



# heatilator®

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Division, HON INDUSTRIES  
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## GENEVA SERIES B-VENT GAS APPLIANCE OWNER'S MANUAL AND INSTALLATION INSTRUCTIONS

MODELS: GGBR60, GGBR60L, GGBR60E, GGBR60LE  
GGBR80, GGBR80L, GGBR80E, GGBR80LE



**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 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.

**CAUTION:**

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

This manual must be used for installation of the Geneva Series Gas Appliance and retained by the homeowner for operation and maintenance instructions.

**WARNING!**

Installation and service must be performed by a qualified installer, service agency or the gas supplier. 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.

Please retain this manual for future use.

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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 a malfunction resulting in serious injury and/or property damage.
2. 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 material, etc. It is imperative that the control compartment and burners of the appliance be kept clean.
3. The GENEVA is a vented gas appliance. Do not burn wood or other material in this appliance.
4. NEVER leave children unattended when there is a fire burning in the fireplace.
5. This appliance must be vented with a minimum 6" B-Vent system and must terminate above the roof line. Venting **must not be connected** to a chimney flue servicing a solid fuel burning appliance.
6. Use only the fuel gas specified on the rating label of this gas appliance.
7. The appliance area shall be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.
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 fireplace 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.
11. Provisions shall be made to provide adequate combustion and ventilation air. The flow of combustion and ventilation air should not be obstructed.

## DESIGN AND INSTALLATION CONSIDERATIONS

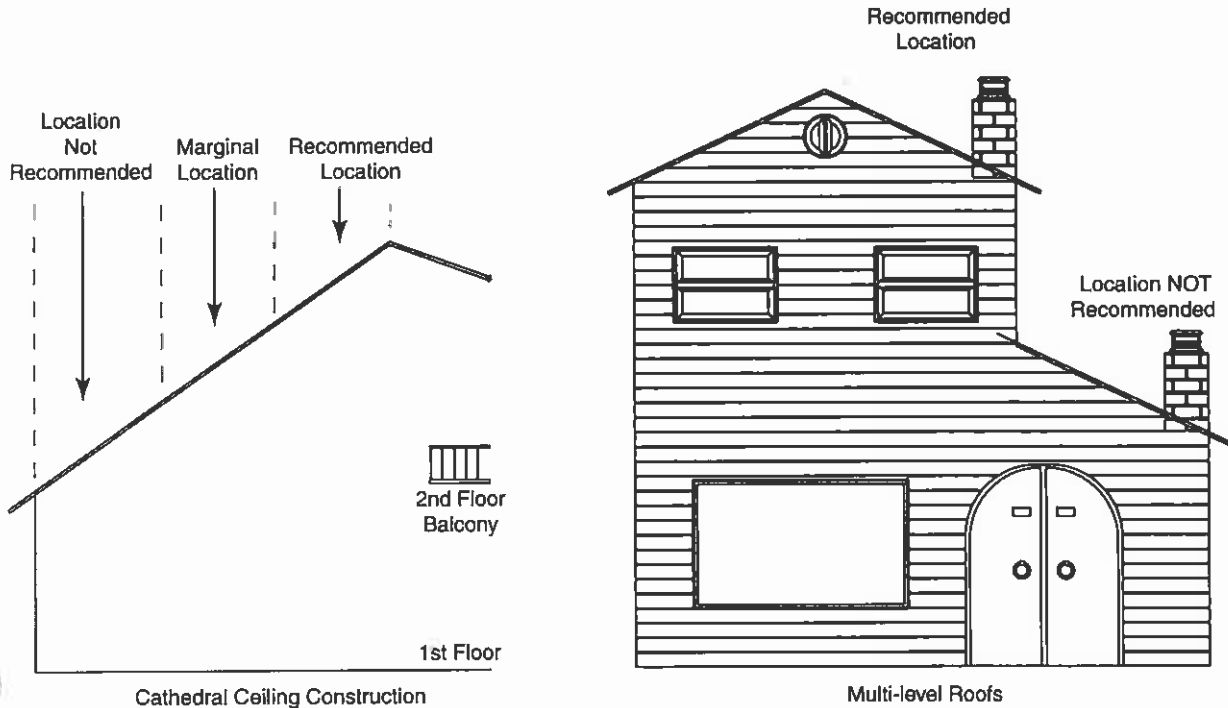
When selecting a location for your B-Vent appliance, it is important to evaluate a number of considerations. Modern construction techniques can create conditions that may not allow your vent to draft properly. This may result in spillage from your B-Vent appliance, as well as cause other combustion appliances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

### U.S. AND CANADA CERTIFICATION

The Geneva Series gas appliances have been tested in accordance with the standards ANSI Z21.50-1998, CGA 2.22-M98, IR41, P4, and IR55 and have been listed by Underwriters Laboratories Inc. for installation and operation as described in this manual. All components are UL, AGA, CGA, or CSA safety certified.

