

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



INSTALLATION AND OPERATING INSTRUCTIONS

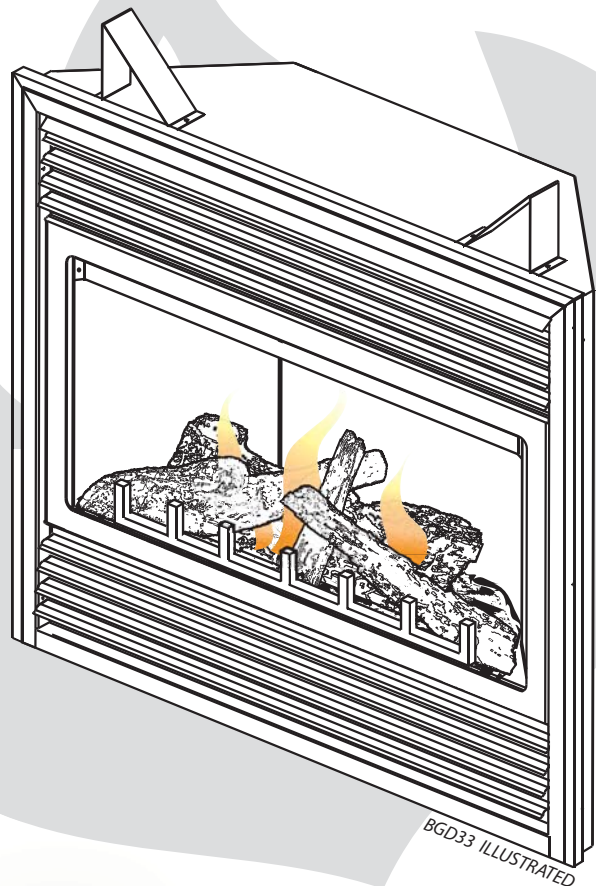
CERTIFIED UNDER CANADIAN AND AMERICAN NATIONAL STANDARDS: CSA 2.33 • ANSI Z21.88 FOR VENTED GAS FIREPLACE HEATERS.

GD33NR BGD33NR

NATURAL GAS MODEL

GD33PR BGD33PR

PROPANE GAS MODEL



CERTIFIED FOR CANADA AND UNITED STATES USING ANSI / CSA METHODS

SAFETY INFORMATION

WARNING: If the information in these instructions are 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 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 supplier.



APPLY SERIAL NUMBER LABEL FROM CARTON

Serial No. XXXXXX000000

MODEL NO.

Wolf Steel Ltd., 24 Napoleon Rd., Barrie, ON L4M 4Y8 Canada • (705)721-1212 • fax(705)722-6031
www.napoleonfireplaces.com • ask@napoleon.on.ca

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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.
- Clothing or other flammable material should not be placed on or near the fireplace.
- Due to high temperatures, the fireplace should be located out of traffic and away from furniture and draperies.
- Ensure you have incorporated adequate safety measure to protect infants/toddlers from touching hot surfaces.
- Even after the fireplace is out, the glass and/or screen will remain hot for an extended period of time.
- Check with your local hearth specialty dealer for safety screens and hearth guards to protect children from hot surfaces. These screens and guards must be fastened to the floor.
- 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 passageway 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.
- 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.
- Pressure relief doors must be kept closed while the fireplace is operating to prevent exhaust fumes containing carbon monoxide, from entering into the home. Temperatures of the exhaust escaping through these openings can also cause the surrounding combustible materials to overheat and catch fire.
- Only doors/optional fronts certified with the appliance shall be used.

NAPOLEON® products 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. The complete fireplace is again 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, gold plated parts against tarnishing, porcelainized enameled 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.

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 licenced, 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.
- A carbon monoxide detector is required in all rooms containing gas fired appliances.
- 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 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 or in the absence of local codes, install to the current standard for gas equipped mobile housing CAN/CSA ZA240 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 Communities 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.

If the optional blower is installed, the receptacle / 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.



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

GENERAL INFORMATION

FOR YOUR SATISFACTION, THIS FIREPLACE HAS BEEN TEST-FIRED TO ASSURE ITS OPERATION AND QUALITY!

GD33 RATES AND EFFICIENCIES			BGD33 RATES AND EFFICIENCIES	
ALTITUDE (FT)	0 - 2,000	2,000 - 4,500*	ALTITUDE (FT)	0 - 4,500
MAX. INPUT (BTU/HR)	22,000	20,000	MAX. INPUT (BTU/HR)	16,400
MAX. OUTPUT (BTU/HR)	17,380	15,800	MAX. OUTPUT (BTU/HR)	11,644
EFFICIENCY (w/ the fan on)	79%	79%	EFFICIENCY (w/ the fan on)	71%

** For elevations between 2,000 and 4,500 ft. above sea level, this fireplace must be de-rated by 10% using the certified High Altitude Kit.*

This fireplace is approved for bathroom, bedroom and bed-sitting room installations and is suitable for mobile home installation.

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.

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

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

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

Use only Napoleon® accessories designed for and listed with the model.

Canada


ENERGUIDE

Gas Fireplace Energy Efficiency Rating

64.6%

Based on CSA P4.1-02

Model No. GD33



CARE OF GLASS AND PLATED PARTS

Do not use abrasive cleaners to clean plated parts. Buff lightly with a clean dry cloth.

GD33 GLASS TYPE	BGD33 GLASS TYPE
3/16" Ceramic Glass*	3/16" Tempered Glass*
<i>*Available from your Napoleon® / Wolf Steel Ltd. dealer.</i>	

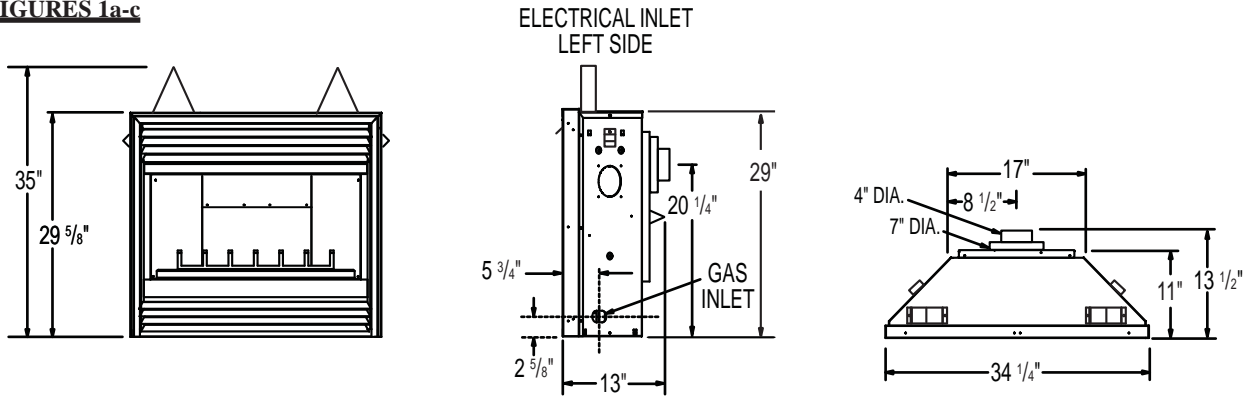


DO NOT SUBSTITUTE MATERIALS. Clean the glass after the first 10 hours of operation with a recommended gas fireplace glass cleaner. Thereafter clean as required.

DO NOT CLEAN GLASS WHEN HOT! If the glass is not kept clean permanent discoloration and / or blemishes may result.

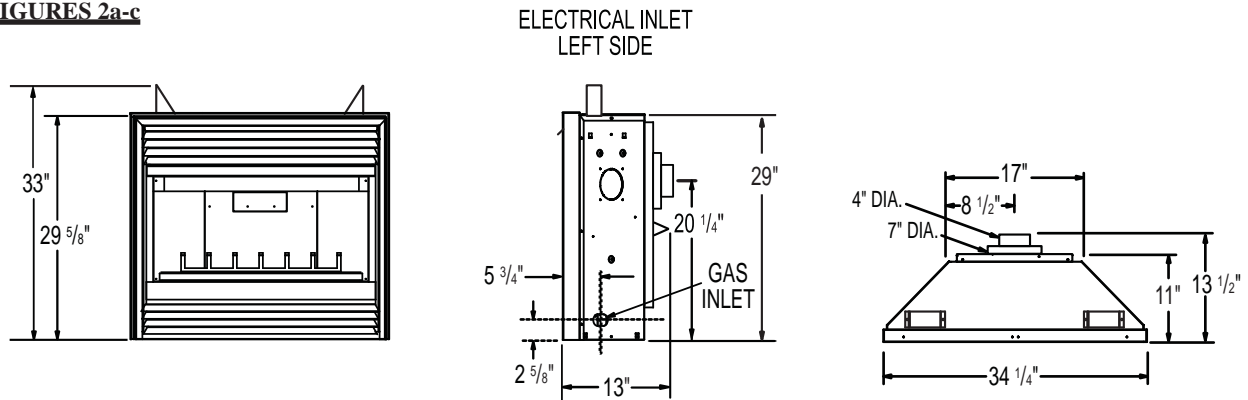
GD33 DIMENSIONS

FIGURES 1a-c



BGD33 DIMENSIONS

FIGURES 2a-c



VENTING

VENTING LENGTHS AND AIR TERMINAL LOCATIONS

Use only Wolf Steel, Simpson Dura-Vent, Selkirk Direct Temp or American Metal Amerivent 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, Selkirk Direct Temp and American Metal Amerivent, follow the installation procedure provided with the venting components.

All outer pipe joints of these venting systems must be sealed using Red RTV and/or Mill Pac high temperature sealant (not supplied) hereafter referred to as high temperature sealant W573-0002 (Red RTV) and high temperature sealant W573-0007 (Mill Pac).

The connection between the adaptor and for these systems and the fireplace flue collar must be sealed using the black high temperature sealant Mill Pac (not supplied).

A starter adaptor must be used with the following vent systems and may be purchased from the corresponding supplier:

PART	4" / 7"	SUPPLIER	WEBSITE ADDRESS*
Simpson Dura-Vent	W175-0053	Wolf Steel Ltd.	www.duravent.com
Selkirk Direct Temp	4DT-AAN	Selkirk	www.selkirkcorp.com
American Metal Amerivent	4DSC-N2	American Metal	www.americanmetalproducts.com

*** For Simpson Dura-Vent, Selkirk Direct Temp and American Metal Amerivent, follow the installation procedure found on the website for your venting supplier.**

For vent systems that provide seals on the inner exhaust flue, only the outer air intake joints must be sealed using a red high temperature silicone (RTV). This same sealant may be used on both the inner exhaust and the outer intake vent pipe joints of all other approved vent systems except for the exhaust vent pipe connection to the fireplace flue collar which must be sealed using the black high temperature sealant Mill Pac. 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 **GD110**, 8/12 to 12/12 Roof Terminal Kit **GD111**, Flat Roof Terminal Kit **GD112** 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 **GD330**.

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.

Horizontal runs may have a 0" rise per foot in all cases using Wolf Steel, Simpson Dura-Vent, Selkirk Direct Temp, or American Metal Amerivent rigid vent components and Wolf Steel flexible vent components.

For optimum performance, it is recommended that horizontal runs have a minimum 1/4" rise per foot when using Simpson Dura-Vent, Selkirk Direct Temp, American Metal Amerivent or Wolf Steel rigid vent components and a minimum 1" rise per foot when using Wolf Steel flexible vent components.

VENT INSTALLATIONS

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.

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

Do not allow the inside liner to bunch up on horizontal or vertical runs and elbows. Keep it pulled tight. A 1¼" air gap between the inner and outer liner all around is required for safe operation.

Use a firestop, vent pipe shield or attic insulation shield when penetrating interior walls, floor or ceiling.

When venting straight out the back, only the rigid vent can be used. **DO NOT USE FLEXIBLE VENT.** For all other venting configurations, flexible vent is acceptable.

GD33	BGD33
<p style="text-align: center;">HORIZONTAL VENT SECTIONS</p> <p><i>A minimum clearance of 1" at the bottom and sides and 2" at the top of the vent pipe in all horizontal runs to combustibles is required. Use firestop sleeve assembly W010-1777 (supplied).</i></p>	<p style="text-align: center;">HORIZONTAL VENT SECTIONS</p> <p><i>A minimum clearance of 1" at the bottom and sides and 2" at the top of the vent pipe in all horizontal runs to combustibles is required. Use firestop sleeve assembly W010-1777 (supplied).</i></p>
<p style="text-align: center;">VERTICAL VENT SECTIONS</p> <p><i>A minimum of 1" all around the vent pipe on all vertical runs to combustibles is required. Use firestop spacer W500-0096 (not supplied).</i></p>	<p style="text-align: center;">VERTICAL VENT SECTIONS</p> <p><i>A minimum of 1" all around the vent pipe on all vertical runs to combustibles is required. Use firestop spacer W500-0096 (not supplied).</i></p>

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

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

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.

