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

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

NAPOLEON®

QUALITY FIREPLACES

Award Winning Products

GAS - DIRECT VENT MILLIVOLT SYSTEM

INSTALLATION AND OPERATION INSTRUCTIONS FOR VENTED GAS FIREPLACE

NATURAL GAS MODEL	**GD33NR BGD33NR**
	GD34NT BGD34NT
PROPANE GAS MODEL	**GD33PR BGD33PR**
	GD34PT BGD34PT

CERTIFIED FOR CANADA AND UNITED STATES USING ANSI / CSA METHODS

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

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapours and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your build ing.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

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

GAS-FIRED C UL US LISTED

R-2000

HPBA Hearth, Patio & Barbecue Association

ISO 9001:2000 QMI REGISTERED QUALITY SYSTEM

Warnock Hersey C US

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

W415-0341 / F / 11.21.05

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PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE

WARNING

- **Do not burn wood or other materials in this fireplace.**
- **Adults and especially children should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition. Supervise young children when they are in the same room as the fireplace.**
- **Due to high temperatures, the fireplace should be located out of traffic and away from furniture and draperies.**
- **Clothing or other flammable material should not be placed on or near the fireplace.**
- **Any safety screen or guard removed for servicing must be replaced prior to operating the fireplace.**
- **It is imperative that the control compartments, burners and circulating blower and its 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. Use only with a glass door certified with the fireplace.**
- **Do not strike or slam shut the fireplace glass door.**
- **This fireplace uses and requires a fast acting thermocouple. Replace only with a fast acting thermocouple supplied by Wolf Steel Ltd.**

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

W415-0341/F/11.21.05

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, ceramic glass (thermal breakage only), gold plated parts against tarnishing, porcelainized enamelled components and aluminum extrusion trims.

Electrical (110V and millivolt) components and wearable parts such as blowers, gas valves, thermal switch, switches, wiring, remote controls, ignitor, gasketing, and pilot assembly are covered and NAPOLEON will provide replacement parts free of charge during the first year of the limited warranty.

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.
- 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.

NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED www.nficertified.org

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

Models GD33 and BGD33 have been certified by Intertek Testing Services under the Warnock Hersey Logo.

Models GD34 and BGD34 have been certified by Underwriters' Laboratorities of Canada under the UL Logo.

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

TABLE 1

MODEL RATES AND EFFICIENCIES

MODEL	*GD33		BGD33	GD34	BGD34
ALTITUDE FT	0-2000	2000-4500	0-4500	0-4500	0-4500
MAX. INPUT BTU/HR	22,000	20,000	16,400	24,500	16,400
MAX. OUTPUT BTU/HR	17,380	15,800	11,644	20,090	12,792
EFFICIENCY W/ THE FAN ON	79%	79%	71%	82%	78%

***For elevations between 2,000 and 4,500 ft. above sea level, this fire place 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.

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.

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

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

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

Use only accessories designed for and listed with the model.

CARE OF GLASS, AND PLATED PARTS

Do not use abrasive cleaners to clean plated parts. Buff lightly with a clean dry cloth. **BGD33 / BGD34:** The glass is $^{3}/_{16}$" *tempered* glass available from your Napoleon / Wolf Steel Ltd. dealer. **GD33 / GD34:** The glass is $^{3}/_{16}$" *ceramic* glass available from your Napoleon / Wolf Steel Ltd. dealer. DO NOT SUBSTITUTE MATERIALS. Clean the glass after the first 10 hours of operation with a recommended gas fireplace glass cleaner. Thereafter clean as required. DO NOT CLEAN GLASS WHEN HOT! If the glass is not kept clean permanent discolouration and / or blemishes may result.

GD33NR

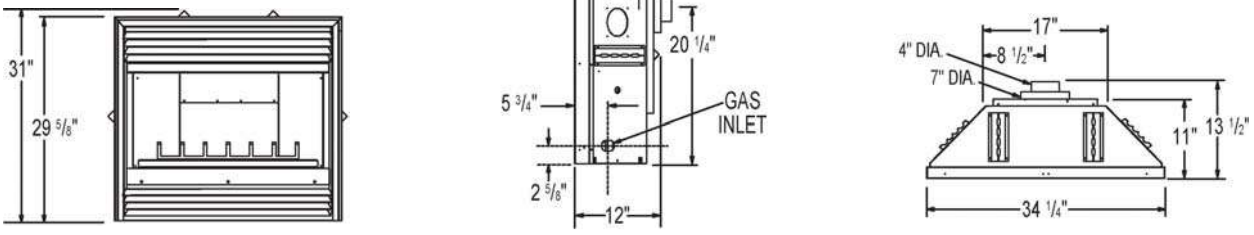


FIGURE 1a

BGD33NR

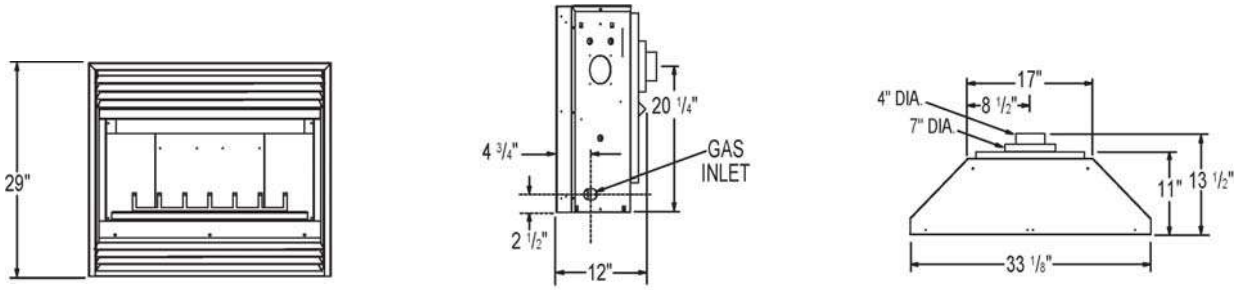


FIGURE 1b

B/GD34NT

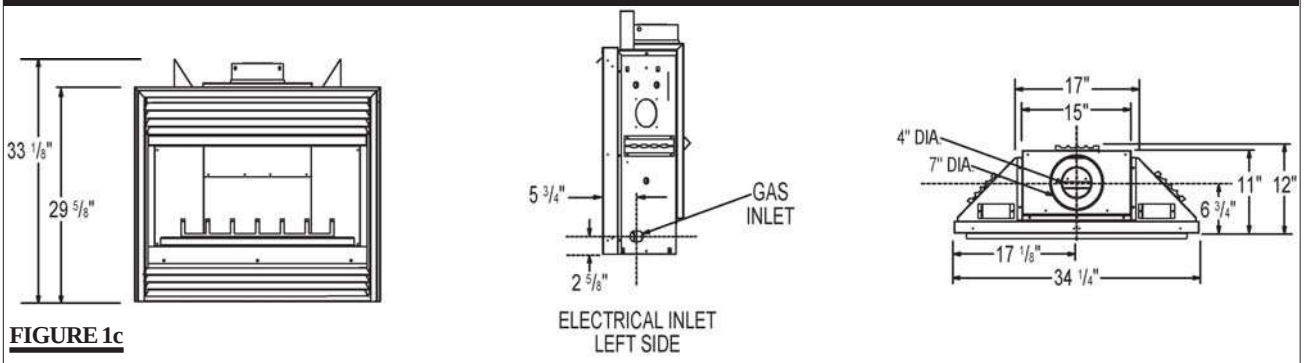


FIGURE 1c

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.

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 maybe used on both the inner exhaust and 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 Ltd. rigid / flexible vent 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**. These vent kits allow for either horizontal or vertical venting of the fireplace.

The maximum allowable vertical vent length is 40 feet.

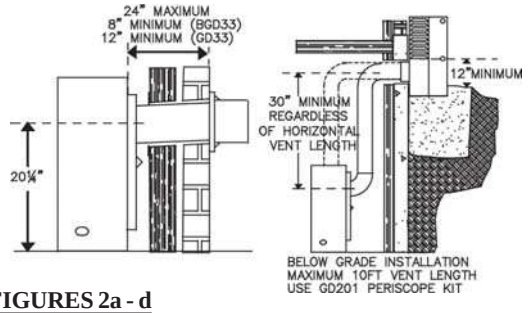
For optimum flame appearance and fireplace performance, keep the vent length and number of elbows to a minimum. The air terminal must remain unobstructed at all times. Examine the air terminal at least once a year to verify that it is unobstructed and undamaged.

Horizontal runs may have a 0 inch rise per foot in all cases using Wolf Steel or Simpson Dura-Vent rigid or flexible venting components when venting.

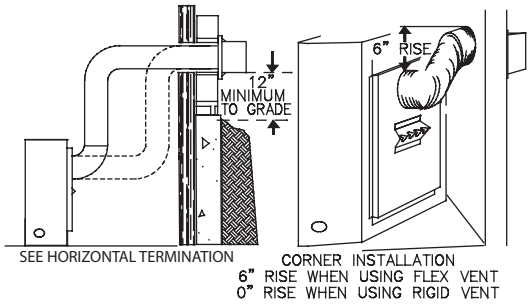
For optimum performance, it is recommended that horizontal runs have a minimum ¼ inch rise per foot when using Simpson Dura-Vent or Wolf Steel rigid vent components and a minimum 1 inch rise per foot when using Wolf Steel flexible vent components.

VENT INSTALLATIONS

TYPICAL VENT INSTALLATIONS



FIGURES 2a - d



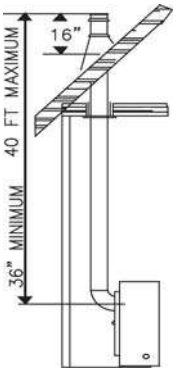


FIGURE 3a - b

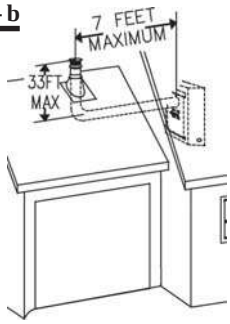
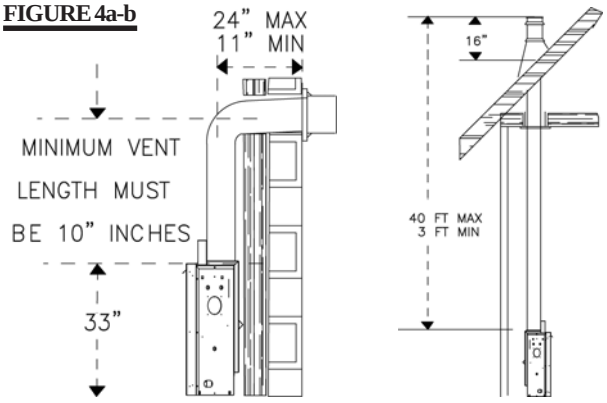


FIGURE 4a-b



***GD33 & BGD33**: When venting either a GD33 or a BGD33, the horizontal run must be kept to a maximum of 24 inches. A GD33 must be kept to a minimum of 12 inches and a BGD33 must be kept to a minimum of 8 inches. When terminating vertically, the vertical rise is a minimum 36 inches to a maximum 40 feet from the centre of the fireplace flue outlet. The maximum horizontal run, when terminating vertically, is 7 feet.*

***ALL MODELS:** 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.

Minimum clearance to combustible construction from fireplace and vent surfaces:

TABLE 2	BGD33	GD33	BGD34	GD34
SIDE OF THE UNIT	0"	0"	0"	0"
BACK OF THE UNIT	0"	0"	0"	0"
BOTTOM OF THE UNIT	0"	0"	0"	0"
TOP OF THE UNIT	0"	0"	0"	0"
TOP OF THE VENT PIPE	2"*	1"	1"	1"
SIDES OF THE VENT PIPE	1"*	1"	1"	1"
BOTTOM OF THE VENT PIPE	1"*	1"	1"	1"
RECESSED DEPTH	12"	12"	12"	12"

** A clearance to combustibles of 2" at the vent pipe top must be maintained for the first 12" of venting. The firestop spacer **W010-0612** supplied with the unit must be used to maintain this clearance. Thereafter a 1" clearance to combustibles may be maintained using the firestop spacer **W500-0096** for use with flexible venting or firestop spacer **W500-0136** for use with rigid venting.*

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 betweeen 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.

