



heatilator®

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Hearth & Home Technologies-Mt. Pleasant
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INSTALLATION & OPERATING INSTRUCTIONS

CALIBER B-VENT SERIES GCBC60/80

DECORATIVE GAS APPLIANCE

FOR RESIDENTIAL USE



WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other gas appliance.
- What to do if you smell gas
 - Do not try to light any appliance.
 - Do not touch any electrical 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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING!

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

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WARNING!

DO NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

SAFETY PRECAUTIONS

1. Please read these installation instructions completely before beginning installation procedures. Failure to follow them could cause an appliance malfunction resulting in serious injury and/or property damage.
2. Always check your local building codes prior to installation. This installation must comply with all local, regional, state and national codes and regulations.
3. Installation and repair should be done by a qualified service person. This appliance should also be inspected annually by a qualified service person. More frequent inspections/cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that the control compartment, burners and circulating air passageways of the appliance be kept clean.
4. This is a vented decorative gas appliance. Do not burn wood or other material in this appliance.
5. NEVER leave children unattended when there is a fire burning in the appliance.
6. This appliance may only use the approved venting systems shown in these installation instructions. Venting must not be connected to chimney flue servicing a solid fuel burning appliance or a gas fuel burning appliance.
7. NEVER use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids in this appliance. Keep any flammable liquids a safe distance from the appliance.
8. While servicing this appliance, always shut off all electricity and gas to the appliance. This will prevent possible electrical shock or burns. Also, make sure the appliance is completely cooled before servicing.
9. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.
10. Be sure to provide adequate clearances around the air openings into the combustion chamber and adequate accessibility clearances for servicing and proper operation.

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Design and Installation Considerations for B-Vents

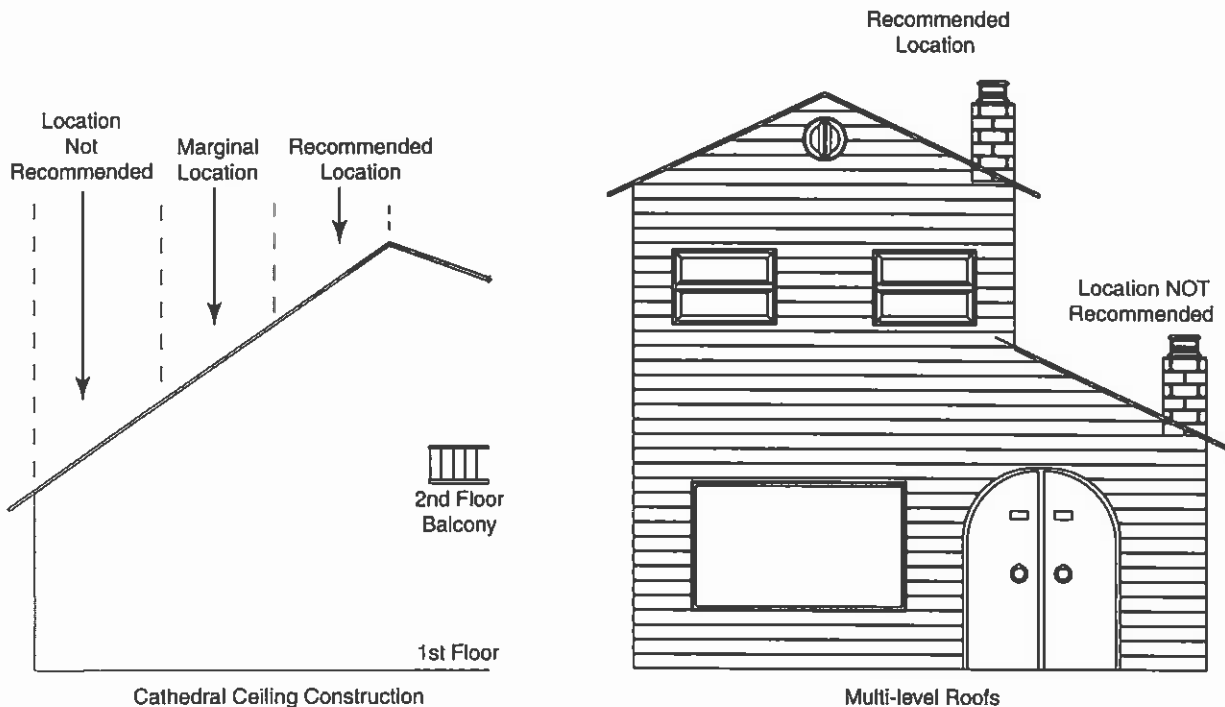
When selecting a location for your B-Vent appliance, it is important to evaluate a number of considerations. Modern construction techniques can create conditions that may not allow your vent to draft properly. This may result in spillage from your B-Vent appliance, as well as cause other combustion appliances to operate incorrectly.