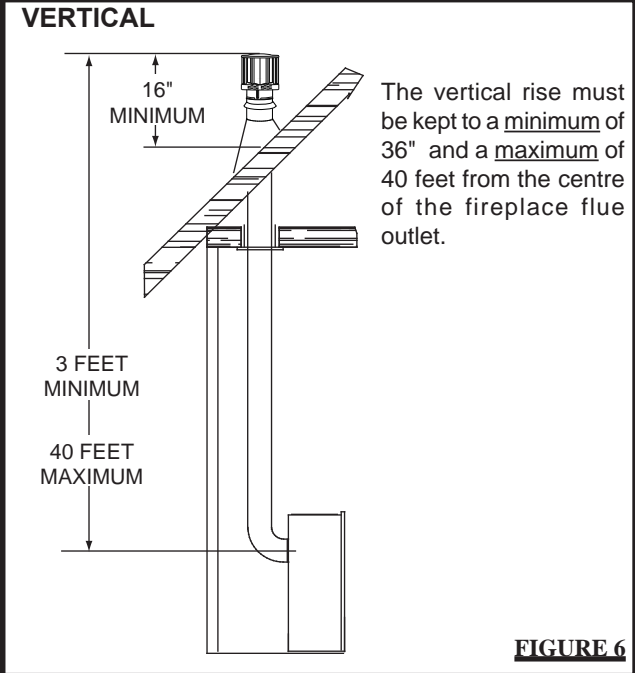
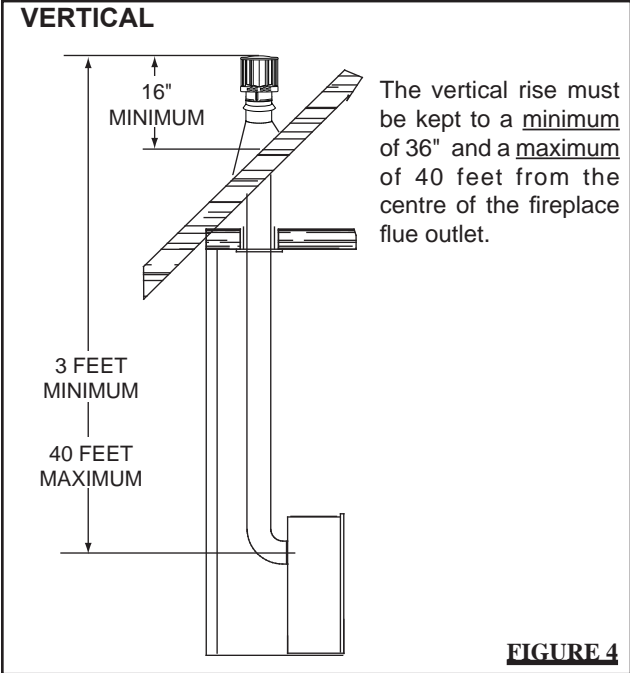
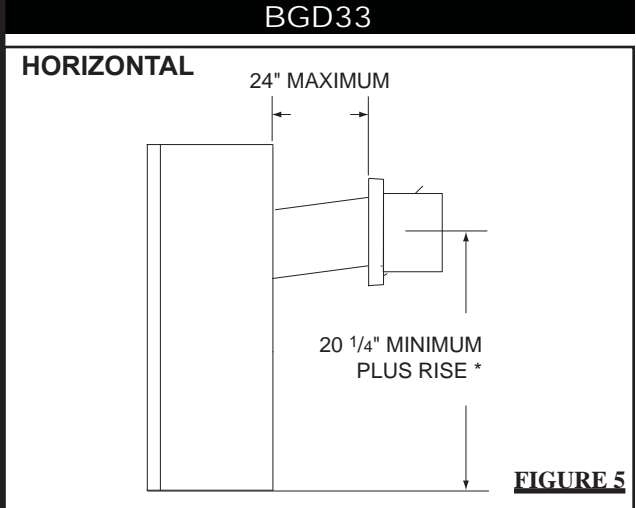
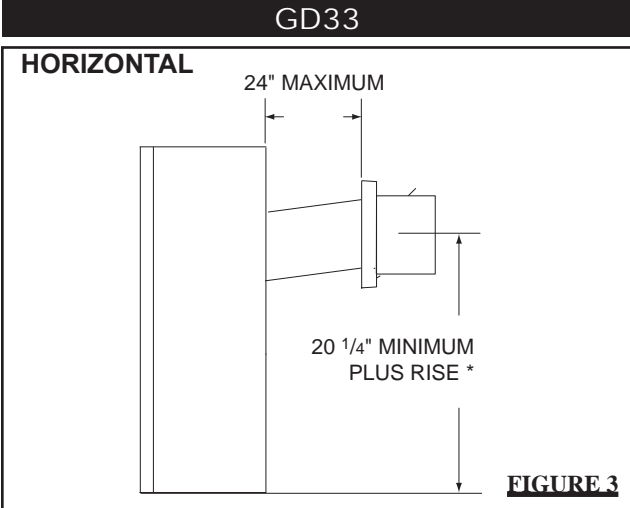
In order to avoid the possibility of exposed insulation or vapour barrier coming in contact with the fireplace body, it is recommended that the walls of the fireplace enclosure be "finished" (ie: drywall/sheetrock), as you would finish any other outside wall of a home. This will ensure that clearance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

Wolf Steel, Simpson Dura-Vent, Selkirk Direct Temp and American Metal Amerivent venting systems must not be combined.

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

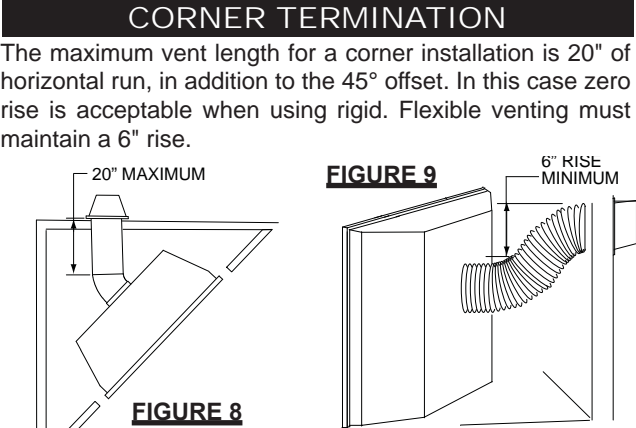
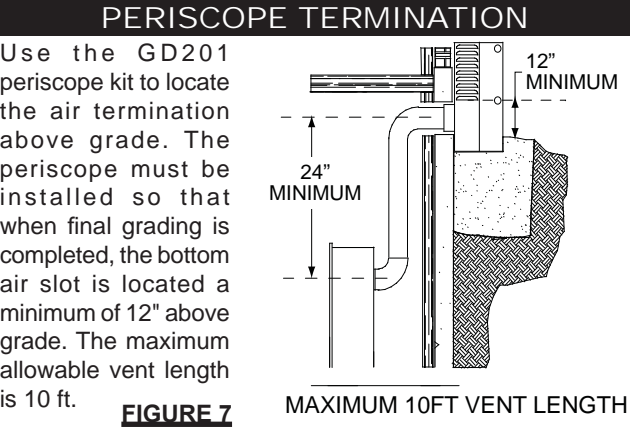
**FOR SPECIFIC VENTING PARAMETERS, REFER TO
PAGES 9-12.**

TYPICAL VENT INSTALLATIONS



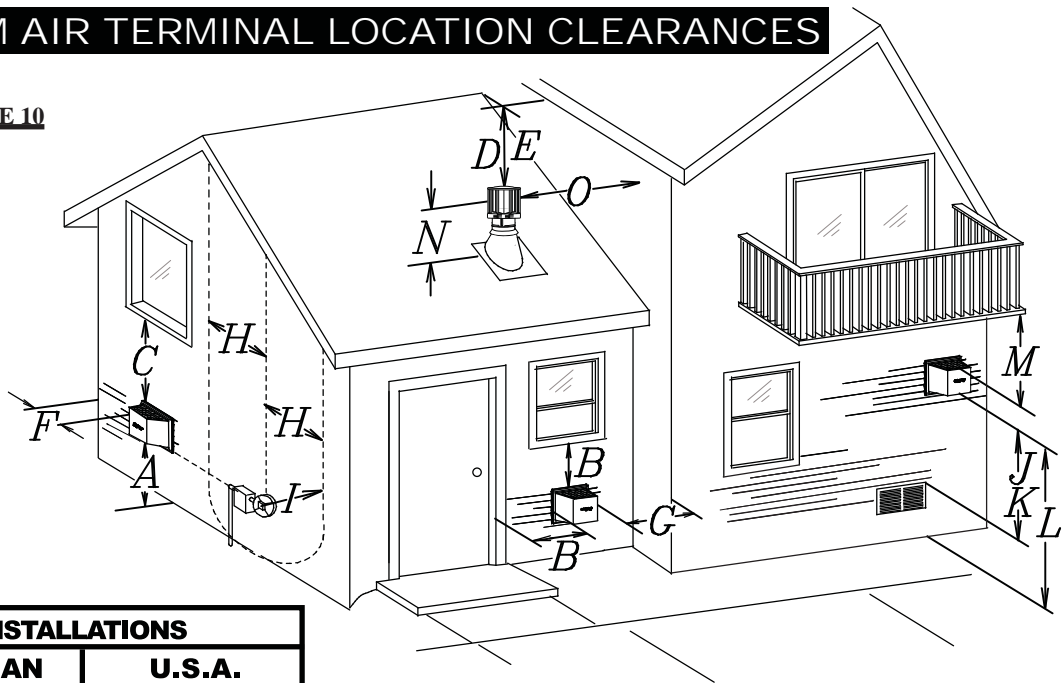
* Refer to the "Venting" section.

SPECIAL VENT INSTALLATIONS



MINIMUM AIR TERMINAL LOCATION CLEARANCES

FIGURE 10



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-combustible</i> corner wall or protruding <i>non-combustible</i> 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.

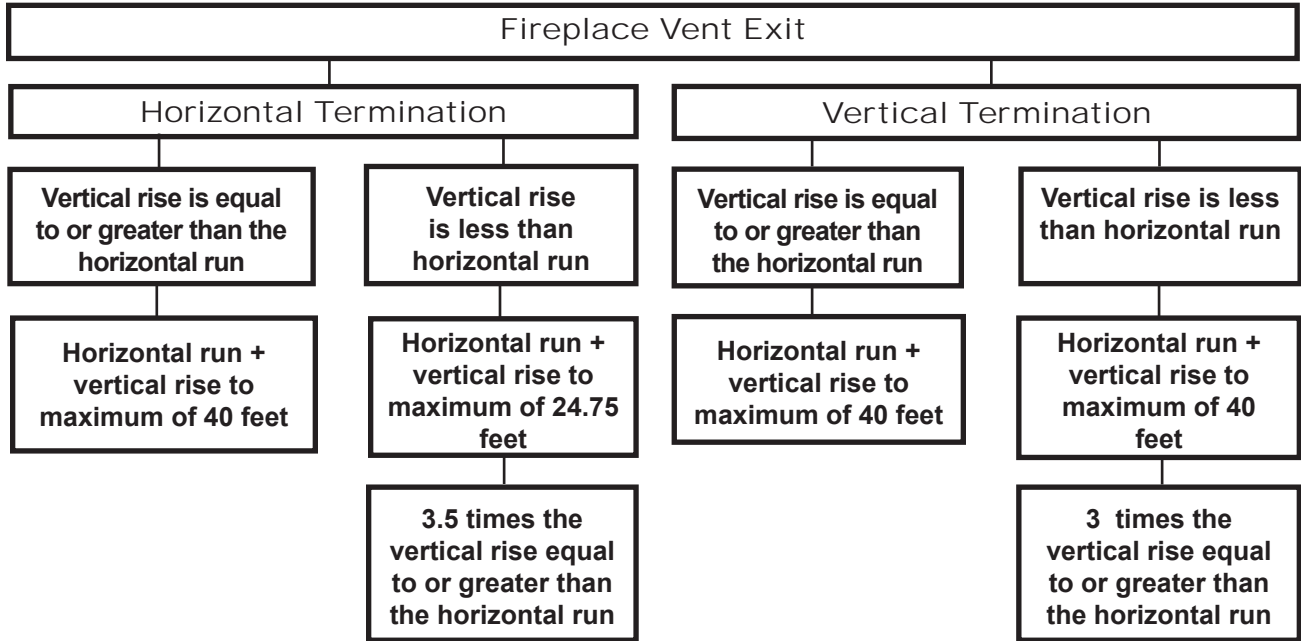
† 3 feet above if within 10 feet horizontally.

‡ A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family 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.

VENTING APPLICATION FLOW CHART



DEFINITIONS

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

- > - greater than
- ≥ - equal to or greater than
- < - less than
- ≤ - 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(total degrees of offset - 90°*) 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

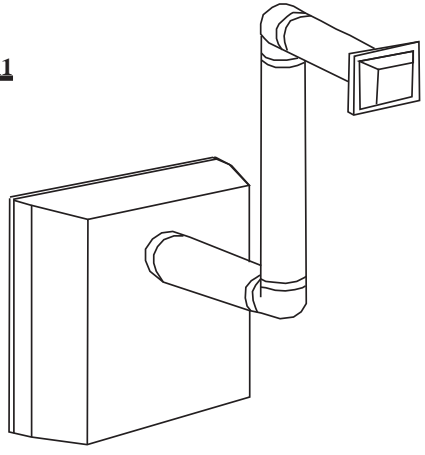
* the first 90° offset has a zero value and is shown in the formula as **-90°** when (H_T) ≤ (V_T)

HORIZONTAL TERMINATION

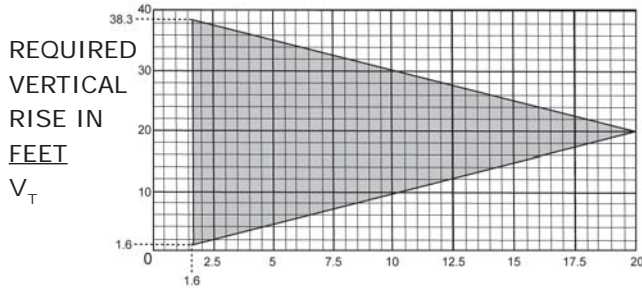
$(H_T) \leq (V_T)$

Simple venting configuration (only two 90° elbows)

FIGURE 11



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



HORIZONTAL VENT RUN PLUS OFFSETS 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 two 90° elbows the following formulas apply:

Formula 1: $H_T \leq V_T$

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

Example 1:

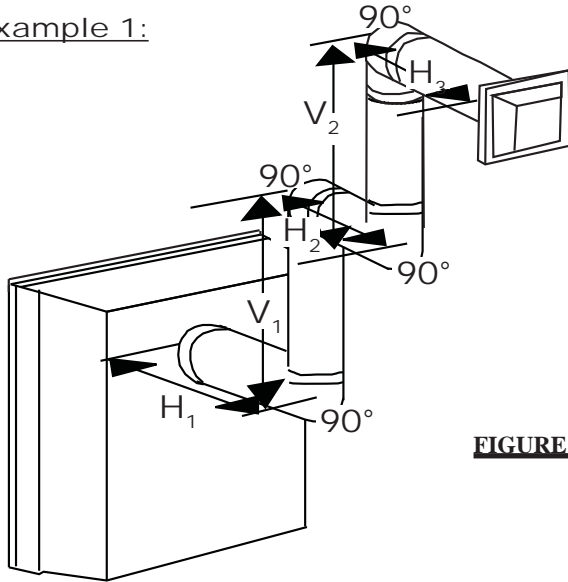


FIGURE 12

$V_1 = 9$ ft
 $V_2 = 6$ ft
 $V_T = V_1 + V_2 = 9 + 6 = 15$ ft
 $H_1 = 3$ ft
 $H_2 = 2$ ft
 $H_3 = 1.5$ ft
 $H_R = H_1 + H_2 + H_3 = 3 + 2 + 1.5 = 6.5$ ft
 $H_O = .03(\text{four } 90^\circ \text{ elbows} - 90^\circ)$
 $= .03(90 + 90 + 90 + 90 - 90) = 8.1$ 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: $H_T \leq V_T$
 $14.6 \leq 15$

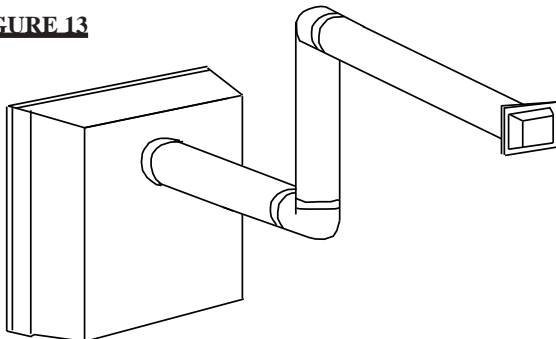
Formula 2: $H_T + V_T \leq 40$ feet
 $29.6 \leq 40$