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

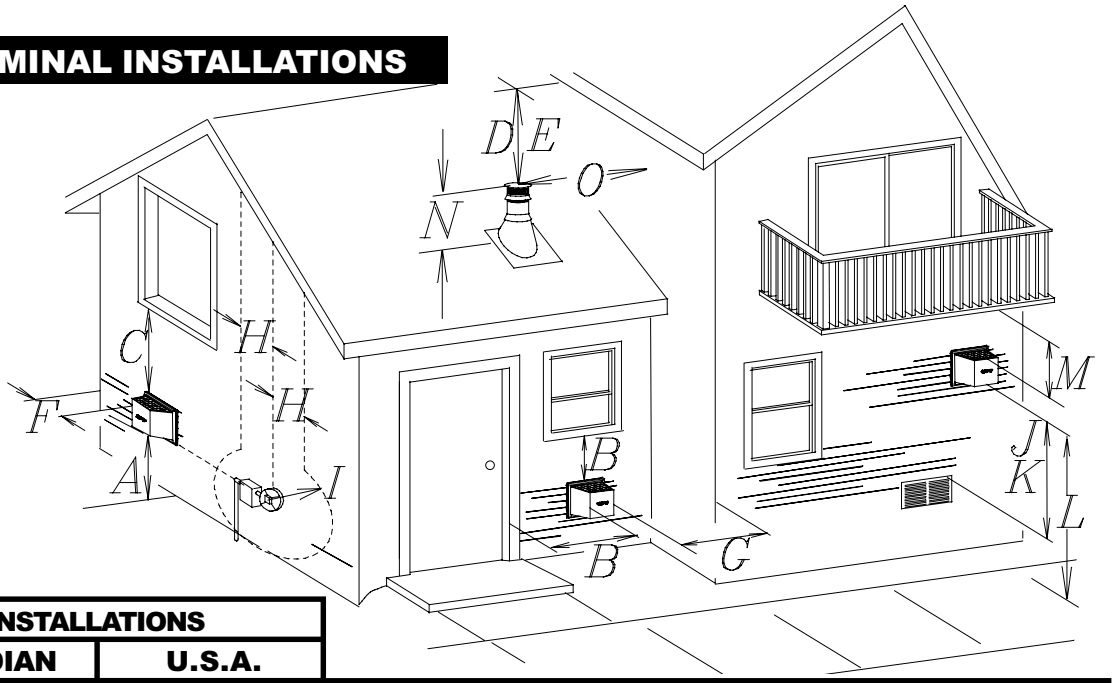
Under extreme vent configurations, allow several minutes (5-15) for the flame to stabilize after ignition.

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

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

FOR SPECIFIC VENTING PARAMETERS, REFER TO PAGES 9-14.

AIR TERMINAL INSTALLATIONS



	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 ***non***-combustible corner wall or protruding ***non***-combustible obstructions (chimney, etc.).
	2 INCHES***	2 INCHES***	Clearance to an inside combustible corner wall or protruding combustible obstructions (vent chase, etc.).
H	3 FEET	3 FEET****	Clearance to each side of the centerline extended above the meter / regulator assembly to a maximum vertical distance of 15ft.
I	3 FEET	3 FEET****	Clearance to a service regulator vent outlet.
J	12 INCHES	9 INCHES	Clearance to a non-mechanical air supply inlet to the building or a combustion air inlet to any other appliance.
K	6 FEET	3 FEET†	Clearance to a mechanical air supply inlet.
L	7 FEET‡	7 FEET****	Clearance above a paved sidewalk or paved driveway located on public property unless fitted with a heat shield kit GD-301.
M	12 INCHES††	12 INCHES****	Clearance under a veranda, porch, deck or balcony.
N	16 INCHES	16 INCHES	Clearance above the roof.
O	2 FEET†*	2 FEET†*	Clearance from an adjacent wall including neighbouring buildings.

*** Recommended to prevent condensation on windows and thermal breakage**
**** It is recommended to use a heat shield and to maximize the distance to vinyl clad soffits.**
***** The periscope GD-201 requires a minimum 18 inches clearance from an inside corner.**
****** This is a recommended distance. For additional requirements check local codes.**
† Three feet above if within 10 feet horizontally.
‡ A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single fami dwellings and serves both dwellings.
†† Permitted only if the veranda, porch, or deck is fully open on a minimum of two sides beneath the floor.
†* Recommenced to prevent recirculation of exhaust products. For additional requirements check local codes.

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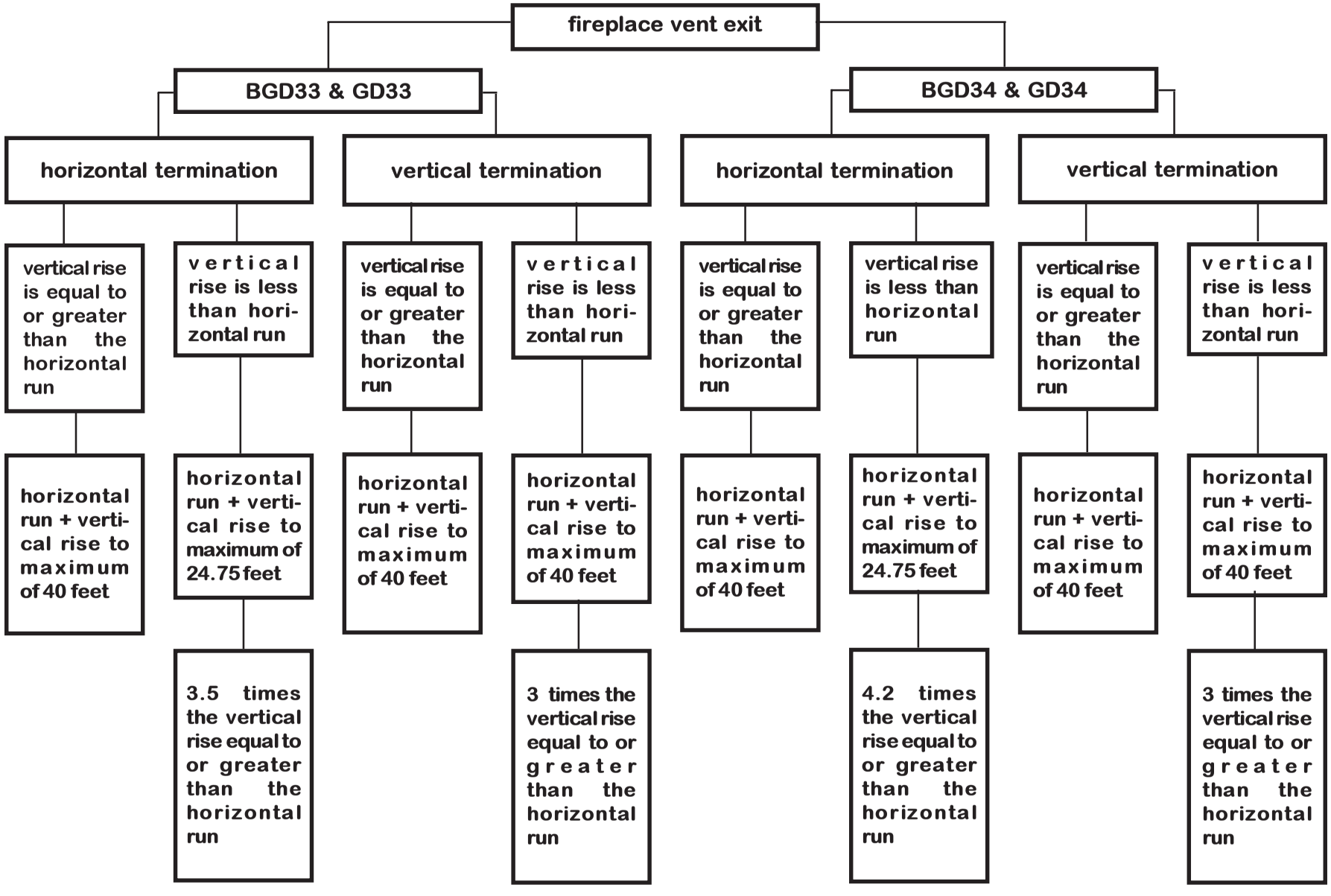
VENTING APPLICATION FLOW CHART



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°**

BGD33 & GD33 HORIZONTAL TERMINATION

when $(H_T) \leq (V_T)$

Simple venting configuration (only two 90° elbows)

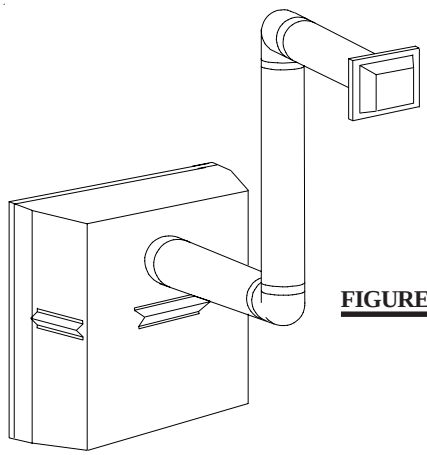
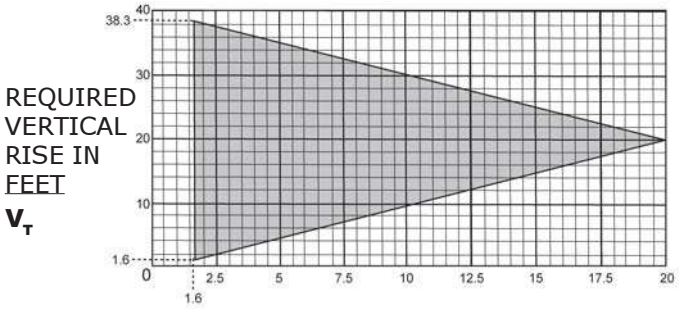


FIGURE 6

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

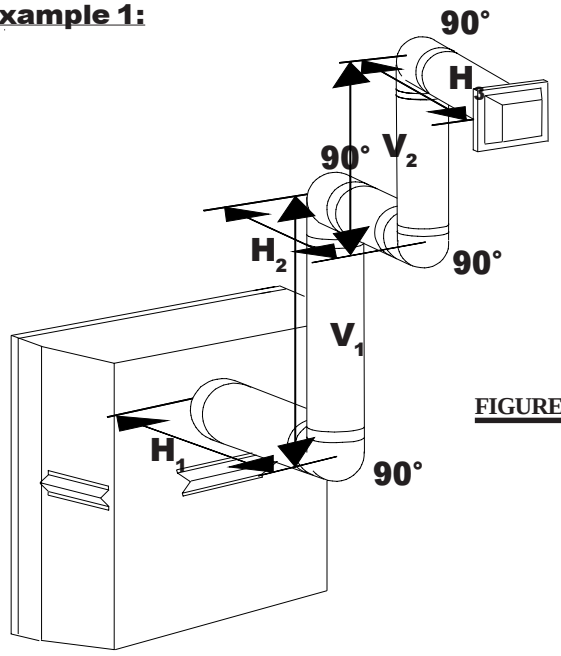


FIGURE 7

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(four 90° elbows - 90°)

= .03(90 + 90 + 90 + 90 - 90) = 8.1 ft

H_T = $H_R + H_O$ = 6.5 + 8.1 = 14.6 ft

$H_T + V_T$ = 14.6 + 15 = 29.6 ft

Formula 1: $H_T \leq V_T$

14.6 ≤ 15

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

29.6 ≤ 40

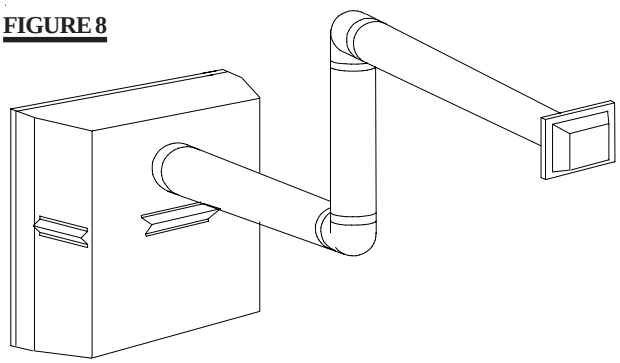
Since both formulas are met, this vent configuration is acceptable.