Tightly sealed construction is important for energy efficiency. Unfortunately, a great deal of effort has been directed to tightening up sidewall construction, while considerably less attention has been paid to tightening upper portions of the warm air envelope (insulated ceilings). This has increased the "Stack Effect", a condition that increases the negative pressure generated by the structure. This negative pressure will directly affect the drafting performance of a B-Vent appliance vent. To minimize the negative pressure generated by stack effect, make certain that all ductwork installed in the attic spaces is sealed airtight. Minimize the number of recessed light fixtures installed in the insulated ceiling and use sealed recessed light fixtures. Finally, make certain the whole house fans and attic access panels are tightly sealed. These are important design considerations that must be observed during the design and construction stage of the home.

If you desire to put an appliance in your basement, we recommend that you consider a direct vent gas appliance. Basements always have a significant negative air pressure that causes the B-Vent system to be more susceptible to spillage and cold flue backdrafting. Since direct vent gas appliances are sealed, they are not affected by the negative pressure that exists in basements.

Finally, a B-Vent appliance performs best when the vent (roof termination) is located on the upper half of the roof, especially when cathedral ceilings are present. Vents that are located on the lower half of the roof realize what is known as "lazy flue" and will not draft as well as a vent that is located in the upper portion of the roof. The reason for this is that the stack effect generated by the overall height of the living spaces inside the house will exceed the draft generated by the vent system. If you desire to place an appliance in a location where the termination cap would be located on the lower half of a roof, such as on an outside wall at the base of a cathedral ceiling, we recommend that you consider using a direct vent gas appliance. This will ensure an appliance that operates correctly.

These properties do not affect just your B-Vent appliance. They can cause any woodburning fireplace as well as any conventionally vented (B-Vent) gas appliance to operate improperly. Careful planning at this stage of your project will ensure satisfaction with the operation of your appliance once it is completed.



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A. APPLIANCE SPECIFICATIONS

1. U.S. AND CANADA CERTIFICATION

The Caliber Series Gas Appliance has been tested in accordance with the ANSI standard Z21.50-1998 (Decorative). In Canada, the current CAN/CGA 2.22-M98, IR41, P4, and IR55 and has been listed by Underwriters Laboratories Inc. for installation as described in this manual. All components are UL, AGA, CGA, or CSA safety certified.

2. LOCAL CODES

This installation must conform with local codes. In the absence of local codes comply with the National Fuel Gas Code ANSI Z223.1-latest edition in the U.S.A., and the CAN/CGA B149, Installation Codes in Canada.

For assistance during installation contact your local dealer or contact Heatilator Technical Services Department, Hearth & Home Technologies, 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641, 1-800-843-2848.

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3. GLASS SPECIFICATIONS/CERTIFICATIONS

Heatilator gas appliances manufactured with tempered glass may be installed in hazardous locations such as bathtub enclosures as defined by the CPSC. The tempered glass has been tested and certified to the requirements of ANSI Z97.1-1984 and CPSC 16 CFR 1202. (Safety Glazing Certification Council SGCC# 1595 and 1597. Architectural Testing, Inc. Reports 02-31919.01 and 02-31917.01.)

This statement is in compliance with SPCS 16 CFR Section 1201.5 "Certification and labeling requirements" which refers to 15 USC 2063 stating "...Such certificate shall accompany the product or shall otherwise be furnished to any distributor or retailer to whom the product is delivered."

