

INSTALLER: THESE INSTRUCTIONS MUST BE CONVEYED TO AND REMAIN WITH THE HOMEOWNER.

CERTIFIED UNDER CANADIAN AND AMERICAN NATIONAL STANDARDS, CSA 2.33, ANSI Z21.88 FOR VENTED GAS FIREPLACE HEATERS AND CSA 22.2 NO. 46 FOR ELECTRIC AIR HEATER.



THE MANHATTAN™

DIRECT VENT MILLIVOLT SYSTEM
INSTALLATION AND OPERATION INSTRUCTIONS FOR
COMBINATION ELECTRIC AND DIRECT VENT GAS FIREPLACE

NATURAL GAS MODEL **GE38NT-M**

PROPANE GAS MODEL **GE38PT-M**

CERTIFIED FOR CANADA AND UNITED STATES USING ANSI / CSA METHODS

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapours 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 neighbour'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.



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TROUBLE SHOOTING GUIDE

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE

WARNING

- Do not burn wood or other materials in this fireplace.
- Adults and especially children should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition. Supervise young children when they are in the same room as the fireplace.
- Due to high temperatures, the fireplace should be located out of traffic and away from furniture and draperies.
- Clothing or other flammable material should not be placed on or near the fireplace.
- Any safety screen or guard removed for servicing must be replaced prior to operating the fireplace.
- It is imperative that the control compartments, burners and circulating blower and its passage-way in the fireplace and venting system are kept clean. The fireplace and its venting system should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. The fireplace area must be kept clear and free from combustible materials, gasoline and other flammable vapours and liquids.
- Under no circumstances should this fireplace be modified.
- This fireplace must not be connected to a chimney flue pipe serving a separate solid fuel burning appliance.
- Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the fireplace and to replace any part of the control system and any gas control which has been under water.
- Do not operate the fireplace with the glass door removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person. Use only with a glass door certified with the fireplace.
- Do not strike or slam shut the fireplace glass door.
- This fireplace uses and requires a fast acting thermocouple. Replace only with a fast acting thermocouple supplied by Wolf Steel Ltd.

NOTE: changes, other than editorial, are denoted by a vertical line in the margin.

NAPOLEON gas fireplaces are manufactured under the strict Standard of the world recognized ISO 9001 : 2000 Quality Assurance Certificate.

NAPOLEON products are designed with superior components and materials, assembled by trained craftsmen who take great pride in their work. The burner and valve assembly are leak and test-fired at a quality test station. Once assembled the complete fireplace is thoroughly inspected by a qualified technician before packaging to ensure that you, the customer, receives the quality product that you expect from NAPOLEON.

NAPOLEON GAS FIREPLACE PRESIDENT'S LIFETIME LIMITED WARRANTY

The following materials and workmanship in your new NAPOLEON gas fireplace are warranted against defects for as long as you own the fireplace. This covers: combustion chamber, heat exchanger, stainless steel burner, phazer™ logs and embers, ceramic glass (thermal breakage only), gold plated parts against tarnishing, porcelainized enamelled components and aluminum extrusion trims.

Electrical (110V and millivolt) components and wearable parts such as blowers, gas valves, thermal switch, switches, wiring, remote controls, ignitor, gasketing, and pilot assembly are covered and NAPOLEON will provide replacement parts free of charge during the first year of the limited warranty. Light bulbs are not covered by this warranty.

Labour related to warranty repair is covered free of charge during the first year. Repair work, however, requires the prior approval of an authorized company official. Labour costs to the account of NAPOLEON are based on a predetermined rate schedule and any repair work must be done through an authorized NAPOLEON dealer.

CONDITIONS AND LIMITATIONS

NAPOLEON warrants its products against manufacturing defects to the original purchaser only -- i.e., the individual or legal entity (registered customer) whose name appears on the warranty registration card filed with NAPOLEON -- provided that the purchase was made through an authorized NAPOLEON dealer and is subject to the following conditions and limitations:

This factory warranty is nontransferable and may not be extended whatsoever by any of our representatives.

The gas fireplace must be installed by a licensed, authorized service technician or contractor. Installation must be done in accordance with the installation instructions included with the product and all local and national building and fire codes.

This limited warranty does not cover damages caused by misuse, lack of maintenance, accident, alterations, abuse or neglect and parts installed from other manufacturers will nullify this warranty.

This limited warranty further does not cover any scratches, dents, corrosion or discolouring caused by excessive heat, abrasive and chemical cleaners nor chipping on porcelain enamel parts, mechanical breakage of PHAZER™ logs and embers, nor any venting components used in the installation of the fireplace.

NAPOLEON warrants its stainless steel burners against defects in workmanship and material for life, subject to the following conditions: During the first 10 years NAPOLEON will replace or repair the defective parts at our option free of charge. From 10 years to life, NAPOLEON will provide replacement burners at 50% of the current retail price.

In the first year only, this warranty extends to the repair or replacement of warranted parts which are defective in material or workmanship provided that the product has been operated in accordance with the operation instructions and under normal conditions.

After the first year, with respect to this President's Limited Lifetime Warranty, NAPOLEON may, at its discretion, fully discharge all obligations with respect to this warranty by refunding to the original warranted purchaser the wholesale price of any warranted but defective part(s).

After the first year, NAPOLEON will not be responsible for installation, labour or any other costs or expenses related to the reinstallation of a warranted part, and such expenses are not covered by this warranty.

Notwithstanding any provisions contained in this President's Limited Lifetime Warranty, NAPOLEON'S responsibility under this warranty is defined as above and it shall not in any event extend to any incidental, consequential or indirect damages.

This warranty defines the obligations and liability of NAPOLEON with respect to the NAPOLEON gas fireplace and any other warranties expressed or implied with respect to this product, its components or accessories are excluded.

NAPOLEON neither assumes, nor authorizes any third party to assume, on its behalf, any other liabilities with respect to the sale of this product. NAPOLEON will not be responsible for: over-firing, downdrafts, spillage caused by environmental conditions such as rooftops, buildings, nearby trees, hills, mountains, inadequate vents or ventilation, excessive venting configurations, insufficient makeup air, or negative air pressures which may or may not be caused by mechanical systems such as exhaust fans, furnaces, clothes dryers, etc.

Any damages to fireplace, combustion chamber, heat exchanger, brass trim or other component due to water, weather damage, long periods of dampness, condensation, damaging chemicals or cleaners will not be the responsibility of NAPOLEON.

The bill of sale or copy will be required together with a serial number and a model number when making any warranty claims from your authorized dealer. The warranty registration card must be returned within fourteen days to register the warranty.

NAPOLEON reserves the right to have its representative inspect any product or part thereof prior to honouring any warranty claim.

GENERAL INSTRUCTIONS

THIS GAS FIREPLACE SHOULD BE INSTALLED AND SERVICED BY A QUALIFIED INSTALLER to conform with local codes. Installation practices vary from region to region and it is important to know the specifics that apply to your area, for example: in Massachusetts State:

- The fireplace damper must be removed or welded in the open position prior to installation of a fireplace insert or gas log.
- The appliance off valve must be a "T" handle gas cock.
- The flexible connector must not be longer than 36 inches.
- The appliance is not approved for installation in a bedroom or bathroom unless the unit is a direct vent sealed combustion product.
- **WARNING:** This product must be installed by a licensed plumber or gas fitter when installed within the commonwealth of Massachusetts.

In absence of local codes, install the **GE38** to the current National Fuel Gas Code, ANSI Z223.1, or the current CAN/CGA B149, Installation Codes. Mobile home installation must conform with local codes. In the absence of local codes, install to the current standard for gas equipped mobile housing CAN/CSA Z240 MH Series in Canada or the manufactured home construction and safety standard, Title 24 CFR, part 3280, or the Fire Safety Criteria for manufactured home installations, Sites and Community Standard ANSI/NFPA 501A in the United States.

The fireplace and its individual 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 psig (3.5 kPa). The fireplace must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

When the fireplace is installed directly on carpeting, vinyl tile or other combustible material other than wood flooring, the fireplace shall be installed on a metal or wood panel extending the full width and depth.

The junction box must be electrically connected and grounded in accordance with local codes. In the absence of local codes, use the current CSA C22.1 CANADIAN ELECTRICAL CODE in Canada or the ANSI/NFPA 70 NATIONAL ELECTRICAL CODE in the United States.

GENERAL INFORMATION

FOR YOUR SATISFACTION, THIS FIREPLACE HAS BEEN TEST-FIRED TO ASSURE ITS OPERATION AND QUALITY! Maximum input is 26,000 BTU/hr for natural gas and propane. When the fireplace is installed at elevations above 4,500ft, and in the absence of specific recommendations from the local authority having jurisdiction, the certified high altitude input rating shall be reduced at the rate of 4% for each additional 1,000ft.

Maximum output for natural gas is 22,360 BTU/hr at an efficiency of 86% with the fan on, and 22,880 BTU/hr for propane at an efficiency of 88% with the fan on. The maximum A.F.U.E. (annual fuel utilization efficiency) rating is 64% for natural gas and 65% for propane.

Minimum inlet gas supply pressure is 4.5 inches water column for natural gas and 11 inches water column for propane. Maximum inlet gas pressure is 7 inches water column for natural gas and 13 inches water column for propane. Manifold pressure under flow conditions is 3.5 inches water column for natural gas and 10 inches water column for propane.

This fireplace is approved for bathroom, bedroom and bed-sitting room installations and is suitable for mobile home installation. The natural gas model can only be installed in a mobile home that is permanently positioned on its site and fueled with natural gas.

No external electricity (110 volts or 24 volts) is required for the gas system operation.

Expansion / contraction noises during heating up and cooling down cycles are normal and are to be expected.

CARE OF GLASS, AND PLATED PARTS

Do not use abrasive cleaners to clean plated parts. Buff lightly with a clean dry cloth. The GE38 is factory equipped with ceramic glass for both the firebox front and back panels. The glass thickness is 3/16". Use only replacement glass available from your Napoleon dealer. **DO NOT SUBSTITUTE MATERIALS.** Clean the glass after the first 10 hours of operation with a recommended gas fireplace glass cleaner. Thereafter clean as required. **DO NOT CLEAN GLASS WHEN HOT!** If the glass is not kept clean permanent discoloration and / or blemishes may result.

Use only accessories designed for and listed with your specific fireplace.

Provide adequate ventilation air. Provide adequate accessibility clearance for servicing and operating the fireplace. Never obstruct the front opening of the fireplace.

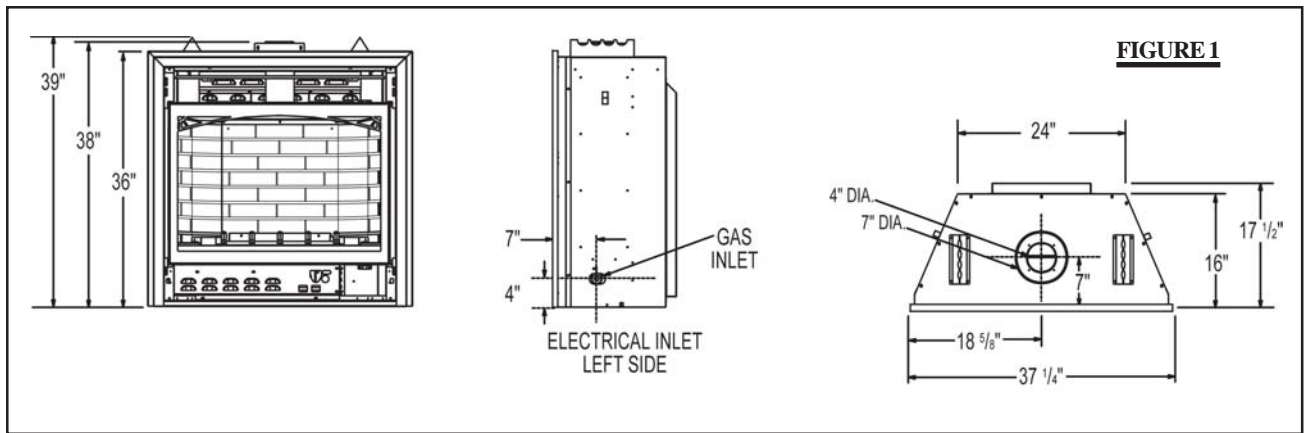
For safe and proper operation of the fireplace follow the venting instruction exactly.

Deviation from the minimum vertical vent length can create difficulty in burner start-up and/or carboning.

Provide a means for visually checking the vent connection to the fireplace after the fireplace is installed.

Vent lengths that pass through unheated spaces (attics, garages, crawl spaces) should be insulated with the insulation wrapped in a protective sleeve to minimize condensation.

Objects placed in front of the fireplace must be kept a minimum of 48" away from the front face of the unit.



VENTING

VENTING LENGTHS

Use only Wolf Steel or Simpson Dura-Vent Model DV-GS venting components. Minimum and maximum vent lengths, for both horizontal and vertical installations, and air terminal locations for either system are set out in this manual and must be adhered to. For Simpson Dura-Vent, follow the installation procedure provided with the venting components.

When using Wolf Steel venting components, use only approved Wolf Steel rigid / flexible components with the following termination kits: WALL TERMINAL KIT **GD222**, or 1/12 TO 7/12 PITCH ROOF TERMINAL KIT **GD210**, 8/12 TO 12/12 ROOF TERMINAL KIT **GD211**, FLAT ROOF TERMINAL KIT **GD212** or PERISCOPE KIT **GD201** (for wall penetration below grade). With flexible venting, in conjunction with the various terminations, use either the 5 foot vent kit **GD220** or the 10 foot vent kit **GD230**.

Wolf Steel rigid and flexible venting systems must not be combined.

Wolf Steel and Simpson Dura-Vent venting systems must not be combined.

These vent kits allow for either horizontal or vertical venting of the fireplace. **FIGURES 3a, & 5a.** The maximum allowable horizontal run is 20 feet. The maximum allowable vertical vent length is 40 feet. The maximum number of 4" vent connections is two horizontally or three vertically (excluding the fireplace and the air terminal connections) when using aluminum flexible venting.

For optimum flame appearance and fireplace performance, keep the vent length and number of elbows to a minimum.

The air terminal must remain unobstructed at all times. Examine the air terminal at least once a year to verify that it is unobstructed and undamaged.

Purge all gas lines with the glass of the fireplace open. Assure that a continuous gas flow is at the burner before closing the door.