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

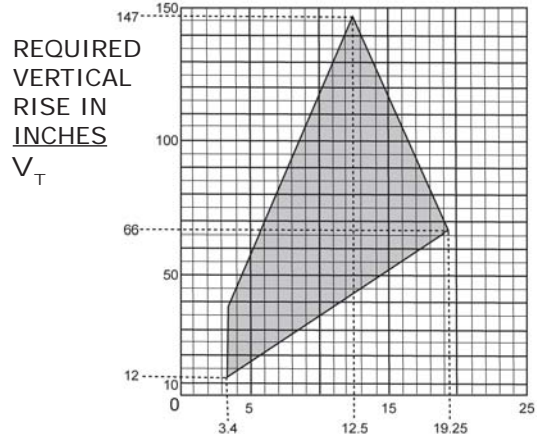
$(H_T) > (V_T)$

Simple venting configuration (only two 90° elbows)

FIGURE 13



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



HORIZONTAL VENT RUN PLUS OFFSETS 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 two 90° elbows the following formulas apply:

Formula 1: $H_T < 3.5V_T$

Formula 2: $H_T + V_T < 24.75$ feet

Example 2:

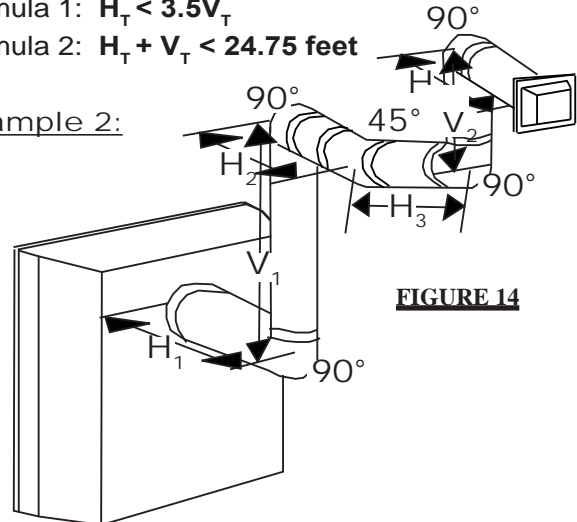


FIGURE 14

$V_1 = 4$ ft
 $V_2 = 1.5$ ft
 $V_T = V_1 + V_2 = 4 + 1.5 = 5.5$ ft
 $H_1 = 2$ ft
 $H_2 = 1$ ft
 $H_3 = 1$ ft
 $H_4 = 1.5$ ft
 $H_R = H_1 + H_2 + H_3 + H_4 = 2 + 1 + 1 + 1.5 = 5.5$ ft
 $H_O = .03(\text{four } 90^\circ \text{ elbows} + \text{one } 45^\circ \text{ elbow} - 90^\circ)$
 $= .03(90 + 90 + 90 + 90 + 45 - 90) = 9.45$ ft
 $H_T = H_R + H_O = 5.5 + 9.45 = 14.95$ ft
 $H_T + V_T = 14.95 + 5.5 = 20.45$ ft

Formula 1: $H_T < 3.5V_T$
 $3.5V_T = 3.5 \times 5.5 = 19.25$ ft
 $14.95 < 19.25$

Formula 2: $H_T + V_T < 24.75$ feet
 $20.45 < 24.75$

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

VERTICAL TERMINATION

$(H_T) \leq (V_T)$

Simple venting configurations

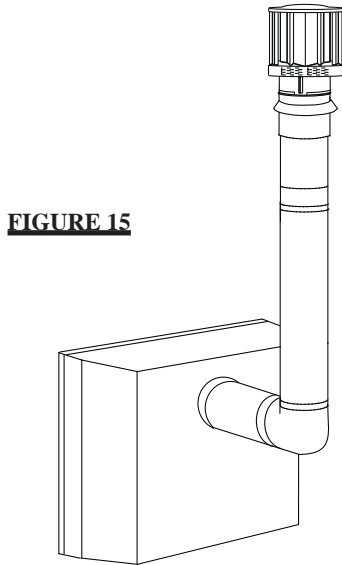
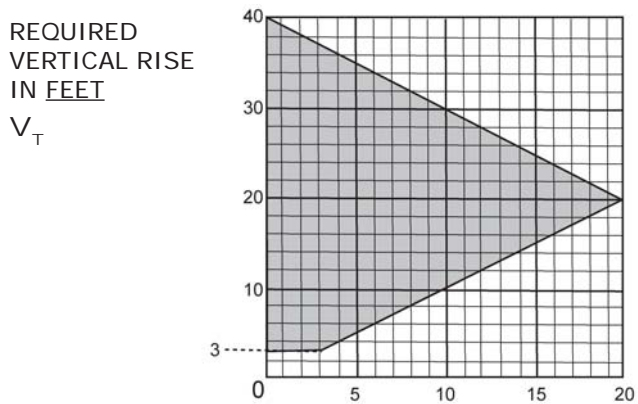


FIGURE 15

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 zero 90° elbow (top exit) or one 90° elbow (rear exit), the following formulas apply:

Formula 1: $H_T \leq V_T$

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

Example 3:

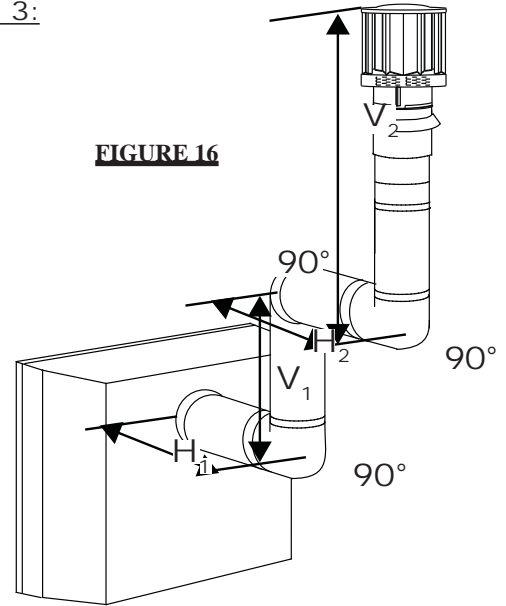


FIGURE 16

- $V_1 = 5$ ft
- $V_2 = 10$ ft
- $V_T = V_1 + V_2 = 5 + 10 = 15$ ft
- $H_1 = 3$ ft
- $H_2 = 2.5$ ft
- $H_R = H_1 + H_2 = 3 + 2.5 = 5.5$ ft
- $H_O = .03(\text{three } 90^\circ \text{ elbows} - 90^\circ)$
 $= .03(90 + 90 + 90 - 90) = 5.4$ ft
- $H_T = H_R + H_O = 5.5 + 5.4 = 10.9$ ft
- $H_T + V_T = 10.9 + 15 = 25.9$ ft

Formula 1: $H_T \leq V_T$
 $10.9 \leq 15$

Formula 2: $H_T + V_T \leq 40$ feet
 $25.9 \leq 40$

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

$(H_T) > (V_T)$

Simple venting configurations

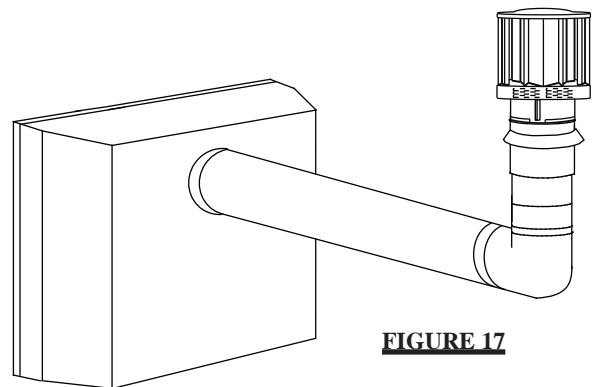
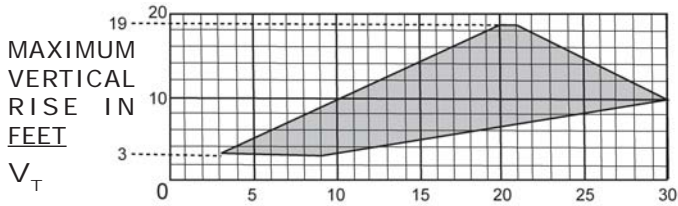


FIGURE 17

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

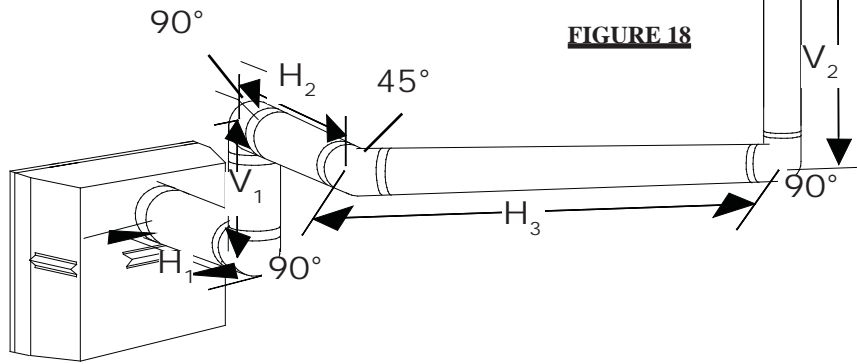
The shaded area within the lines represents acceptable values for H_T and V_T .

For vent configurations requiring more than two 90° elbow (top exit) or one 90° elbow (rear exit), the following formulas apply:

Formula 1: $H_T \leq 3V_T$

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

Example 4:



$$\begin{aligned}
 V_1 &= 1.5 \text{ ft} \\
 V_2 &= 5 \text{ ft} \\
 V_T &= V_1 + V_2 = 1.5 + 5 = 6.5 \text{ ft} \\
 H_1 &= 1 \text{ ft} \\
 H_2 &= 1 \text{ ft} \\
 H_3 &= 10.75 \text{ ft} \\
 H_R &= H_1 + H_2 + H_3 = 1 + 1 + 10.75 = 12.75 \text{ ft} \\
 H_O &= .03(\text{three } 90^\circ \text{ elbows} + \text{one } 45^\circ \text{ elbow} - 90^\circ) \\
 &= .03(90 + 90 + 90 + 45 - 90) = 6.75 \text{ ft} \\
 H_T &= H_R + H_O = 12.75 + 6.75 = 19.5 \text{ ft} \\
 H_T + V_T &= 19.5 + 6.5 = 26 \text{ ft}
 \end{aligned}$$

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
 $26 \leq 40$

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

INSTALLATION

WALL AND CEILING PROTECTION

For optimum performance, it is recommended that horizontal runs have a minimum ¼" rise per foot when using Simpson Dura-Vent, Selkirk Direct Temp, American Metal Amerivent, or Wolf Steel rigid vent components and a minimum 1" rise per foot when using Wolf Steel flexible vent components

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

HORIZONTAL INSTALLATION

FIRESTOP SLEEVE ASSEMBLY

1. Assemble the two halves of the vent sleeve by aligning the holes that come together to make a rectangular shape (lip to the outside). Secure using 6 of the screws supplied in the manual baggie.

NOTE: SCREWS NOT REQUIRED IN TWO BLIND HOLES. See [Figure 19](#).

2. Fit the firestop spacer into one end of the vent sleeve and secure through the aligned holes on the top, bottom, and sides with the remaining 5 screws supplied.

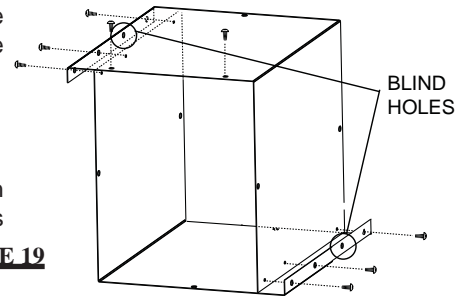


FIGURE 19

If flexible venting is to be used remove the rigid firestop spacer. The remaining hole is sized for flexible venting.

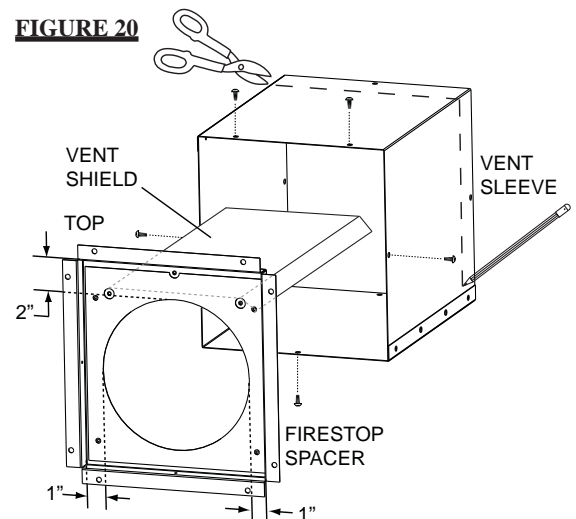
This application occurs when venting through an exterior wall. Having determined the air terminal location, cut and frame a hole in the exterior wall 9 7/8" wide by 11 3/8" high to accommodate the firestop sleeve assembly.

NOTE: THE FIRESTOP SLEEVE ASSEMBLY MUST BE INSTALLED WITH THE 2" CLEARANCE TO THE TOP.

The length of the vent shield may be cut shorter for combustible walls that are less than 8 1/2" thick but the vent shield must extend the full depth of the combustible wall.

1. Insert the firestop sleeve assembly into the wall, mark the wall depth and trim the vent sleeve to suit. The screws that secure the vent sleeve may need to be repositioned to ensure a rigid assembly is maintained. **Figure 20.**

FIGURE 20



2. Apply a bead of caulking (not supplied) to the inside surface of the firestop flange and secure the assembly to the wall. (Ensure that the rectangular shaped assembly is installed to maintain 2" from the top of the vent). **Figure 21.**

3. Once the vent pipe is installed in its final position, apply high temperature sealant W573-0002 (not supplied) between the pipe and the firestop.

NOTE: DO NOT FILL THE CAVITY BETWEEN THE PIPE AND THE VENT SLEEVE WITH ANY TYPE OF MATERIAL.