BGD33 & GD33 HORIZONTAL TERMINATION

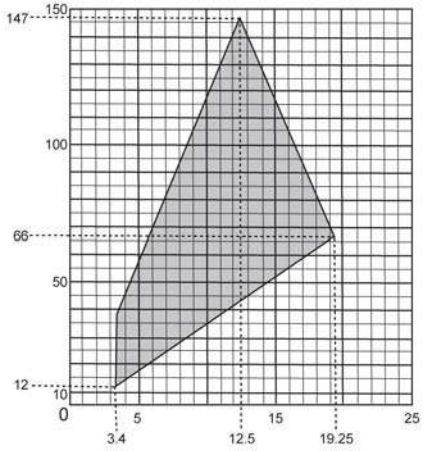
when **(H_T) > (V_T)**

Simple venting configuration (only two 90° elbows)

FIGURE 8



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: **$H_T \leq 3.5V_T$**

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

Example 2:

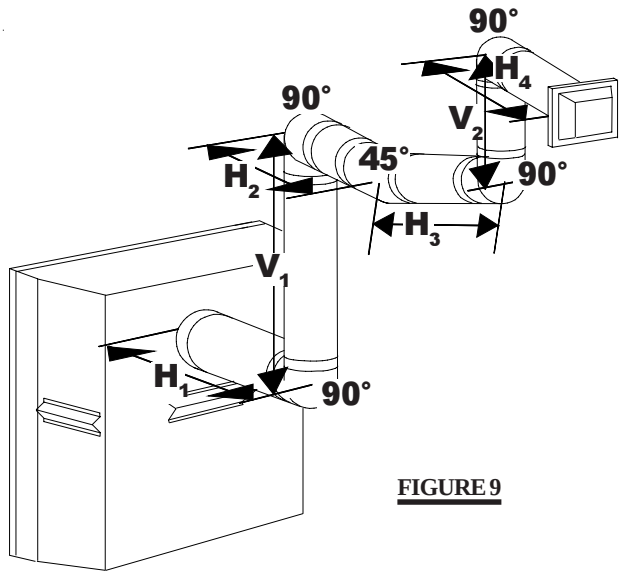


FIGURE 9

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(four 90° elbows + one 45° elbow - 90°)
	= .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: **$H_T \leq 3.5V_T$**

$3.5V_T$ = 3.5 x 5.5 = 19.25 ft

14.95 ≤ 19.25

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

20.45 ≤ 24.75

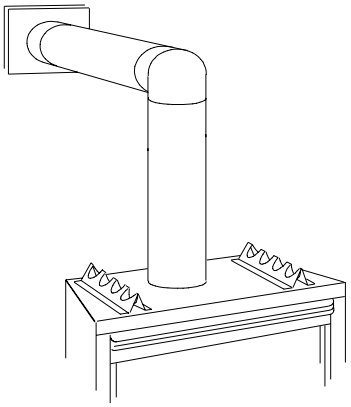
Since both formulas are met, this vent configuration is acceptable.

BGD34 & GD34 HORIZONTAL TERMINATION

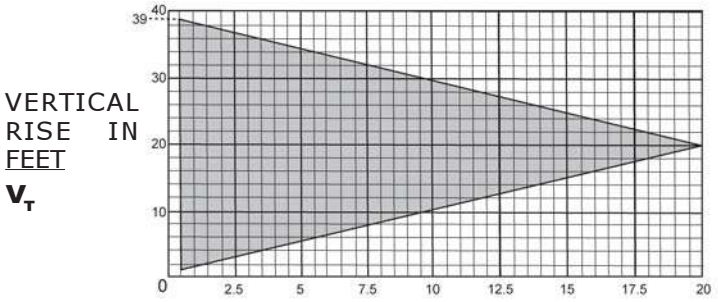
when $(H_T) \leq (V_T)$

Simple venting configuration (only one 90° elbow)

FIGURE 10



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



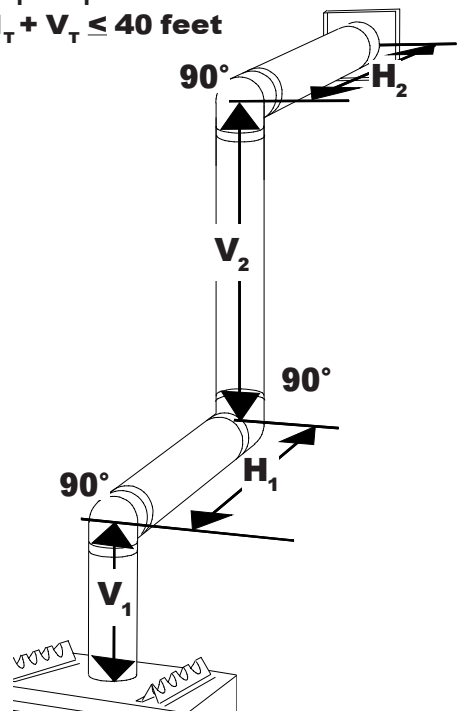
The shaded area within the lines represents acceptable values for H_T and V_T .

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

Formula 1: $H_T \leq V_T$

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

FIGURE 11



Example 3:

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

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

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

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

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

BGD34 & GD34 HORIZONTAL TERMINATION

when **(H_T) > (V_T)**

Simple venting configuration (only one 90° elbow)

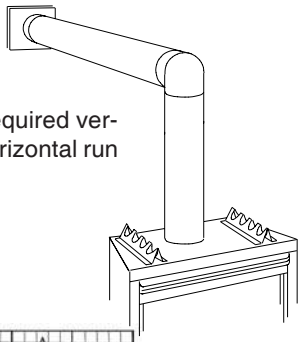
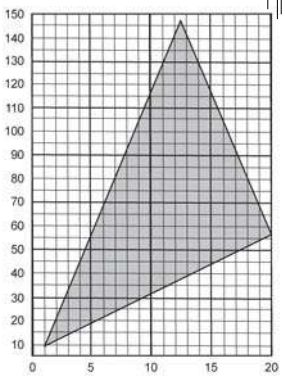


FIGURE 12

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



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

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

Formula 1: $H_T \leq 4.2\ V_T$

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

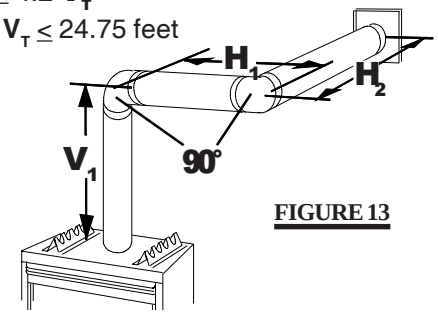


FIGURE 13

Example 4:

V_1 = V_T = 6 ft
H_1 = 3 ft
H_2 = 5 ft
H_R = $H_1 + H_2$ = 3 + 5 = 8 ft
H_O = .03(two 90° elbows - 90°) = .03(180° - 90°) = 2.7 ft
H_T = $H_R + H_O$ = 8 + 2.7 = 10.7 ft
$H_T + V_T$ = 10.7 + 6 =16.7

Formula 1: **$H_T \leq 4.2\ V_T$**

$4.2\ V_T$ = 4.2 x 6 = 25.2 ft

10.7 ≤ 25.2

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

16.7 ≤ 24.75

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

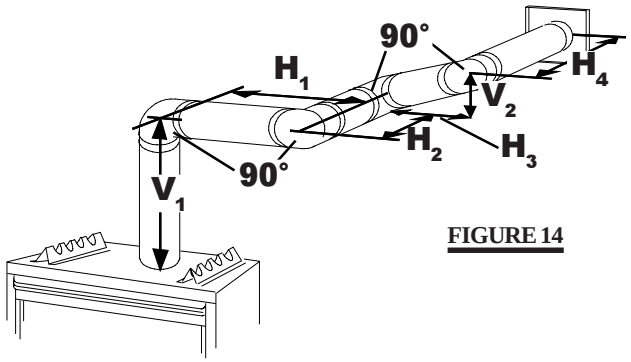


FIGURE 14

Example 5:

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(four 90° elbows - 90°) = .03(360° - 90°) = 8.1 ft
H_T = $H_R + H_O$ = 5.5 + 8.1 = 13.6 ft
$H_T + V_T$ = 13.6 + 5.5 = 19.1 ft

Formula 1: **$H_T \leq 4.2\ V_T$**

$4.2\ V_T$ = 4.2 x 5.5 = 23.1 ft

13.6 ≤ 23.1

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

19.1 ≤ 24.75

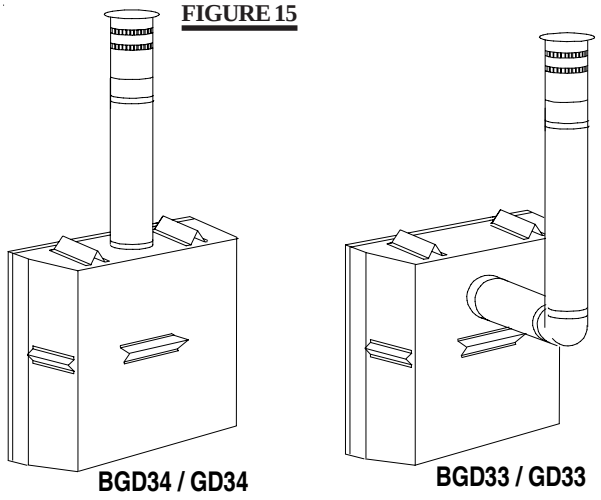
Since both formulas are met, this vent configuration is acceptable.

VERTICAL TERMINATION

when **(H_T) ≤ (V_T)**

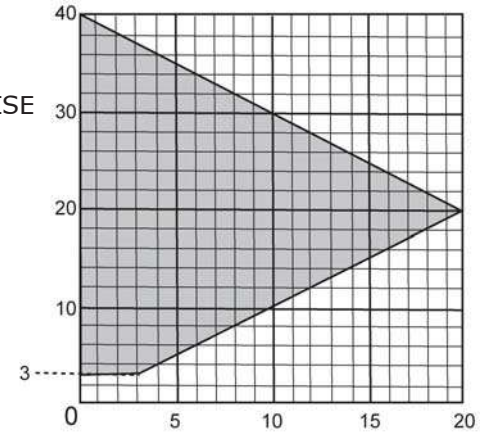
Simple venting configurations

FIGURE 15



BGD34 / GD34 **BGD33 / GD33**

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



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

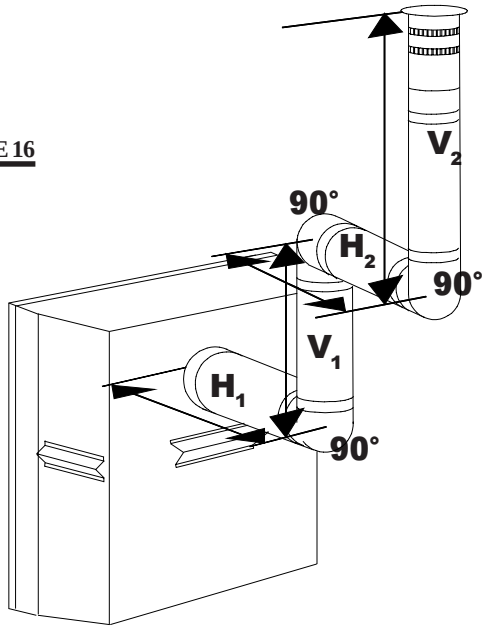
For vent configurations requiring more than zero 90° elbow (top exit) or one 90° elbow (rear exit), the following formulas apply:

Formula 1: $H_T \leq V_T$

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

Example 6:

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(three 90° elbows - 90°)
	= .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 ≤ 15

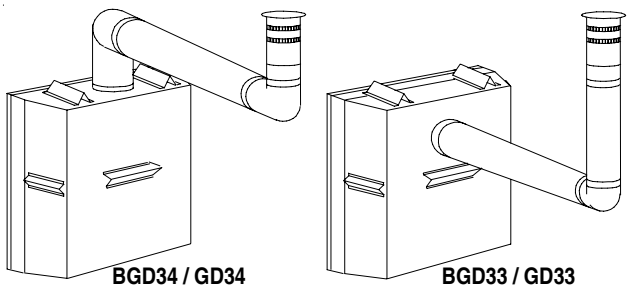
Formula 2: **$H_T + V_T \leq 40$ feet**
25.9 ≤ 40

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

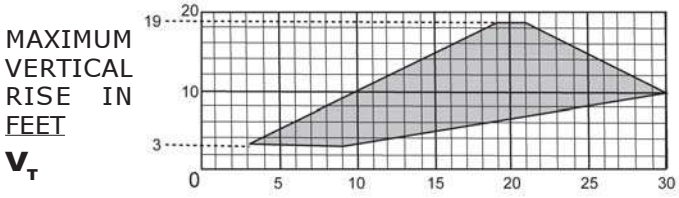
VERTICAL TERMINATION

when **(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.