Under extreme vent configurations, allow several minutes (5-15) for the flame to stabilize after ignition.

6" inches is the minimum bend radius allowed for the 7" diameter flexible liner.

For optimum performance it is recommended that all horizontal runs have a 1 inch rise per foot when using Napoleon flexible vent components.

A terminal shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings. Local codes or regulations may require different clearances.

Do not allow the inside liner to bunch up on horizontal or vertical runs and elbows. Keep it pulled tight. A 1/4" air gap all around between the inner liner and outer liner is required for safe operation. Use a firestop when penetrating interior walls, floor or ceiling.

Minimum clearance to combustible construction from fireplace and vent surfaces:

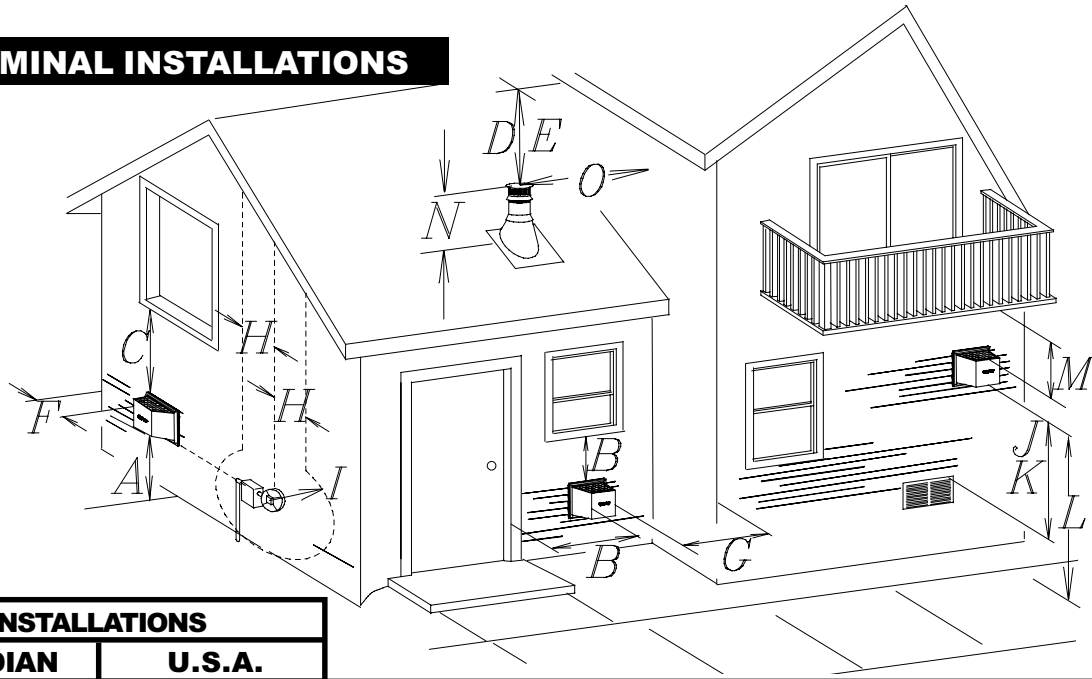
fireplace framing	- 0" to stand-offs (top, rear and sides)
fireplace finishing	- 0" to sides, 3" to top of unit
vent pipe	- 1 inch
recessed depth	- 17 1/2" inches

Horizontal runs may have a 0 inch rise per foot in all cases using SIMPSON DURA-VENT or NAPOLEON RIGID OR FLEXIBLE venting components when venting as illustrated in Figures 3, and 4.

Only a clearance to combustibles of 1" all around the vent pipe is required.

AIR TERMINAL INSTALLATIONS

FIGURE 2



INSTALLATIONS			
	CANADIAN	U.S.A.	
A	12 INCHES	12 INCHES	Clearance above grade, veranda porch, deck or balcony.
B	12 INCHES	9 INCHES	Clearance to windows or doors that open.
C	12 INCHES*	12 INCHES*	Clearance to permanently closed windows.
D	18 INCHES**	18 INCHES**	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet from the centerline of the terminal.
E	12 INCHES**	12 INCHES**	Clearance to unventilated soffit.
F	0 INCHES	0 INCHES	Clearance to an outside corner wall.
G	0 INCHES***	0 INCHES***	Clearance to an inside <i>non</i> -combustible corner wall or protruding <i>non</i> -combustible obstructions (chimney, etc.).
	2 INCHES***	2 INCHES***	Clearance to an inside combustible corner wall or protruding combustible obstructions (vent chase, etc.).
H	3 FEET	3 FEET****	Clearance to each side of the centerline extended above the meter / regulator assembly to a maximum vertical distance of 15ft.
I	3 FEET	3 FEET****	Clearance to a service regulator vent outlet.
J	12 INCHES	9 INCHES	Clearance to a non-mechanical air supply inlet to the building or a combustion air inlet to any other appliance.
K	6 FEET	3 FEET†	Clearance to a mechanical air supply inlet.
L	7 FEET‡	7 FEET****	Clearance above a paved sidewalk or paved driveway located on public property unless fitted with a heat shield kit GD-301.
M	12 INCHES††	12 INCHES****	Clearance under a veranda, porch, deck or balcony.
N	16 INCHES	16 INCHES	Clearance above the roof.
O	2 FEET†*	2 FEET†*	Clearance from an adjacent wall including neighbouring buildings.

* Recommended to prevent condensation on windows and thermal breakage

** It is recommended to use a heat shield and to maximize the distance to vinyl clad soffits.

*** The periscope GD-201 requires a minimum 18 inches clearance from an inside corner.

**** This is a recommended distance. For additional requirements check local codes.

† Three feet above if within 10 feet horizontally.

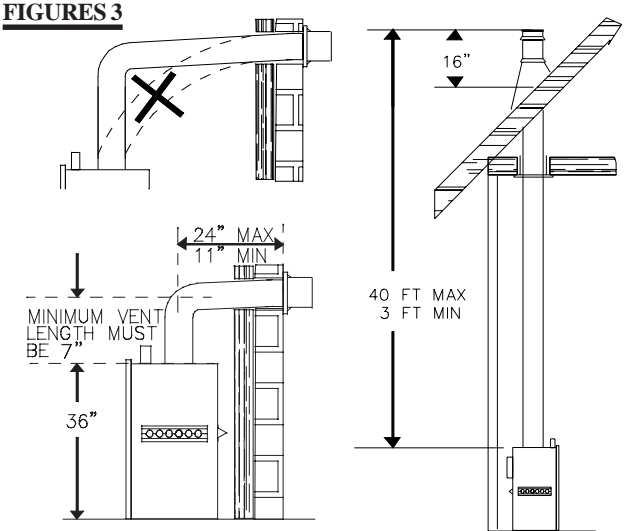
‡ A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single fami dwellings and serves both dwellings.

†† Permitted only if the veranda, porch, or deck is fully open on a minimum of two sides beneath the floor.

†* Recommended to prevent recirculation of exhaust products. For additional requirements check local codes.

TYPICAL VENT INSTALLATIONS

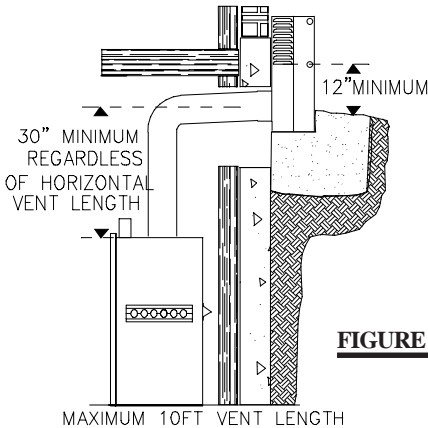
For optimum performance, it is recommended that all horizontal runs have a 1 inch rise per foot. When terminating vertically, the vertical rise is a minimum 36 inches and a maximum 40 feet from the centre of the fireplace flue outlet.



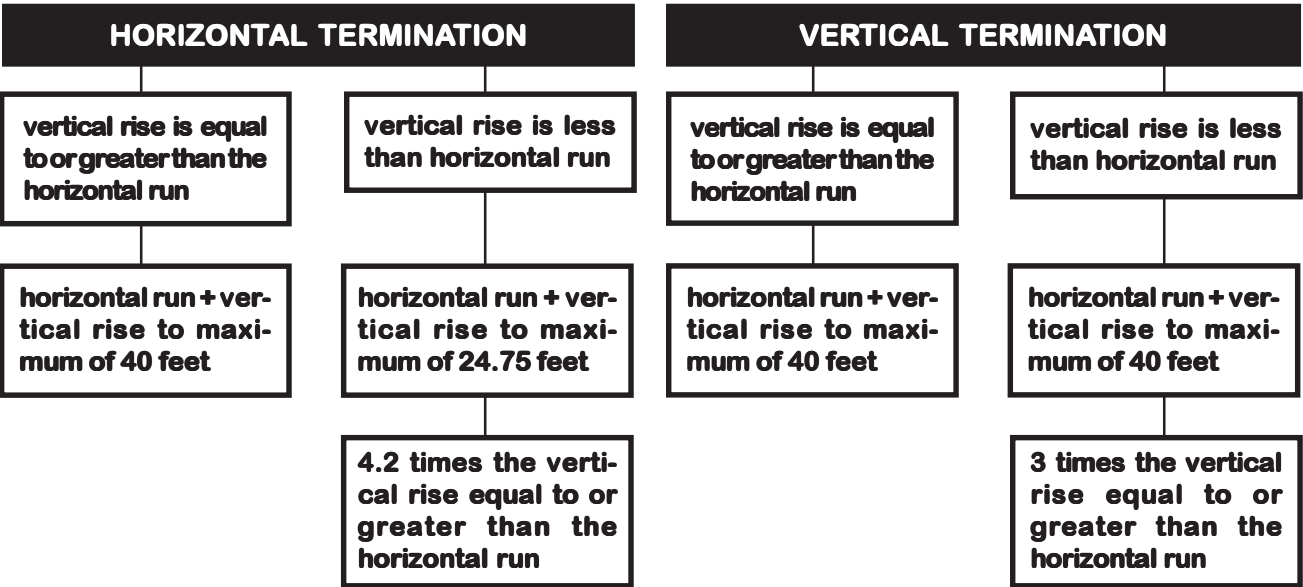
SPECIAL VENT INSTALLATIONS

PERISCOPE TERMINATION

Use the GD201 periscope kit to locate the air termination above grade. The periscope must be installed so that when final grading is completed, the bottom air slot is located a minimum of 12 inches above grade. The maximum allowable vent length depends on the fireplace, as illustrated.



VENTING APPLICATION FLOW CHART



DEFINITIONS

for the following symbols used in the venting calculations and examples are:

- $>$ - greater than
- \geq - equal to or greater than
- $<$ - less than
- \leq - equal to or less than
- H_T - total of both horizontal vent lengths (H_R) and offsets (H_O) in feet
- H_R - combined horizontal vent lengths in feet
- H_O - offset factor: $.03(\text{total degrees of offset} - 90^\circ)$ in feet
- V_T - combined vertical vent lengths in feet

ELBOW VENT LENGTH VALUES

	feet	inches
1°	0.03	0.5
15°	0.45	6.0
30°	0.9	11.0
45°	1.35	16.0
90°*	2.7	32.0

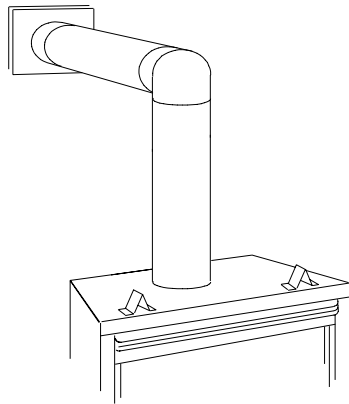
* the first 90° offset has a zero value and is shown in the formula as -90°

TOP EXIT / HORIZONTAL TERMINATION

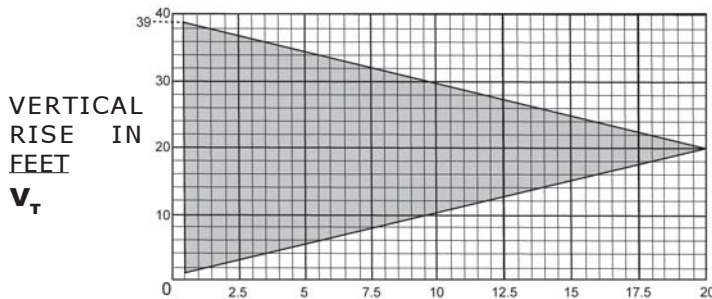
when $(H_T) \leq (V_T)$

Simple venting configuration (only one 90° elbow)

FIGURE 5



See graph to determine the required vertical rise V_T for the required horizontal run H_T .



HORIZONTAL VENT RUN PLUS OFFSET IN FEET H_T
The shaded area within the lines represents acceptable values for H_T and V_T .

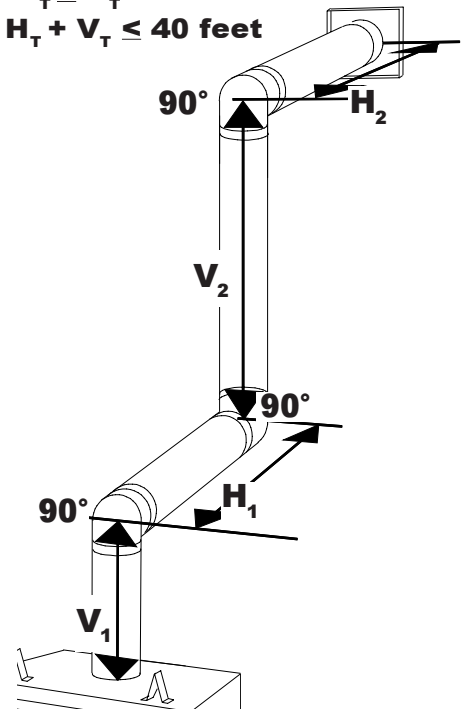
For vent configurations requiring more than one 90° elbow, the following formulas apply:

Formula 1: $H_T \leq V_T$

Formula 2: $H_T + V_T \leq 40$ feet

Example 1:

FIGURE 6



- $V_1 = 3$ ft
- $V_2 = 8$ ft
- $V_T = V_1 + V_2 = 3 + 8 = 11$ ft
- $H_1 = 2.5$ ft
- $H_2 = 2$ ft
- $H_R = H_1 + H_2 = 2.5 + 2 = 4.5$ ft
- $H_O = .03(\text{three } 90^\circ \text{ elbows} - 90^\circ) = .03(270^\circ - 90^\circ) = 5.4$ ft
- $H_T = H_R + H_O = 4.5 + 5.4 = 9.9$ ft

$H_T + V_T = 9.9 + 11 = 20.9$ ft

Formula 1: $H_T \leq V_T$
 $9.9 \leq 11$

Formula 2: $H_T + V_T \leq 40$ feet
 $20.9 \leq 40$

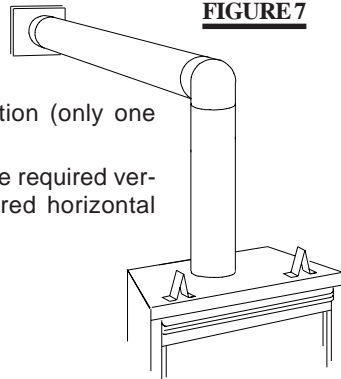
Since both formulas are met, this vent configuration is acceptable.