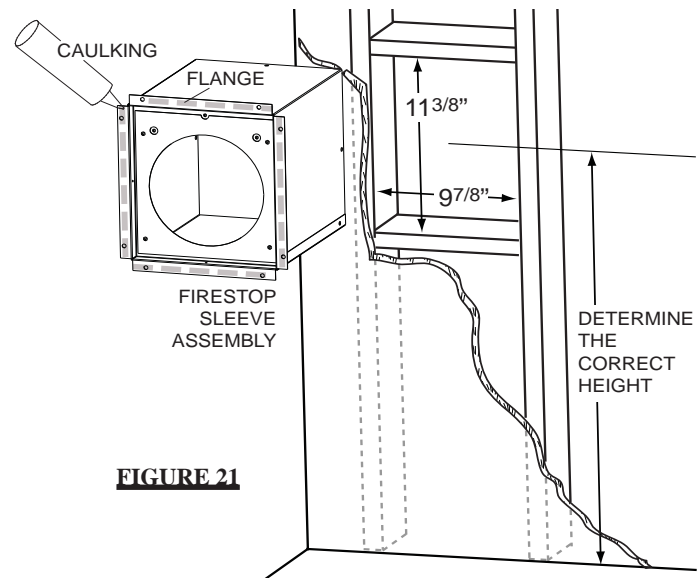
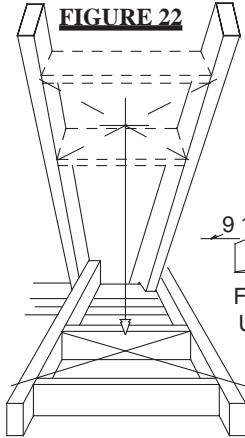


FIGURE 21

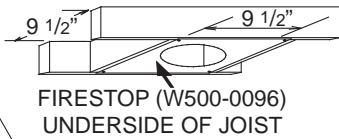
VERTICAL INSTALLATION

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 9½" openings in the ceiling and the roof to provide the minimum clearance between the vent pipe and any combustible material. Try to center the vent pipe location midway between two joists 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.

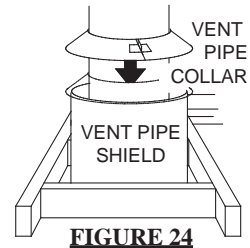
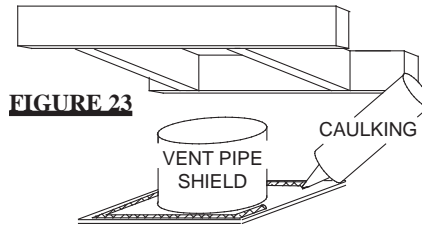


A vent pipe shield will prevent any materials such as insulation, from filling up the 1" air space around the pipe. Nail headers between the joist for extra support.

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. 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.

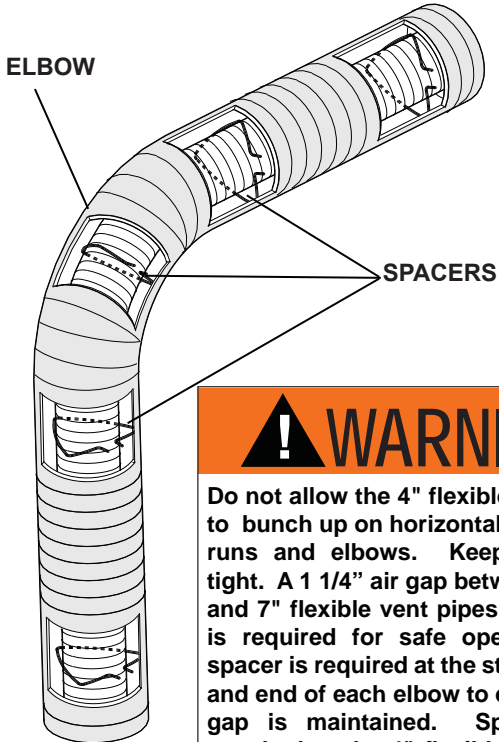
Ensure that both spacer and shield maintain the required clearance to combustibles. Once the vent pipe is installed in its final position, apply sealant between the pipe and the firestop assembly.

3. 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.



USING FLEXIBLE VENT COMPONENTS

FIGURE 25



! WARNING

Do not allow the 4" flexible vent pipe to bunch up on horizontal or vertical runs and elbows. Keep it pulled tight. A 1 1/4" air gap between the 4" and 7" flexible vent pipes all around is required for safe operation. A spacer is required at the start, middle and end of each elbow to ensure this gap is maintained. Spacers are attached to the 4" flexible vent pipe at predetermined intervals to maintain a 1-1/4" air gap to the 7" flexible vent pipe. These spacers must not be removed.

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

All 4" flex vent pipe and 7" flex vent pipe joints may be sealed using high temperature sealant W573-0002 (not supplied) or the high temperature sealant W573-0002 Mill Pac (not supplied). However, the high temperature sealant W573-0007 Mill Pac (not supplied) must be used on the joint connecting the 4" flex vent and the exhaust flue collar.

Use only approved flex vent pipe kits marked:



"Wolf Steel Approved Venting" as identified by the stamp only on the 7" flex vent pipe.

Six inches (6") is the minimum bend radius allowed for the 7" flex vent pipe.

For optimum performance it is recommended that all horizontal runs have a minimum 1" rise per foot using flexible venting.

! WARNING

When venting straight out the back, only the rigid vent can be used. Do not use flexible vent. For all other venting configurations, flexible vent is acceptable.

HORIZONTAL AIR TERMINAL INSTALLATION

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

1. Stretch the 4" flex vent pipe to the required length taking into account the additional length needed for the finished wall surface. Slip the vent pipe 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 W573-0007 (not supplied).

NOTE: If using pipe clamps to connect vent components, 3 screws must also be used to ensure the connection cannot slip off.

2. Using the 7" flex vent pipe, slide over the outer combustion air sleeve of the air terminal and secure with 3 #8 screws. Seal using high temperature sealant W573-0002 (not supplied).

3. Insert the vent pipes 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).

4. If more vent pipe needs to be used to reach the fireplace, couple them together as illustrated. The vent system must be supported approximately every 3 feet for both vertical and horizontal runs. Use noncombustible strapping to maintain the minimum 1" clearance to combustibles.

The air terminal mounting plate may be recessed into the exterior wall or siding by 1½", the depth of the return flange.

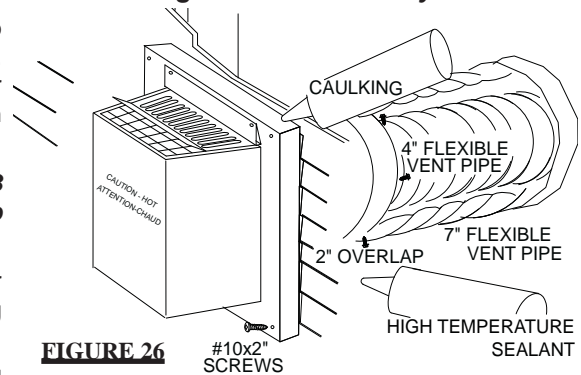


FIGURE 26

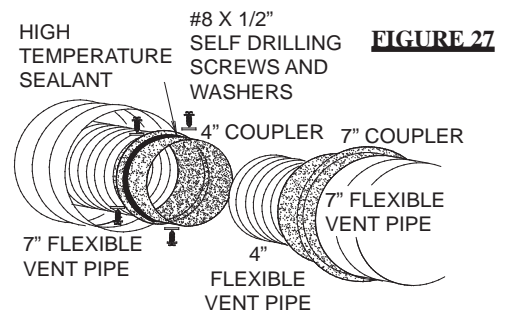


FIGURE 27

VERTICAL AIR TERMINAL INSTALLATION

1. Fasten the roof support to the roof using the screws provided. 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. Figure 28.

2. Stretch the 4" flex vent pipe to the required length. Slip the 4" flex vent pipe a minimum of 2" over the inner pipe of the air terminal connector and secure with 3 #8 screws. Seal using a heavy bead of high temperature sealant W573-0007 (not supplied). Figure 29.

NOTE: If using pipe clamps to connect vent components, 3 screws must also be used to ensure the connection cannot slip off.

3. Repeat using the 7" flex vent pipe, using a heavy bead of high temperature sealant W573-0002 (not supplied). Figure 29.

4. Thread the air terminal connector / vent pipe assembly down through the roof. The air terminal must be located vertically and plumb. Attach the air terminal connector to the roof support, ensuring that the top of the air terminal is 16" above the highest point that it penetrates the roof. Figure 30. **DO NOT CLAMP THE FLEX VENT PIPE.**

5. Remove nails from the shingles, above and to the sides of the chimney. Place the flashing over the air terminal connector leaving a min. 3/4" of the air terminal connector showing above the top of the flashing. Slide the flashing underneath the sides and upper edge of the shingles. Ensure that the air terminal connector is properly centred 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 30.

6. Aligning the seams of the terminal and air terminal connector, place the terminal over the air terminal connector making sure the vent pipe goes into the hole in the terminal. Secure with the three screws provided. Figure 30.

7. Apply a heavy bead of weatherproof caulking 2" above the flashing. Note: Maintain a minimum 2" space between the air inlet base and the storm collar. Install the storm collar around the air terminal and slide down to the caulking. Tighten to ensure that a weather-tight seal between the air terminal and the collar is achieved. Figure 30.

8. If more vent pipe needs to be used to reach the fireplace, couple them together as illustrated. The vent system must be supported approximately every 3 feet for both vertical and horizontal runs. Use noncombustible strapping to maintain the minimum 1" clearance to combustibles. Figure 27.

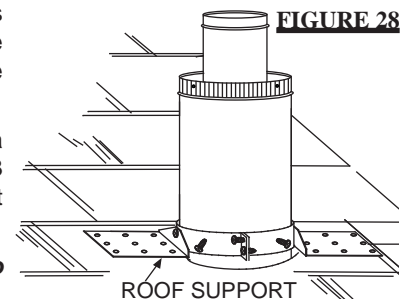


FIGURE 28

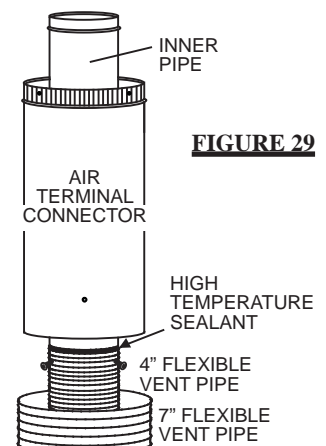


FIGURE 29

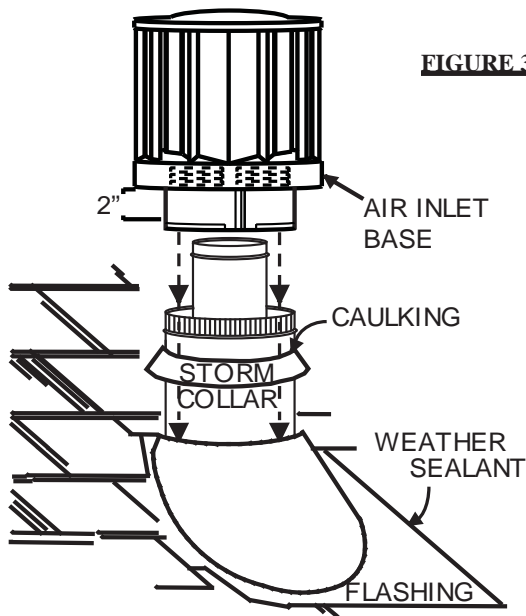


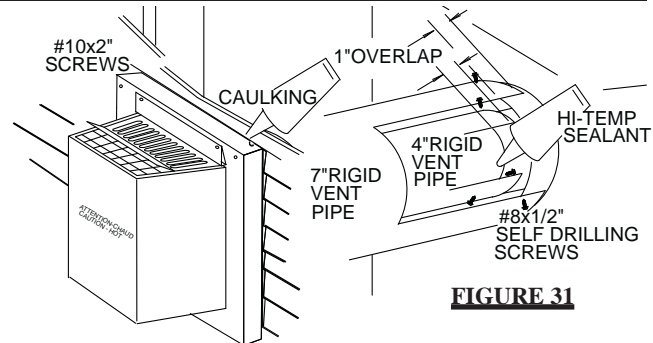
FIGURE 30

FIREPLACE VENT CONNECTION

1. Install the 4" flex vent pipe to the fireplace. Secure with 3 screws and flat washers. Seal the joint and screw holes using the high temperature sealant W573-0007 (not supplied).
2. Install the 7" flex vent pipe to the fireplace. Attach and seal the joints using the high temperature sealant W573-0002 (not supplied).

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 **W615-0033** every 3 feet on either side of each elbow to maintain the minimum 1¼" clearance between the 7" rigid vent pipe and 4" rigid vent pipes. Use Napoleon® support ring assembly **W010-0370** or equivalent noncombustible strapping to maintain the minimum clearance to combustibles for both vertical and horizontal runs.



HORIZONTAL AIR TERMINAL INSTALLATION

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 1¼" overlaps between venting components.
2. Apply high temperature sealant W573-0007 (not supplied) to the outer edge of the 4" inner collar of the fireplace. Attach the first 4" rigid vent pipe component and secure using 3 self tapping screws. Repeat using the 7" rigid vent pipe.
3. Holding the air terminal (lettering in an upright, readable position), insert into both vent pipes with a twisting motion to ensure that both the terminal sleeves engage into the vent pipes and the sealant. Secure the terminal to the exterior wall and make weather tight by sealing with caulk (not supplied).

The air terminal mounting plate may be recessed into the exterior wall or siding by 1½", the depth of the return flange.

EXTENDED HORIZONTAL AND CORNER AIR TERMINAL INSTALLATION

A 45° corner installation can have 0" rise between the fireplace combustion air collar and the air terminal. In this case, vent lengths must be kept to a maximum of 24". For longer vent lengths, a minimum vertical rise of 24" is required.

1. Follow the instructions for "Horizontal Air Terminal Installations".
2. Continue adding components alternating 4" rigid vent pipe and 7" rigid vent pipe. Ensure that all 4" rigid vent pipe and elbows have sufficient vent spacers attached and each component is sealed and securely fastened to the one prior. Attach the 4" telescopic sleeve to the vent run. Repeat using a 7" telescopic sleeve. Seal and secure as before. To facilitate completion, attach 4" and 7" couplers to the air terminal.
3. Install the air terminal. See item 3, *Horizontal Air Terminal Installation*. Extend the 4" telescopic sleeve; apply sealant and connect to the air terminal assembly. Fasten with self tapping screws. Repeat using the 7" telescopic sleeve.

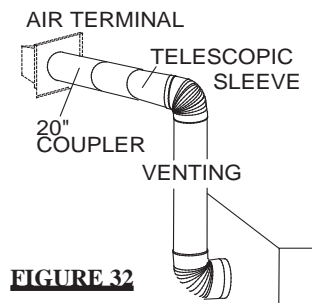


FIGURE 32

VERTICAL AIR TERMINAL INSTALLATION

1. Attach 4" and 7" elbows to the fireplace. Apply high temperature sealant W573-0007 (not supplied) and secure the joints with 3 screws.

2. Move the fireplace into position.

3. Fasten the roof support to the roof using the screws provided. The roof support is optional. The venting is to be adequately supported using either an alternate method suitable to the authority having jurisdiction or the optional roof support.

4. Apply high temperature sealant W573-0007 (not supplied) to the outer edge of the inner pipe of the air terminal connector. Slip the 4" rigid vent pipe a minimum of 2" over the inner pipe of the air terminal connector and secure using 3 screws.