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 7:

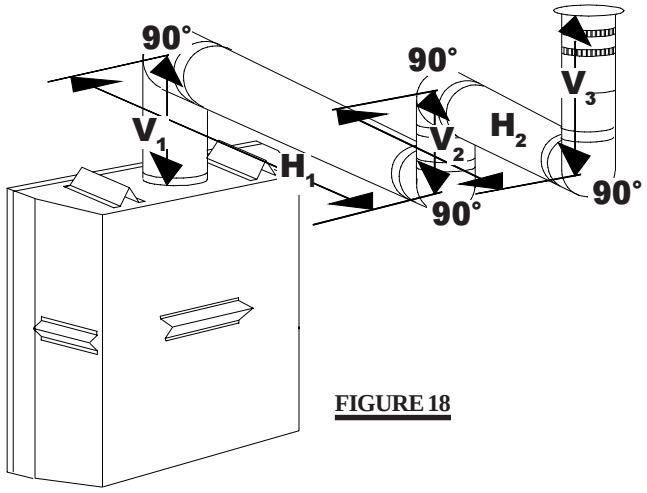


FIGURE 18

V_1 = 2 ft
V_2 = 1 ft
V_3 = 1.5 ft
V_T = $V_1 + V_2 + V_3$ = 2 + 1 + 1.5 = 4.5 ft
H_1 = 6 ft
H_2 = 2 ft
H_R = $H_1 + H_2$ = 6 + 2 = 8 ft
H_o = .03(four 90° elbows - 90°)
= .03(90 + 90 + 90 + 90 - 90) = 8.1 ft
H_T = $H_R + H_o$ = 8 + 8.1 = 16.1 ft
$H_T + V_T$ = 16.1 + 4.5 = 20.6 ft

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

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

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

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

Example 8:

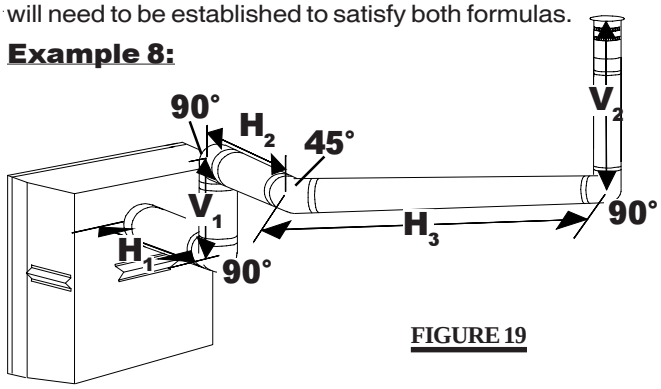


FIGURE 19

V_1 = 1.5 ft
V_2 = 5 ft
V_T = $V_1 + V_2$ = 1.5 + 5 = 6.5 ft
H_1 = 1 ft
H_2 = 1 ft
H_3 = 10.75 ft
H_R = $H_1 + H_2 + H_3$ = 1 + 1 + 10.75 = 12.75 ft
H_o = .03(three 90° elbows + one 45° elbow - 90°)
= .03(90 + 90 + 90 + 45 - 90) = 6.75 ft
H_T = $H_R + H_o$ = 12.75 + 6.75 = 19.5 ft
$H_T + V_T$ = 19.5 + 6.5 = 26 ft

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

Formula 2: **$H_T + V_T \leq 40$ feet**
26 ≤ 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 inch rise per foot when using Simpson Dura-Vent or Wolf Steel rigid vent components and a minimum 1 inch 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

This application occurs when venting through an exterior wall. Having determined the air terminal location, cut and frame the required minimum opening listed in **TABLE 2** on **page 6**.

(As an alternative to framing, a vent pipe shield may be installed, ensuring the correct clearance to combustibles.)

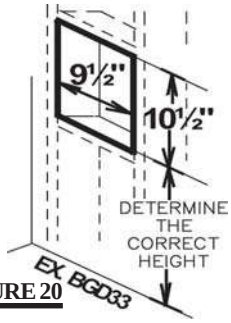


FIGURE 20

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

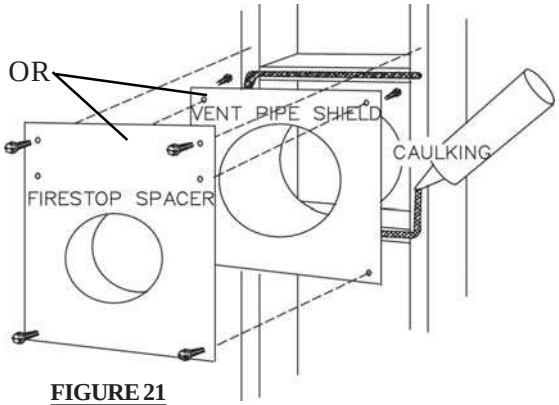


FIGURE 21

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.

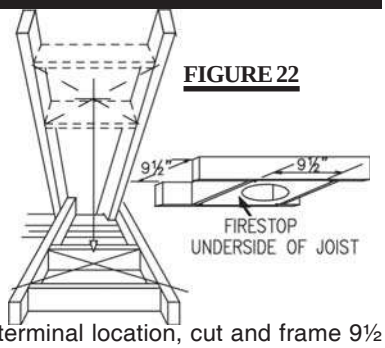


FIGURE 22

1. Determine the air terminal location, cut and frame 9½ inch openings in the ceiling and the roof to provide the minimum clearance between the fireplace pipe / liner and any combustible material. Try to center the exhaust pipe location midway between two joist to prevent having to cut them. Use a plumb bob to line up the center of the openings.

Do not fill this space with any type of material.

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

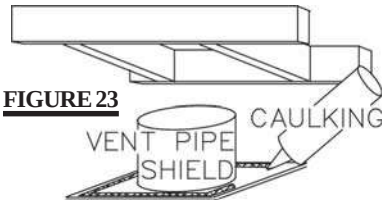


FIGURE 23

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 / liner is installed in its final position, apply sealant between the pipe / liner and the firestop spacer.

3. In the attic, after the pipe / liner has been installed, 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.

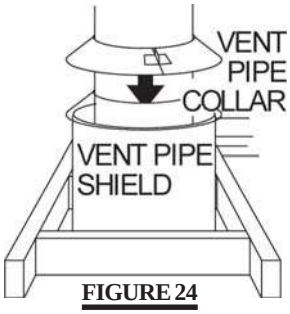


FIGURE 24

USING FLEXIBLE VENT COMPONENTS

Use only approved aluminum flexible liner kits marked:

FIGURE 25

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

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

For optimum performance, it is recommended that horizontal runs have a minimum ¼ inch rise per foot when using Simpson Dura-Vent or Wolf Steel rigid vent components and a minimum 1 inch rise per foot when using Wolf Steel flexible vent components.

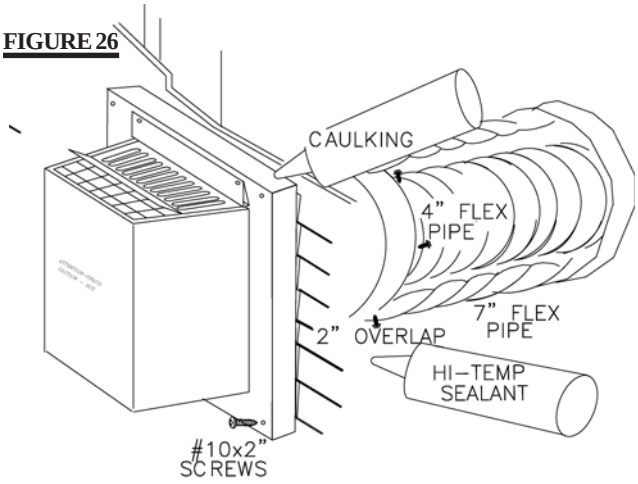
HORIZONTAL AIR TERMINAL INSTALLATION

1. Cut or frame a hole in an exterior wall with a minimum round or square opening listed in **TABLE 2** on **page 6**. Secure the firestop spacer over the opening to the interior wall.

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

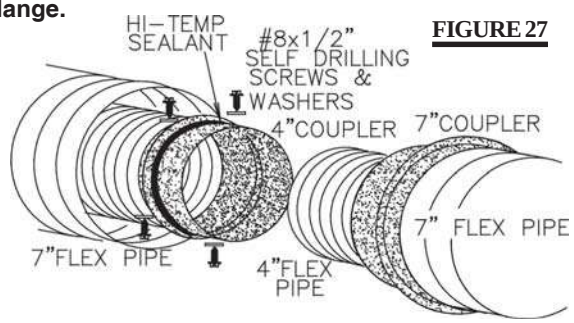
3. Using the 7" diameter flexible aluminum liner, slide over the outer combustion air sleeve of the air terminal and secure with 3 #8 screws. Seal as before.

FIGURE 26



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

FIGURE 27



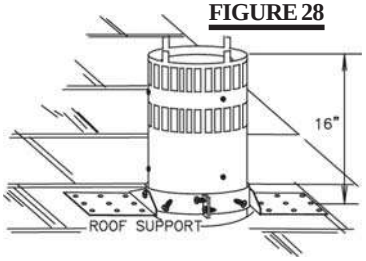
4. Insert the liners through the firestop maintaining the required clearance to combustibles. Holding the air terminal (lettering in an upright, readable position), secure to the exterior wall and make weather tight by sealing with caulking (not supplied).

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

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

VERTICAL AIR TERMINAL INSTALLATION

FIGURE 28



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.

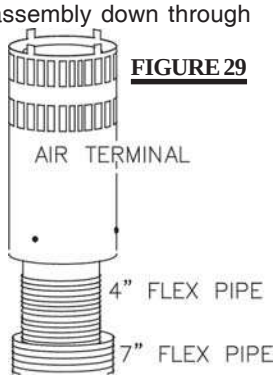
2. Stretch the 4" diameter aluminium flexible liner to the required length. Slip the liner a minimum of 2" over the inner sleeve of the air terminal and secure with 3 #8 screws. Seal using a heavy bead of the high temperature sealant.

3. Repeat using 7" diameter aluminium flexible liner.

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

DO NOT CLAMP THE FLEXIBLE ALUMINIUM LINER.

FIGURE 29



5. Remove nails from the shingles, above and to the sides of the chimney. Place the flashing over the air terminal and slide it underneath the sides and upper edge of the shingles. Ensure that the air terminal is properly 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.

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

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

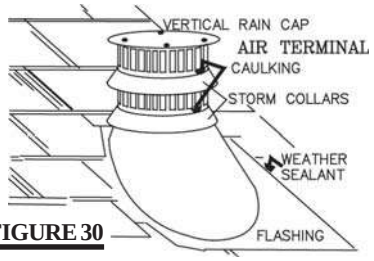


FIGURE 30

7. If more liner 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 a clearance to combustibles of 1".

FIREPLACE VENT CONNECTION

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

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

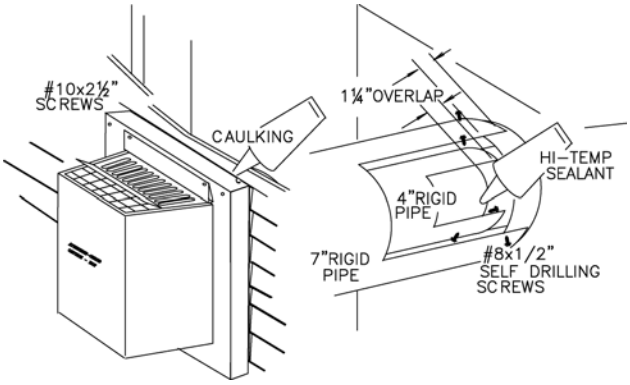
USING RIGID VENT COMPONENTS

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

For optimum performance, it is recommended that horizontal runs have a minimum ¼ inch rise per foot when using Wolf Steel or Simpson Duravent 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 outer and inner 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.

FIGURE 31



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

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 caulking (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 inch 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.

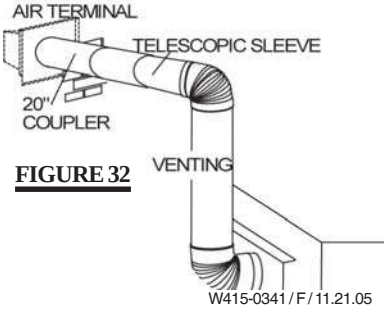


FIGURE 32

EXTENDED HORIZONTAL AND CORNER AIR TERMINAL INSTALLATION CONTINUED

1. Follow the instructions for "Horizontal Air Terminal Installations".

2. Continue adding components alternating inner and outer venting. Ensure that all 4" venting and elbows have sufficient vent spacers attached and each component is 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.

VERTICAL VENTING INSTALLATION

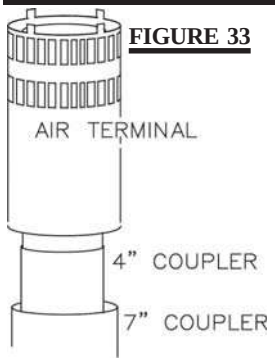


FIGURE 33

1. Attach 4" and 7" elbows to the fireplace. Apply high temperature sealant 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 to the outer edge of the inner sleeve of the air terminal. Slip a 4" diameter coupler a minimum of 2" over the sleeve and secure using 3 screws.

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

6. Thread the air terminal pipe assembly down through the roof support and attach, ensuring that a minimum 16" of air terminal will penetrate the roof when fastened. **If the attic space is tight, we recommend threading the Wolf Steel vent pipe collar or equivalent loosely onto the air terminal assembly as it is passed through the attic.** The air terminal 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 and slide it underneath the sides and upper edge of the shingles. Ensure that the air terminal is properly centered within the flashing, giving a $^{3}/_{4}$" margin all around. Fasten to the roof. Do NOT nail through the lower portion of the flashing. Make weather-tight by sealing with caulking. Where possible, cover the sides and top edges of the flashing with roofing material.