TOP EXIT / HORIZONTAL TERMINATION

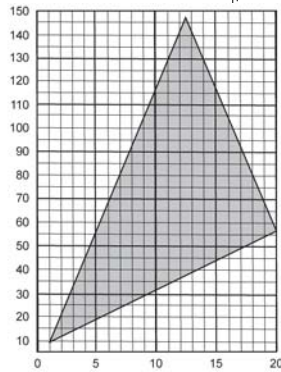
when $(H_T) > (V_T)$

Simple venting configuration (only one 90° elbow)

See graph to determine the required vertical rise V_T for the required horizontal run H_T .



REQUIRED VERTICAL RISE IN INCHES V_T



HORIZONTAL VENT RUN PLUS OFFSET IN FEET H_T

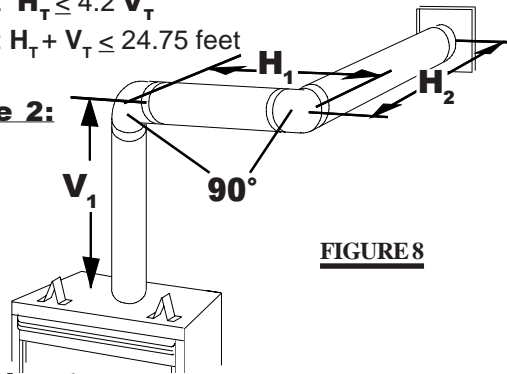
The shaded area within the lines represents acceptable values for H_T and V_T .

For vent configurations requiring more than one 90° elbow the following formulas apply:

Formula 1: $H_T \leq 4.2 V_T$

Formula 2: $H_T + V_T \leq 24.75$ feet

Example 2:



$$\begin{aligned} V_1 &= V_T = 6 \text{ ft} \\ H_1 &= 3 \text{ ft} \\ H_2 &= 5 \text{ ft} \\ H_R &= H_1 + H_2 = 3 + 5 = 8 \text{ ft} \\ H_O &= .03(\text{two } 90^\circ \text{ elbows} - 90^\circ) = .03(180^\circ - 90^\circ) = 2.7 \text{ ft} \\ H_T &= H_R + H_O = 8 + 2.7 = 10.7 \text{ ft} \\ H_T + V_T &= 10.7 + 6 = 16.7 \end{aligned}$$

Formula 1: $H_T \leq 4.2 V_T$
 $4.2 V_T = 4.2 \times 6 = 25.2$ ft
 $10.7 \leq 25.2$

Formula 2: $H_T + V_T \leq 24.75$ feet
 $16.7 \leq 24.75$

Since both formulas are met, this vent configuration is acceptable.

Example 3:

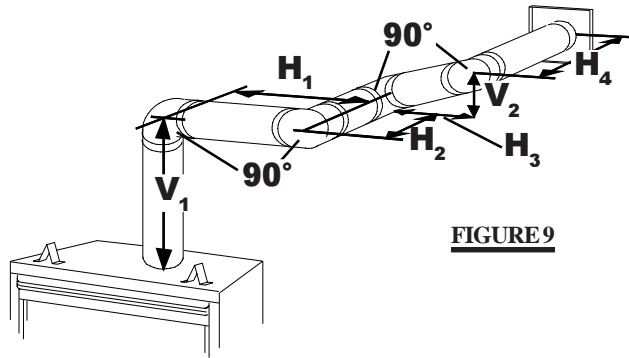


FIGURE 9

$$\begin{aligned} V_1 &= 4 \text{ ft} \\ V_2 &= 1.5 \text{ ft} \\ V_T &= V_1 + V_2 = 4 + 1.5 = 5.5 \text{ ft} \\ H_1 &= 2 \text{ ft} \\ H_2 &= 1 \text{ ft} \\ H_3 &= 1 \text{ ft} \\ H_4 &= 1.5 \text{ ft} \\ H_R &= H_1 + H_2 + H_3 + H_4 = 2 + 1 + 1 + 1.5 = 5.5 \text{ ft} \\ H_O &= .03(\text{four } 90^\circ \text{ elbows} - 90^\circ) = .03(360^\circ - 90^\circ) = 8.1 \text{ ft} \\ H_T &= H_R + H_O = 5.5 + 8.1 = 13.6 \text{ ft} \\ H_T + V_T &= 13.6 + 5.5 = 19.1 \text{ ft} \end{aligned}$$

Formula 1: $H_T \leq 4.2 V_T$
 $4.2 V_T = 4.2 \times 5.5 = 23.1$ ft

$$13.6 \leq 23.1$$

Formula 2: $H_T + V_T \leq 24.75$ feet
 $19.1 \leq 24.75$

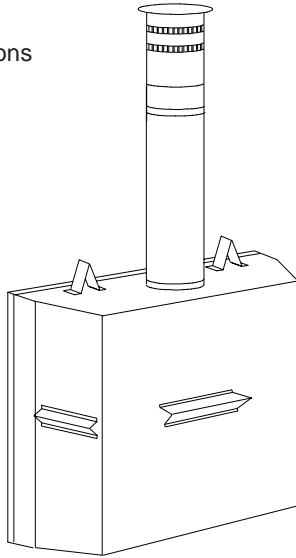
Since both formulas are met, this vent configuration is acceptable.

TOP EXIT VERTICAL TERMINATION

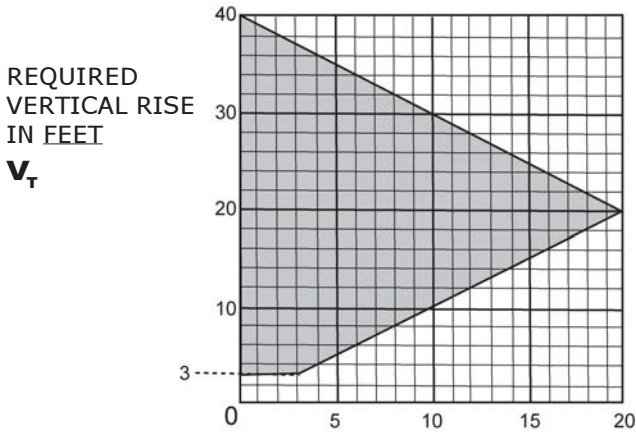
when $(H_T) \leq (V_T)$

Simple venting configurations

FIGURE 10



See graph to determine the required vertical rise V_T for the required horizontal run H_T .



HORIZONTAL VENT RUN PLUS OFFSET IN FEET H_T
The shaded area within the lines represents acceptable values for H_T and V_T .

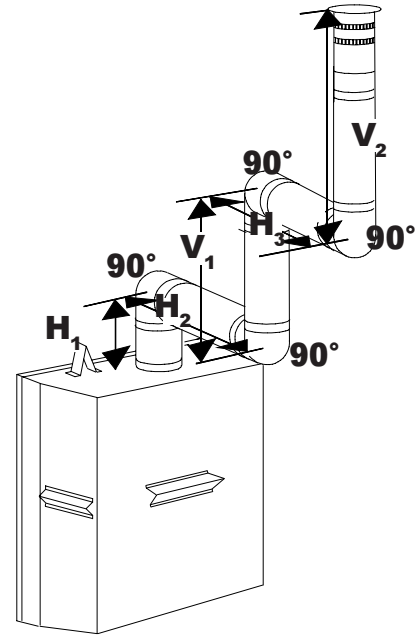
For vent configurations requiring elbows, the following formulas apply:

Formula 1: $H_T \leq V_T$

Formula 2: $H_T + V_T \leq 40$ feet

Example 4:

FIGURE 11



- V_1 = 5 ft
- V_2 = 10 ft
- V_T = $V_1 + V_2 = 5 + 10 = 15$ ft
- H_1 = 1 ft
- H_2 = 3 ft
- H_3 = 2.5 ft
- H_R = $H_1 + H_2 + H_3 = 1 + 3 + 2.5 = 6.5$ ft
- H_o = .03(four 90° elbows - 90°)
- = .03(90 + 90 + 90 + 90 - 90) = 8.1 ft
- H_T = $H_R + H_o = 6.5 + 8.1 = 14.6$ ft
- $H_T + V_T = 14.6 + 15 = 29.6$ ft

Formula 1: $H_T \leq V_T$
 $14.6 \leq 15$

Formula 2: $H_T + V_T \leq 40$ feet
 $29.6 \leq 40$

Since both formulas are met, this vent configuration is acceptable.

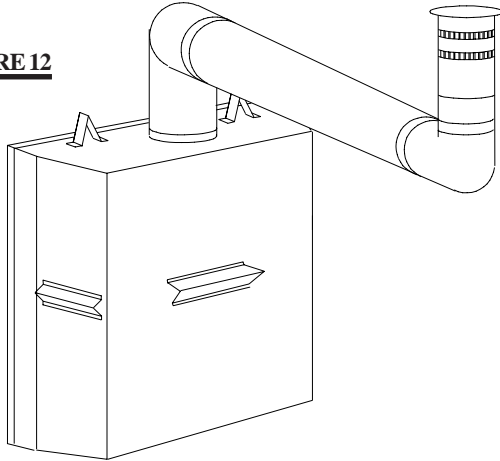
TOP EXIT VERTICAL TERMINATION

when $(H_T) > (V_T)$

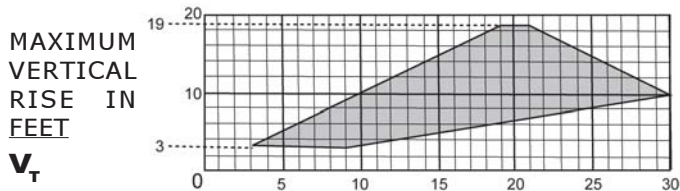
Simple venting configurations

See graph to determine the required vertical rise V_T for the required horizontal run H_T .

FIGURE 12



For vent configurations requiring elbows, the following formulas apply:



HORIZONTAL VENT RUN PLUS OFFSET IN FEET H_T
 The shaded area within the lines represents acceptable values for H_T and V_T .

Formula 1: $H_T \leq 3V_T$

Formula 2: $H_T + V_T \leq 40$ feet

Example 5:

- $V_1 = 2$ ft
- $V_2 = 1$ ft
- $V_3 = 1.5$ ft

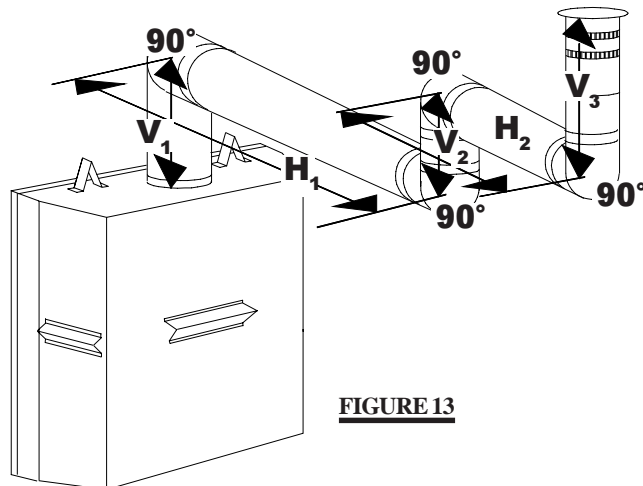


FIGURE 13

$$\begin{aligned}
 V_T &= V_1 + V_2 + V_3 = 2 + 1 + 1.5 = 4.5 \text{ ft} \\
 H_1 &= 6 \text{ ft} \\
 H_2 &= 2 \text{ ft} \\
 H_R &= H_1 + H_2 = 6 + 2 = 8 \text{ ft} \\
 H_O &= .03(\text{four } 90^\circ \text{ elbows} - 90^\circ) \\
 &= .03(90 + 90 + 90 + 90 - 90) = 8.1 \text{ ft} \\
 H_T &= H_R + H_O = 8 + 8.1 = 16.1 \text{ ft} \\
 H_T + V_T &= 16.1 + 4.5 = 20.6 \text{ ft}
 \end{aligned}$$

Formula 1: $H_T \leq 3V_T$
 $3V_T = 3 \times 4.5 = 13.5$
 $16.1 > 13.5$

Since this formula is not met, this vent configuration is **unacceptable**.

Formula 2: $H_T + V_T \leq 40$ feet
 $20.6 \leq 40$

Since only formula 2 is met, this vent configuration is unacceptable and a new fireplace location or vent configuration will need to be established to satisfy both formulas.

Example 6:

- $V_1 = 1.5$ ft
- $V_2 = 5$ ft
- $V_T = V_1 + V_2 = 1.5 + 5 = 6.5$ ft

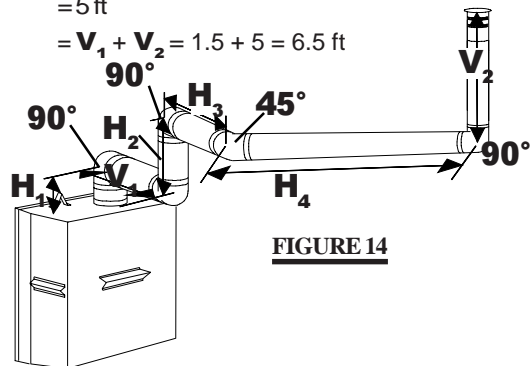


FIGURE 14

$$\begin{aligned}
 H_1 &= 1 \text{ ft} \\
 H_2 &= 1 \text{ ft} \\
 H_3 &= 1 \text{ ft} \\
 H_4 &= 10.75 \text{ ft} \\
 H_R &= H_1 + H_2 + H_3 + H_4 = 1 + 1 + 1 + 10.75 = 13.75 \text{ ft} \\
 H_O &= .03(\text{four } 90^\circ \text{ elbows} + \text{one } 45^\circ \text{ elbow} - 90^\circ) \\
 &= .03(90 + 90 + 90 + 90 + 45 - 90) = 9.45 \text{ ft} \\
 H_T &= H_R + H_O = 13.75 + 9.45 = 23.2 \text{ ft} \\
 H_T + V_T &= 23.2 + 6.5 = 29.7 \text{ ft}
 \end{aligned}$$

Formula 1: $H_T \leq 3V_T$
 $3V_T = 3 \times 6.5 = 19.5$
 $19.5 = 19.5$

Formula 2: $H_T + V_T \leq 40$ feet
 $29.7 \leq 40$

Since both formulas are met, this vent configuration is acceptable.