5. Apply high temperature sealant W573-0002 (not supplied) to the outer edge of the of the outer pipe of the air terminal connector. Slip the 7" rigid vent pipe over the outer pipe of the air terminal connector and secure as before. Trim the 7" rigid vent pipe even with the end of the 4" rigid vent pipe.

6. Thread the air terminal connector / vent pipe assembly down through the roof support and attach, ensuring that a minimum 16" of air terminal connector will penetrate the roof when fastened.

If the attic space is tight, we recommend threading the Wolf Steel vent pipe collar or equivalent loosely onto the air terminal connector / vent pipe assembly as it is passed through the attic. The air terminal connector must be located vertically and plumb.

7. Remove nails from the shingles, above and to the sides of the chimney. Place the flashing over the air terminal connector and slide it underneath the sides and upper edge of the shingles. Ensure that the air terminal connector is properly centered within the flashing, giving a $\frac{3}{4}$ " 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.

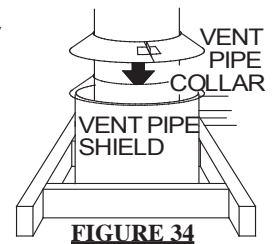
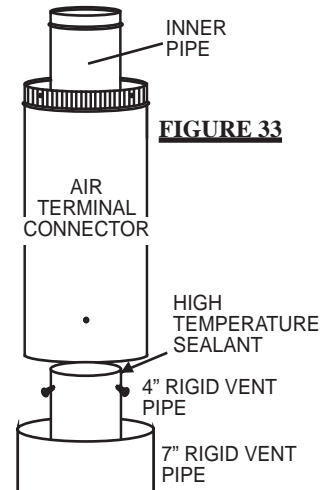
8. Aligning the seams of the terminal and air terminal connector, place the terminal over the air terminal connector making sure the vent pipe goes into the hole in the terminal. Secure with the three screws provided.

9. Apply a heavy bead of weatherproof caulking 2" above the flashing. Note: Maintain a minimum 2" space between the air inlet base and the storm collar. Install the storm collar around the air terminal and slide down to the caulking. Tighten to ensure that a weather-tight seal between the air terminal and the collar is achieved.

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

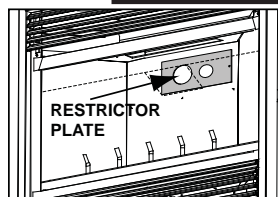
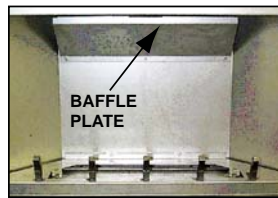
11. Run a bead of high temperature sealant W573-0007 (not supplied) around the outside of the 4" elbow. Pull the telescopic sleeve a minimum 2" onto the elbow. Secure with 3 screws. Repeat with the 7" telescopic sleeve.

12. 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.



GD33 RESTRICTING VERTICAL VENTS

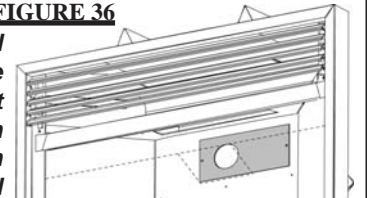
Vertical installations may display a very active flame. If this appearance is not desirable, remove the baffle plate from the rear wall of the firebox, exposing the flue gas outlet opening. Reverse the restrictor plate, superimposing the flue outlet hole with the smaller restrictor plate opening. Replace the baffle plate. This reduces the velocity of the exhaust gases, slowing down the flame pattern and creating a more traditional flame appearance.



FIGURES 35a-b

BGD33 RESTRICTING VERTICAL VENTS

Warning: **FIGURE 36**
This restrictor (located in the lower valve compartment) must not be installed on any vent configuration that has a horizontal termination or vertical vent with vertical termination less than 10'. Vertical installations over 10' may display a very active flame. If this appearance is not desirable, install the restrictor plate. This reduces the velocity of the exhaust gases, slowing down the flame pattern and creating a more traditional flame appearance.



MOBILE HOME INSTALLATION

This appliance is certified to be installed as an OEM (Original Equipment Manufacturer) installation in a manufactured home or mobile home and must be installed in accordance with the manufacturer's instructions and the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280, in the United States or the Mobile Home Standard, CAN/CSA Z240 MH Series, in Canada. This appliance is only for use with the type(s) of gas indicated on the rating plate. A conversion kit is supplied with the mobile home appliance.

This Mobile/Manufactured Home Listed appliance comes factory equipped with a means to secure the unit. 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. 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.

This appliance is certified to be installed in an aftermarket permanently located, manufactured (mobile) home, where not prohibited by local codes. This fireplace is only for use with the type of gas indicated on the rating plate. This fireplace is not convertible for use with other gases, unless a certified kit is used.

Conversion Kits

The mobile home appliance is field convertible between Natural Gas (NG) and Propane (LP). To convert from one gas to another consult your Napoleon® dealer/distributor.

GAS INSTALLATION

Proceed once the vent installation is complete.

NOTE: All gas connections must be contained within the fireplace when complete.

1. Move the fireplace into position and secure to the floor through the 1/4" holes located at either side of the base.
2. The fireplace is designed to accept 3/8" gas supply line. The fireplace is equipped with a 3/8" manual shut-off valve.
3. Connect the gas supply in accordance to local codes. In the absence thereof, install according to the National Installation Code.
4. When flexing any gas line, support the gas valve so that the lines are not bent or kinked.
5. Check for gas leaks by brushing on a soap and water solution.

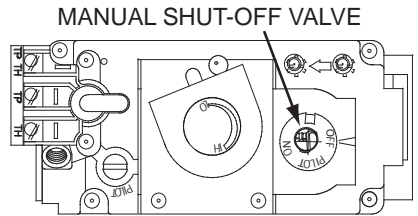


FIGURE 37

DO NOT USE OPEN FLAME.

Purge all gas lines with the glass door of the stove removed. Assure that a continuous gas flow is at the burner before re-installing the door.

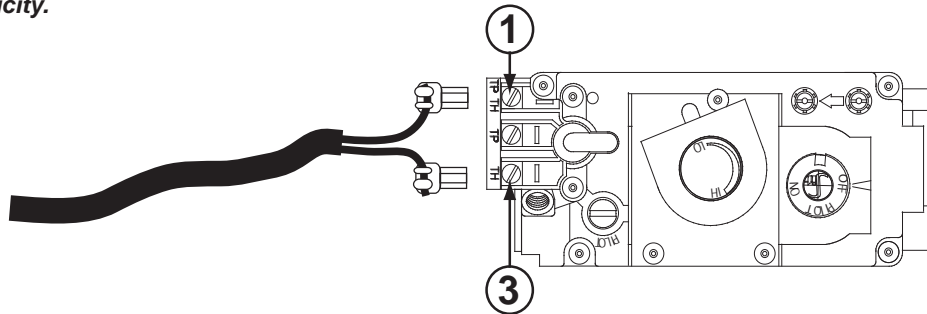
OPTIONAL WALL SWITCH INSTALLATION

For ease of accessibility, an optional remote wall switch 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	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.

Do not connect either the wall switch, thermostat or gas valve directly to 110 volt electricity.



GD33 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.

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.

To install the fireplace face flush with the finished wall, position the framework to accommodate the thickness of the finished wall. It is not necessary to install a hearth extension with this fireplace system.

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.

MINIMUM CLEARANCES TO COMBUSTIBLES

SIDE OF THE UNIT	0"
BACK OF THE UNIT	0"
BOTTOM OF THE UNIT	0"
TOP OF THE UNIT	0"
TOP OF THE VENT PIPE	2"*
SIDES OF THE VENT PIPE	1"
BOTTOM OF THE VENT PIPE	1"
RECESSED DEPTH	13"
ENCLOSURE TOP TO BOTTOM OF THE UNIT	35"
CEILING TO BOTTOM OF THE UNIT	66"

* A minimum clearance of 2" at the top of the vent pipe in all horizontal runs to combustibles is required. Use firestop sleeve assembly W010-1777 (supplied).

MINIMUM FRAMING DIMENSIONS

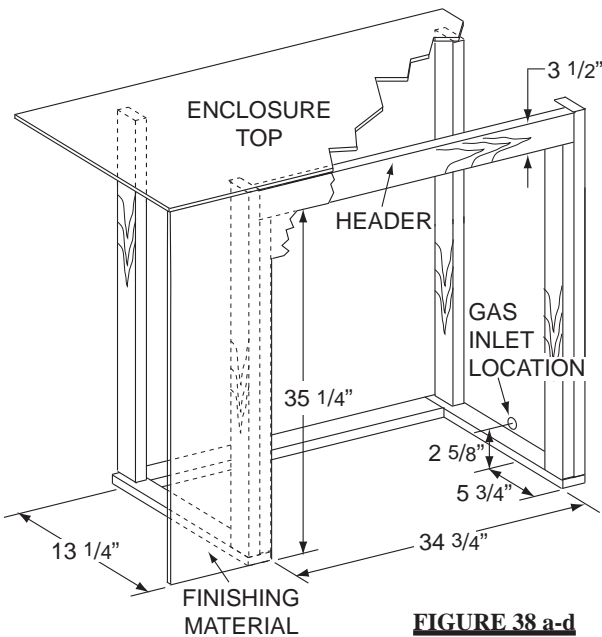


FIGURE 38 a-d

STAND-OFF ASSEMBLY

WARNING

THE STANDOFFS HAVE BEEN SHIPPED FLAT. BEFORE FRAMING ENSURE THE STANDOFFS ARE BENT UP AND SCREWED INTO PLACE.

ATTENTION

LES ESPACEURS SONT EMBALLÉS À PLAT. AVANT DE CONSTRUIRE L'OSSATURE, ASSUREZ-VOUS QUE LES ESPACEURS SONT PLIÉS ET FIXÉS EN PLACE À L'AIDE DE VIS.

ATENCIÓN

LAS TRABAS PERMANECEN PLANAS DURANTE EL ENVÍO. ANTES DE LA INSTALACION, VERIFIQUE QUE LAS TRABAS SE PLIEGUEN HACIA ARRIBA Y SE ATORNILLEN CORRECTAMENTE.

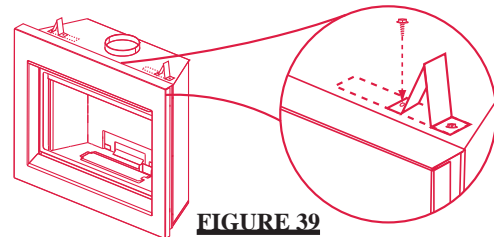
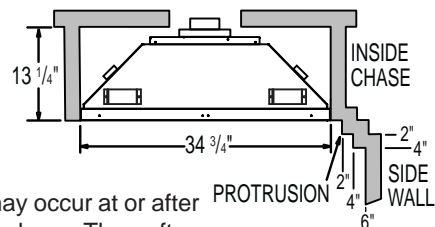
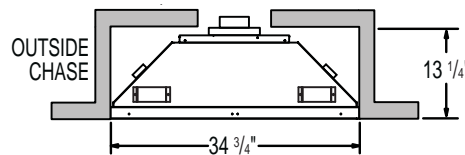
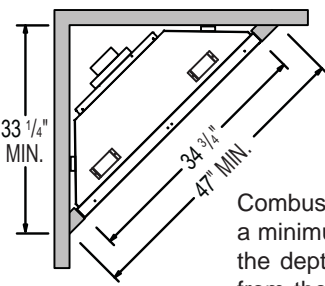


FIGURE 39



Combustion protrusions such as mantels and shelves may occur at or after a minimum distance of 2" away from the side of the fireplace. Thereafter, the depth of any protrusions must be equal to or less than the distance from the side of the fireplace up to a depth of 6", after which no greater clearance than 6" is required. This can be considered a side wall with no length boundary.

BGD33 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.

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.

To install the fireplace face flush with the finished wall, position the framework to accommodate the thickness of the finished wall. It is not necessary to install a hearth extension with this fireplace system.

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.

MINIMUM CLEARANCES TO COMBUSTIBLES

SIDE OF THE UNIT	0"
BACK OF THE UNIT	0"
BOTTOM OF THE UNIT	0"
TOP OF THE UNIT	0"
TOP OF THE VENT PIPE	2"*
SIDES OF THE VENT PIPE	1"
BOTTOM OF THE VENT PIPE	1"
RECESSED DEPTH	13"
ENCLOSURE TOP TO BOTTOM OF THE UNIT	33"
CEILING TO BOTTOM OF THE UNIT	66"

* A minimum clearance of 2" at the top of the vent pipe in all horizontal runs to combustibles is required. Use firestop sleeve assembly W010-1777 (supplied).

MINIMUM FRAMING DIMENSIONS

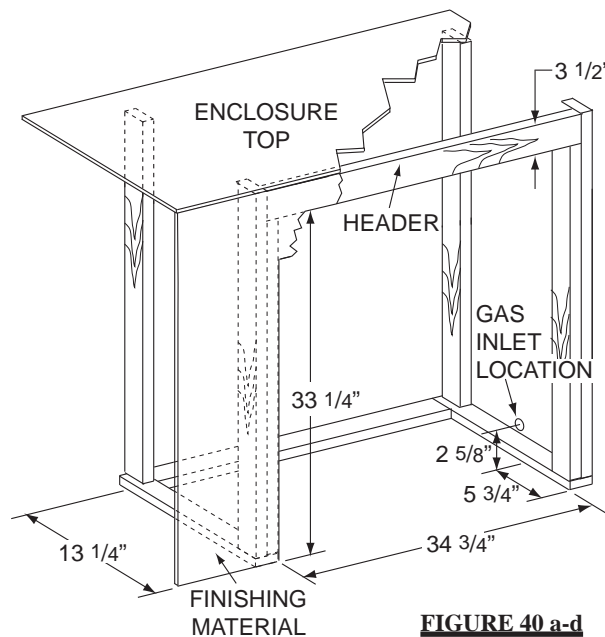
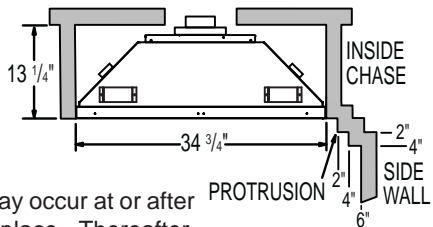
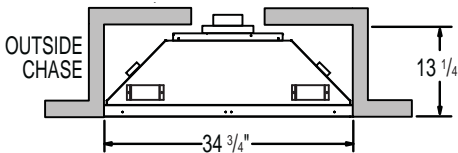
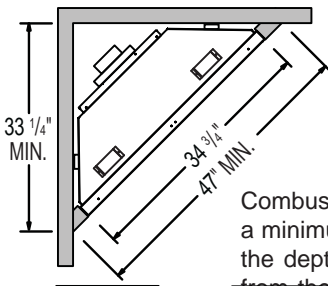


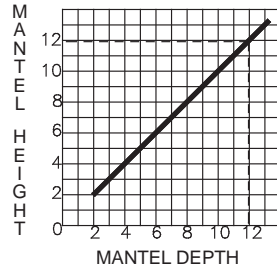
FIGURE 40 a-d



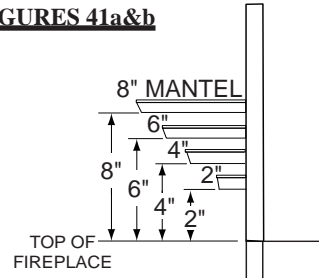
Combustion protrusions such as mantels and shelves may occur at or after a minimum distance of 2" away from the side of the fireplace. Thereafter, the depth of any protrusions must be equal to or less than the distance from the side of the fireplace up to a depth of 6", after which no greater clearance than 6" is required. This can be considered a side wall with no length boundary.