### 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.

If you need assistance during installation, please contact your local dealer or Heatilator Technical Services Department, Hearth Technologies Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641.

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#### **WARNING!**

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

#### **CAUTION:**

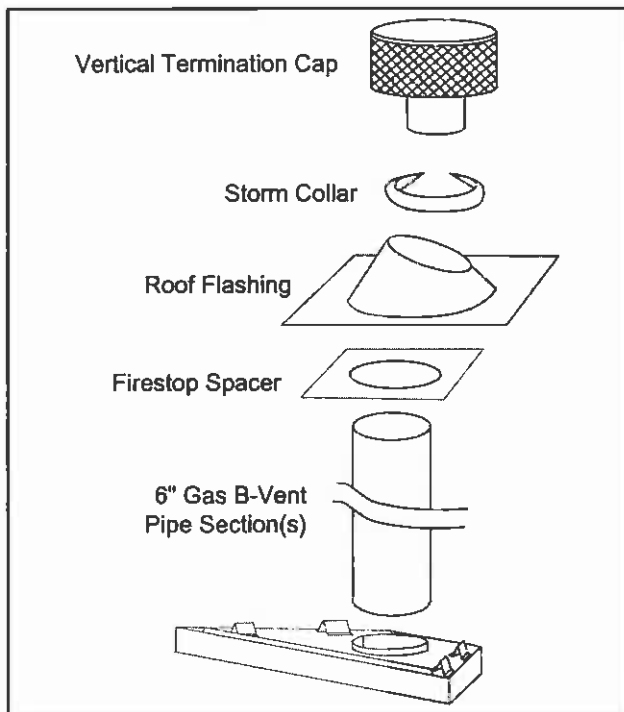
Do not expose the appliance to the elements (such as rain, etc.).

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.

**GENEVA Nomenclature**

Catalog #	Description
GG	Gas Geneva
B	B-Vent
R	Radiant
60	60 = 36" Appliance 80 = 42" Appliance
LE	No suffix - Natural Gas, Standing Pilot L = Propane Gas, Standing Pilot E = Natural Gas, Electronic Ignition LE = Propane Gas, Electronic Ignition
GGBR60LER	Appliance Order Code Number with Upgrade Code Number
R	Refractory Upgrade
<b>Example:</b>	
GGBR60LER	Gas Geneva B-Vent, Radiant, 36", Propane Gas, Electronic Ignition Appliance with Refractory

**TYPICAL INSTALLATION COMPONENTS**



**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.

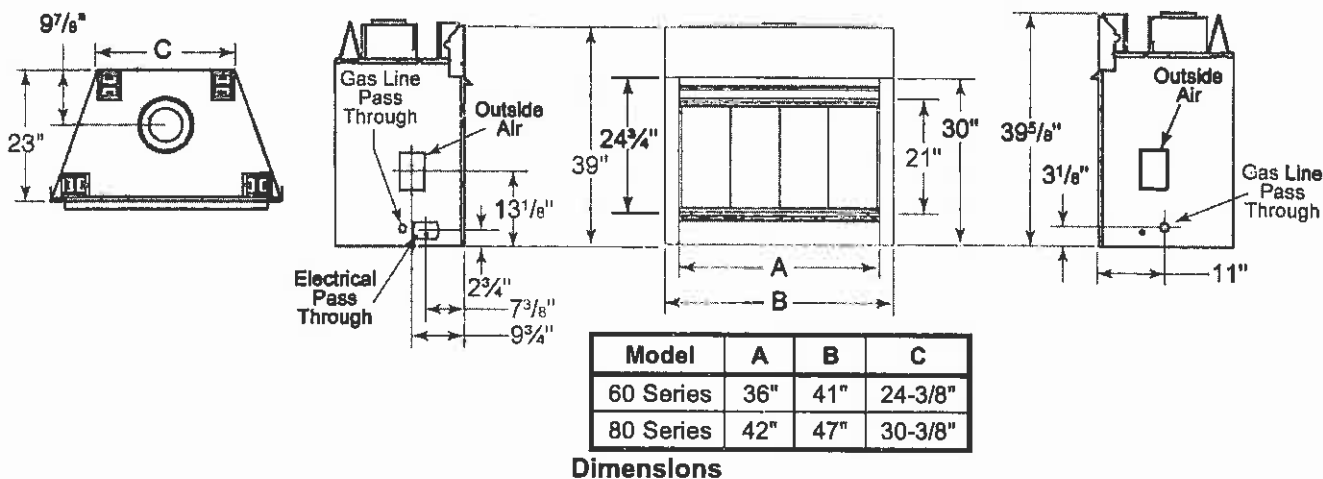
The illustrations and diagrams used throughout these installation instructions are not drawn to scale.