INSTALLATION

WALL AND CEILING PROTECTION

FOR SAFE AND PROPER OPERATION OF THE FIREPLACE, FOLLOW THE VENTING INSTRUCTIONS EXACTLY.

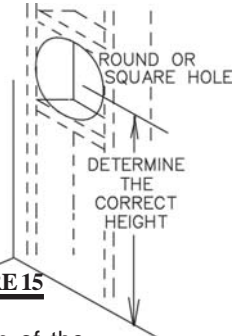
A HEAT SHIELD MUST BE USED IF THE WALL TERMINAL IS INSTALLED ON COMBUSTIBLE, EXTERIOR SURFACES.

NOTE: Only a clearance to combustibles of 1" all around the vent pipe is required.

HORIZONTAL INSTALLATION

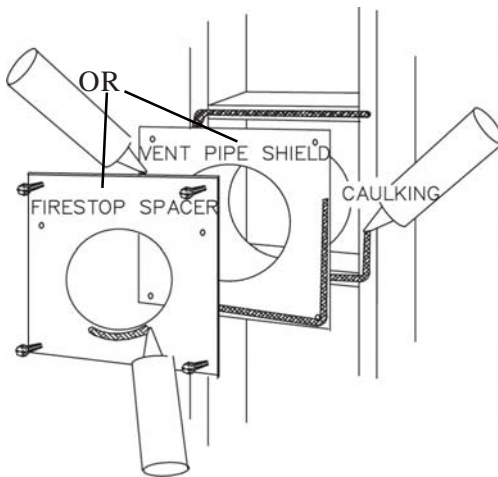
This application occurs when venting through an exterior wall. Having determined the air terminal location, cut and frame a hole in an exterior wall with a minimum opening as required. **See Note above.** (As an alternative to framing, a vent pipe shield may be installed, ensuring a 1" clearance to combustibles. See Figure 16.)

FIGURE 15



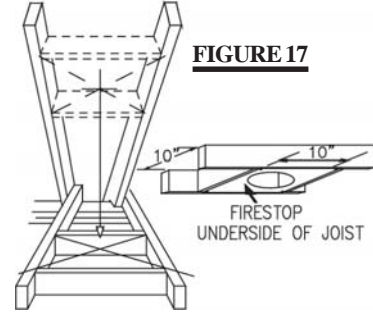
1. Mark and cut the vent pipe shield to the determined depth of the combustible wall. Apply a bead of caulking (not supplied) to the framework or to the shield plate (in the case of a finished wall) and secure the shield through the opening to the interior wall. *The final location of the vent pipe shield should maintain the required clearance to the 7" vent pipe / liner.* (See note above). Do not fill this cavity with any type of material. Apply a bead of caulking all around and place a firestop spacer over the vent shield to restrict cold air from being drawn into the room or around the fireplace. Ensure that both spacer and shield maintain the required clearance to combustibles. Once the vent pipe / liner is installed in its final position, apply sealant between the pipe / liner and the firestop spacer.

FIGURE 16



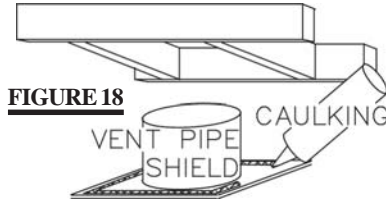
VERTICAL INSTALLATION

This application occurs when venting through a roof. Installation kits for various roof pitches are available from your Napoleon dealer. See Accessories to order the specific kit required.



1. Determine the air terminal location, cut and frame 10 inch openings in the ceiling and the roof to provide the minimum 1 inch clearance between the fireplace pipe / liner and any combustible material. Try to center the exhaust pipe location midway between two joist to prevent having to cut them. Use a plumb bob to line up the center of the openings. **DO NOT FILL THIS SPACE WITH ANY TYPE OF MATERIAL.** A vent pipe shield will prevent any materials such as insulation, from filling up the 1" air space around the pipe. Nail headers between the joist for extra support.

FIGURE 18



2. Apply a bead of caulking (not supplied) to the framework or to the Wolf Steel vent pipe shield plate or equivalent (in the case of a finished ceiling), and secure over the opening in the ceiling. **FIGURE 18.** A firestop must be placed on the bottom of each framed opening in a roof or ceiling that the venting system passes through. Apply a bead of caulking all around and place a firestop spacer over the vent shield to restrict cold air from being drawn into the room or around the fireplace. Ensure that both spacer and shield maintain the required clearance to combustibles. Once the vent pipe / liner is installed in its final position, apply sealant between the pipe / liner and the firestop spacer.

USING FLEXIBLE VENT COMPONENTS



Use only approved aluminum flexible liner kits marked:



"Wolf Steel Approved Venting" as identified by the stamp only on the 7" outer liner.

HORIZONTAL AIR TERMINAL INSTALLATION

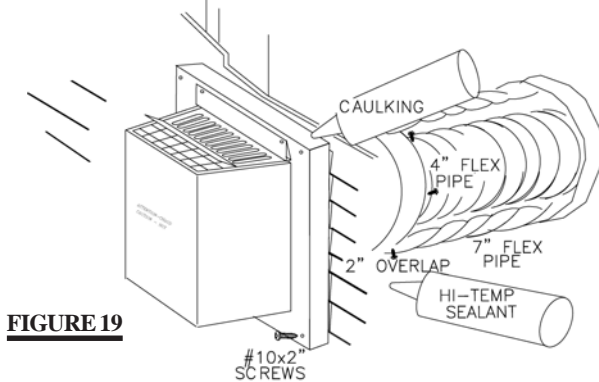


FIGURE 19

1. Cut or frame a hole in an exterior wall with a minimum round or square opening listed on **page 5**. Secure the firestop spacer over the opening to the interior wall.

2. Stretch the 4" diameter aluminum flexible liner to the required length taking into account the additional length needed for the finished wall surface. Slip the liner a minimum of 2" over the inner sleeve of the air terminal and secure with 3 #8 screws. Apply a heavy bead of the high temperature sealant.

3. Using the 7" diameter flexible aluminum liner, slide over the outer combustion air sleeve of the air terminal and secure with 3 #8 screws. Seal as before.

4. Insert the liners through the firestop maintaining the required clearance to combustibles. Holding the air terminal (lettering in an upright, readable position), secure to the exterior wall and make weather tight by sealing with caulking (not supplied).

5. Apply a heavy bead of the high temperature sealant, supplied with the unit, to the inside of the 4" liner approximately 1" from the end. Slip the liner a minimum of 2" over the fireplace vent collar and secure with 3 #8 screws.

6. Using the 7" diameter flexible aluminium liner, apply sealant, slide a minimum of 2" over the fireplace combustion air collar and secure with 3 #8 screws.

EXTENDED HORIZONTAL AIR TERMINAL INSTALLATION

Use the GD220 vent kit and couplers for this application. If more than one length of liner needs to be used to reach the fireplace, couple them together as illustrated in **FIGURE 20**. Seal the joints using the same procedure as described in points 2 and 3. The vent system must be supported approximately every 3 feet for both vertical and horizontal runs. Use Wolf Steel support ring assemblies, or equivalent noncombustible strapping to maintain the minimum 1" clearance to combustibles as well as to prevent sagging.

Spacers are attached to the 4" inner flex liner at predetermined intervals to maintain a 1-1/4" air gap to the 7" outer liner. These spacers must not be removed.

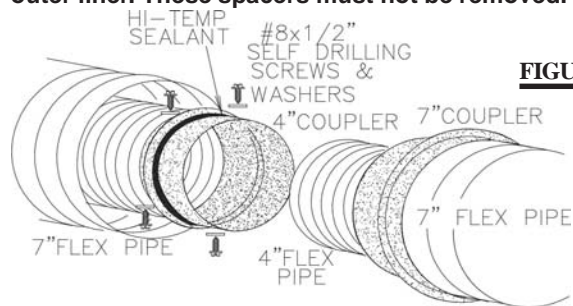


FIGURE 20

VERTICAL AIR TERMINAL INSTALLATION

1. Fasten the roof support to the roof using the screws provided. **FIGURE 21**. The roof support is optional. In this case the venting is to be adequately supported using either an alternate method suitable to the authority having jurisdiction or the optional roof support.

2. Stretch the 4" diameter aluminium flexible liner to the required length. Slip the liner a minimum of 2" over the inner sleeve of the air terminal and secure with 3 #8 screws. Seal using a heavy bead of the high temperature sealant.

3. Repeat using the 7" diameter flexible aluminium liner.

4. Thread the air terminal pipe assembly down through the roof. The air terminal must be located vertically and plumb. Attach the air terminal assembly to the roof support, ensuring that a minimum 16" of air terminal will penetrate the roof when fastened.

DO NOT CLAMP THE FLEXIBLE ALUMINIUM LINER.

5. Remove nails from the shingles, above and to the sides of the chimney. Place the flashing over the air terminal and slide it underneath the sides and upper edge of the shingles. Ensure that the air terminal is properly centered within the flashing, giving a 3/4" margin all around. Fasten to the roof.

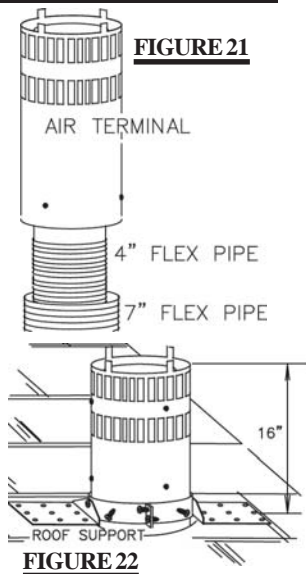


FIGURE 21

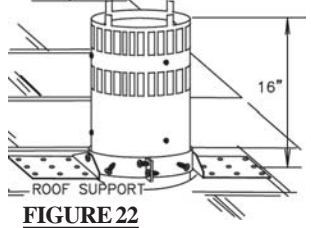


FIGURE 22

Do **not** nail through the lower portion of the flashing. Make weather-tight by sealing with caulking. Where possible, cover the sides and top edges of the flashing with roofing material.

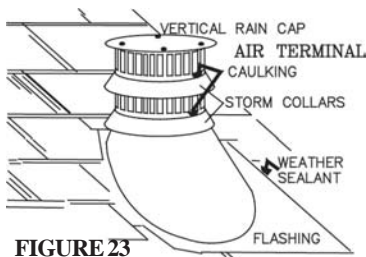


FIGURE 23

6. Apply a heavy bead of weatherproof caulking 2 inches above the flashing. Slide the storm collar around the air terminal and down to the caulking. Tighten to ensure that a weather-tight seal between the air terminal and the collar is achieved. Attach the other storm collar centered between the air intake and the air exhaust slots onto the air terminal. Tighten securely. **FIGURE 23**. Attach the vertical rain cap.

Spacers are attached to the 4" inner flex liner at predetermined intervals to maintain a 1-1/4" air gap to the 8" outer liner. These spacers must not be removed.

7. If more liner needs to be used to reach the fireplace, follow the same procedure as found in **EXTENDED HORIZONTAL AIR TERMINAL INSTALLATION**. The vent system must be supported approximately every 3 feet for both vertical and horizontal runs. Use Wolf Steel support ring assembly or equivalent noncombustible strapping to maintain a clearance to combustibles.

FIREPLACE VENT CONNECTION

1. Install the 4 inch diameter aluminium flexible liner to the fireplace. Secure with 3 screws and flat washers. Seal the joint and screw holes using the high temperature sealant provided. **FIGURE 24**.

2. Install the 7 inch diameter aluminium flexible liner to the fireplace. Attach and seal the joints.

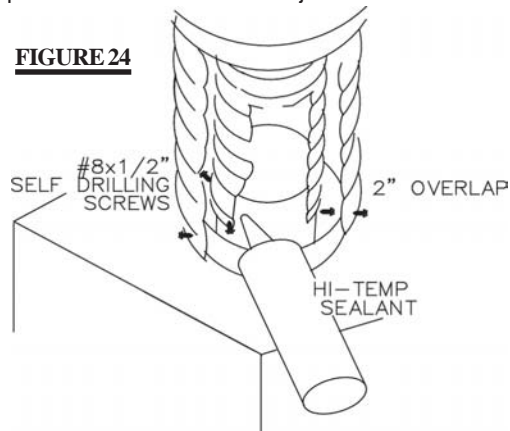


FIGURE 24

USING RIGID VENT COMPONENTS

The vent system must be supported approximately every 3 feet for both vertical and horizontal runs. Use Wolf Steel vent spacers every 3 feet and either side of each elbow to maintain the minimum 1/4" clearance between the outer and inner vent pipes. Use Wolf Steel support ring assembly or equivalent noncombustible strapping to maintain the minimum clearance to combustibles for both vertical and horizontal runs.

3. Holding the air terminal (with the air deflectors to the top), insert into both vent pipes with a twisting motion to ensure that both the terminal sleeves engage into the vent pipes and sealant. Secure the terminal to the exterior wall and make weather tight by sealing with caulking (not supplied).

The air terminal mounting plate may be recessed into the exterior wall or siding by 1/2", the depth of the return flange.