MINIMUM MANTEL CLEARANCES

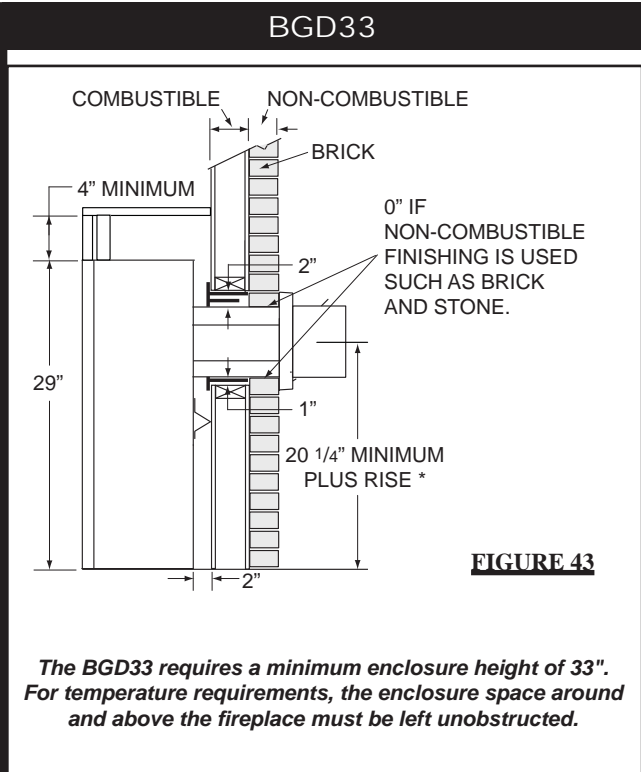
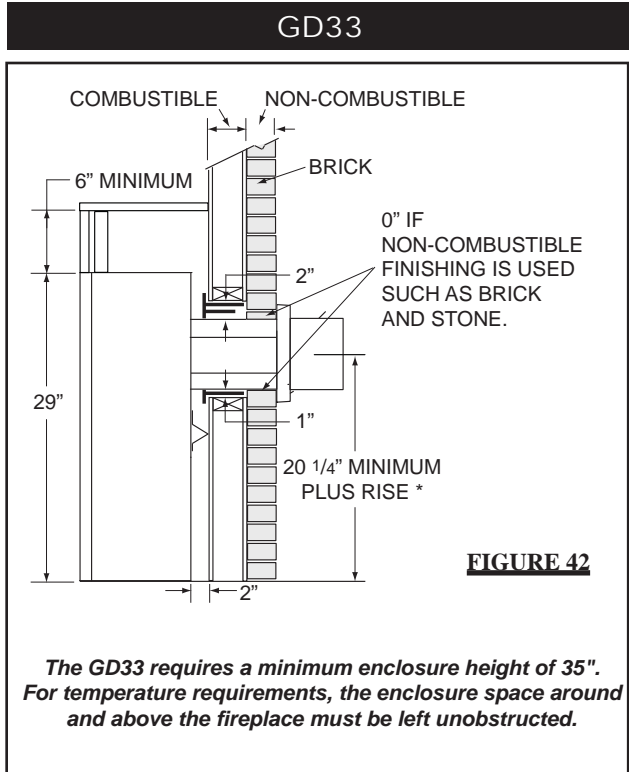
Mantel clearance can vary according to the mantel depth. Use the graph to help evaluate the clearance needed. Combustible materials must be installed flush with the front of the fireplace but must not cover any of the black face-area of the fireplace. Non-combustible material (cement board, ceramic tile, marble, etc.) may protrude past the face of the fireplace.



FIGURES 41a&b



MINIMUM ENCLOSURE CLEARANCES



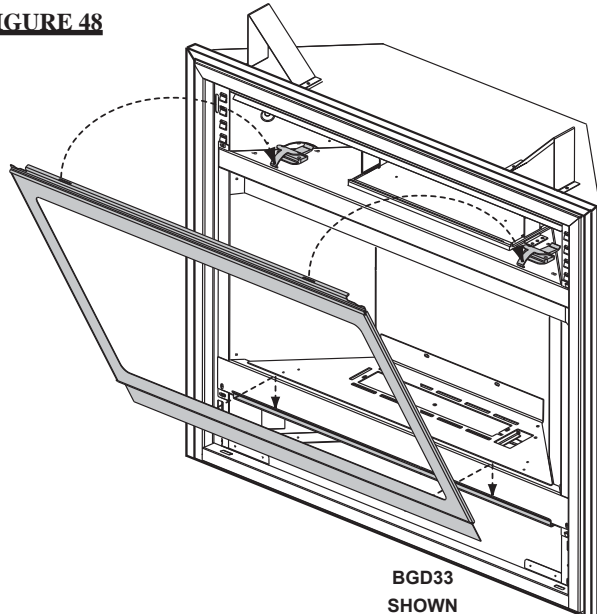
** Refer to the "Venting" section.*

FINISHING

DOOR REMOVAL / INSTALLATION

Place the bottom of the door into the retaining bracket.
Pivot the top of the door to the firebox and secure with the door latches.

FIGURE 48



DOOR GLASS REPLACEMENT

1. Place the door frame face down careful not to scratch the paint.

2. Center the gasketed glass inside the door frame with the thick side of the gasket facing up.

3. Bend the glass retainers located along the edge of the door frame over the gasket holding the glass in place. Careful not to break the glass.

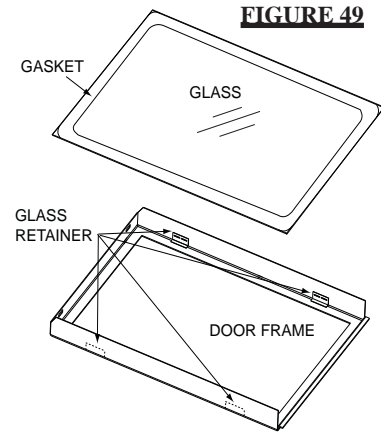


FIGURE 49

LOGO PLACEMENT

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

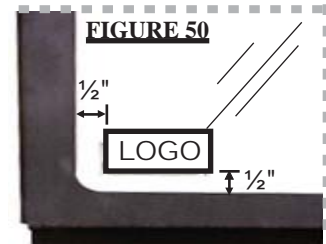


FIGURE 50

LOG PLACEMENT

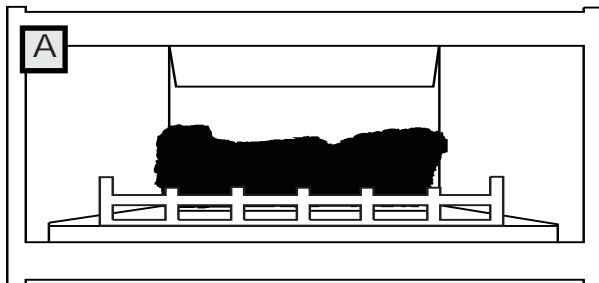
Blocked burner ports can cause an incorrect flame pattern, carbon deposits and delayed ignition. PHAZER® logs glow when exposed to direct flame and provide a unique and realistic glowing effect. Use only certified PHAZER® logs available from your Napoleon® / Wolf Steel Ltd. dealer.

Positioning the logs improperly will cause flame impingement and carboning.

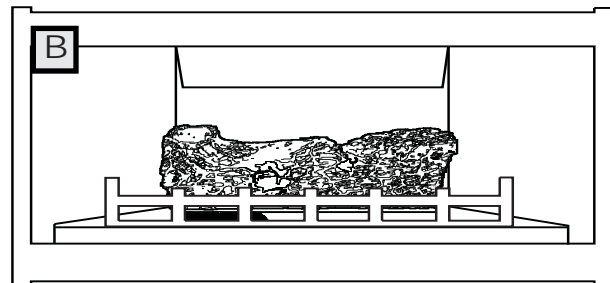
Log colours may vary. During the initial use of the fireplace, the colours will become more uniform as colour pigments burn in during the heat activated curing process.

GD33 LOG SET

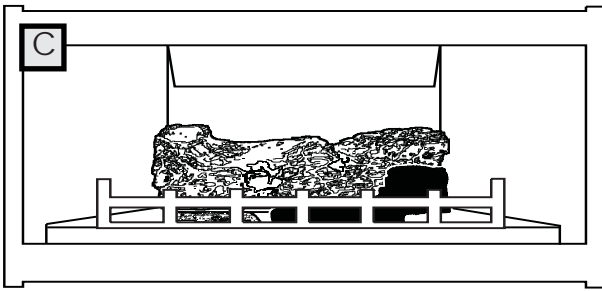
FIGURE 44a-f



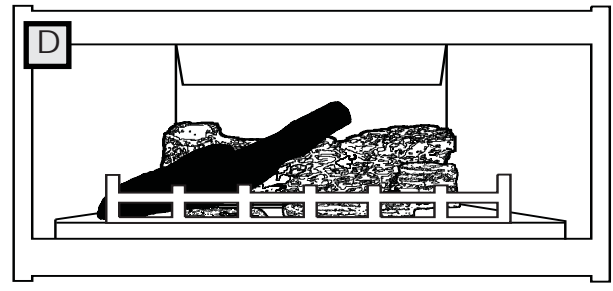
Place log #1 onto the burner, centering it on the log support and pushing it as close to the rear wall of the firebox as possible.



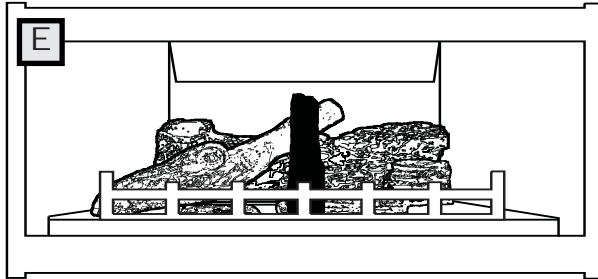
Place the charcoal piece (log #5) onto the pins on the left side of the burner.



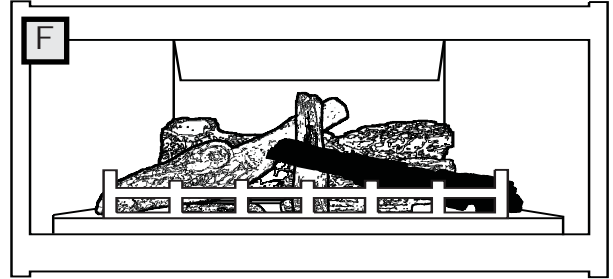
Place log #6 onto the pins on the right side of the burner.



Sit the bottom of log #2 onto the locating pin on the left side of the log support. Position the top of the log into the pocket provided on the top of the rear log (#1).



Position the notch located in the bottom end of log #3 against the centre grate post. Rest the top of log #3 into the pocket at the top end of log #2.

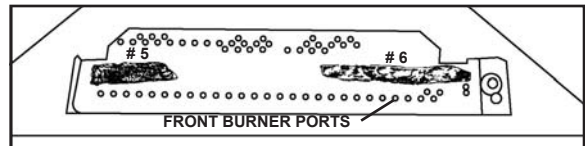


Place the bottom of log #4 onto the locating pin on the right side of the log support. Rest the top into the pocket provided on the center log (#3).

GLOWING EMBERS

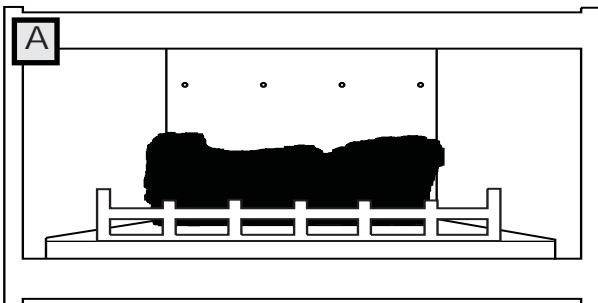
Tear the glowing embers into pieces and place onto the front row of burner ports, in front of logs #5 and #6. Care should be taken to shred the embers into *thin, small irregular pieces* as only the exposed edges of the fibre hairs will glow when exposed to direct flame; however care should be taken to not block the burner ports. Blocked ports can cause an incorrect flame pattern, carbon deposits and delayed ignition.

FIGURE 45

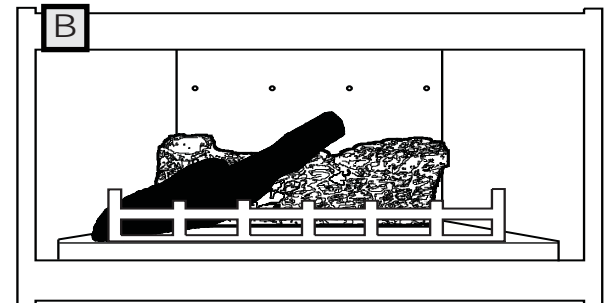


BGD33 LOG SET

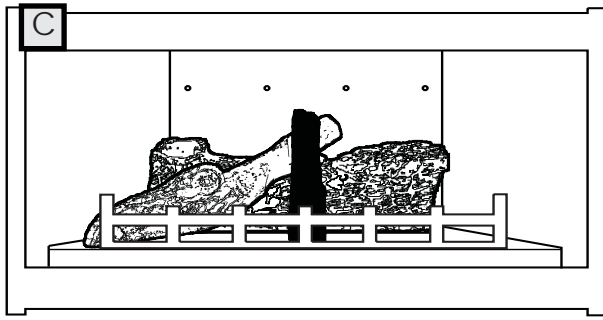
FIGURE 46a-d



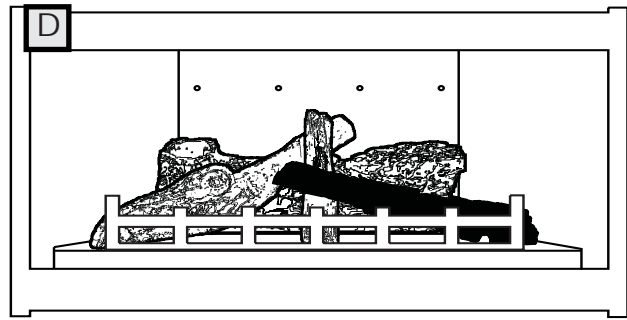
Place log #1 onto the burner, centering it on the log support and pushing it as close to the rear wall of the firebox as possible.