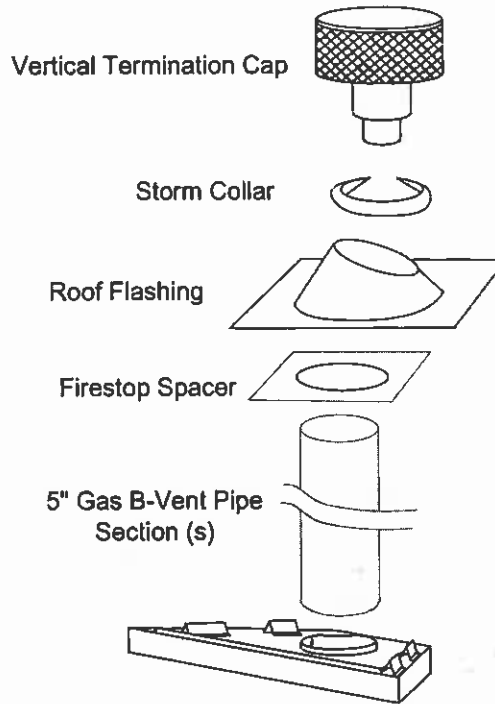
Some local building codes require the use of tempered glass with permanent marking in such locations. Glass meeting this requirement is available from the factory. Please contact your dealer or distributor to order.

We strongly recommend that you DO NOT install B-Vent Gas Appliances in strong negative air locations, such as a basement or a public facility. Living rooms with cathedral ceilings could be susceptible to a negative air situation, but such installations can be overcome through raising the termination, depending on specific installations. This appliance uses room air for normal operation and could have problems establishing a positive draft in a negative air location. In lieu, we recommend a Direct Vent Gas Appliance.

CALIBER NOMENCLATURE

Catalog #	Description
GCBC60LE	Appliance Order Code Number
GC	Gas Caliber
B	B-Vent
C	Circulating
60	60 = 36" Appliance 80 = 42" Appliance
LE	No suffix - Standing Pilot, Natural Gas L = Standing Pilot, Propane Gas E = Electronic Ignition, Natural Gas LE = Electronic Ignition, Propane Gas
GCBC60LE	Appliance Order Code Number with Upgrade Code Number
R	Refractory Upgrade
F	Fan Kit Upgrade
GCBC60LERF	EXAMPLE Gas CALIBER, B-Vent, Heat Circulating, 36", Propane Gas, Electronic Ignition appliance with Refractory and Fan Kit Upgrades

TYPICAL VERTICAL INSTALLATIONS



Tools and building supplies normally required for installation:

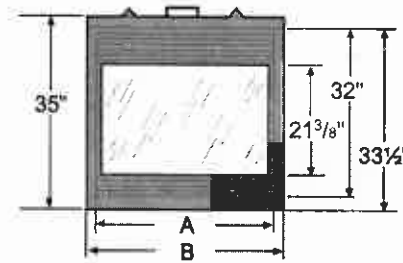
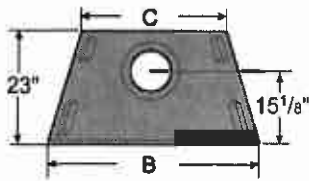
- | | |
|----------------------|--------------------------|
| Saw | Wall-finishing materials |
| Pliers | Framing material |
| Hammer | Surround |
| Phillips screwdriver | Caulking material |
| Tape measure | Gloves |
| Plumb line | Framing square |
| Level | Electric drill/bits |

Note: Minimum and maximum clearances must be maintained at all times. Illustrations throughout these instructions reflect typical installations and are for design purposes only. Actual installation may vary slightly due to individual design preferences.

The illustrations and diagrams used throughout these installation instructions are not drawn to scale.

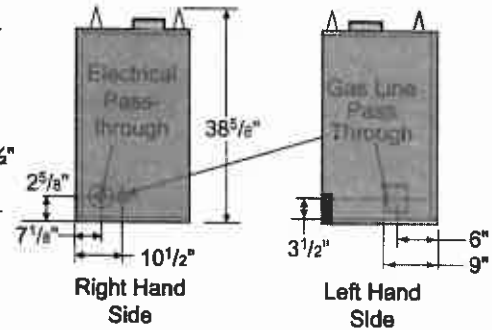
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B. LOCATION AND CLEARANCES



Model	A	B	C
36" Series	36"	41"	24 1/2"
42" Series	42"	47"	30 1/2"

Dimensions



WARNING!

Due to high temperatures, the gas appliance should be located out of traffic and away from furniture and draperies.