HORIZONTAL AIR TERMINAL INSTALLATION

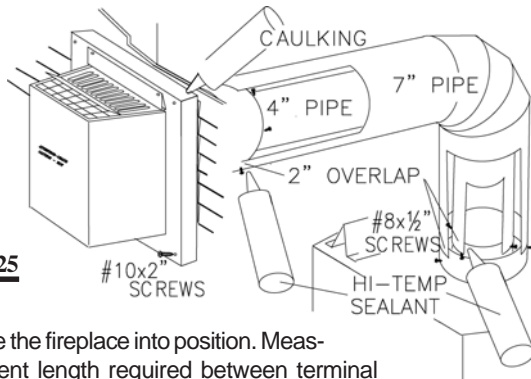


FIGURE 25

1. Move the fireplace into position. Measure the vent length required between terminal and fireplace taking into account the additional length needed for the finished wall surface and any 1/4" overlaps between venting components.

2. Apply high temperature sealant to the outer edge of the 4" inner collar of the fireplace. Attach the first vent component and secure using 3 self tapping screws. Repeat using 7" piping.

EXTENDED HORIZONTAL AND CORNER AIR TERMINAL INSTALLATION

1. Follow the instructions for "Horizontal Air Terminal Installations", items 1 to 3.

2. Continue adding components alternating inner and outer venting. Ensure that all 4" venting and elbows have sufficient vent spacers attached and each component is securely fastened to the one prior. Attach the 4" telescopic sleeve to the vent run.

Repeat using a 7" telescopic sleeve. Secure and seal as before. To facilitate completion, attach 5" and 8" couplers to the air terminal.

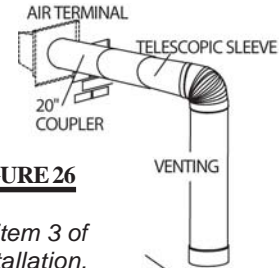


FIGURE 26

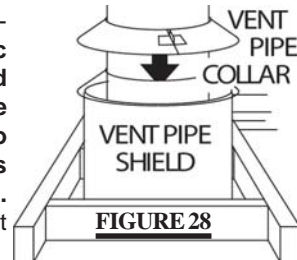
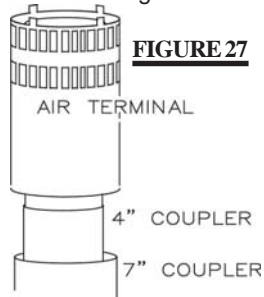
3. Install the air terminal. See item 3 of the Horizontal Air Terminal Installation. Extend the 4" telescopic sleeve; connect to the air terminal assembly. Fasten with self tapping screws and seal. Repeat using the 7" telescopic sleeve.

VERTICAL VENTING INSTALLATION

1. Move the fireplace into position.
2. Fasten the roof support to the roof using the screws provided. **FIGURE 22.** The roof support is optional. In this case the venting is to be adequately supported using either an alternate method suitable to the authority having jurisdiction or the optional roof support.
3. Apply high temperature sealant to the outer edge of the inner sleeve of the air terminal. Slip a 4" diameter coupler a minimum of 2" over the sleeve and secure using 3 screws.

4. Apply high temperature sealant to the outer edge of the of the outside sleeve of the air terminal. Slip a 7" diameter coupler over the sleeve and secure as before. **FIGURE 27.** Trim the 7" coupler even with the 4" coupler end.

5. Thread the air terminal pipe assembly down through the roof support and attach, ensuring that a minimum 16" of air terminal will penetrate the roof when fastened. **FIGURE 22.** If the attic space is tight, we recommend threading the Wolf Steel vent pipe collar or equivalent loosely onto the air terminal assembly as it is passed through the attic. **FIGURE 28.** The air terminal must be located vertically and plumb.



6. Remove nails from the shingles, above and to the sides of the chimney. Place the flashing over the air terminal and slide it underneath the sides and upper edge of the shingles. Ensure that the air terminal is properly centered within the flashing, giving a 3/4" margin all around. Fasten to the roof. Do NOT nail through the lower portion of the flashing. Make weather-tight by sealing with caulking. Where possible, cover the sides and top edges of the flashing with roofing material. **FIGURE 23.**

7. Apply a heavy bead of waterproof caulking 2 inches above the flashing. Slide the storm collar around the air terminal and down to the caulking. Tighten to ensure that a weather-tight seal between the air terminal and the collar is achieved. Attach the other storm collar centered between the air intake and air exhaust slots onto the air terminal. Tighten securely. Attach the rain cap.

8. Continue adding rigid venting sections, sealing and securing as above. Attach a 4" collapsed telescopic pipe to the last section of rigid piping. Secure with screws and seal. Repeat using a 7" telescopic pipe.

9. Run a bead of high temperature sealant around the outside of the 4" collar on the fireplace. Pull the adjustable pipe a minimum of 2" onto the collar. Secure with 3 screws. Repeat with the 7" telescopic pipe.

10. In the attic, slide the vent pipe collar down to cover up the open end of the shield and tighten. This will prevent any materials, such as insulation, from filling up the 1" air space around the pipe.

GAS INSTALLATION

Proceed once the vent installation is complete.

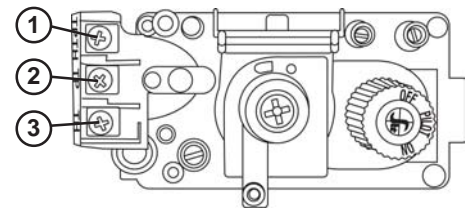
1. Move the fireplace into position and secure using the nailing tabs and/or secure to the floor through the 1/4" diameter holes located at either end of the base.

2. Route a 3/8" N.P.T. black iron gas line, 1/2" type-L copper tubing or equivalent to the fireplace.

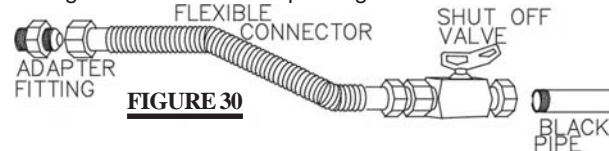
3. For ease of accessibility, an optional remote wall switch or millivolt thermostat may be installed in a convenient location. Route 2-strand (solid core) millivolt wire through the electrical hole located at the bottom left side of the unit. The recommended maximum lead length depends on wire size:

WIRE SIZE	MAX. LENGTH
14 gauge	100 feet
16 gauge	60 feet
18 gauge	40 feet

Attach the two leads to terminals 1 and 3 located on the gas valve.



4. Install rigid black pipe, 1/2" type-L copper tubing or, if local codes permit, a 3/8" flex connector and shutoff valve to the gas line and the fireplace gas valve.



The gas line and the shutoff valve (if so equipped) must not interfere with the opening and closing of the door latch.

Seal and tighten securely. An adapter fitting is required between the gas valve and the copper tubing or flex connector.

Do not kink flex connector.

5. Check for gas leaks by brushing on a soap and water solution.

Do not use open flame.

Do not connect either the wall switch, thermostat or gas valve to electricity (110 volts).

Purge all gas lines with the glass door of the fireplace open. Assure that a continuous gas flow is at the burner before closing the door.

MOBILE HOME INSTALLATION

In Canada, mobile home installation may be vented horizontally or vertically. In the United States, it may only be installed vertically. See "Vertical Venting" or "Horizontal Air Terminal Installation" for installation.

The fireplace is equipped with two 1/4" diameter holes located in the front left and right corners of the base. For mobile home installations, the fireplace must be fastened in place. Use #10 hex head screws, inserted through the holes in the base to secure. It is recommended that the fireplace be secured in all installations.

Always turn off the pilot and the fuel supply at the source, prior to moving the mobile home.

After moving the mobile home and prior to lighting the fireplace, ensure that the logs are positioned correctly.

FRAMING

It is best to frame your fireplace after it is positioned and the vent system is installed. Use 2x4's and frame to local building codes. **FIGURES 31-33.**

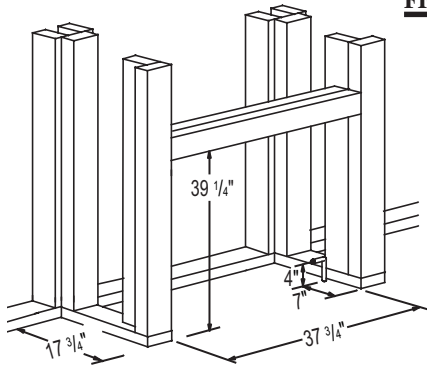


FIGURE 31

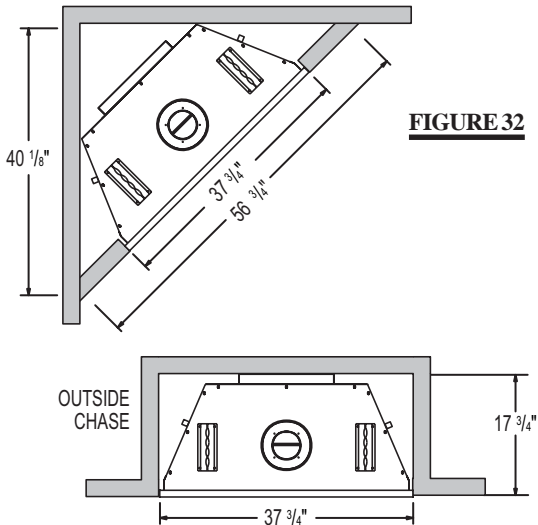
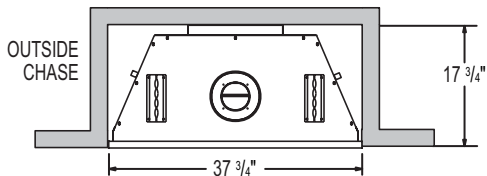
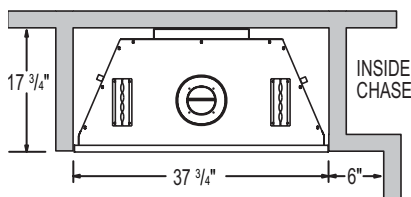


FIGURE 32



FIGURES 33



It is not necessary to install a hearth extension with this fireplace system.

Note: In order to avoid the possibility of exposed insulation or vapour barrier coming in contact with the fireplace body, it is recommended that the walls of the fireplace enclosure be "finished" (ie: drywall/sheetrock), as you would finish any other outside wall of a home. This will ensure that clearance to combustibles is maintained within the cavity.

When roughing in the fireplace, raise the fireplace to accommodate for the thickness of the finished floor materials, i.e. tile, carpeting, hard wood, which if not planned for will interfere with the opening of the lower access door and the installation of many decorative flashing accessories.

Objects placed in front of the fireplace should be kept a minimum of 48" away from the front face.

A non-combustible finishing material must be used for a minimum of 3" above the fireplace

Combustible materials may be installed flush with the front sides of the fireplace but must not cover or protrude past any of the black face-side-areas of the fireplace. Non-combustible material (brick, stone or ceramic tile) may protrude in these areas.

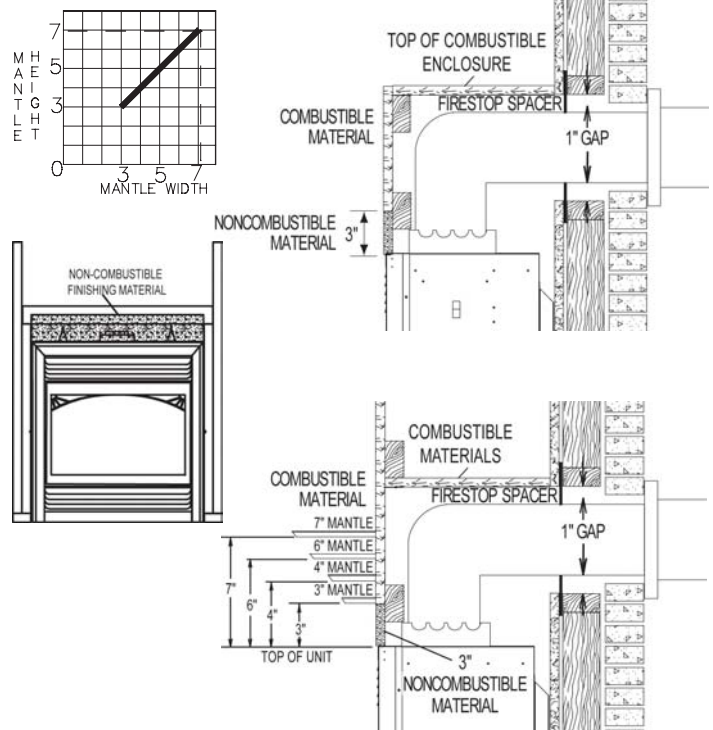
NAILING TABS

To install the fireplace face flush with the finished wall, position the framework to accommodate the thickness of the finished wall. Bend out the four nailing tabs, attached on either side of the fireplace and secure to the 2x4 framing. The tabs will facilitate the installation of either a 3/4" or a 1" finished wall thickness. **The nailing tabs must not be removed.**

MANTLE CLEARANCES & ENCLOSURES

Combustible mantle clearance can vary according to the mantle depth. Use the graph to help evaluate the clearance needed. Curtains, above the fireplace, must not be positioned lower than the 3" distance required for the 3" combustible mantle. **These same requirements apply to any combustibles protruding on either side of the fireplace.**

FIGURES 34



FINISHING

DOOR REMOVAL & INSTALLATION

Lift up and remove the upper louvres. Open the valve control door. Release the top and bottom door latches, located at the right side of the door.
To close the door, repeat in reverse order.

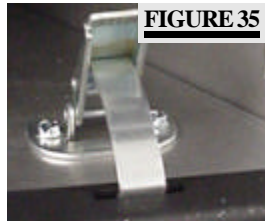


FIGURE 35

The door latch holes are elongated for door levelling. The door may need to be lifted up at the right side before latching to ensure the door is level.

GVFL LOUVRE INSTALLATION

Remove the protective plastic wrap from the louvres and install as illustrated.

Clip each upper louvre into a slot on the louvre bracket. Ensure that the louvres are centered within the opening.