**Tools and building supplies normally required for installation:**

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

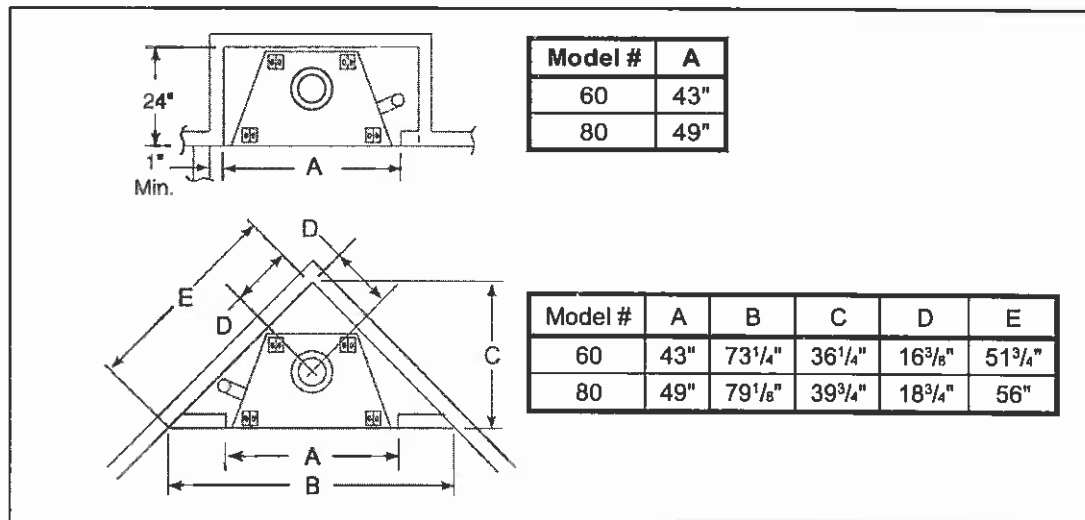
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**B. LOCATION AND CLEARANCES**



**1. APPLIANCE LOCATIONS AND SPACE REQUIREMENTS**

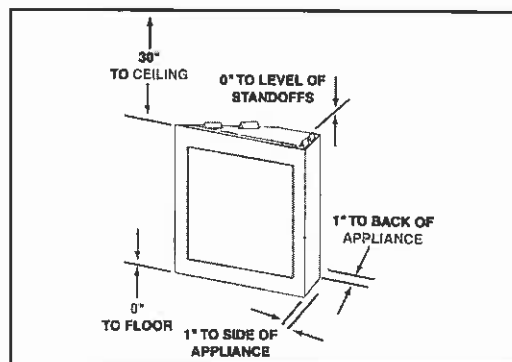
Figure 1 illustrates a variety of ways the appliance may be located in a room. The GENEVA may be installed directly on the floor or raised on a hearth. These appliances are certified for installation in a bedroom or bed/sitting room in the U.S. and Canada, provided that the bedroom or bathroom has a volume of at least 1700 cubic feet for the GGBR60 Series or 1800 cubic feet for the GGBR80 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**

### C. FRAMING

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

	60 Series	80 Series
A	43"	49"

**WARNING!**

To prevent contact with sagging or loose insulation, the appliance must **not** be installed against vapor barriers or exposed insulation.