1. APPLIANCE LOCATIONS AND SPACE REQUIREMENTS

Figure 1 illustrates a variety of ways the appliance may be located in a room. The CALIBER Series may be installed directly on the floor or raised on a hearth. These appliances are certified for installation in a bedroom or bed/sitting room in the U.S. and Canada, provided that the bedroom or bed/sitting room has a volume of at least 1600 cubic feet for the GCBC60 Series or 1750 cubic feet for the GCBC80 Series.

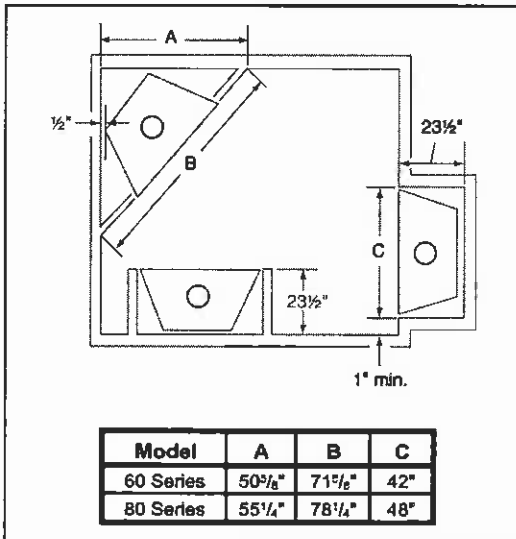


Figure 1 - Appliance Locations

2. CLEARANCES

Figure 2 shows all clearances that must be maintained around the appliance.

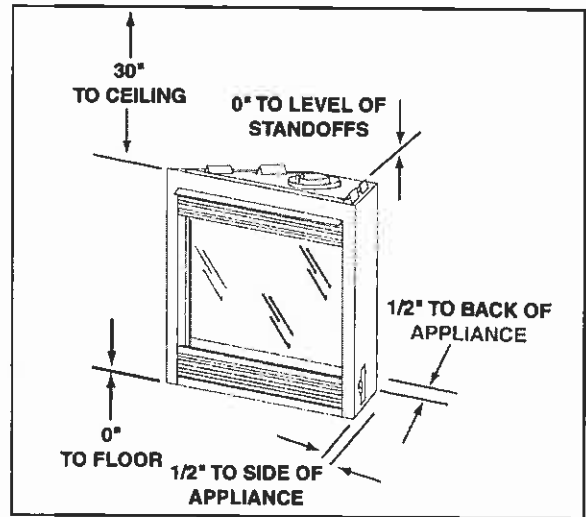


Figure 2
Appliance Clearances to Combustible Materials

CAUTION:

Do not expose the appliance to the elements (such as rain, etc.).

C. FRAMING

Figure 3 shows typical framing of this appliance using combustible materials. Figure 4 shows the minimum mantel heights. All required clearances to combustibles must be adhered to.