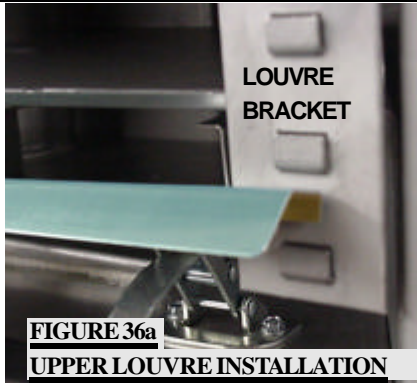


FIGURE 36a
UPPER LOUVRE INSTALLATION

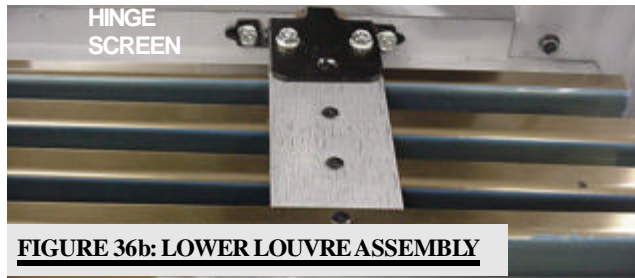


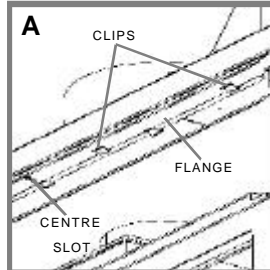
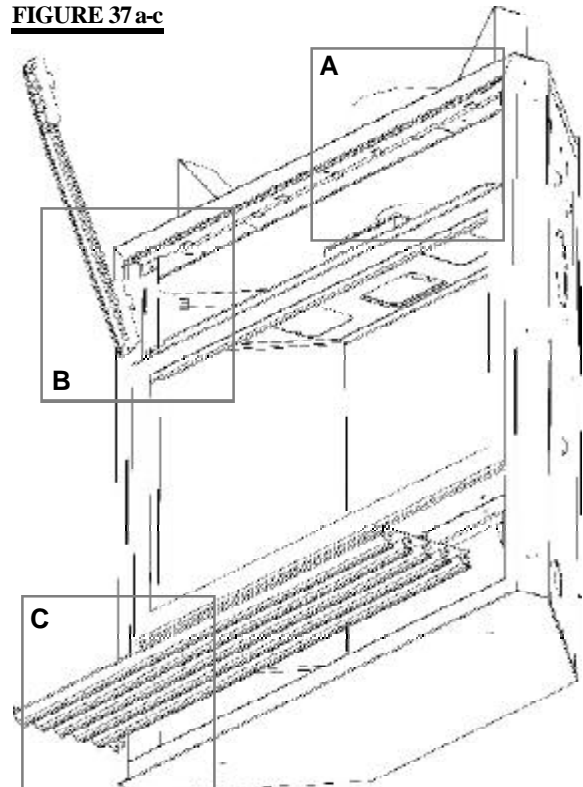
FIGURE 36b: LOWER LOUVRE ASSEMBLY

Secure the lower louvre assembly to the lip of the fireplace base as shown.

Position the hinge screen into place and with the control door open, secure to the firebox using three screws.

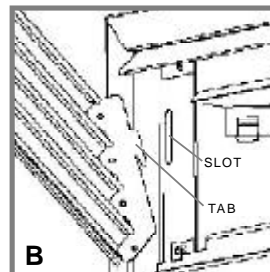
L38 LOUVRE INSTALLATION

FIGURE 37 a-c



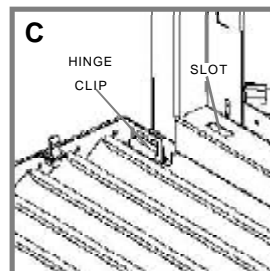
HOOD

Attach the hood by pressing the top flange into the clips along the top of the louvre opening. Secure using a screw through the centre slot.



UPPER LOUVRES

Insert the louvre tabs into the slots located at the top left and right corners of the unit.



LOWER LOUVRES

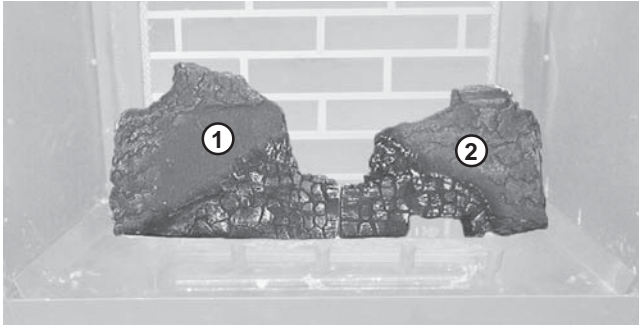
Insert the hinge clips into the slots located at the bottom left and right corners of the unit.

To remove the louvres, pull the back tabs of the clips forward, while pushing the louvre assembly back. Lift the clip.

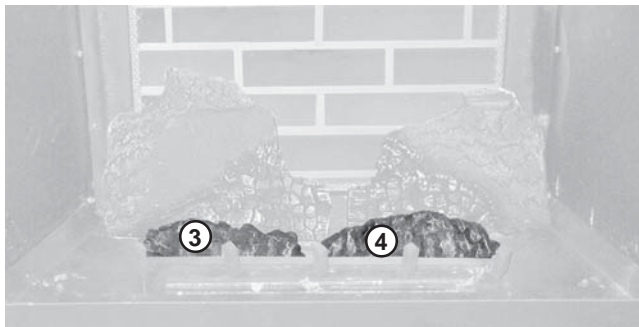
LOG PLACEMENT

PHAZER™ logs and glowing embers exclusive to Napoleon Fireplaces, provide a unique and realistic glowing effect that is different in every installation. Take the time to carefully position the glowing embers for a maximum glowing effect. Log colours may vary. During the initial use of the fireplace, the colours will become more uniform as colour pigments burn in during the heat activated curing process.

FIGURE 38a-d



1. Place rear logs **#1 & #2** against the back of the firebox with the notch in the bottom of log **#2** around the pilot assembly, as shown.



2. Place logs **#3** and **#4** onto the locating pins on the burner.



3. Place the bottom of log **#5** against the left side of the firebox. Rest the log back, diagonally into the designated pocket in log **#1**.



4. Place the bottom of log **#6** against the right side of the firebox. The upper branch rests against log **#1**. The lower branch rests against the 4th and 5th grate posts.

CHARCOAL EMBERS

Randomly place the charcoal embers along the front and sides of the log support tray in a realistic manner. *Fine dust found in the bottom of the bag should not be used.*

GLOWING EMBERS

Tear the embers into pieces and place along the front row of ports covering all of the burner area in front of the small logs (**#2 & #3**). Care should be taken to shred the embers into thin, small irregular pieces as only the exposed edges of the fibre hairs will glow. *The ember material will only glow when exposed to direct flame; however, care should be taken to not block the burner ports.*

Blocked burner ports can cause an incorrect flame pattern, carbon deposits and delayed ignition. **PHAZER™** logs glow when exposed to direct flame. Use only certified "glowing embers" and **PHAZER™** logs available from your Napoleon dealer.

GLOWING CRYSTAL EMBERS

Place the glowing crystal embers along the front of the log support **on the glass only**. Make sure the glowing crystal embers don't block the gap between the burner and the glass.

DO NOT PLACE GLOWING CRYSTAL EMBERS ON THE BURNER.

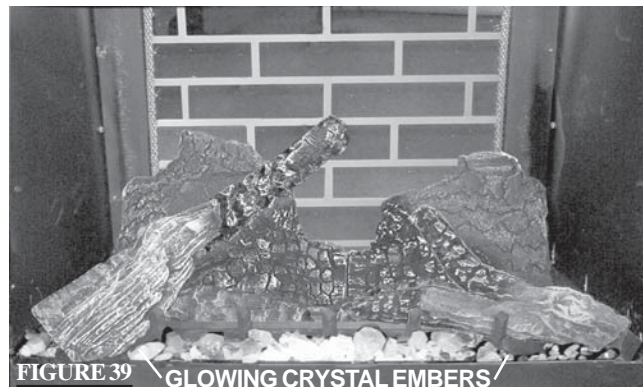


FIGURE 39 GLOWING CRYSTAL EMBERS

LOGO PLACEMENT

Remove the backing of the logo supplied and place on the glass viewing door, as indicated.

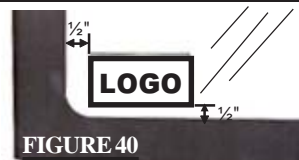


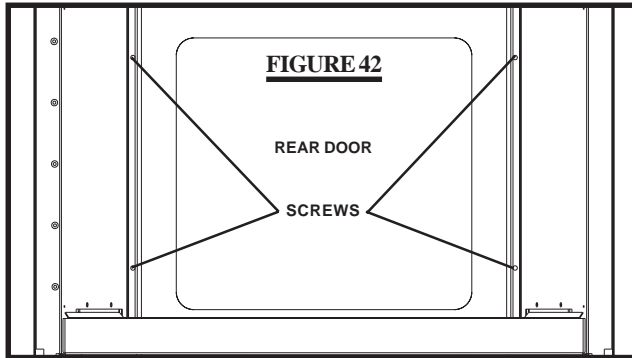
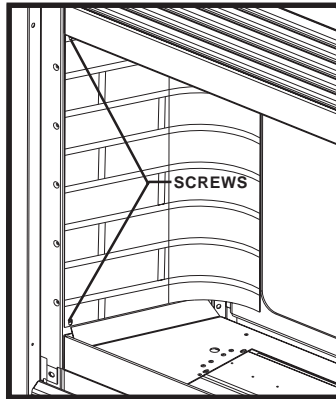
FIGURE 40

BLOWER REPLACEMENT

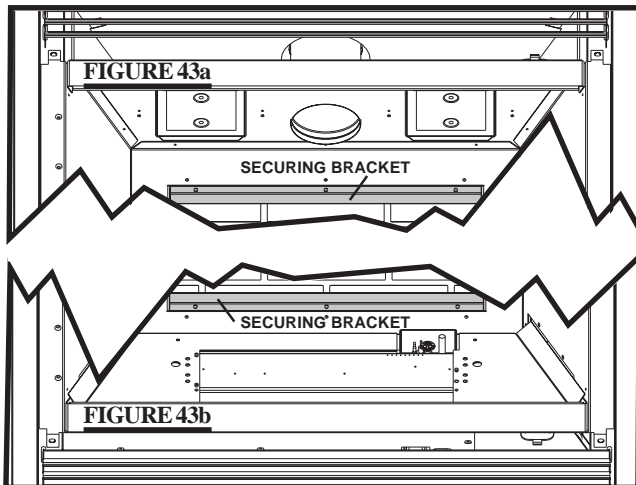
1. Before proceeding, turn off the power to the unit.
2. Turn the pilot light off.
3. Remove the logs and place in a location where they will not be damaged.

FIGURE 41

4. Remove the 2 side metal brick panels by removing the two securing screws on the front of the panels.



5. Remove the 4 screws that secure the rear door and remove the door.

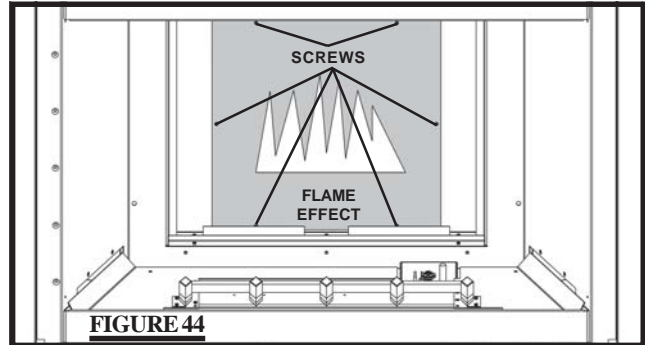


6. Remove the top and bottom glass securing brackets on the upper and lower portions of the glass opening and remove the glass.

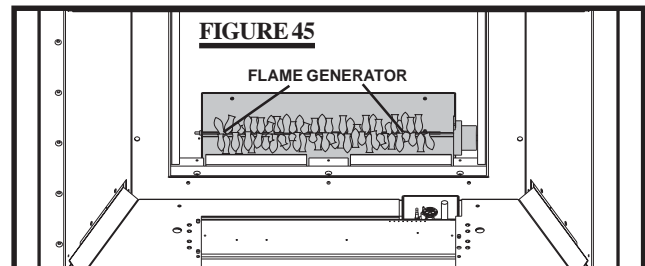
FLAME EFFECT BULB REPLACEMENT

To replace the flame effect bulbs, follow steps 1-8 of the **BLOWER REPLACEMENT** section above, then continue with step 9.

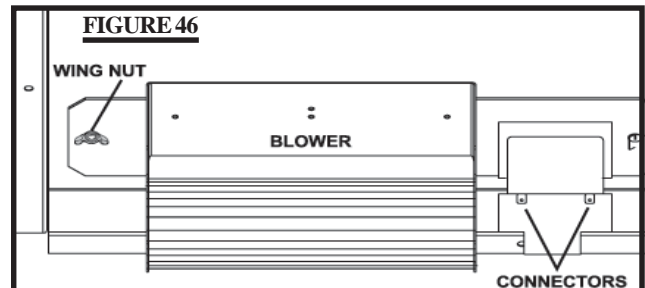
9. Slide the defective bulb to either side until opposite end is disengaged. Remove the bulb towards the back of the fireplace.



7. Remove the flame effect panel by removing the 6 screws.



8. Remove the flame generator by sliding to the left and dislodging the neoprene tube from the motor shaft. Next, slide the flame generator to the right to remove the shaft from the nylon bearing.



9. Remove the two wires secured to the blower (they should slide off of the connector).

10. Remove the wing nut.

11. Remove the blower and replace with the new one.

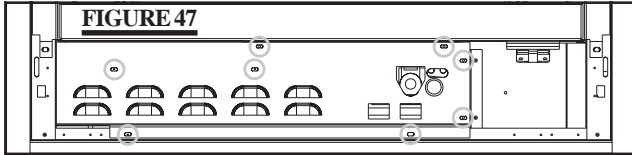
12. Repeat steps 9 through 11 to put unit back together.

10. Replace with 75 watt Halogen light (E-11 Base).

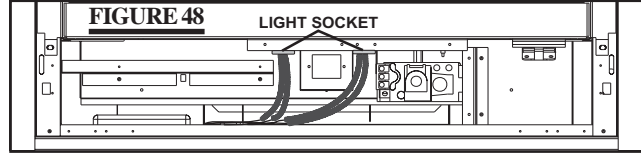
Install the replacement bulb using the protective wrap to avoid touching the lens, then discard protective wrap.

11. Repeat steps 8 through 11 to put the unit back together.

EMBER BED BULB REPLACEMENT



1. Remove the lower control panel by removing the 8 securing screws.



2. Hold the lower portion of the light socket and turn clockwise to remove.

3. Pull the bulb straight out of the socket and replace the bulb being careful not to touch the quartz portion with your fingers.