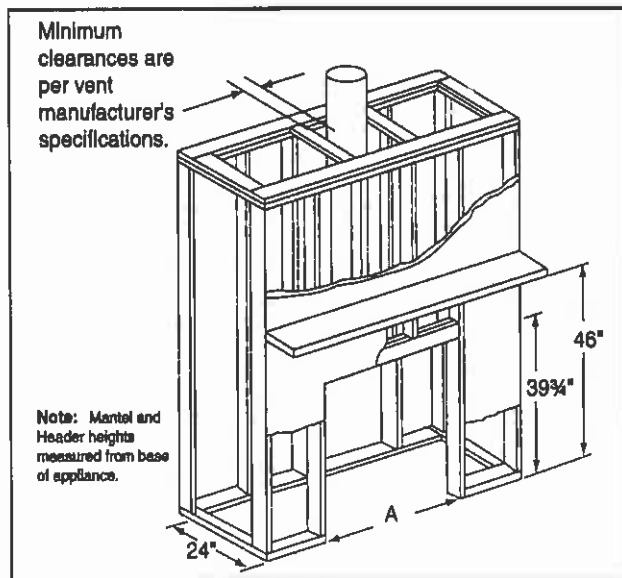


Figure 3 - Framing

#### GGBR60/80 MINIMUM MANTEL HEIGHT

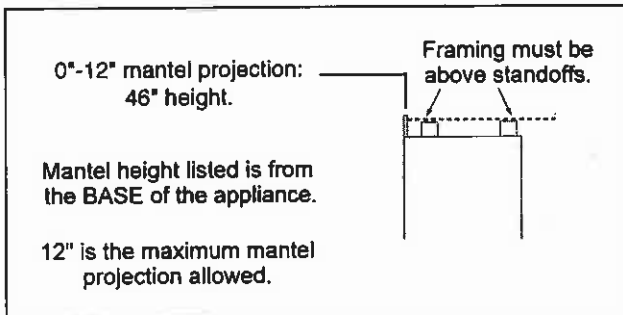


Figure 4  
Mantel Heights

**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.

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## D. SETTING THE APPLIANCE

### POSITIONING 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 a 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 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 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.

## E. VENTING

**Note:** This appliance requires a 6" B-Vent for operation. NEVER DOWNSIZE PIPE.

### 1. CLEARANCES

Vent clearances are per vent manufacturer's specifications.

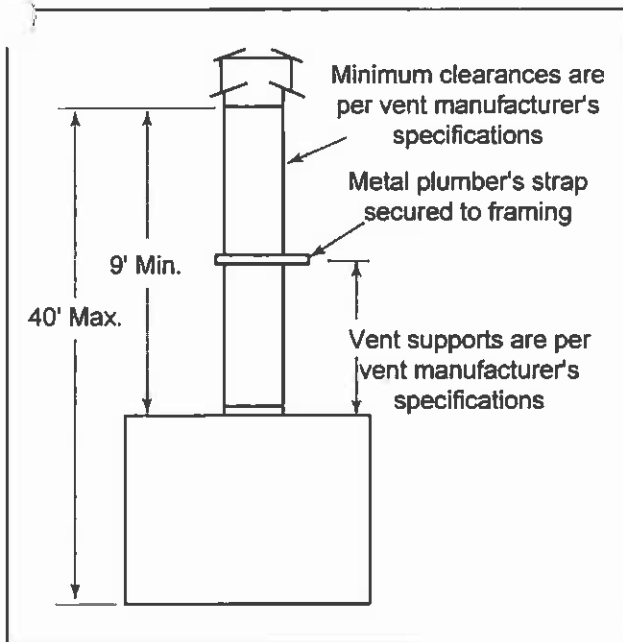
### 2. VENT LENGTHS

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

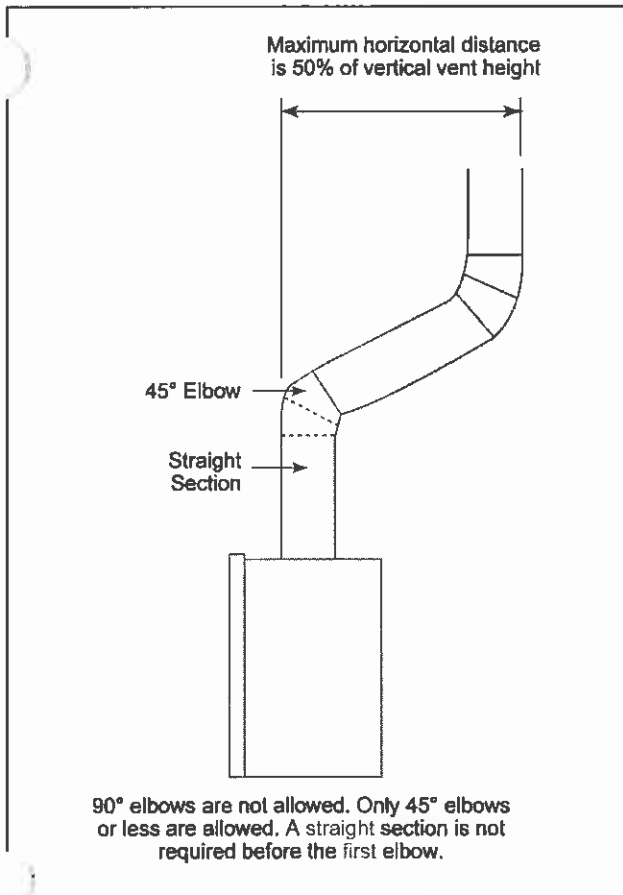
#### WARNING - RISK OF FIRE!