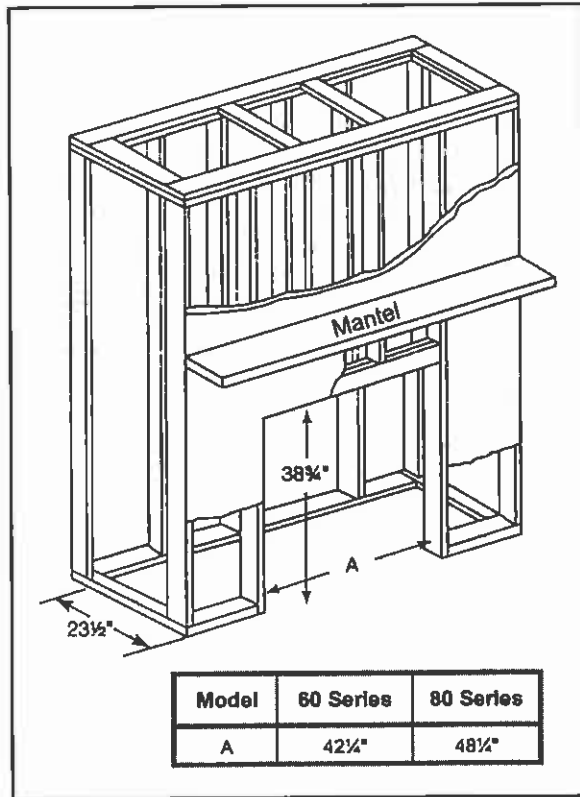


Figure 3
Framing

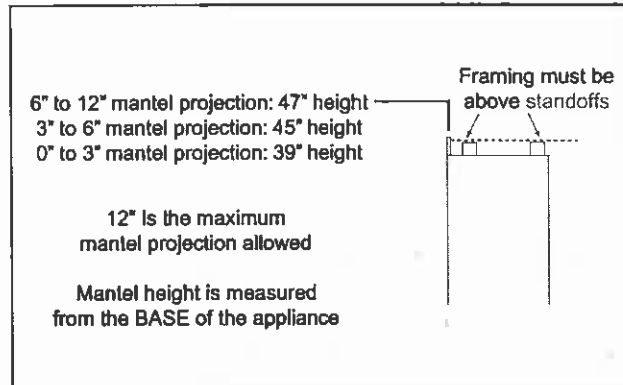


Figure 4 - Mantel Heights

CAUTION:
 Wear gloves and safety glasses for protection.

CAUTION:
 Provide adequate clearances around the air openings into the combustion chamber and adequate accessibility clearances for servicing and proper operation.

WARNING!
 To prevent contact with sagging or loose insulation, the appliance must not be installed against vapor barriers or exposed insulation. Localized overheating could occur and a fire could result.

D. SETTING THE APPLIANCE

This appliance may be placed on a smooth combustible or noncombustible continuous, flat surface. When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance. Slide the appliance into position and level it from side-to-side

and front-to-back. Shim with noncombustible material as necessary.

Secure the appliance by bending out the nailing flanges on each side of the appliance and nail to framing. The nailing flanges have been positioned 5/8" back from the front of the appliance to allow the addition of drywall.

WARNING!
 This gas appliance may only use an approved B-Vent chimney system. It must not be connected to a chimney flue servicing a separate solid fuel or gas fuel burning appliance.

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E. VENTING

Note: This appliance requires a 5 inch B-Vent for operation. Never down size pipe.

1. CLEARANCES

Vent clearances are per vent manufacturer's specifications.

2. VENT LENGTHS

Various venting configurations are shown in Figures 5 and 6 from which maximum vent runs can be determined.

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 present a fire hazard.

a. No Elbows

See Figure 5.

b. Elbows

You may have a 90° elbow directly off the top of the appliance. See National Fuel Gas Code for the maximum number of elbows allowed. Follow the rule of maximum horizontal being 50% of vertical, but not exceeding 20'. See Figure 6.