4. To put back together, reinstall the control panel removed in step 1.

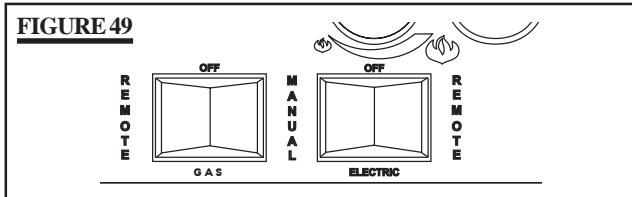
OPERATION

FIREPLACE OPERATION

To operate the gas features, the pilot needs to be running and the gas valve turned to the on position.

You can run the fireplace on manual or remote.

When operating the main burner on manual, the fireplace will operate on low input only.

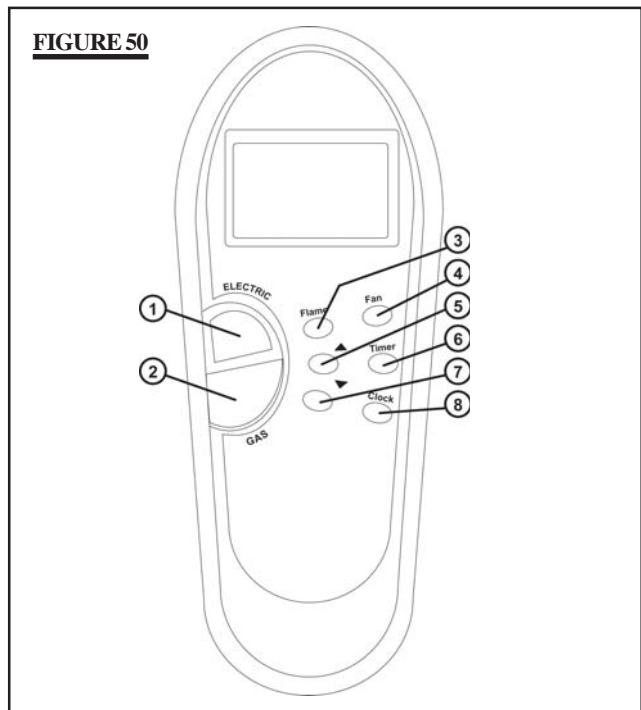


Turn the respective main power switches to **manual** to operate either the gas or the electric features of the fireplace **without the remote** or thermostat.

Turn both the main power switches to **remote** to operate either the gas or the electric features of the fireplace **with the remote** or thermostat.

Turn both the main power switches to the **off** position to disable either the gas or the electric features of the fireplace.

In order to save the battery life on the remote, it is recommended that when operating the electric fireplace for an extended period of time, to operate with the electric power switch in the manual position.



HAND HELD REMOTE OPERATION

1. Turns electric flame on/off.
2. Turns gas flame on/off.
3. Activates gas flame adjustment.
4. Activates fan adjustment.
5. Adjusts options #3 & #4 up.
6. Sets the timer.
7. Adjusts options #3 & #4 down.
8. Sets the time.

OPERATING INSTRUCTIONS

When lit for the first time, the fireplace will emit a slight odour for a few hours. This is a normal temporary condition caused by the curing of the logs and the "burn-in" of internal paints and lubricants used in the manufacturing process and will not occur again.

After extended periods of non-operation such as following a vacation or a warm weather season, the fireplace may emit a slight odour for a few hours. This is caused by dust particles in the heat exchanger burning off. In both cases, open a window to sufficiently ventilate the room.

Purge the gas line with the glass door open. Assure that a continuous gas flow is at the burner before closing the door.

FOR YOUR SAFETY READ BEFORE LIGHTING:

- A. This fireplace is equipped with a pilot which must be lit by hand while following these instructions exactly.
- B. Before operating smell all around the fireplace area for gas and next to the floor because some gas is heavier than air and will settle on the floor
- C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the fireplace and replace any part of the control system and any gas control which has been under water.

WHAT TO DO IF YOU SMELL GAS

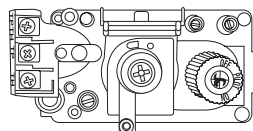
- Turn off all gas to the fireplace.
- Open windows.
- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

FIGURE 51



GAS KNOB


FIGURE 52





LIGHTING INSTRUCTIONS

WARNING: The gas valve has an interlock device which will not allow the pilot burner to be lit until the thermocouple has cooled. Allow approximately 60 seconds for the thermocouple to cool.

When lighting and re-lighting, the gas knob cannot be turned from pilot to off unless the knob is **depressed slightly**.

1. Stop! Read the above safety information on this label.
2. Turn off all electric power to the fireplace.
3. Turn the gas knob clockwise  to off.
4. Wait five (5) minutes to clear out any gas. If you smell gas including near the floor. Stop! Follow "B" in the above safety

information on this label. If you don't smell gas go the next step.

5. Turn gas knob counter-clockwise  to pilot.
6. Depress slightly and hold gas knob while lighting the pilot with the push button ignitor. Keep knob depressed for one minute, then release. If pilot does not continue to burn, repeat steps 3 through 5.
7. With pilot lit, depress and turn gas knob counter-clockwise  to on.
8. If equipped with remote on-off switch/thermostat, main burner may not come on when you turn valve to on. Remote switch must be in the on position to ignite burner.
9. Turn on all electric power to the fireplace.

TO TURN OFF GAS

1. Turn off all electric power to the fireplace if service is to be performed.
2. Push in gas control knob slightly and turn clockwise  to off. Do not force.

MAINTENANCE

Turn off the gas and electrical power before servicing the fireplace.

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing. This fireplace and its venting system should be inspected before use and at least annually by a qualified service person. The fireplace area must be kept clear and free of combustible materials, gasoline or other flammable vapours and liquids. The flow of combustion and ventilation air must not be obstructed.

1. In order to properly clean the burner and pilot assembly, remove the logs to expose both assemblies.

2. Keep the control compartment, logs, burner, air shutter opening and the area surrounding the logs clean by vacuuming or brushing, *at least once a year*.

3. Check to see that all burner ports are burning. Clean out any of the ports which may not be burning or are not burning properly.

4. Check to see that the pilot flame is large enough to engulf the thermocouple and thermopile and reaches toward the burner with the third jet.

5. Replace the cleaned logs.

6. Check to see that the main burner ignites completely on all openings when the gas knob for the burner is turned on. A 5 to 10 second total light-up period is satisfactory. If ignition takes longer, consult your Continental dealer / distributor.

7. Check that the gasketing on the sides, top and bottom of the door is not broken or missing. Replace if necessary.

ELECTRICAL CONNECTION

This fireplace requires 6 amps, 120 volt and a 60 hz grounded circuit.

Do NOT use the fireplace if any part has been under water.

Call a qualified service technician IMMEDIATELY to have the fireplace inspected for damage to the electrical circuit.

HARD WIRING CONNECTION

It is necessary to hard wire this fireplace.

Permanently framing the fireplace with an enclosure, requires the fireplace to be hardwired.

This fireplace must be electrically connected and grounded in accordance with local codes. In the absence of local codes, use the current CSA C22.1 CANADIAN ELECTRICAL CODE in Canada or the ANSI/NFPA 70-1996 NATIONAL ELECTRICAL CODE in the United States.

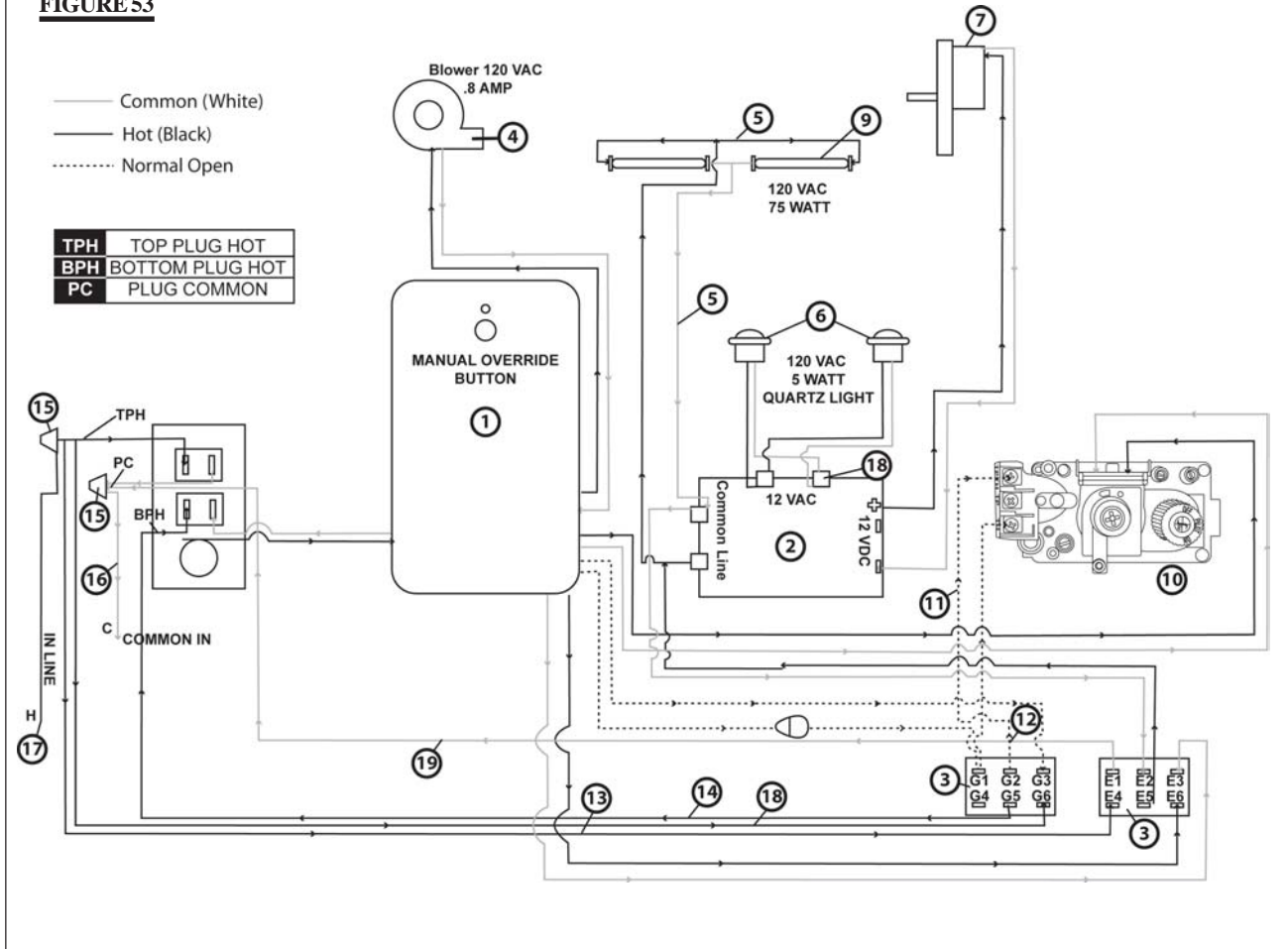
The plastic coating of the two electrical inlet lines are marked "H" for hot and "C" for common.

ELECTRICAL DIAGRAM LEGEND

#	Part #	Description
1.	W660-0029	Controller
2.	W707-0003	Transformer
3.	W660-0034	Rocker Switch
4.	W062-0005	Blower
5.	W750-0117	Light Harness
6.	W387-0004	5 Watt Quartz Light
7.	W435-0004	12 Volt Motor
8.	W350-0126	Receptical (Electrical Box)
9.	W387-0003	75 Watt Quartz Bulbs
10.	W725-0035	Natural Gas Valve
	W725-0034	Propane Valve
11.	W750-0122	1 pcs
12.	W750-0123	1 pcs
13.	W750-0124	1 pcs
14.	W750-0134	1 pcs
15.	W175-0010	Wire Nut
16.	W750-0133	Line In Wire Harness (common)
17.	W750-0133	Line In Wire Harness (hot)
18.	W750-0135	1 pcs
19.	W750-0135	1 pcs

Electric Diagram

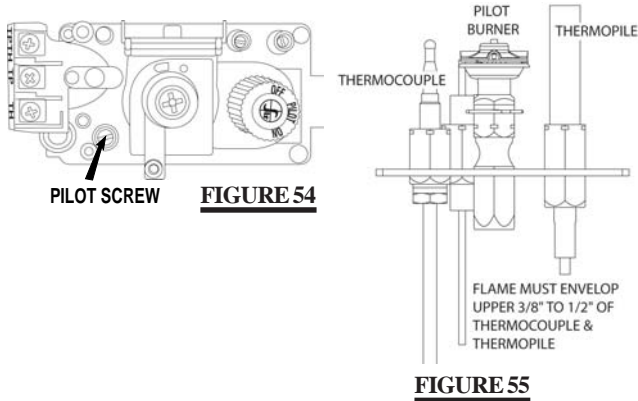
FIGURE 53



ADJUSTMENTS

PILOT BURNER ADJUSTMENT

Adjust the pilot screw to provide properly sized flame. Turn in a clockwise direction to reduce the gas flow.



Closing the air shutter will cause a more yellow flame, but can lead to carboning.

Opening the air shutter will cause a more blue flame, but can cause flame lifting from the burner ports. The flame may not appear yellow immediately; allow 15 to 30 minutes for the final flame colour to be established.

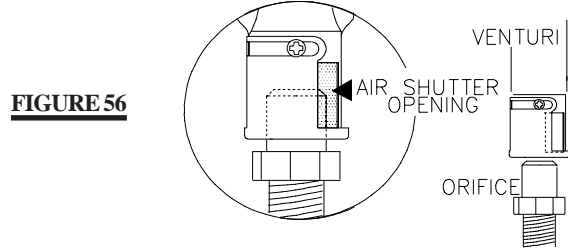


FIGURE 56

Air shutter adjustment must only be done by a qualified installer!

VENTURI ADJUSTMENT

Air shutters have been factory set open according to the chart below:

	AIR SHUTTER
NG	$\frac{1}{16}$ "
LP	$\frac{3}{16}$ "

These settings are for the maximum horizontal vent run. Adjustment may be required depending on fuel type, vent configuration and altitude.

