

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 39. 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.

4. ASSEMBLING THE SLIP SECTIONS

Slip sections should be snapped into the first mating piece, then expanded to their desired length, making sure that a 1½" 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 vent. See Figure 40. 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.

5. DISASSEMBLING VENT SECTIONS (only if necessary)

To disassemble any two pieces of pipe, rotate either section so that the seams on both pipe sections are aligned as shown in Figure 41. They can then be carefully pulled apart.

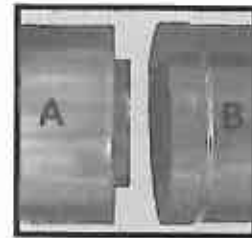


Figure 37



Figure 38

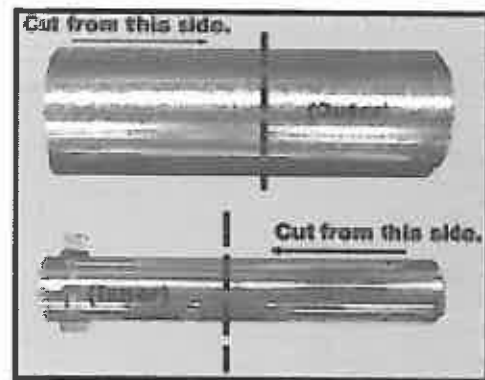


Figure 39



Figure 40



Figure 41