Sit the bottom of log #2 onto the locating pin on the left side of the log support. Position the top of the log into the pocket provided on the top of the rear log (#1).



Position the notch located in the bottom end of log #3 against the centre grate post. Rest the top of log #3 into the pocket at the top end of log #2.



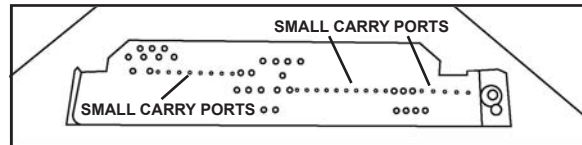
Place the bottom of log #4 onto the locating pin on the right side of the log support. Rest the top into the pocket provided on the center log (#3).

NOTE: There are 2 extra logs included in this GL-638 log set. These small charcoal logs (part#W135-0082 and W135-0182) are not meant for use in the BGD33. For these models these two logs must be discarded.

GLOWING EMBERS

Tear the glowing embers into pieces and place onto the small carry ports. Care should be taken to shred the embers into *thin, small irregular pieces* as only the exposed edges of the fibre hairs will glow when exposed to direct flame; however care should be taken to not block the burner ports. Blocked ports can cause an incorrect flame pattern, carbon deposits and delayed ignition.

FIGURE 47

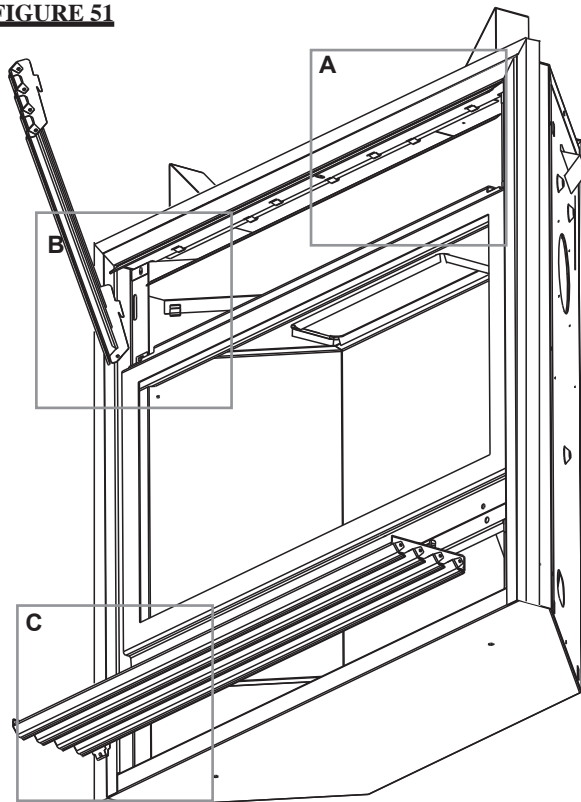


CHARCOAL EMBERS

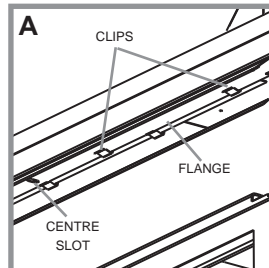
Randomly place the charcoal embers behind the grate posts and around the logs in a realistic manner but not in contact with the flames. Keep ember dust away from burner ports to avoid plugging them.

L334 LOUVRE INSTALLATION

FIGURE 51



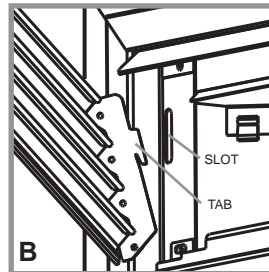
FIGURES 52 a,b&c



HOOD

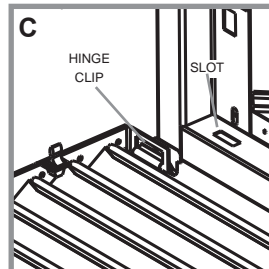
Attach the hood by pressing the top flange into the clips along the top of the louvre opening. Secure using a screw through the centre slot.

NOTE: Hood W335-0028 is required on all models.



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.

Note: The protective wrap is best removed from the louvres when the assembly is at room temperature but this can be improved if the assembly is warmed, using a hair dryer or similar heat source.

OPTIONAL BLOWER INSTALLATION

INSTALLATION TO BE DONE BY A QUALIFIED INSTALLER and 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.

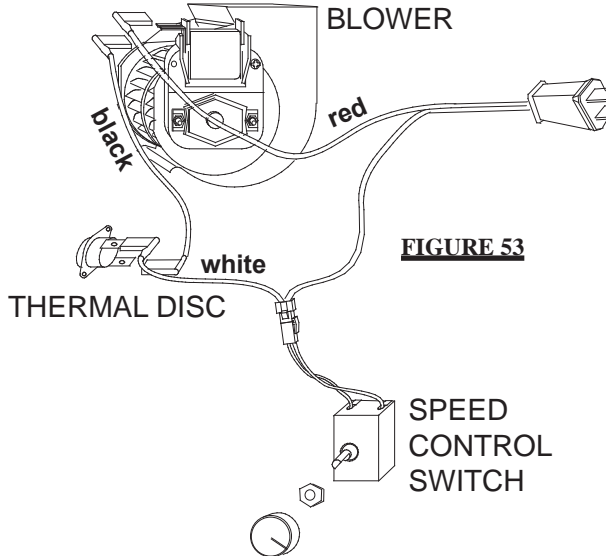


FIGURE 53

If the fireplace was not previously equipped with a blower: route a grounded 2-wire, 60hz power cable to the receptacle / junction box. At this point, it must be strain relieved and insulated.

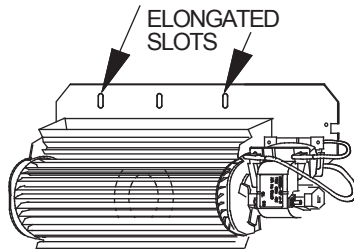


FIGURE 54

The three slots on the blower mounting bracket allow ease of adjustment when attaching the blower. For a quiet running blower, do not allow the assembly to sit on the firebox base. Slide the vibration reducing pad (A) into the clip (C) and up against the threaded stud (B) at the other end. The blower must be able to be positioned entirely onto the pad.

Tilt the blower onto its side. Slide it past the controls and into the clip (C). Secure to the threaded stud using the lock washer and wing nut provided. Ensure that the blower does not touch the fireplace base or the firebox.

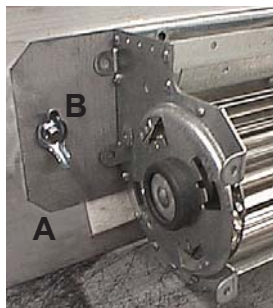


FIGURE 55

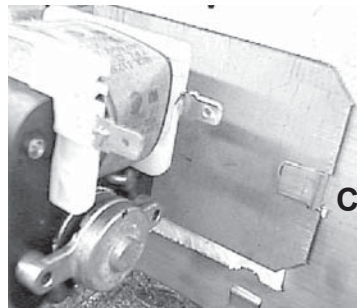


FIGURE 56

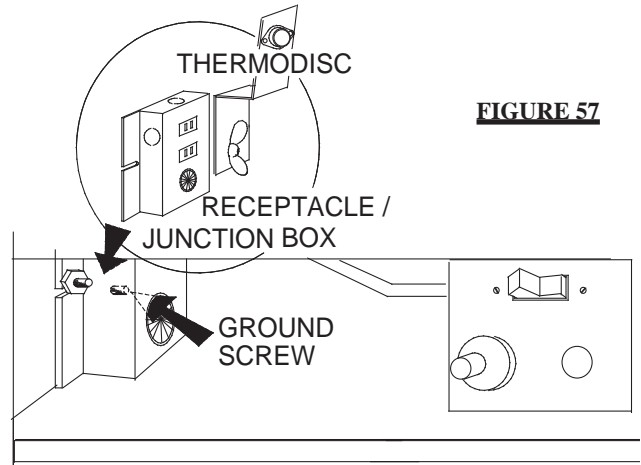
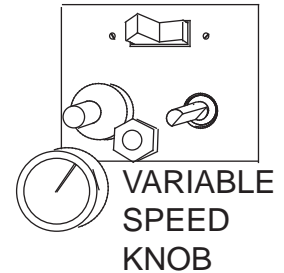


FIGURE 57

Attach the connectors from the black and white wires to the thermodisc and secure the thermodisc bracket to the securing stud at the bottom left of the unit using a lock washer and wing nut. Ensure that the thermodisc touches the firebox wall. Attach the connectors from the black and red wires to the blower.

FIGURE 58

Attach and secure the variable speed switch using the nut provided. Plug the harness cord into the receptacle.



The wire harness provided in this kit is a universal harness. When installed, ensure that any excess wire is contained, preventing it from making contact with moving or hot objects.

Because the blower is thermally activated, when turned on, it will automatically start approximately 10 minutes after lighting the fireplace and will run for approximately 30-45 minutes after the fireplace has been turned off. Use of the fan increases the output of heat.

Drywall dust will penetrate into the blower bearing causing irreparable damage and must be prevented from coming into contact with the blower or its compartment. Any damage resulting from this condition is not covered by the warranty policy.

OPERATION / MAINTENANCE

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

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.

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 59




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.

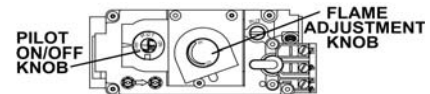
6. Depress slightly and hold gas knob while lighting the pilot with the push button igniter. Keep knob depressed for one minute, then release. If pilot does not continue to burn, repeat steps 3 through 5.

7. With pilot lit, depress and turn gas knob counter-clock-wise  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.

FIGURE 60



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.

TURN THE CONTROL VALVE TO THE OFF POSITION WHEN HEATER IS NOT IN USE.

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 open-

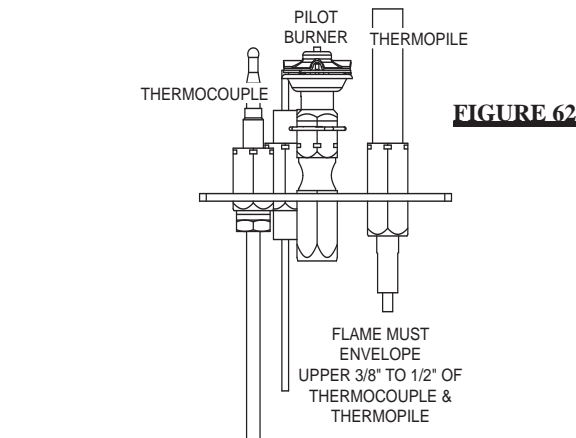
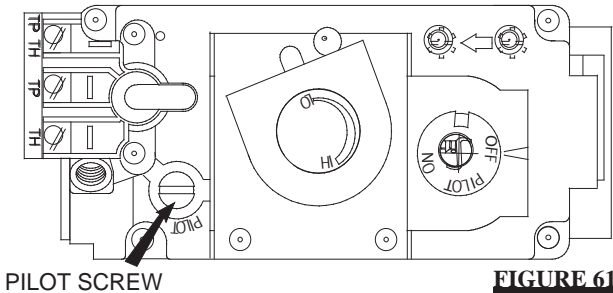
ing and the area surrounding the logs clean by vacuuming or brushing, *at least once a year*.

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

ADJUSTMENTS

PILOT BURNER ADJUSTMENT

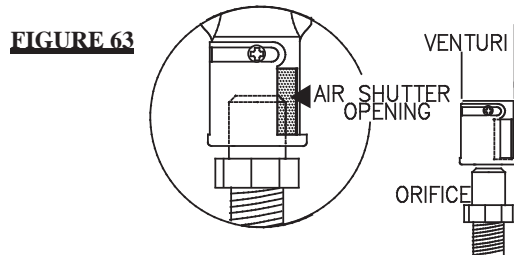
Adjust the pilot screw to provide properly sized flame. Turn in a clockwise direction to reduce the gas flow.



VENTURI ADJUSTMENT

All fireplace models have air shutters that have been factory set open according to the chart below. These settings are for maximum horizontal / terminations. Adjustments may be required depending on fuel type, vent configuration and altitude. 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.

GD33		BGD33	
NG	5/16	NG	1/32
LP	1/2	LP	5/8



NOTE: Ensure the venturi is seated onto orifice.

For fuel conversion refer to the instructions included with your conversion kit.

FLAME ADJUSTMENT

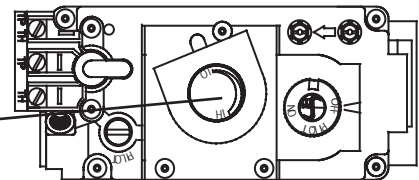
Turn counterclockwise to decrease flame height



Turn clockwise to increase flame height

FIGURE 64

FLAME ADJUSTMENT KNOB



GD33 FLAME CHARACTERISTICS

It is important to periodically perform a visual check of the pilot and the burner flames. Compare them to the figures shown. If any flames appear abnormal call a service person.

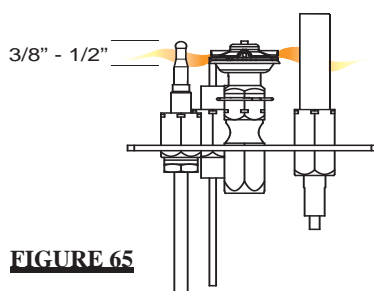


FIGURE 66



BGD33 FLAME CHARACTERISTICS

It is important to periodically perform a visual check of the pilot and the burner flames. Compare them to the figures shown. If any flames appear abnormal call a service person.

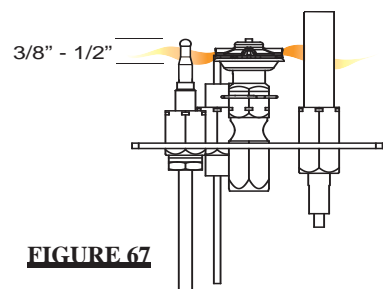


FIGURE 68



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:

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

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

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

COMMON COMPONENTS

#	PART NO.	DESCRIPTION
1*	W562-0025	GLASS GASKET
2*	W225-0135	BLACK DOOR FRAME
3	W010-1641	GLASS c/w GASKET
4*	W750-0112	20FT OF WIRE
5	W455-0070	NATURAL GAS PILOT INJECTOR
5	W455-0068	PROPANE GAS PILOT INJECTOR
6	W010-0800	PROPANE GAS PILOT ASSEMBLY
6	W010-0801	NATURAL GAS PILOT ASSEMBLY
7*	W357-0001	PIEZO IGNITER
8	W680-0004	THERMOPILE
9	W680-0005	THERMOCOUPLE**
10	GL-638	LOG SET
11	W135-0177	LOG #1
12	W135-0178	LOG #2
13	W135-0180	LOG #3
14	W135-0181	LOG #4
15*	W361-0016	GLOWING EMBERS
16*	W385-0334	NAPOLEON® LOGO
17*	W720-0062	PILOT TUBE c/w FITTINGS
18	W010-1642	BLACK DOOR c/w GLASS & GASKET
19*	W490-0420	24 GAUGE ALUMINIUM PIPE
20*	W490-0720	26 GAUGE GALVANIZED PIPE
21*	W665-0011	NAILING TAB TRIM - SIDE
22*	W665-0014	NAILING TAB TRIM - TOP
23	W010-1777	FIRESTOP SLEEVE ASSEMBLY

** WARNING: This is a fast acting thermocouple. It is an integral safety component. Replace only with a fast acting thermocouple supplied by Wolf Steel Ltd.