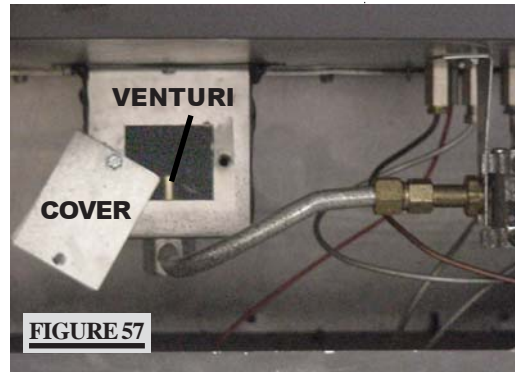


FIGURE 57

1. Remove the front central panel to access the venturi housing.
2. Remove the 2 screws that secure the cover to the venturi housing, taking care not to damage the gasket.

REPLACEMENTS

Contact your dealer for questions concerning prices and availability of replacement parts. Normally all parts can be ordered through your Napoleon dealer or distributor.

When ordering replacement parts always give the following information:

FOR WARRANTY REPLACEMENT PARTS, A PHOTOCOPY OF THE ORIGINAL INVOICE WILL BE REQUIRED TO HONOUR THE CLAIM.

REPLACEMENT PARTS

#	PART NO.	DESCRIPTION
1	W135-0214	LEFT REAR LOG (#1)
2	W135-0216	RIGHT REAR LOG (#2)
3	W135-0184	LEFT MIDDLE LOG (#3)
4	W135-0185	RIGHT MIDDLE LOG (#4)
5	W135-0215	LEFT CROSSOVER LOG (#5)
6	W135-0217	RIGHT CROSSOVER LOG (#6)
7	GL-645	LOG SET
8*	W361-0016	GLOWING EMBERS
9*	W550-0001	CHARCOAL EMBERS
10*	W300-0077	GLASS CRYSTAL EMBERS
11	W357-0001	PIEZO IGNITER
12	W680-0004	THERMOPILE
13	W680-0005	THERMOCOUPLE
14	W010-0800	NATURAL GAS PILOT ASSEMBLY
14	W010-0801	PROPANE GAS PILOT ASSEMBLY
15*	W573-0007	HIGH TEMPERATURE SEALANT
16	W455-0070	NATURAL GAS PILOT INJECTOR
16	W455-0068	PROPANE GAS PILOT INJECTOR
17	W725-0044	NATURAL GAS VALVE
17	W725-0045	PROPANE VALVE
18*	W385-0245	NAPOLEON LOGO
19*	W750-0112	20FT OF WIRE
20	W010-0764	PAN BURNER
21	W455-0040	#41 NATURAL GAS ORIFICE
21	W455-0003	#54 PROPANE GAS ORIFICE
22	W500-0044	FIRESTOP SPACER (FLEX VENTING)
23	W062-0005	BLOWER
24	W660-0030	REMOTE TRANSMITTER
25	W660-0031	REMOTE RECEIVER
26	W010-1168	REAR DOOR ASSEMBLY
27	W300-0074	FLAME EFFECT GLASS
28	W475-0330	DECORATIVE BRICK PANEL - LEFT
29	W475-0331	DECORATIVE BRICK PANEL - RIGHT
30	W010-1090	FLAME EFFECT ASSEMBLY
31	W387-0003	130 VAC T-3 78MM QUARTZ LAMP
32	W435-0006	FLAME EFFECT MOTOR
33	W660-0034	ROCKER SWITCH
34	W300-0072	EMBER BED GLASS
35	W300-0073	BURNER DEFUSER GLASS
36	W707-0003	VARIABLE TRANSFORMER

1. MODEL & SERIAL NUMBER OF FIREPLACE
2. INSTALLATION DATE OF FIREPLACE
3. PART NUMBER
4. DESCRIPTION OF PART
5. FINISH

* IDENTIFIES ITEMS WHICH ARE NOT ILLUSTRATED. FOR FURTHER INFORMATION, CONTACT YOUR NAPOLEON DEALER.

FLEXIBLE VENT KITS

GD220 (5 FT)

#	PART NO.	DESCRIPTION
37*	W010-0397	4" FLEXIBLE ALUMINIUM LINER - (5 FT) C/W SPACERS
37*	W410-0017	7" FLEXIBLE ALUMINIUM LINER - (5 FT)

GD330 (10 FT)

#	PART NO.	DESCRIPTION
37*	W410-0018	7" FLEXIBLE ALUMINIUM LINER -(10 FT)
37*	W010-0300	4" FLEXIBLE ALUMINIUM LINER -(10 FT) C/W SPACERS
38*	W010-0370	WALL SUPPORT ASSEMBLY

TERMINAL KITS

39 PERISCOPE	-	GD201
40 WALL TERMINAL KIT	-	GD222

ROOF TERMINAL KITS

41 1/12 TO 7/12 PITCH	-	GD110
42 8/12 TO 12/12 PITCH	-	GD111
43 FLAT ROOF	-	GD112

PART NO. DESCRIPTION

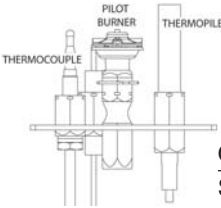
44	W010-0569	AIR TERMINAL
45	W120-0036	VERTICAL CAP
46	W170-0063	STORM COLLAR
47	W010-0567	ROOF SUPPORT
48	W263-0054 / W263-0055 / W263-0056	ROOF FLASHING

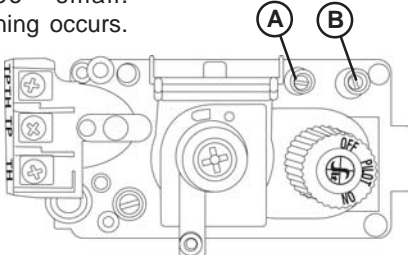
ACCESSORIES

#	PART NO.	DESCRIPTION
49*	W175-0001	4" COUPLER
49*	W175-0013	7" COUPLER
50	GDLVK	LOUVRE KIT - UPPER & LOWER - BLACK
50	GDLVPB	LOUVRE KIT - UPPER & LOWER - POLISHED BRASS
50	GDLVSS	LOUVRE KIT - UPPER & LOWER - BRUSHED STAINLESS STEEL
50	GDLVG	LOUVRE KIT - UPPER & LOWER - GOLD
51	L38K	LOUVRE KIT - UPPER & LOWER - BLACK
52*	W573-0008	HI-TEMPERATURE SEALANT
53*	W690-0001	MILLIVOLT THERMOSTAT
54*	W500-0163	FIRESTOP SPACER (RIGID VENTING)
55	GD501	HEAT GUARD
56*	W585-0096	SOFFIT HEAT SHIELD
57*	W010-0810	WALL SUPPORT ASSEMBLY
58*	W175-0170	DURA-VENT ZERO CLEARANCE ADAPTOR
59	W170-0086	VENT PIPE COLLAR
60	W585-0092	VENT PIPE SHIELD
61	GA-566	HOT AIR DISTRIBUTION KIT
62*	W690-0005	THERMOSTAT 110V FOR USE WITH GA-566
63	GA-70	EXTENSION KIT - 5 FT
64	GA-72	HOT AIR EXHAUST KIT
65*	W175-0223	CONVERSION KIT - NG TO LP
65*	W175-0224	CONVERSION KIT - LP TO NG
66	D70K	BLACK DOOR
66	D70G	GOLD DOOR
66	D70SS	STAINLESS STEEL DOOR

TROUBLE SHOOTING GUIDE

BEFORE ATTEMPTING TO TROUBLESHOOT, PURGE YOUR UNIT AND INITIALLY LIGHT THE PILOT AND THE MAIN BURNER WITH THE GLASS DOOR OPEN.

SYMPTOM	PROBLEM	TEST SOLUTION	
Main burner goes out; pilot stays on.	Pilot flame is not large enough or not engulfing the thermopile	<ul style="list-style-type: none"> - turn up pilot flame. - replace pilot assembly. 	
	Thermopile shorting	<ul style="list-style-type: none"> - clean thermopile connection to the valve. Reconnect. - replace thermopile / valve. 	
	Remote wall switch wire is too long; too much resistance in the system.	<ul style="list-style-type: none"> - shorten wire to correct length or wire gauge. 	
	Faulty thermostat or switch.	<ul style="list-style-type: none"> - replace. 	
Main burner goes out; pilot goes out.	Refer to "MAIN BURNER GOES OUT; PILOT STAYS ON"		
	Vent is blocked	<ul style="list-style-type: none"> - check for vent blockage. 	
	Vent is re-circulating	<ul style="list-style-type: none"> - check joint seals and installation. 	
	4" flexible vent has become disconnected from fireplace.	<ul style="list-style-type: none"> - re-attach to fireplace. 	
Pilot goes out when the gas knob is released. The gas valve has an interlock device which will not allow the pilot burner to be lit until the thermocouple has cooled. Allow approximately 60 seconds for the thermocouple to cool.	System is not correctly purged.	<ul style="list-style-type: none"> - purge the gas line. 	
	Out of propane gas.	<ul style="list-style-type: none"> - fill the tank. 	
	Pilot flame is not large enough	<ul style="list-style-type: none"> - turn up the pilot flame. 	
	Pilot flame is not engulfing the thermocouple.	<ul style="list-style-type: none"> - gently twist the pilot head to improve the flame pattern around the thermocouple. 	
	Thermocouple shorting / faulty.	<ul style="list-style-type: none"> - loosen and tighten thermocouple. - clean thermocouple and valve connection. - replace thermocouple. - replace valve. 	
Faulty valve.	<ul style="list-style-type: none"> - replace. 		
Pilot burning; no gas to main burner; gas knob is on 'HI'; wall switch / thermostat is on.	Thermostat or switch is defective.	<ul style="list-style-type: none"> - connect a jumper wire across the wall switch terminals; if main burner lights, replace switch / thermostat. 	
	Wall switch wiring is defective.	<ul style="list-style-type: none"> - disconnect the switch wires & connect a jumper wire across terminals 1 & 3; if the main burner lights, check the wires for defects and / or replace wires. 	
	Main burner orifice is plugged.	<ul style="list-style-type: none"> - remove stoppage in orifice. 	
	Faulty valve.	<ul style="list-style-type: none"> - replace. 	
Pilot will not light.		No spark at pilot burner	<ul style="list-style-type: none"> - check if pilot can be lit by a match - check that the wire is connected to the push button ignitor. - check if the push button ignitor needs tightening. - replace the wire if the wire insulation is broken or frayed. - replace the electrode if the ceramic insulator is cracked or broken. - replace the push button ignitor.
		Out of propane gas	<ul style="list-style-type: none"> - fill the tank.
		Spark gap is incorrect	<ul style="list-style-type: none"> - spark gap should be 0.150" to 0.175" (5/32" to 11/64" approx.) from the electrode tip and the pilot burner. To ensure proper electrode location, tighten securing nut (finger tight plus 1/4 turn).
		No gas at the pilot burner	<ul style="list-style-type: none"> - check that the manual valve is turned on. - check the pilot orifice for blockage. - replace the valve. - call the gas distributor.
		Gas piping is undersized.	<ul style="list-style-type: none"> - turn on all gas appliances and see if pilot flame flutters, diminishes or extinguishes, especially when main burner ignites. Monitor appliance supply working pressure. - check if supply piping size is to code. Correct all undersized piping.

SYMPTOM	PROBLEM	TEST SOLUTION
Flames are consistently too large or too small. Carboning occurs.	Unit is over-fired or under-fired.	<ul style="list-style-type: none"> - check pressure readings: Inlet pressure can be checked by turning screw (A) counter-clockwise 2 or 3 turns and then placing pressure gauge tubing over the test point. Gauge should read 7" (minimum 4.5") water column for natural gas or 13" (11" minimum) water column for propane. Check that main burner is operating on "HI". Outlet pressure can be checked the same as above using screw (B). Gauge should read 3.5" water column for natural gas or 10" water column for propane. Check that main burner is operating on "HI". <p>AFTER TAKING PRESSURE READINGS, BE SURE TO TURN SCREWS CLOCKWISE FIRMLY TO RESEAL. DO NOT OVERTORQUE. Leak test with a soap and water solution.</p>
		
Flames are very aggressive.	Door is ajar	<ul style="list-style-type: none"> - fit door assembly into the lower support brackets and secure the four door latches.
Main burner flame is a blue, lazy, transparent flame.	Blockage in vent. Incorrect installation.	<ul style="list-style-type: none"> - remove blockage. In really cold conditions, ice buildup may occur on the terminal and should be removed as required. - refer to Figure 23 to ensure correct location of storm collars.
Carbon is being deposited on glass, logs or combustion chamber surfaces.	Air shutter has become blocked Flame is impinging on the logs or combustion chamber.	<ul style="list-style-type: none"> - ensure air shutter opening is free of lint or other obstructions. - check that the logs are correctly positioned. - open air shutter to increase the primary air. - check the input rate: check the manifold pressure and orifice size as specified by the rating plate values. - check that the door gasketing is not broken or missing and that the seal is tight. - check that both 4" and 7" vent liners are free of holes and well sealed at all joints. - check that minimum rise per foot has been adhered to for any horizontal venting.
White / grey film forms.	Sulphur from fuel is being deposited on glass, logs or combustion chamber surfaces.	<ul style="list-style-type: none"> - clean the glass with a recommended gas fireplace glass cleaner. DO NOT CLEAN GLASS WHEN HOT. If deposits are not cleaned off regularly, the glass may become permanently marked.
Remote wall switch is in "OFF" position; main burner comes on when gas knob is turned to "ON" position.	Wall switch is mounted upside down Remote wall switch is grounding. Remote wall switch wire is grounding. Faulty valve.	<ul style="list-style-type: none"> - reverse. - replace. - check for ground (short); repair ground or replace wire. - replace.
ELECTRIC TROUBLE SHOOTING		
All but flame light works	- Light bulbs are loose or have burned out.	<ul style="list-style-type: none"> - Remove the access panel and change or tighten light bulbs.
Flame light, but no movement in the flame	- Flame generator is defective. - Flame generator has come loose.	<ul style="list-style-type: none"> - Replace the batteries and check the power source. - Consult your local dealer. - Remove the access panel and check to make sure the flame generator bracket is secured to the motor with the rubber tube.
Remote control not working	- Dead batteries. - No power to the unit. - Power turned off. - Power button on control panel is in the manual or off position.	<ul style="list-style-type: none"> - Make sure batteries are charged. - Make sure main power is on. - Turn on manual power switch. - Make sure the power button is on REMOTE setting.
Fireplace will not turn on.	- Breaker or fuse has blown. - Main switch is in the off position	<ul style="list-style-type: none"> - Check main power switch is turned to manual or remote. - Consult your local dealer. - Make sure main power switch is turned to the on position.