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

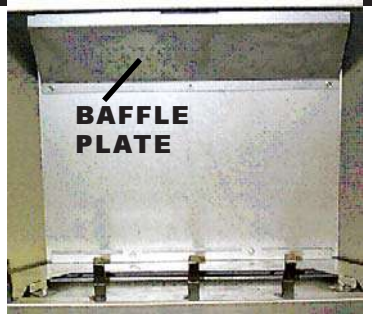
9. Continue adding rigid venting sections, sealing and securing as above. Attach a 4" collapsed telescopic pipe to the last section of rigid piping. Secure with screws and seal. Repeat using a 7" telescopic pipe.

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

11. 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.

RESTRICTING VERTICAL VENTS (GD33 ONLY)

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.



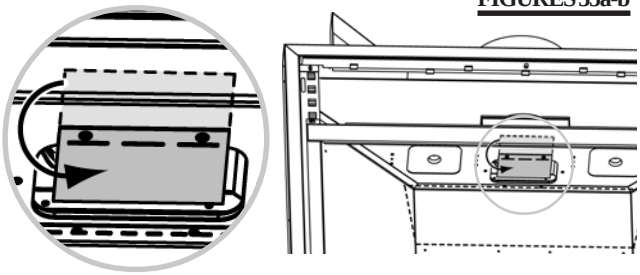
FIGURES 34a-b

RESTRICTING VERTICAL VENTS (BGD34 & GD34)

Vertical terminations running longer than 15 feet may display a very active flame. If this appearance is not desirable, the vent exit must be restricted using the restrictor plate. This reduces the velocity of the exhaust gases, slowing down the flame pattern and creating a more traditional appearance.

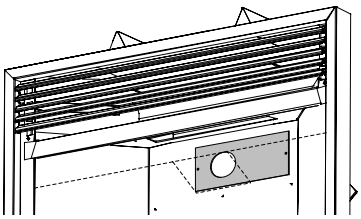
Note: Some vent configurations may cause excessive air flow around the pilot flame and contribute to pilot outage. In this case the restrictor plate can be installed over the flue opening to stabilize the pilot flame.

FIGURES 35a-b



Remove the screws securing the restrictor plate and rotate the plate 180°. Secure using the same two screws through the existing holes.

RESTRICTING VERTICAL VENTS (BGD33 ONLY)



Warning:

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

In Canada, manufactured (mobile) home installation may be vented horizontally or vertically. In the United States, it may only be installed vertically. See "Vertical Venting" for installation.

The fireplace is equipped with two ¼" 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 screws, inserted through the holes in the base to secure. It is recommended that the fireplace be secured in all installations.

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

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

GAS INSTALLATION

Proceed once the vent installation is complete.

1. Route a 3/8" N.P.T. black iron gas line, ½" type-L copper tubing or equivalent to the fireplace.

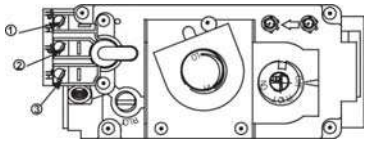
2. For ease of accessibility, an optional remote wall switch or millivolt thermostat may be installed in a convenient location. Route 2-strand (solid core) millivolt wire through the electrical hole located at the bottom left side of the unit. The recommended maximum lead length depends on wire size:

TABLE 3

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

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

FIGURE 36



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

3. Install rigid black pipe, ½" type-L copper tubing or, if local codes permit, a 3/8" flex connector and shutoff valve to the gas line and the fireplace gas valve. Seal and tighten securely. An adapter fitting is required between the gas valve and the copper tubing or flex connector.

DO NOT KINK FLEXIBLE CONNECTOR.

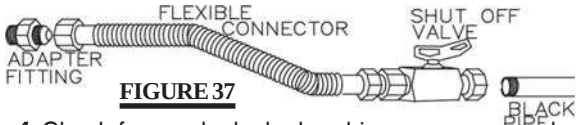


FIGURE 37

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

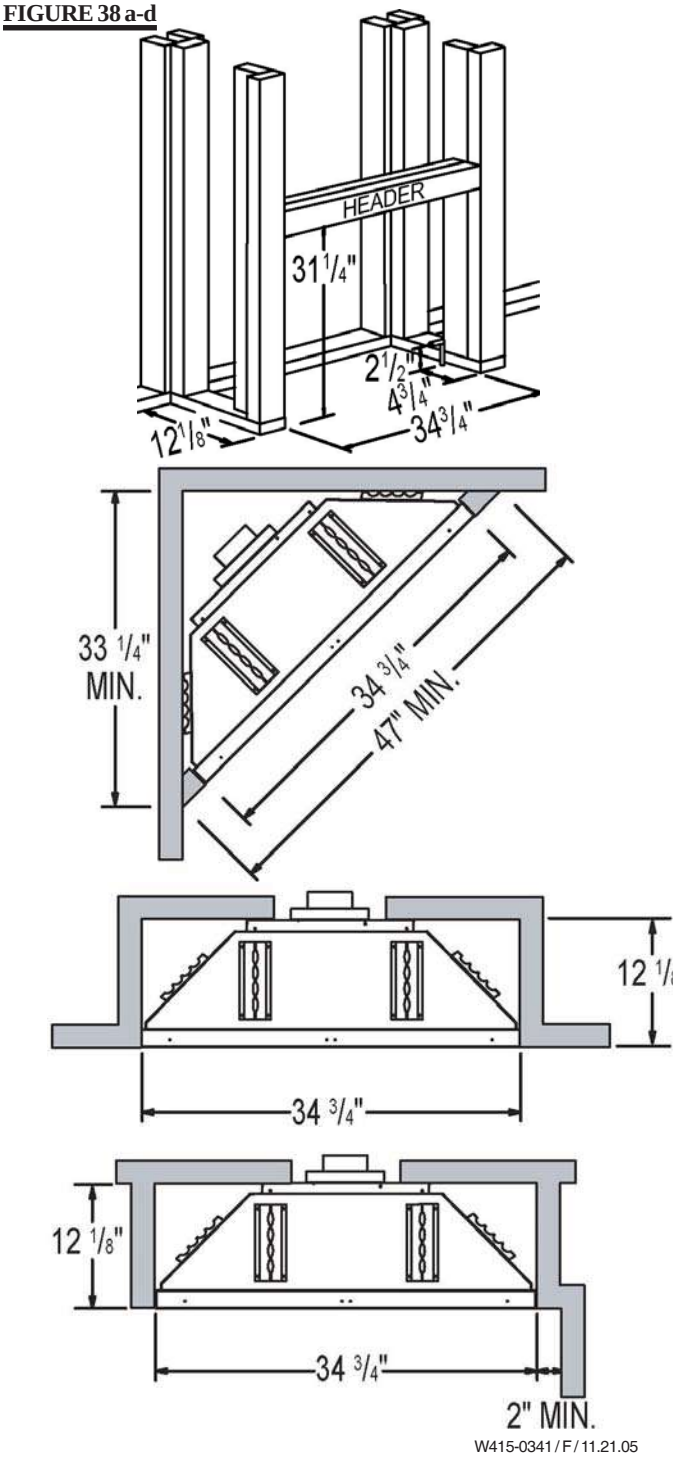
Do not use open flame.

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

FRAMING

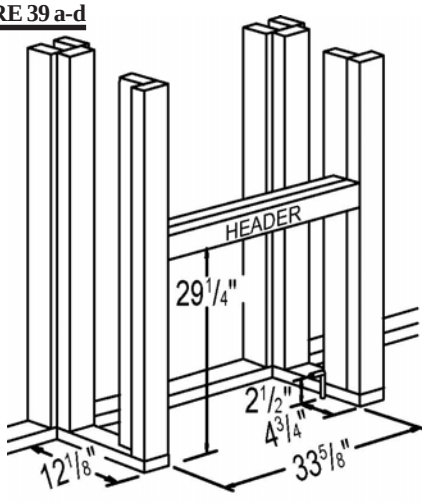
GD33

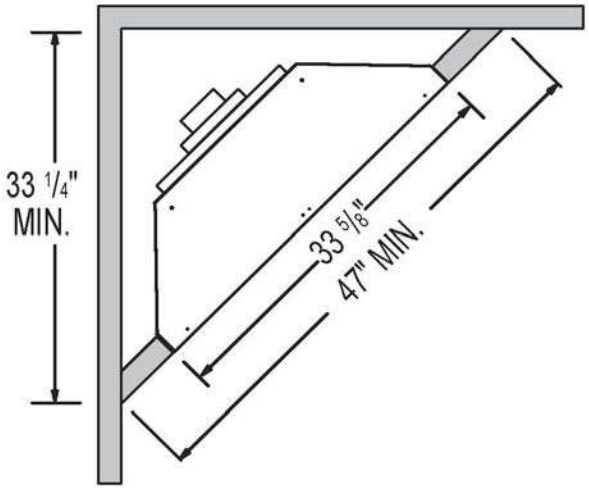
FIGURE 38 a-d

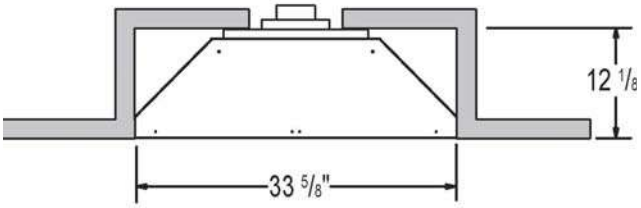


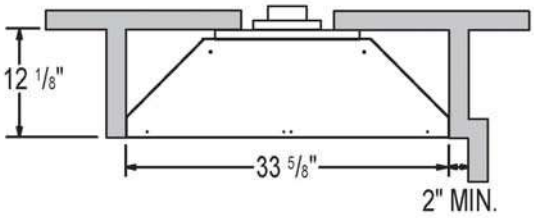
BGD33

FIGURE 39 a-d



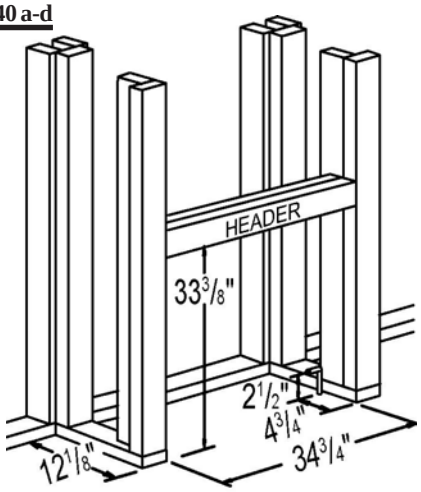


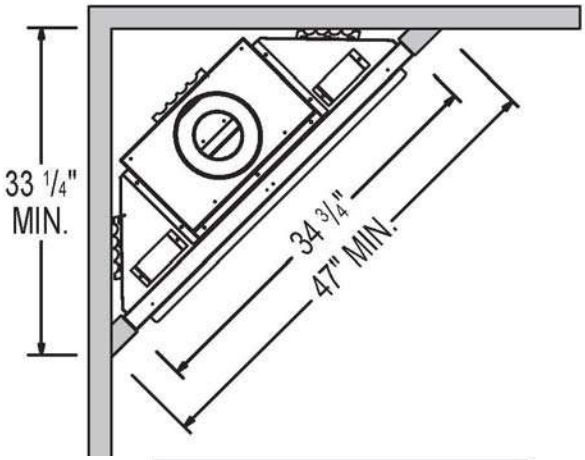




GD34 & BGD34

FIGURE 40 a-d





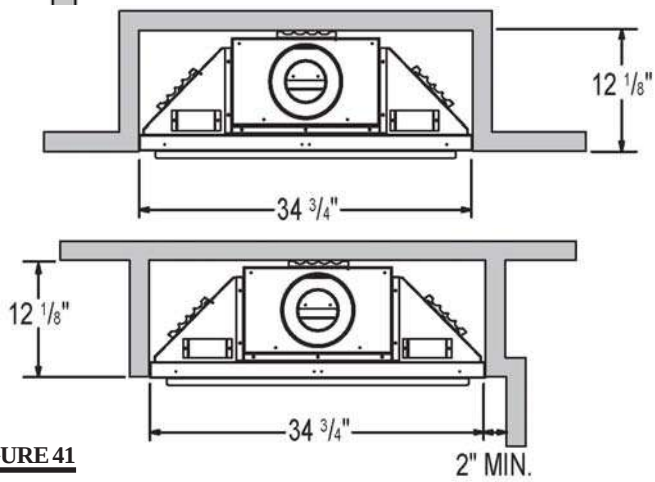
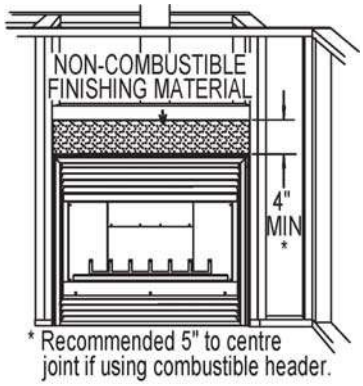


FIGURE 41



GD34: Finishing must be done using a non-combustible material placed flush with the front face of the unit and extending from the top of the unit. (Example: cement board) (not supplied).