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





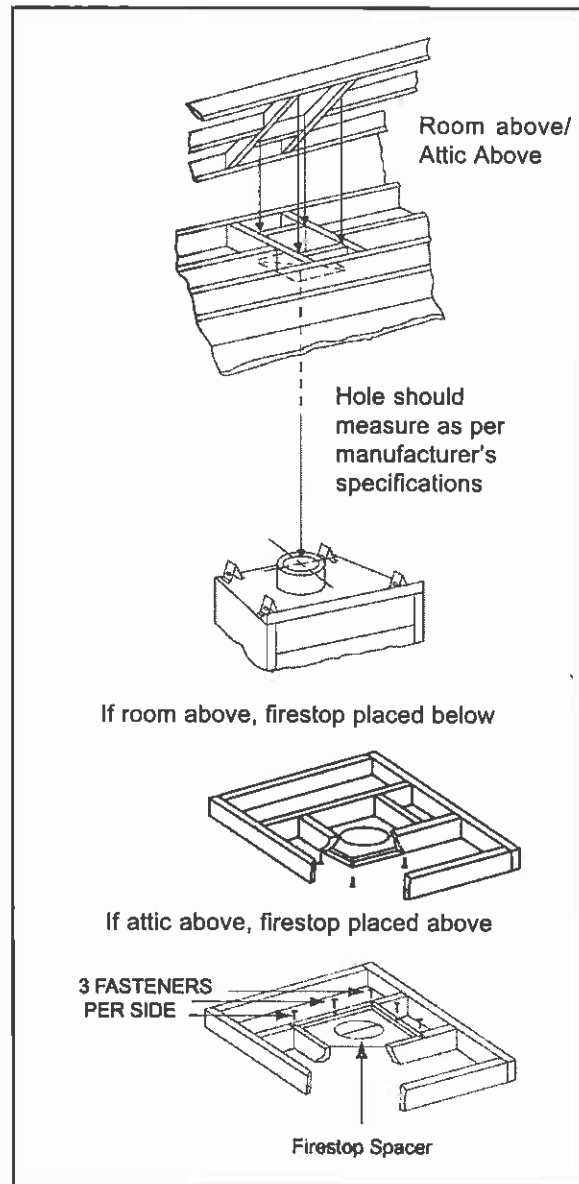
**Figure 5**  
**Top Vent - No Elbows**



**Figure 6**  
**Venting off the Top of the Appliance**

**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.



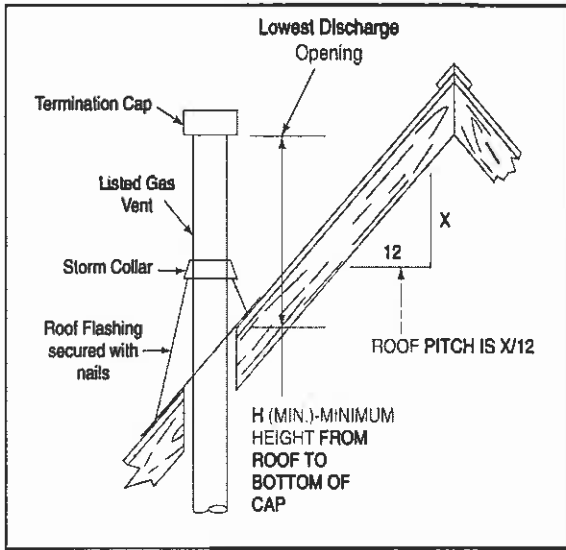
**Figure 7**  
**Installing the Firestop Spacer**

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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**

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

<b>Roof Pitch</b>	<b>H (Min.) Ft.</b>
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