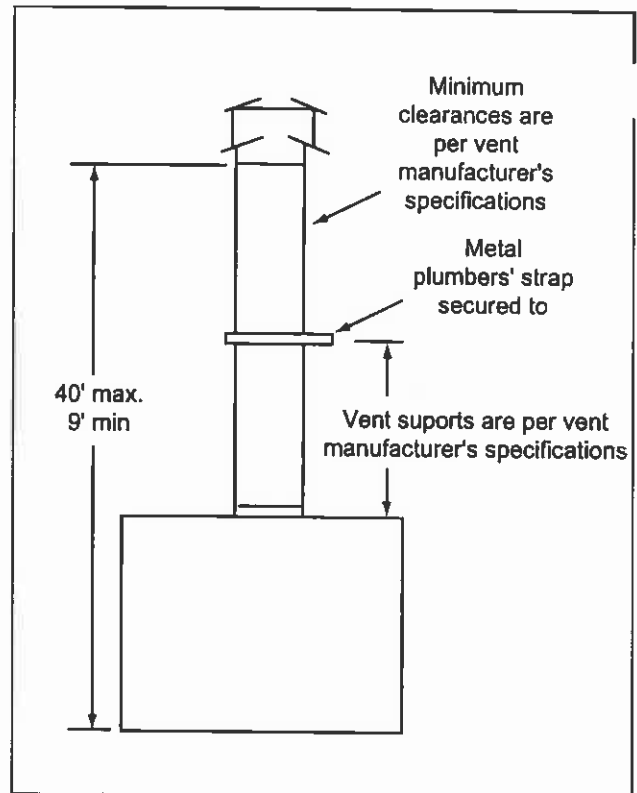


Figure 5
Vertical Termination Clearances

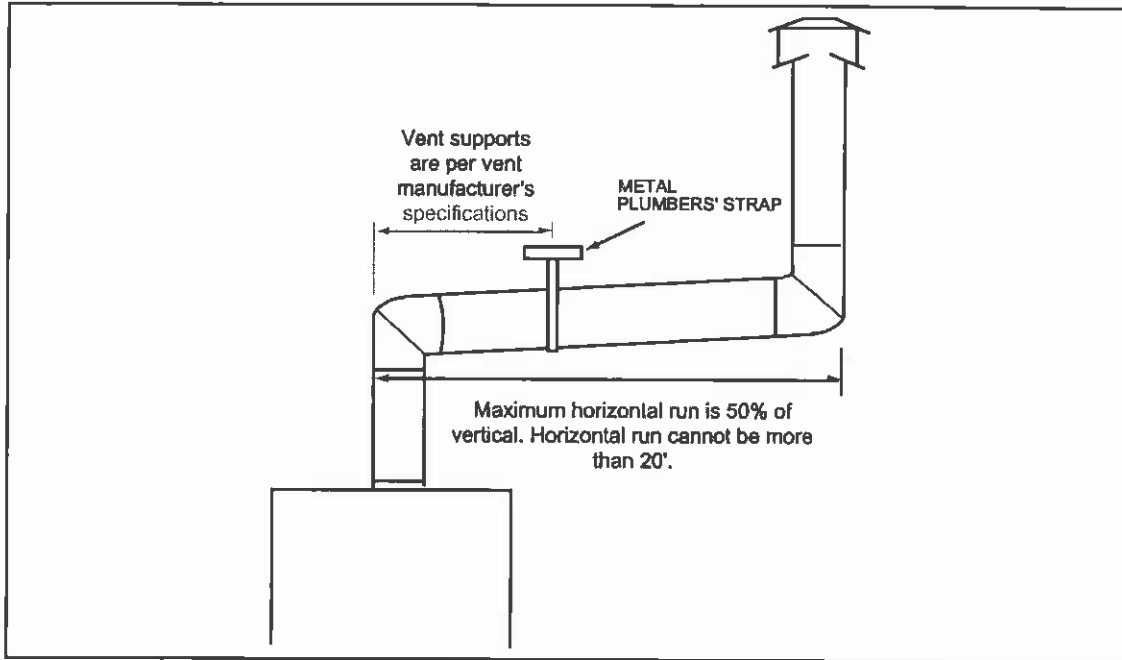


Figure 6
Vertical Termination Vent Lengths

3. FIRESTOP SPACER/VENT INSTALLATION

Frame an opening and install a firestop spacer whenever the vent penetrates a ceiling/floor area, as shown in Figure 7. 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. Assemble vent sections as per manufacturer's specifications.

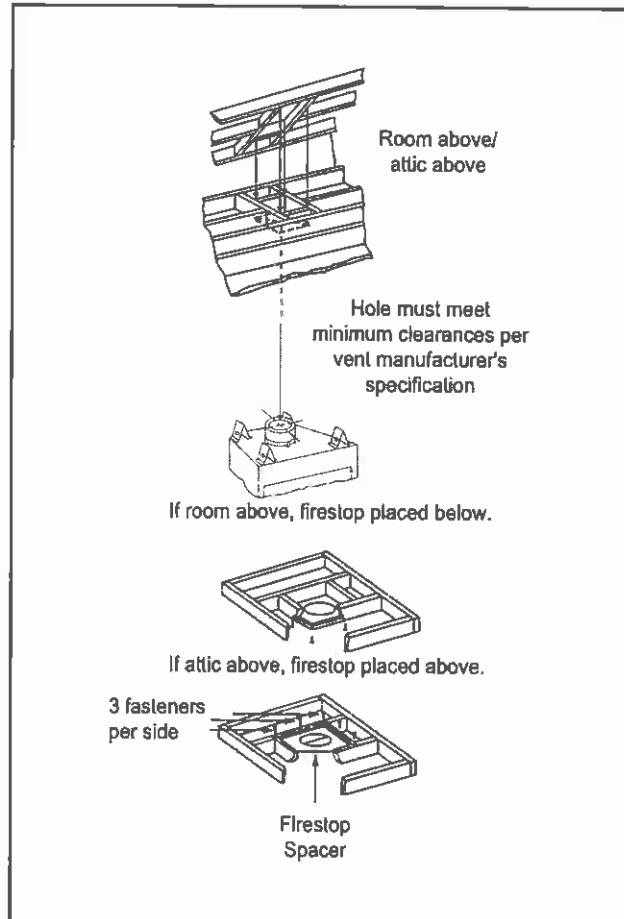


Figure 7
Installing the Firestop Spacer

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4. CHASE/TERMINATION INSTALLATION

Figure 8 and Table 1 specify 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.