FRAMING CONTINUED

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 accomodate 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.

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

BGD33 NAILING TAB INSTALLATION

1) Attach the nailing tabs to the corner posts using the 2 sheet metal screws supplied. Secure through the centre of the top and bottom slots in the nailing tab and then through the existing holes in the corner posts.

FIGURE 42

If there are no existing holes, follow these instructions:

Position the nailing tab so that the front face is offset with the front edge of the corner post (approx. ½"). Centre the nailing tab vertically on the corner post.

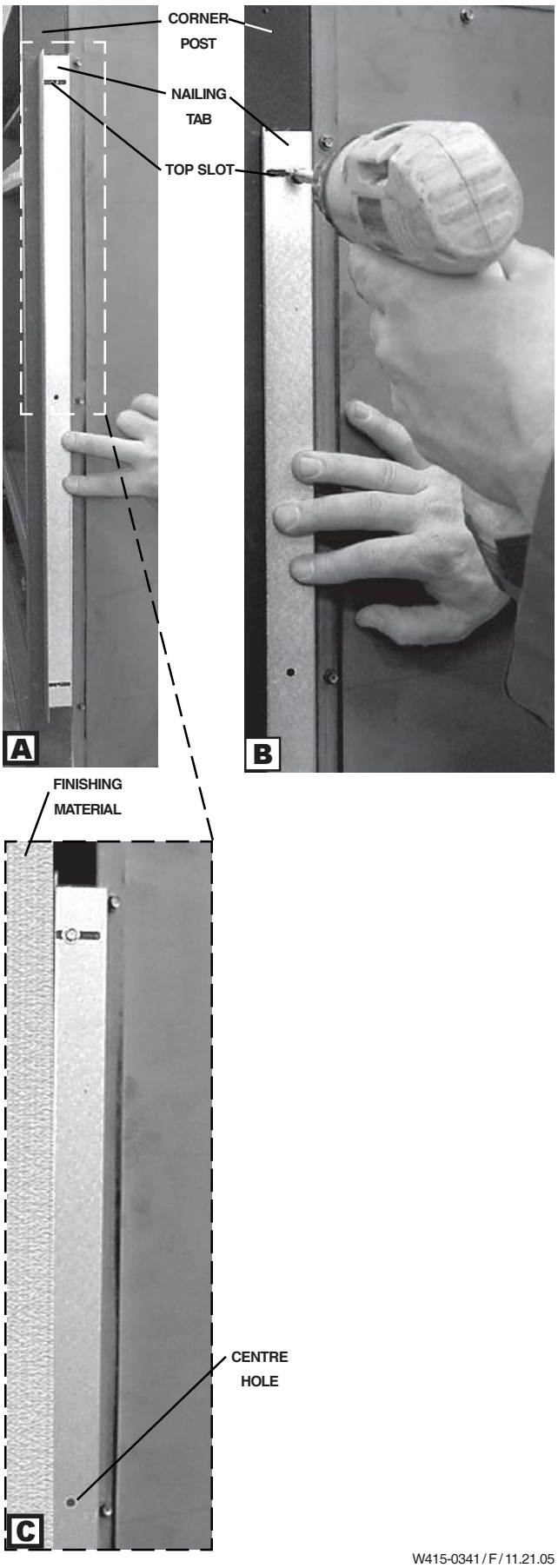
Figure 43 a.

Drill through the centre of the top and bottom slots in the nailing tab. Secure using the two sheet metal screws supplied. This allows the nailing tab to slide back and forth for desired framing. **Figure 43 b.**

2) To determine the final location of the nailing tab you must first determine the thickness of your finishing material (i.e. drywall). This will determine the dimension from the front edge of the corner post to the nailing tab. Once the nailing tab is in the desired location, drill through the centre hole of the nailing tab. Secure with a sheet metal screw*. **Figure 43 c.**

** Additional set screws may be installed.*

FIGURE 43 a-c



MANTLE CLEARANCES & ENCLOSURES

Mantle clearance can vary according to the mantle 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 (brick, stone or ceramic tile) may protrude past the face of the fireplace.

GD33NR

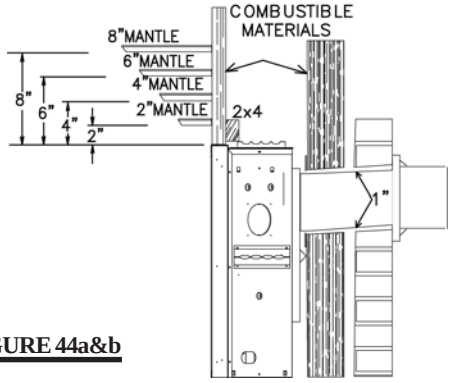
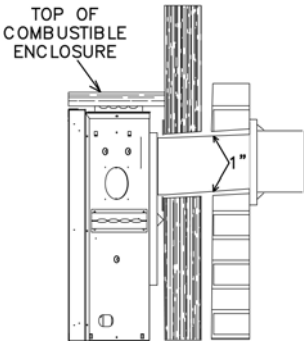


FIGURE 44a&b



BGD33NR

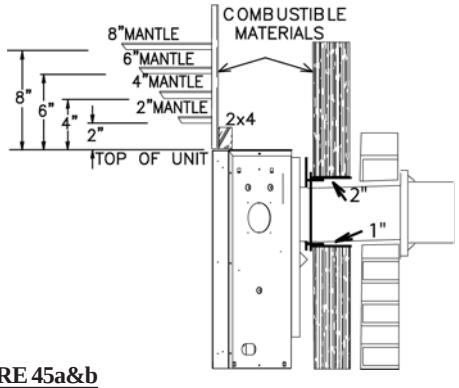
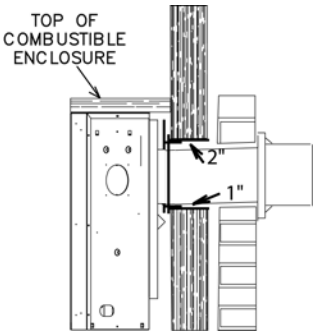


FIGURE 45a&b



BGD34 & GD34

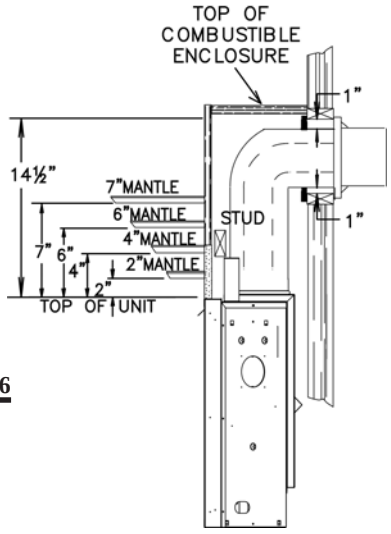


FIGURE 46

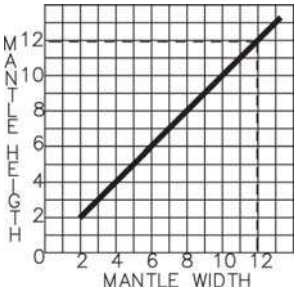


FIGURE 47

FINISHING

LOG PLACEMENT

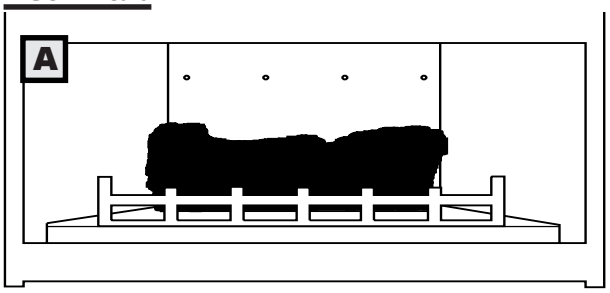
Blocked burner ports can cause an incorrect flame pattern, carbon deposits and delayed ignition. ***PHAZER***™ logs glow when exposed to direct flame and provide a unique and realistic glowing effect. Use only certified ***PHAZER***™ logs available from your Napoleon / Wolf Steel Ltd. dealer.

Positioning the logs improperly will cause flame impingement and carboning.

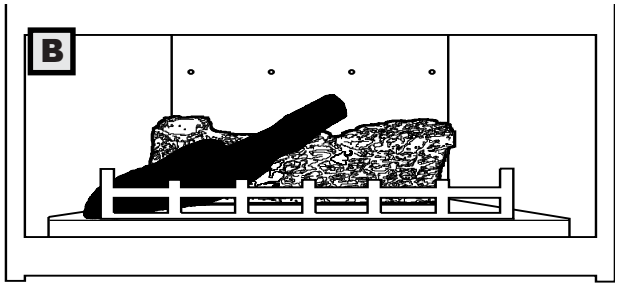
Log colours may vary. During the initial use of the fireplace, the colours will become more uniform as colour pigments burn in during the heat activated curing process.

BGD33/34 LOG SET

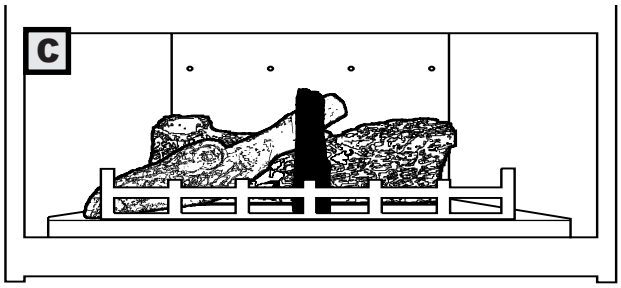
FIGURE 48a-d



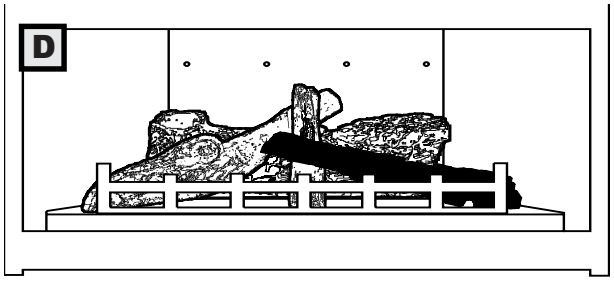
Place log #1 onto the burner, centering it on the log support and pushing it as close to the rear wall of the firebox as possible.



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).



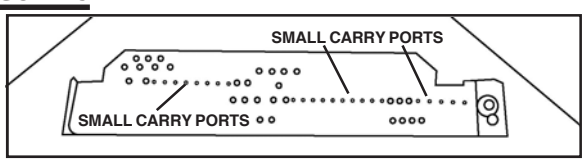
Position the notch located in the bottom end of log #3 against the centre grate post. Rest the top of log #3 into the pocket at the top end of log #2.



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).

GLOWING EMBERS

FIGURE 49



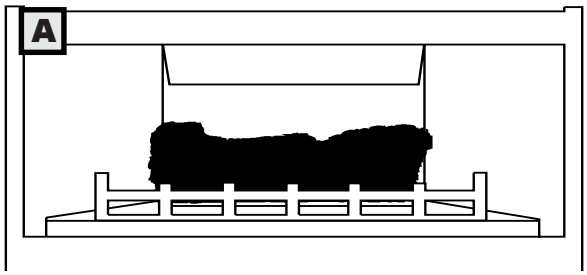
Tear the glowing embers into pieces and place onto the small carry ports. Care should be taken to shred the embers into *thin, small irregular pieces* as only the exposed edges of the fibre hairs will glow when exposed to direct flame; however care should be taken to not block the burner ports. Blocked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

CHARCOAL EMBERS

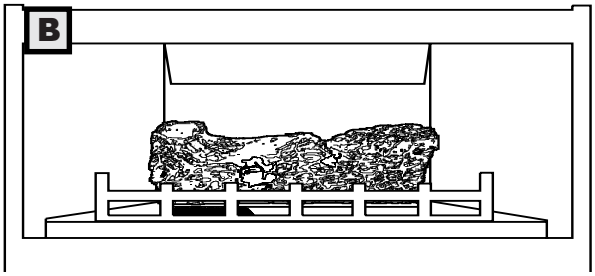
Randomly place the charcoal embers behind the grate posts and around the logs in a realistic manner but not in contact with the flames. Keep ember dust away from burner ports to avoid plugging them.