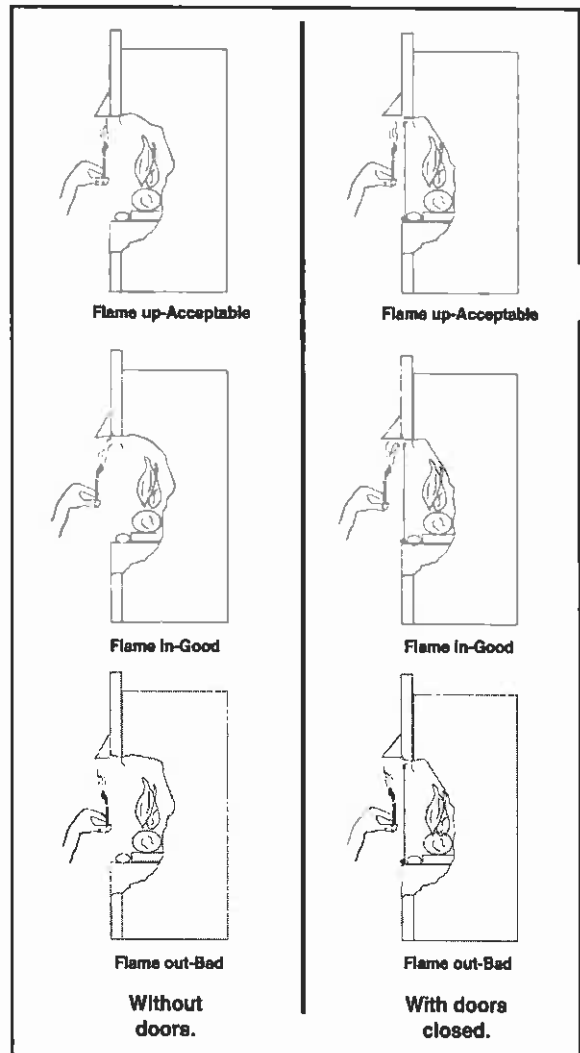
**Table 1**  
**Vent Height**

**5. CHECKING THE VENT SYSTEM**

Test the venting system periodically to assure proper operation. This can be done with a match while the appliance is operating.

Hold a lighted match at the top edge of the appliance opening. If the flames and smoke remain upright, ventilation is acceptable. If the flames and smoke are drawn into the appliance, this means ventilation is good. If the flames and smoke are forced away from the appliance, this may indicate a ventilation blockage or down draft resulting in gas spillage into your home. If this occurs, turn off the appliance and do not burn it until it has been inspected by a qualified service person.

If you have installed optional doors, close the doors and conduct the test following the same instructions above. See Figure 9.



**Figure 9**  
**Testing Ventilation**

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**OUTSIDE AIR KIT INSTALLATION**

An outside air kit is available as an optional feature with this appliance. An outside air kit helps to decrease the amount of room air taken by utilizing outside air for combustion. It is strongly recommended that it be installed.

The outside air kit can be installed on either side of the appliance.

To install the outside air kit, refer to the installation instructions provided with the kit.

**WARNING!**

Exhaust products of gasoline engines are hazardous. The outside air must not be taken from a garage space, attic spaces, basements, or above the roofing where other heating appliances, fans, or chimneys exhaust or utilize air.

**Note:** The outside air kit can terminate at any level with the exception that it must terminate at least one foot below the vent termination cap.

**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.

**2. GAS LINE CONNECTION**

Remove/open the control access panel as shown in Figures 10 and 11. The appliance is provided with a stainless steel flexible connector and manual shutoff valve. The incoming gas line should be piped into the valve compartment and connected to the 1/2" FIP connection provided on the manual shutoff valve. All connections must be tightened and checked for leaks with a soap/water solution or leak detector. Bleed the gas line for about 5 seconds to extract any air that may have been trapped inside the pipe. See Figure 12 to connect the gas line.



Figure 10 - Control Access Panel Removal



Figure 11 - Control Access Panel Removal

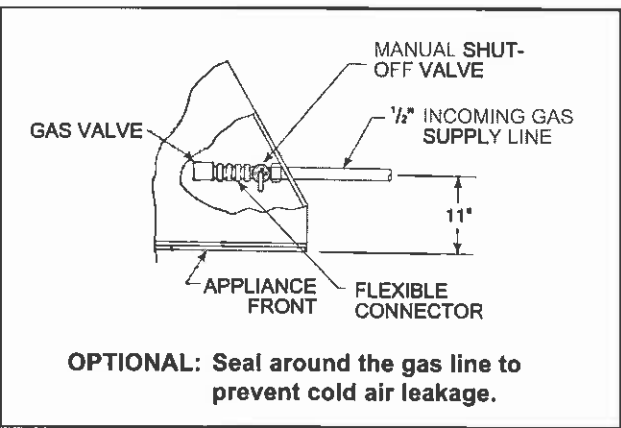


Figure 12 - Gas Line

**Note:** This appliance and its manual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

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**3. GAS PRESSURE**

A pressure tap is included on the front face of the valve for the standing pilot and electronic gas control valve. Pressure taps are immediately upstream of the gas supply connection and accessible for test gauge connection. See Table 2.

**4. GAS CONVERSIONS**

Natural or propane gas conversions necessary to meet the application need to be made by a qualified technician using Hearth Technologies Inc. specified and approved parts. The propane version of the Geneva 60/80 gas appliances use two burner tubes and two different orifices. When converting to natural gas, a blank orifice must be installed in the rear bulkhead and the rear burner tube should be removed from the appliance. See Table 3.

Use Table 4 to determine the conversion kit you will need to convert your appliance.

 **WARNING**

**THIS VALVE HAS BEEN PRESET AT THE FACTORY. ALTERING SETTINGS MAY RESULT IN FIRE HAZARD OR BODILY INJURY.**

Table 2

GENEVA 60 and 80	
Inlet Gas Supply Pressure (NG)	4.5 (min.) - 7.0 (max.) in. w.c.
Optimal Manifold Press (NG)	3.5 in. w.c.
Inlet Gas Supply Pressure (LP)	11.0 (min.) - 14.0 (max.) in. w.c.
Optimum Manifold Pressure (LP)	10 in. w.c.