COMMON ACCESSORIES

24	GZ550-1KT	BLOWER KIT
25*	B440-KT	BLOWER
26*	W500-0033	V.S.S. MOUNTING PLATE FOR WALL SWITCH
27*	W690-0001	MILLIVOLT THERMOSTAT
28*	W660-0010B	REMOTE CONTROL - ADVANTAGE
29*	W660-0011B	REMOTE CONTROL - ADVANTAGE PLUS
30*	W660-0026	PROGRAMMABLE TIMER
31	GA-566	HOT AIR DISTRIBUTION KIT
32*	W690-0005	THERMOSTAT 110V FOR USE WITH GA-566
33	GA-72	HOT AIR EXHAUST KIT
34	GA-70	EXTENSION KIT 5FT
35	GD-301	HEAT GUARD
36*	W010-0370	WALL SUPPORT ASSEMBLY
37*	W175-0053	DURA-VENT ZERO CLEARANCE ADAPTOR
38*	W175-0013	7" COUPLER
39*	W175-0001	4" COUPLER
40	W170-0063	VENT PIPE COLLAR
41	W585-0072	VENT PIPE SHIELD
42*	GD200-PB	DOOR TRIM - BLACK
43*	MBP-153	METAL BRICK PANELS
44*	PRP33	PORCELAIN REFLECTIVE RADIANT PANELS
45	L334K	LOUVRE ASSEMBLY - BLACK
45	L334PB	LOUVRE ASSEMBLY - POLISHED BRASS
45	L334SS	LOUVRE ASSEMBLY - BRUSHED STAINLESS STEEL FINISH
46*	GD33B-KT	BAY FRONT KIT - c/w PULL SCREEN
47*	GIB-1LK	BAY LOUVRE KIT - BLACK
47*	GIB-1LPB	BAY LOUVRE KIT - POLISHED BRASS
47*	GIB-1LAB	BAY LOUVRE KIT - ANTIQUE BRASS
47*	GIB-1LSS	BAY LOUVRE KIT - BRUSHED STAINLESS STEEL FINISH
47*	GIB-1LG	BAY LOUVRE KIT - GOLD PLATED
48*	GIB-1OIK	BAY ORNAMENTAL INSET - BLACK
48*	GIB-1OIG	BAY ORNAMENTAL INSET - GOLD PLATED

W415-0662 / A / 03.04.09

49*	TB333K	BEVELLED TRIM KIT - BLACK
49*	TB333PB	BEVELLED TRIM KIT - POLISHED BRASS
49*	TB333SS	BEVELLED TRIM KIT - BRUSHED STAINLESS STEEL
50*	ANI-K	ANDIRONS - BLACK
51*	ANI-G	ANDIRONS - GOLD
52*	270	PAINT, BLACK - 13OZ
53*	W573-0002	HIGH TEMPERATURE SEALANT
54*	W573-0007	HIGH TEMPERATURE SEALANT
55*	W500-0096	FIRESTOP SPACER

COMMON FLEXIBLE VENT KITS

GD220 (5 FT)		
56*	W010-0397	4" FLEX VENT PIPE-(5 FT) c/w SPACERS
57*	W410-0017	7" FLEX VENT PIPE -(5 FT)
GD330 (10 FT)		
58*	W010-0300	4" FLEX VENT PIPE - (10 FT) c/w SPACERS
59*	W410-0018	7" FLEX VENT PIPE -(10 FT)
60*	W010-0370	WALL SUPPORT ASSEMBLY

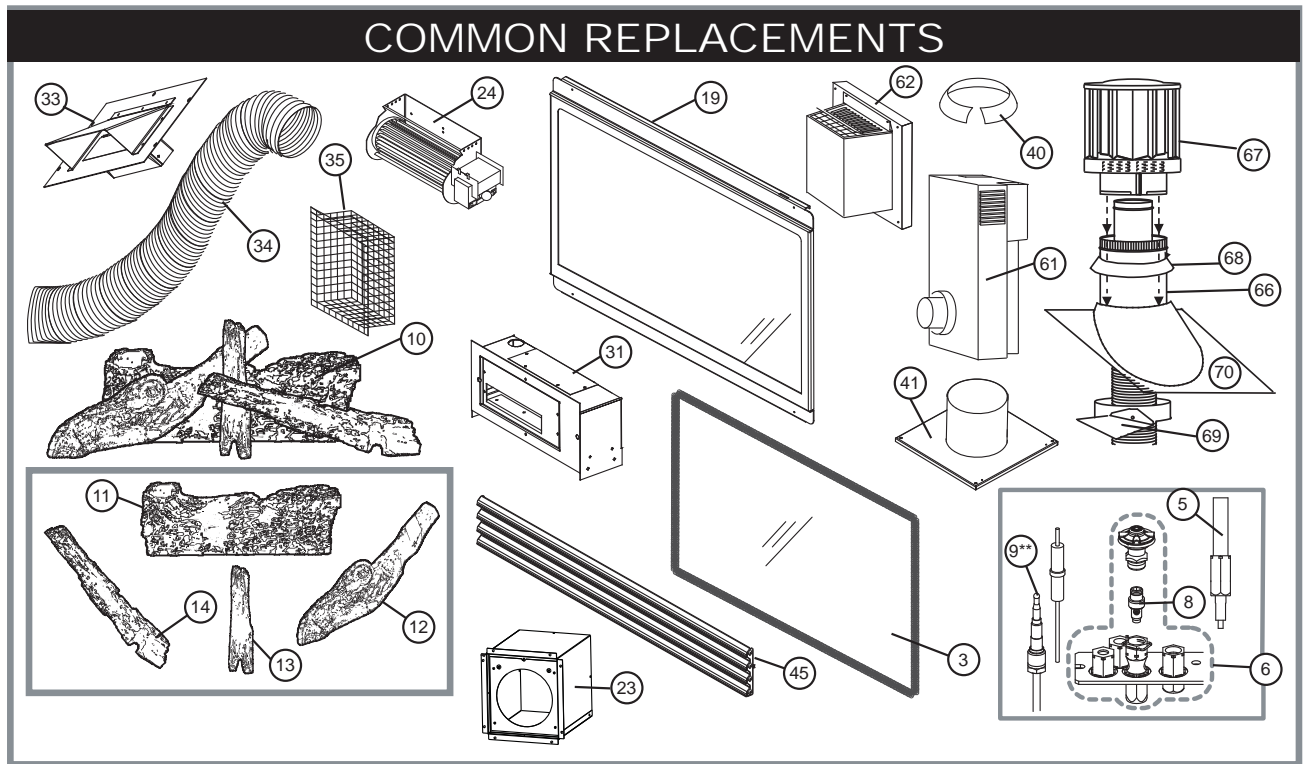
COMMON TERMINAL KITS

61	PERISCOPE	-	GD-201
62	WALL TERMINAL KIT	-	GD-222

COMMON ROOF TERMINAL KITS

63*	1/12 TO 7/12 PITCH	-	GD-110
64*	8/12 TO 12/12 PITCH	-	GD-111
65*	FLAT ROOF	-	GD112
66	W490-0073	4/7 INNER/OUTER SLEEVE	
67	W670-0006	4/7 TERMINAL	
68	W170-0063	STORM COLLAR	
69	W010-0453	ROOF SUPPORT	
70	W263-0054 /	ROOF FLASHING	
	W263-0055 /		
	W263-0057		

NOTE: Care must be taken when removing and disposing of any broken glass or damaged components. Be sure to vacuum up any broken glass from inside the fireplace before operation.



GD33 COMPONENTS

- | | | |
|----|-----------|---------------------------------------|
| 71 | W455-0001 | #44 NATURAL GAS MAIN ORIFICE - HI ALT |
| 71 | W455-0019 | #45 NATURAL GAS MAIN ORIFICE |
| 71 | W455-0047 | #56 PROPANE GAS MAIN ORIFICE - HI ALT |
| 71 | W455-0050 | #55 PROPANE GAS MAIN ORIFICE |
| 72 | W725-0025 | NATURAL GAS VALVE |
| 72 | W725-0026 | PROPANE GAS VALVE |
| 73 | W010-0595 | BURNER |
| 74 | W500-0126 | RESTRICTOR PLATE |
| 75 | W135-0082 | LOG #5 - CHARCOAL PIECE |
| 76 | W135-0182 | LOG #6 |

BGD33 COMPONENTS

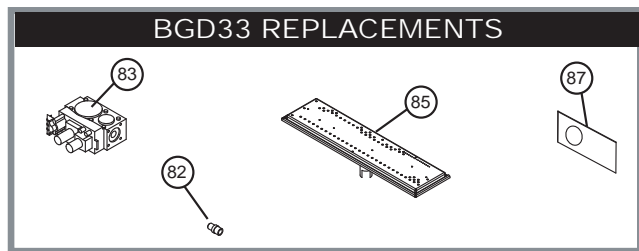
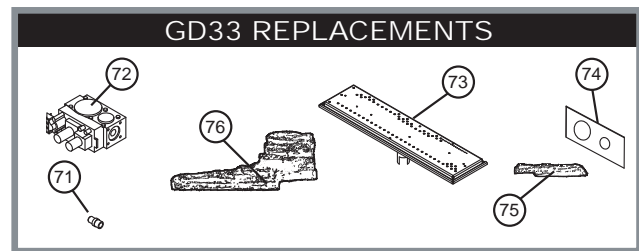
- | | | |
|-----|-----------|------------------------------|
| 82 | W455-0056 | #50 NATURAL GAS MAIN ORIFICE |
| 82 | W455-0057 | #58 PROPANE GAS MAIN ORIFICE |
| 83 | W725-0035 | NATURAL GAS VALVE |
| 83 | W725-0043 | PROPANE GAS VALVE |
| 84* | W665-0017 | NAILING TAB |
| 85 | W010-0695 | BURNER |
| 86* | W550-0001 | CHARCOAL EMBERS |
| 87 | W500-0237 | RESTRICTOR PLATE |

GD33 ACCESSORIES

- | | | |
|-----|-----------|------------------------------------|
| 77* | W175-0127 | CONVERSION KIT - NG TO LP |
| 78* | W175-0128 | CONVERSION KIT - NG TO LP (HI ALT) |
| 79* | W175-0130 | CONVERSION KIT - NG TO NG (HI ALT) |
| 80* | W175-0129 | CONVERSION KIT - LP TO NG |
| 81* | GD818KT | DECORATIVE BRICK KIT - SANDSTONE |

BGD33 ACCESSORIES

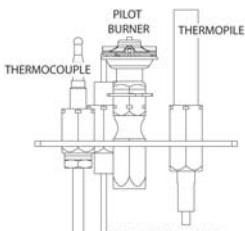
- | | | |
|-----|-----------|---------------------------|
| 88* | W175-0147 | CONVERSION KIT - NG TO LP |
| 89* | W175-0171 | CONVERSION KIT - LP TO NG |

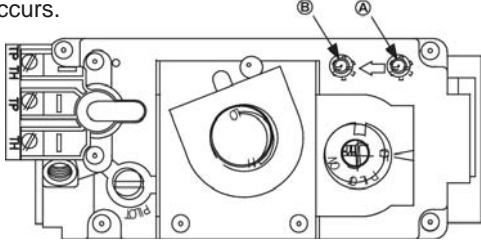


TROUBLE SHOOTING GUIDE

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

SYMPTOM	PROBLEM	TEST SOLUTION	
Pilot goes out while standing; Main burner is in 'OFF' position.	Gas piping is under sized.	<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. 	
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.	- purge the gas line with the glass door removed.	
	Out of propane gas.	- fill the tank.	
	Pilot flame is not large enough	- turn up the pilot flame.	
	Pilot flame is not engulfing the thermocouple.	- 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.	- replace.	
Pilot burning; no gas to main burner; gas knob is on 'HI'; wall switch / thermostat is on.	Thermostat or switch is defective.	- connect a jumper wire across the wall switch terminals; if main burner lights, replace switch / thermostat.	
	Wall switch wiring is defective.	- disconnect switch wires from valve & 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.	- remove stoppage in orifice.	
	Faulty valve.	- 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 igniter. - check if the push button igniter 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 igniter. 	
		Out of propane gas	- fill the tank.
		Spark gap is incorrect	- 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.
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.	- shorten wire to correct length or wire gauge.	
	Faulty thermostat or switch.	- replace.	



SYMPTOM	PROBLEM	TEST SOLUTION
Main burner goes out; pilot goes out.	Refer to "MAIN BURNER GOES OUT; PILOT STAYS ON"	
	Vent is blocked	- check for vent blockage.
	Vent is re-circulating	- check joint seals and installation.
	4" flexible vent has become disconnected from fireplace.	- re-attach to fireplace.
Excessive air flow around the pilot burner.		- install the restrictor plate supplied with the unit (BGD33 only p. 18).
Flames are consistently too large or too small. Carboning occurs.	Unit is over-fired or under-fired.	- 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". AFTER TAKING PRESSURE READINGS, BE SURE TO TURN SCREWS CLOCKWISE FIRMLY TO RESEAL. DO NOT OVERTORQUE. Leak test with a soap and water solution.
		
Carbon is being deposited on glass, logs or combustion chamber surfaces.	Air shutter has become blocked	- ensure air shutter opening is free of lint or other obstructions.
	Flame is impinging on the logs or combustion chamber.	- 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.	- clean the glass with a gas fireplace glass cleaner. DO NOT CLEAN GLASS WHEN HOT. If deposits are not cleaned off regularly, the glass may become permanently marked.
Exhaust fumes smelled in room, headaches.	Fireplace is spilling.	- check door seal and relief flap seal. - check for chimney blockage - check that chimney is installed to building code. - room is in negative pressure; increase fresh air supply.
Flames are very aggressive.	Door is ajar	- tighten screws holding door in place
	MODEL GD33 ONLY:	- Restrict vent exit. See " RESTRICTING VERTICAL VENTS ".
Main burner flame is a blue, lazy, transparent flame.	Blockage in vent.	- remove blockage. In really cold conditions, ice buildup may occur on the terminal and should be removed as required.
	Incorrect installation.	- refer to Figure 30 to ensure correct location of storm collars.
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	- reverse.
	Remote wall switch is grounding.	- replace.
	Remote wall switch wire is grounding.	- check for ground (short); repair ground or replace wire.
	Faulty valve.	- replace.