GD33/34 LOG SET

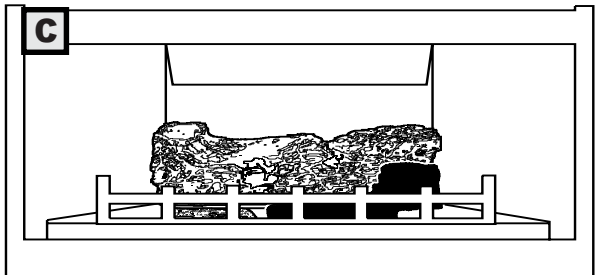
FIGURE 50a-f



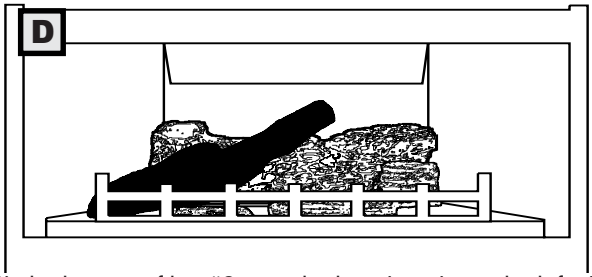
Place log #1 onto the burner, centering it on the log support and pushing it as close to the rear wall of the firebox as possible.



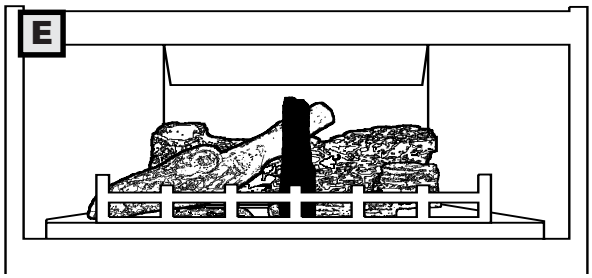
Place the charcoal piece (log #5) onto the pins on the left side of the burner.



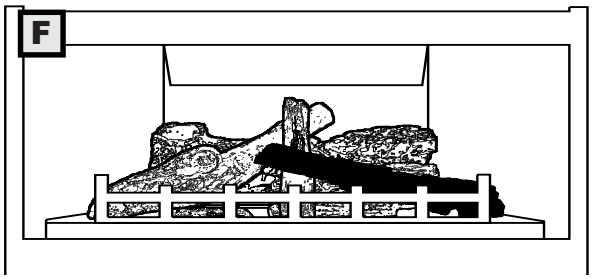
Place log #6 onto the pins on the right side of the burner.



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).



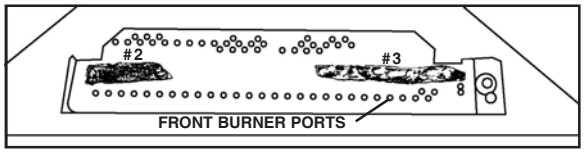
Position the notch located in the bottom end of log #3 against the centre grate post. Rest the top of log #3 into the pocket at the top end of log #2.



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

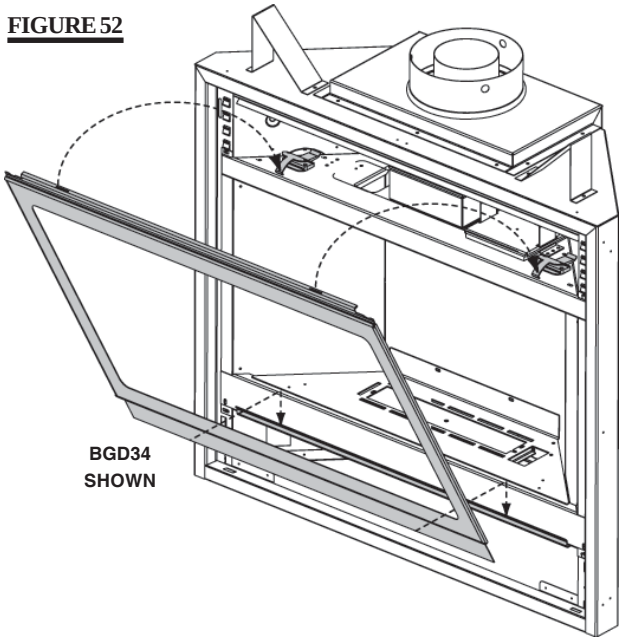
FIGURE 51



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.

DOOR INSTALLATION

FIGURE 52

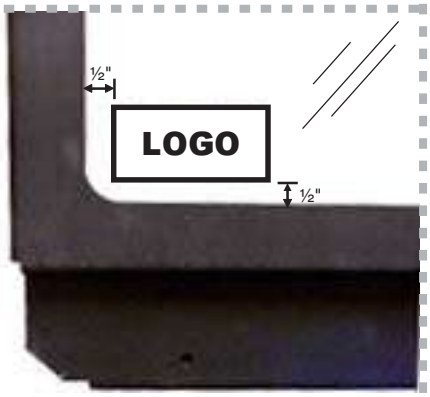


Place the bottom of the door into the retaining bracket.

Pivot the top of the door to the firebox and secure with the door latches.

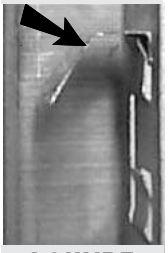
LOGO PLACEMENT

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



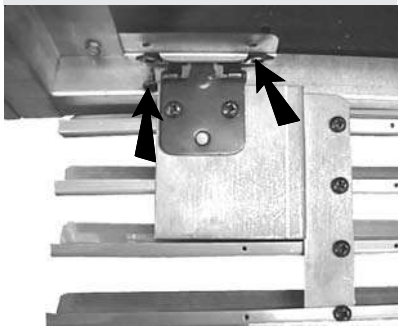
GDL153 LOUVRE INSTALLATION

UPPER LOUVRES
FIGURES 53



LOUVRE SNAPPED INTO PLACE

LOWER LOUVRES
FIGURE 54



The louvre assemblies are installed as illustrated. **Ensure that the upper louvres snap into place.** This will ensure proper air flow. Optional plated door trim and the arched door facia are available at your local Napoleon/ Wolf Steel dealer.

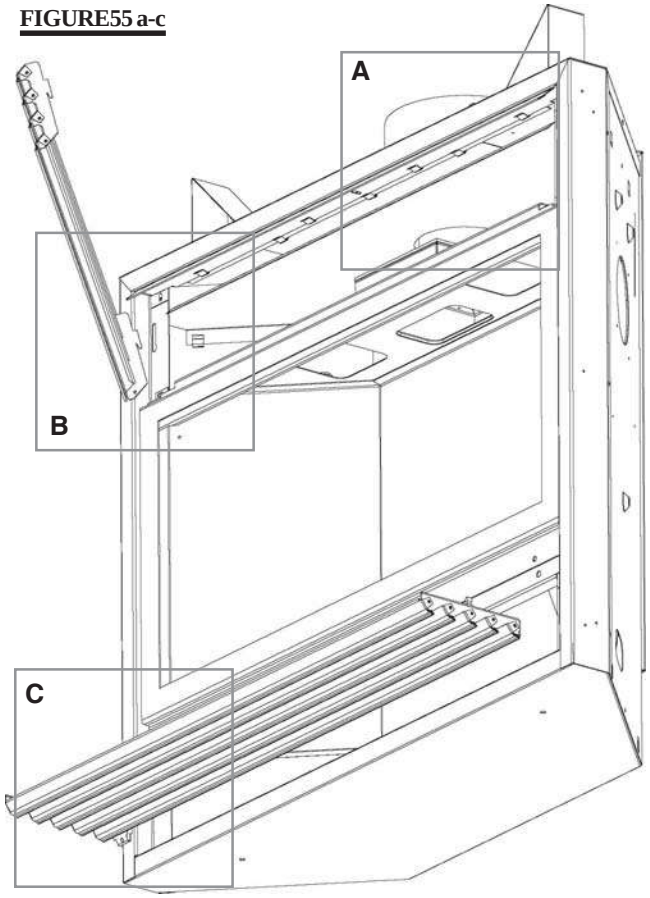
NOTE:

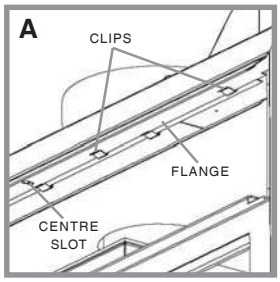
Hood W335-0028 is not included with the GDL153 kit, but is REQUIRED and must be ordered separately when installed on B/GD34 models.

Hood W335-0028 is recommended but not required on B/GD33 models.

L334 LOUVRE INSTALLATION

FIGURE55 a-c



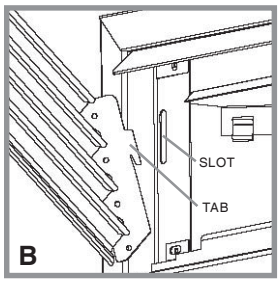


HOOD

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

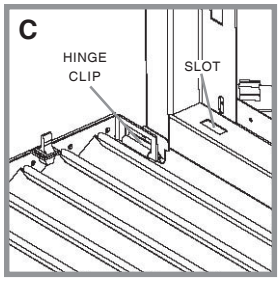
NOTE: ***Hood W335-0028 is required on B/GD34 models.***

Hood W335-0028 is recommended but not required on B/GD33 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.

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.

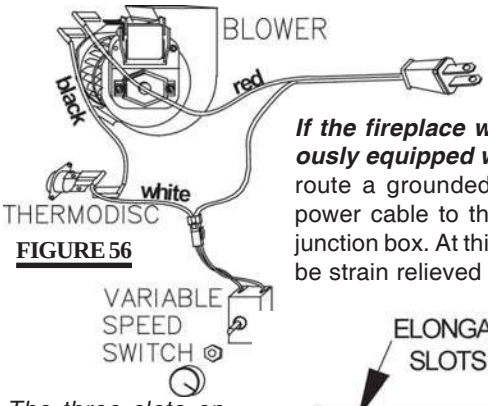


FIGURE 56

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.

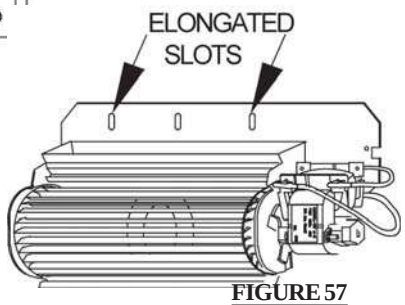


FIGURE 57

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.

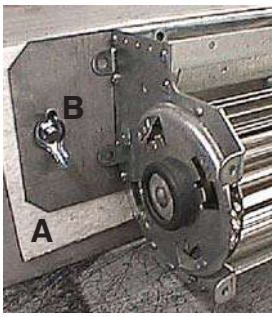


FIGURE 58

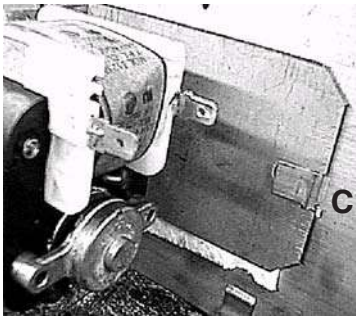


FIGURE 59

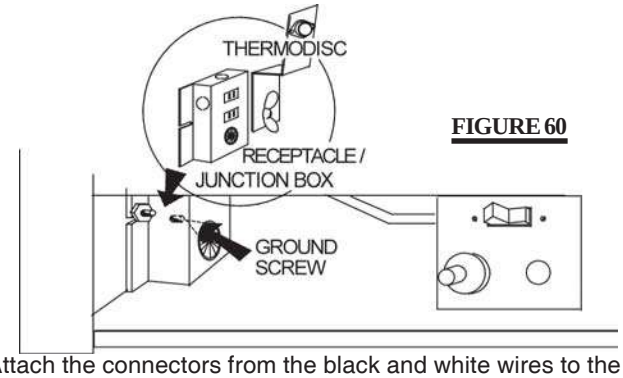


FIGURE 60

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.

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

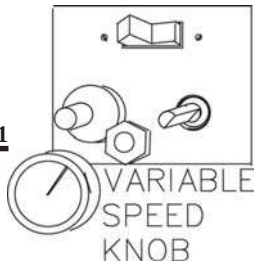


FIGURE 61

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 62

GAS KNOB

LIGHTING INSTRUCTIONS

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

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

1. Stop! Read the above safety information on this label.

2. Turn off all electric power to the fireplace.

3. Turn the gas knob clockwise to off.

4. Wait five (5) minutes to clear out any gas. If you smell gas including near the floor. Stop! Follow "B" in the above safety information on this label. If you don't smell gas go the next step.

5. Turn gas knob counter-clockwise to pilot.

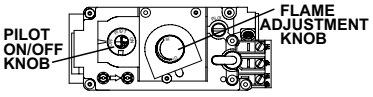
6. Depress slightly and hold gas knob while lighting the pilot with the push button ignitor. Keep knob depressed for one minute, then release. If pilot does not continue to burn, repeat steps 3 through 5.

7. With pilot lit, depress and turn gas knob counter-clockwise to on.

8. If equipped with remote on-off switch/thermostat, main burner may not come on when you turn valve to on. Remote switch must be in the on position to ignite burner.