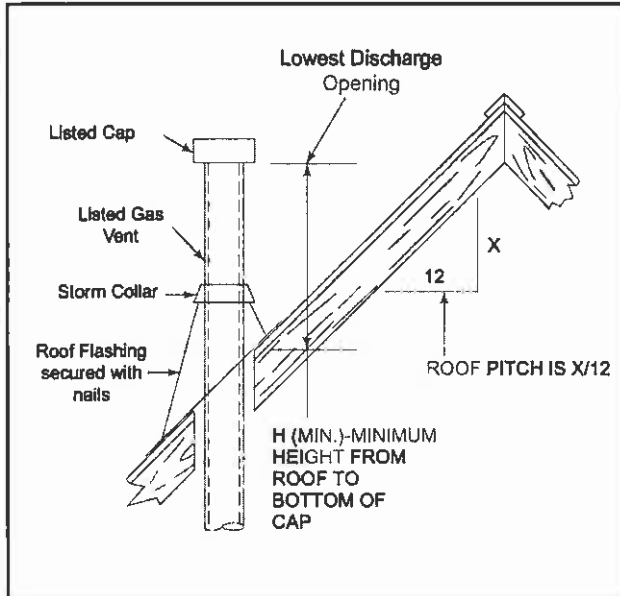


Figure 8
Vent Height for Vertical Termination

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

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

5. CHECK VENTING SYSTEM

Check the venting system to assure proper operation. This can be done with a match while the appliance is operating. See Figure 9.

Hold a lighted match at the bottom edge of the draft hood opening.

- If the flames and smoke remain upright, ventilation is acceptable.
- If the flames and smoke are drawn into the draft hood, this means ventilation is good.
- If the flames and smoke are forced away from the draft hood, this may indicate a ventilation blockage or down draft resulting in gas spillage into the home.

If this occurs, turn off the appliance and do not burn it until it has been inspected by a qualified service person.

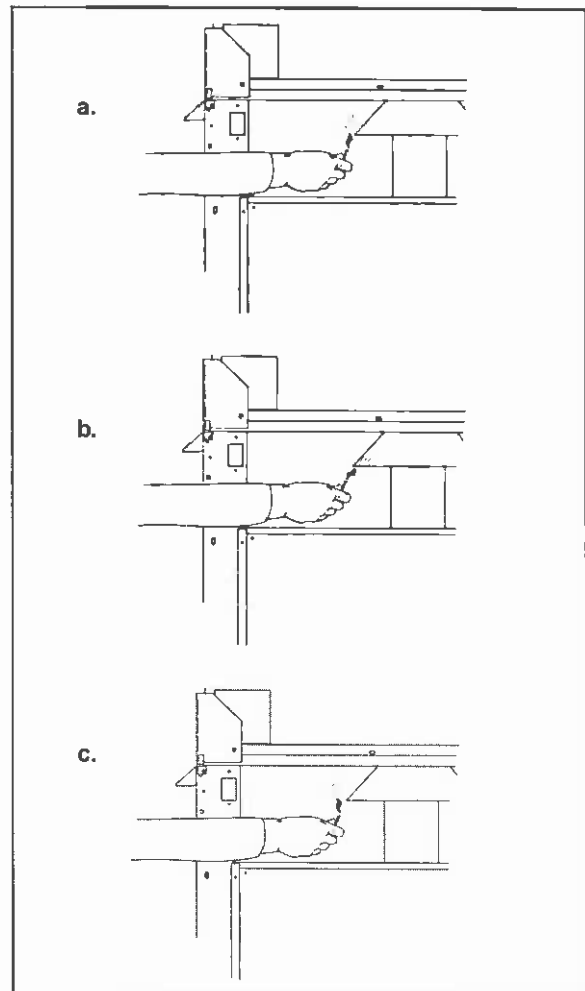


Figure 9
Testing Ventilation

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