Table 3

GENEVA	60	80
Input Rate (NG)	34,000 BTU/hr.	36,000 BTU/hr.
Input Rate (LP)	34,000 BTU/hr.	36,000 BTU/hr.
Orifice Size (LP)	.046 (front burner) .052 (rear burner)	.048 (front burner) .052 (rear burner)
Orifice Size (NG)	.115 (front burner) blank orifice (rear burner)	.115 (front burner) blank orifice (rear burner)

Table 4

Model	Convert to LP	Convert to Natural Gas
GGBR60/80	CKGP	
GGBR60/80(L)		CKN
GGBR60/80(E)	DCKGP	
GGBR60/80(LE)		DCKN

**Gas Information for Electronic and Standing Pilot Appliances**

**5. JUNCTION BOX INSTALLATION**

- a. Remove the junction box assembly from the valve compartment.
- b. If the box is being wired from the OUTSIDE of the appliance;
  - 1) Loosen two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
  - 2) Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the Junction box.
  - 3) Attach the junction box assembly to the outside of the appliance with the two screws provided.
- c. If the box is being wired from the INSIDE of the appliance;
  - 1) Pull the electrical wires from outside the appliance through this opening into the valve compartment.
  - 2) Loosen the two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
  - 3) Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the junction box.
  - 4) Attach the junction box assembly to the inside of the appliance with the two screws provided.
- d. If the box is not to be wired at the time of appliance installation, assemble the receptacle and cover to the box and install on the inside of the appliance.

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**ELECTRONIC IGNITION**

**a. Appliance Requirements**

This appliance requires a 110V AC supply to the appliance junction box for operation. A wiring diagram is shown in Figure 13. A backup battery pack is supplied with the appliance. This battery pack requires the use of two D-cell batteries that are not supplied with the appliance.

Backup batteries cannot be placed in the battery pack while the 3VAC transformer is powering the control module. If backup power is needed the transformer must be unplugged before the batteries are placed in the battery pack to prevent damage to the batteries.

**b. Optional Accessories Requirements**

Wiring for optional accessories should be done now to avoid reconstruction.

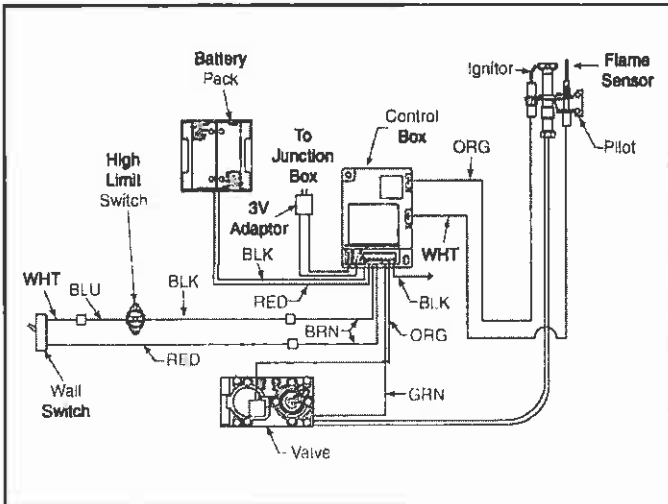


Figure 13 - Electronic Ignition Wiring Diagram

**CAUTION:**  
Battery polarity must be correct or control module damage will occur.

**Note:** This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with National Electric Code ANSI/NFPA 70-latest edition or the Canadian Electric Code, CSA C22.1.

**7. STANDING PILOT IGNITION**

**a. Appliance Requirements**

A wiring diagram is shown in Figure 14.

**b. Optional Accessories Requirements**

Wiring for optional accessories should be done now to avoid reconstruction.

**WARNING!**  
Standing pilot appliance does NOT require a 110V AC supply for operation. Connecting the appliance/wall switch to a 110V AC supply will cause the appliance to malfunction and destroy the valve and thermopile.