9. Turn on all electric power to the fireplace.

FIGURE 63



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

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

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

5. Replace the cleaned logs.

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

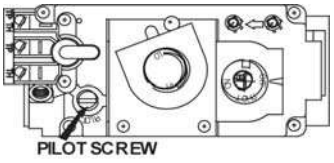


FIGURE 64

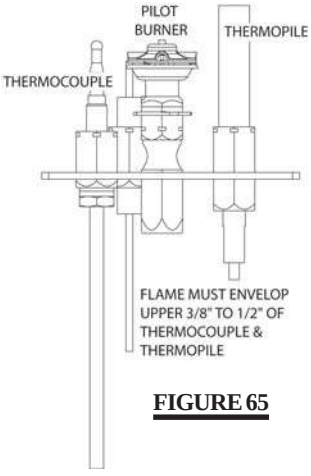


FIGURE 65

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.

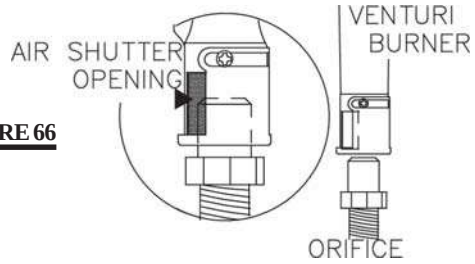


FIGURE 66

TABLE 5

	BGD33	GD33	BGD34	GD34
NG	1/32	5/16	3/16	3/16
LP	5/8	1/2	5/16	3/8

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.

* ***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.***

When ordering replacement parts always give the following information:

1. Model & 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.

COMPONENTS COMMON TO ALL UNITS:

#	PART NO.	DESCRIPTION
1	W562-0025	GLASS GASKET
2	W225-0135	BLACK DOOR FRAME
3	W010-0502	GLASS c/w GASKET
4	W020-0084	PKG OF 3 DOOR SCREWS
5	W750-0112	20FT OF WIRE
6	W455-0069	NATURAL GAS PILOT INJECTOR
6	W455-0067	PROPANE GAS PILOT INJECTOR
7	W010-0800	PROPANE GAS PILOT ASSEMBLY
7	W010-0801	NATURAL GAS PILOT ASSEMBLY
8	W357-0001	PIEZO IGNITER
9	W680-0004	THERMOPILE
10	*W680-0005	THERMOCOUPLE
11	GL-638	LOG SET
12	W135-0177	LOG #1
13	W135-0178	LOG #2
14	W135-0180	LOG #3
15	W135-0181	LOG #4
16	W361-0016	GLOWING EMBERS
17	W385-0245	NAPOLEON LOGO
18	W573-0008	HIGH TEMPERATURE SEALANT - 3 oz
19	W720-0062	PILOT TUBE c/w fittings
20	W010-1126	BLACK DOOR c/w glass & gasket

BGD33 COMPONENTS:

21	W455-0056	#50 NATURAL GAS MAIN ORIFICE
21	W455-0057	#58 PROPANE GAS MAIN ORIFICE
22	W725-0035	NATURAL GAS VALVE
22	W725-0034	PROPANE GAS VALVE
23	W010-0612	FIRESTOP SPACER
24	W665-0017	NAILING TAB
25	W010-0695	BURNER
26	W550-0001	CHARCOAL EMBERS
27	W500-0237	RESTRICTOR PLATE

GD33 COMPONENTS:

21	W455-0001	#44 NATURAL GAS MAIN ORIFICE - HI ALT
21	W455-0019	#43 NATURAL GAS MAIN ORIFICE
21	W455-0047	#56 PROPANE GAS MAIN ORIFICE - HI ALT
21	W455-0050	#55 PROPANE GAS MAIN ORIFICE
22	W725-0025	NATURAL GAS VALVE
22	W725-0026	PROPANE GAS VALVE
28	W665-0011	NAILING TAB TRIM - SIDE
28	W665-0014	NAILING TAB TRIM - TOP
25	W010-0595	BURNER
29	W135-0082	LOG #5 -charcoal piece
30	W135-0182	LOG #6
31	W500-0126	RESTRICTOR PLATE
23	W500-0136	FIRESTOP SPACER

BGD34 COMPONENTS:

21	W455-0048	#47 NATURAL GAS MAIN ORIFICE
21	W455-0047	#56 PROPANE GAS MAIN ORIFICE
28	W665-0011	NAILING TAB TRIM - SIDE
28	W665-0014	NAILING TAB TRIM - TOP
22	W725-0035	NATURAL GAS VALVE
22	W725-0034	PROPANE GAS VALVE
25	W010-0695	BURNER
26	W550-0001	CHARCOAL EMBERS
23	W500-0096	FIRESTOP SPACER
32	W500-0208	RESTRICTOR PLATE

GD34 COMPONENTS:

21	W455-0040	#41 NATURAL GAS MAIN ORIFICE
21	W455-0003	#54 PROPANE GAS MAIN ORIFICE
28	W665-0011	NAILING TAB TRIM - SIDE
28	W665-0014	NAILING TAB TRIM - TOP
22	W725-0035	NATURAL GAS VALVE
22	W725-0034	PROPANE GAS VALVE
25	W010-0595	BURNER
29	W135-0082	LOG #5 -charcoal piece
30	W135-0182	LOG #6
23	W500-0096	FIRESTOP SPACER
32	W500-0208	RESTRICTOR PLATE

ACCESSORIES:

33	GZ550-1KT	BLOWER KIT
34	W500-0033	V.S.S. MOUNTING PLATE for wall switch
35	W690-0001	MILLIVOLT THERMOSTAT
36	GA-566	HOT AIR DISTRIBUTION KIT
37	W690-0005	THERMOSTAT 110V for use with GA-566
38	GA-72	HOT AIR EXHAUST KIT
39	GA-70	EXTENSION KIT 5ft
40	GD-101	WINDSHIELD KIT
41	GD-301	HEAT GUARD
42	W010-0370	WALL SUPPORT ASSEMBLY
43	W175-0053	DURA-VENT ZERO CLEARANCE ADAPTOR
44	W175-0013	7" COUPLER
45	W175-0001	4" COUPLER
46	W585-0071	VENT PIPE COLLAR
47	W585-0072	VENT PIPE SHIELD
48	GDL153K	LOUVRE ASSEMBLY - black
48	GDL153PB	LOUVRE ASSEMBLY - polished brass
48	GDL153SS	LOUVRE ASSEMBLY - brushed stainless steel
49	L334K	LOUVRE ASSEMBLY - black
49	L334PB	LOUVRE ASSEMBLY - polished brass
49	L334SS	LOUVRE ASSEMBLY - brushed stainless steel
50	W335-0028	LOUVRE HOOD

FLEXIBLE VENT KITS

GD220 (5 FT)

51	W010-0397	4" FLEX ALUMINUM LINER-(5 ft) c/w spacers
52	W410-0017	7" FLEX ALUMINUM LINER -(5 ft)

GD330 (10 FT)

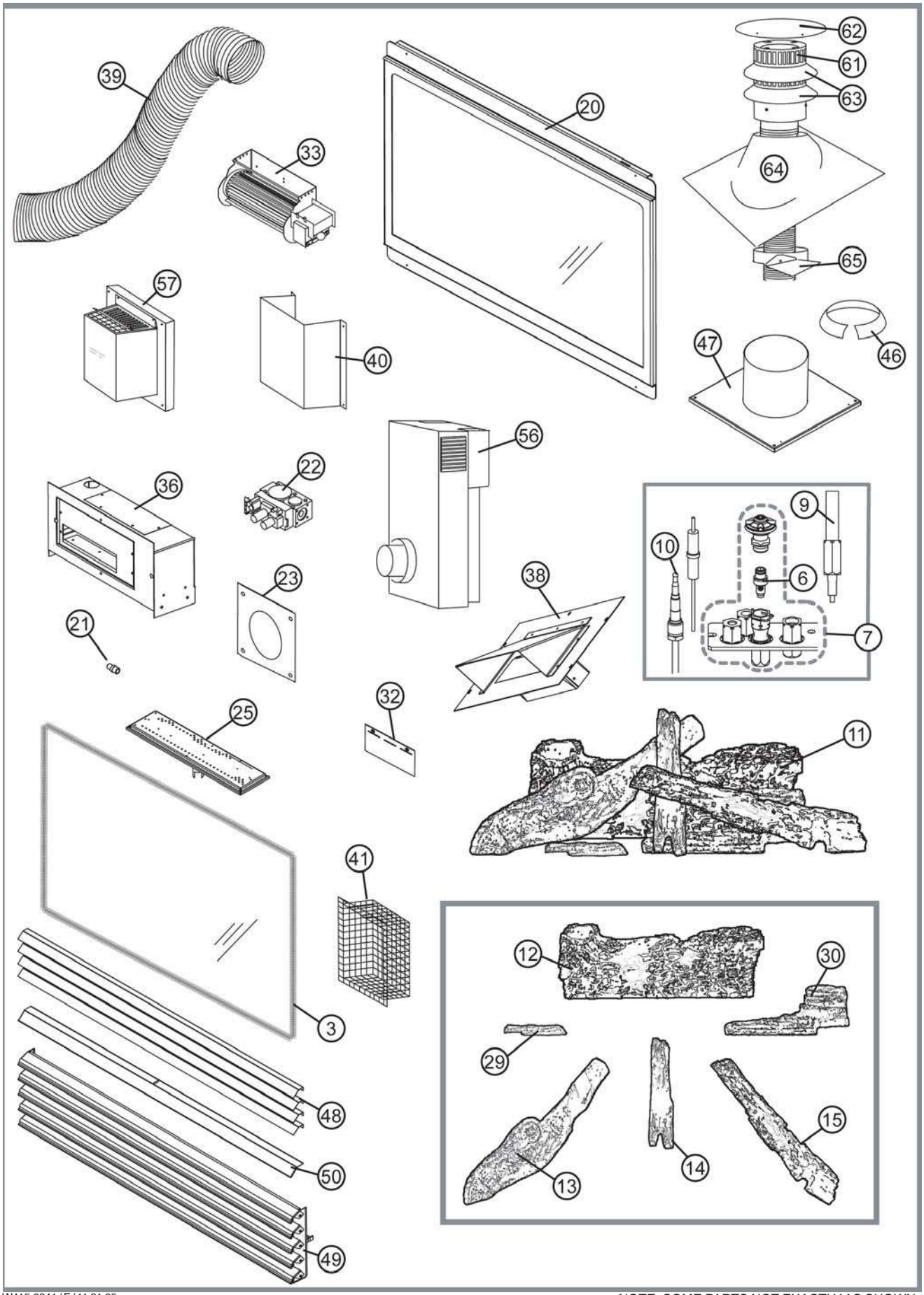
53	W010-0300	4" FLEX ALUMINUM LINER - (10 ft) c/w spacers
54	W410-0018	7" FLEX ALUMINUM LINER -(10 ft)
55	W010-0370	WALL SUPPORT ASSEMBLY

TERMINAL KITS

56	**PERISCOPE**	**-**	**GD-201**
57	**WALL TERMINAL KIT**	**-**	**GD-222**
58	**1/12 TO 7/12 PITCH**	**-**	**GD-110**
59	**8/12 TO 12/12 PITCH**	**-**	**GD-111**
60	**FLAT ROOF**	**-**	**GD112**

ROOF TERMINAL KITS

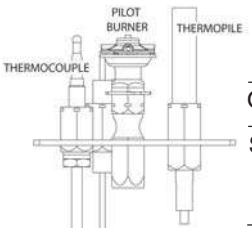
61	W010-0569	AIR TERMINAL
62	W120-0036	VERTICAL CAP
63	W170-0063	STORM COLLAR
64	W263-0054/W263-0055/W263-0056	ROOF FLASHING
65	W010-0567	ROOF SUPPORT

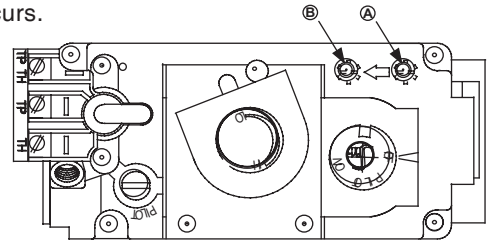


NOTE: SOME PARTS NOT EXACTLY AS SHOWN.

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 undersized.	- 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.	- 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.	Themostat 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	- check if pilot can be lit by a match - check that the wire is connected to the push button ignitor. - check if the push button ignitor needs tightening. - replace the wire if the wire insulation is broken or frayed. - replace the electrode if the ceramic insulator is cracked or broken. - replace the push button ignitor.
	Out of propane gas	- 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	- 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	- turn up pilot flame. - replace pilot assembly.
	Thermopile shorting	- 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.	- rotate the restrictor plate into position **(34s only p.18)**. - install the restrictor plate supplied with the unit **(BGD33 only p.19)**.
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 foor 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: **BGD34 & GD34:** Aggressive venting action due to vent height.	- Restrict vent exit. See "**RESTICTING VERTICAL VENTS**". - VENT HEIGHT MORE THAN 15 FEET: restrict vent exit using restrictor plate kit RP34-KT
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 15 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.