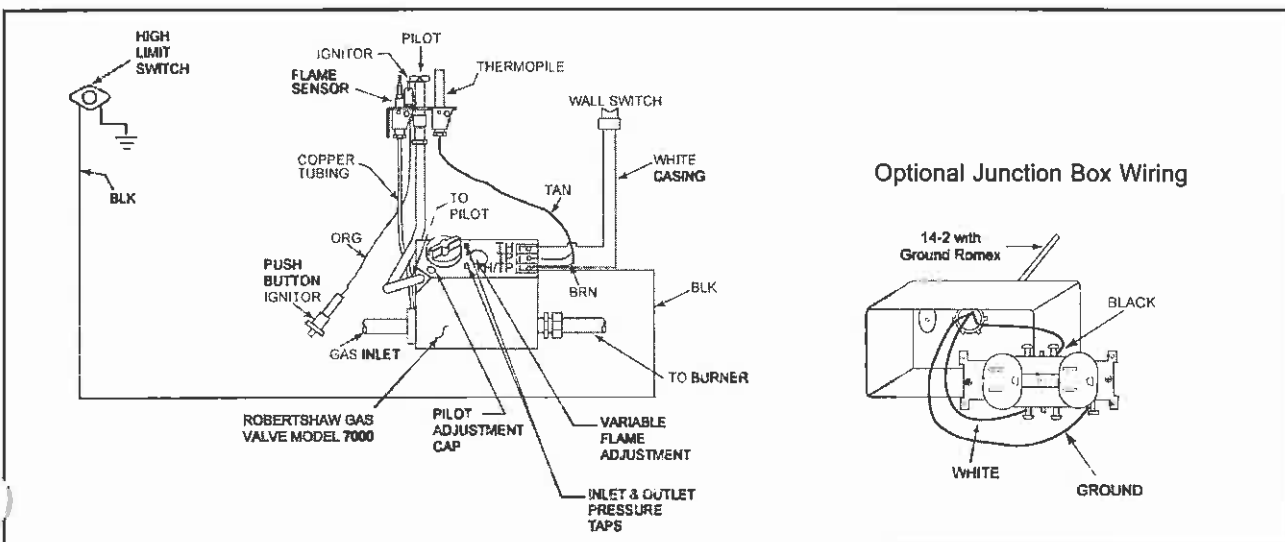


Figure 14 - Standing Pilot Ignition Diagram

## G. FINISHING

### 1. COMBUSTIBLE FINISHING MATERIAL

Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or any material capable of igniting and burning, whether flame proofed or not, plastered or unplastered (this includes drywall).

### 2. NONCOMBUSTIBLE FINISHING MATERIAL

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof, or have a UL fire rating of zero (0).

### 3. HIGH TEMPERATURE SEALANT MATERIAL

Sealants that will withstand high temperatures: General Electric RTV103 (Black) or equivalent. Rutland, Inc. Appliance Mortar #63, or equivalent.

A high temperature sealant, 1/8" wide minimum bead, must be used to close off gaps between the appliance and facing to prevent cold air leaks. See Figure 15.

A combustible mantel may be installed. Please refer to Figure 4, page 7.

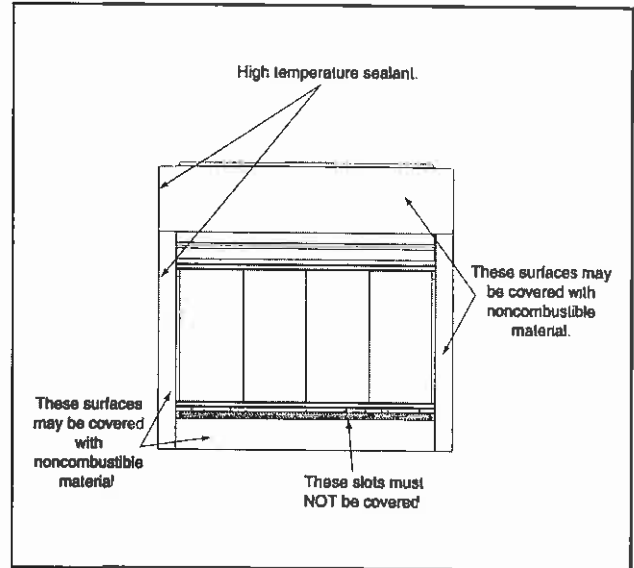


Figure 15

### WARNING!

Air slots on this appliance cannot, in any way, be covered as it may create a fire hazard.

## H. APPLIANCE PREPARATION

### 1. LOG SET

The log set should look similar to that in Figure 16.

### 2. PLACING THE LAVA ROCK AND VERMICULITE

Place lava rock on top of the control access panel, in front of, under and around burner. When placing vermiculite, sprinkle it evenly over the area covered by the lava rock. See Figures 17 and 18.

### 3. PLACING THE ROCK WOOL

Place approximately 1/2" diameter pieces of rock wool under the front logs, on the bottom hearth log. Place the rock wool the full length of the burner. Do not pack the wool tightly against the burner. This appliance is supplied with two bags of rock wool. It is not necessary to use all the wool. Save the remaining amount for future use. See Figure 19.

### 4. PLACING THE FIRE GLOW

Fire glow (FIRE98) is a flame colorant material that also adds to the realism of the gas appliance flame. After placing the rock wool in the appliance, sprinkle some of the fire glow on top of the hearth log and rock wool. As with the lava rock, vermiculite, and rock wool, it is not necessary to use the entire bag. Save the remaining for future use. See Figure 20.