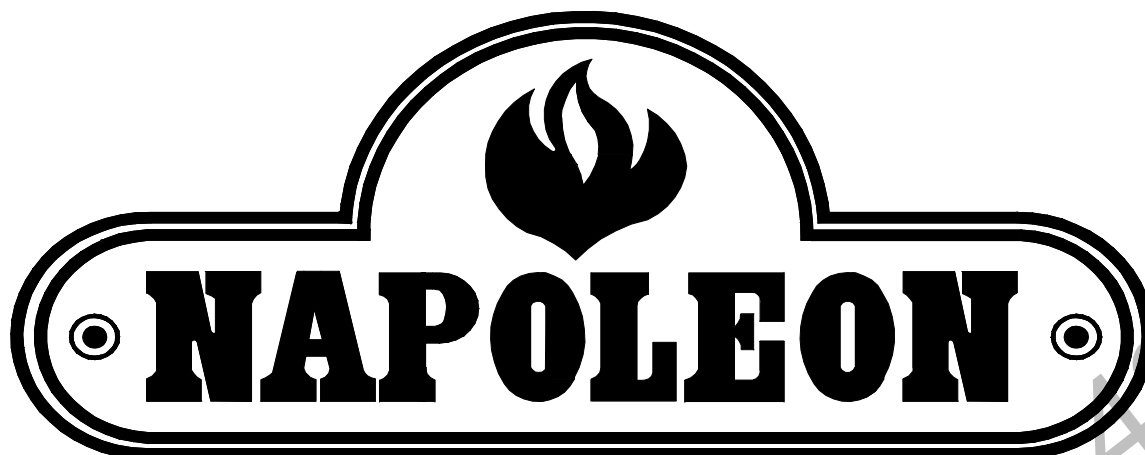


**INSTALLER: THESE INSTRUCTIONS MUST BE CONVEYED TO AND REMAIN WITH THE HOMEOWNER.**

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



## **FIREPLACES**

### **GAS-FIRED STOVES**

**INSTALLATION AND OPERATION INSTRUCTIONS FOR:  
VENTED GAS FIREPLACE HEATER**

NATURAL GAS MODELS **GDS 50 - N** and **GDI 50 - N** NATURAL GAS MODEL **GS 50 - N**  
PROPANE GAS MODELS **GDS 50 - P** and **GDI 50 - P** PROPANE GAS MODEL **GS 50 - P**

*Model GS50 is made up of Model GDS50 and B-Vent Adapter Kit GS-150KT*

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

#### **FOR YOUR SAFETY**

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

#### **WHAT TO DO IF YOU SMELL GAS:**

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

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

**Wolf Steel Ltd., RR#1, 9 Napoleon Rd.,  
Barrie, ON., Canada L4M 4Y8 (705)721-1212**

Fax: (705)722-6031 Email: ask@napoleon.on.ca  
Web: www.napoleon.on.ca



**HEARTH  
PRODUCTS  
ASSOCIATION**



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### WARNING

- The stove is a vented gas-fired heater. Do not burn wood or other materials in this stove.
- 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 stove.
- Due to high temperatures, the stove 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 stove.
- Any safety screen or guard removed for servicing must be replaced prior to operating the stove.
- It is imperative that the control compartments, burners and circulating blower and its passageway in the stove and venting system are kept clean. The stove 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 stove area must be kept clear and free from combustible materials, gasoline and other flammable vapours and liquids.
- Under no circumstances should this stove be modified.
- This stove must not be connected to a chimney flue pipe serving a separate solid fuel burning appliance.
- Do not use this stove if any part has been under water. Immediately call a qualified service technician to inspect the stove and to replace any part of the control system and any gas control which has been under water.
- Do not operate the stove with the glass door opened, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.
- Do not strike or slam shut the stove glass door.

*NAPOLEON gas fireplaces are manufactured under the strict Standard of the world recognized ISO9002 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 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 licensed, authorized service technician or contractor. Installation must be done in accordance with the installation instructions included with the product and all local and national building and fire codes.

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

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

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

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

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

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

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

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

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

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

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

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

## 4 GENERAL INSTRUCTIONS

**THIS GAS STOVE SHOULD BE INSTALLED AND SERVICED BY A QUALIFIED INSTALLER** to conform with local codes. In absence of local codes, install to the current CAN1-B149 Installation Code in Canada or to the National Fuel Gas Code, ANSI Z223.1-1988, and NFPA 54-1988 in the United States. 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 Z240 MH Series in Canada or ANSI Z223.1-1988 and NFPA 54-1988 in the United States.

**Purge all gas lines with the glass door of the stove opened. 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.**

**All horizontal runs must have a ¼ inch rise per foot.**

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

The stove 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 stove 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).

A 1/8 inch NPT plug, accessible for test gauge connection, must be installed immediately upstream of the gas supply connection to the stove.

The stove, when installed with a blower, 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 70-1990 NATIONAL ELECTRICAL CODE in the United States. The blower power cord must be connected into a properly grounded receptacle. The grounding prong must not be removed from the cord plug.

### GENERAL INFORMATION

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

Minimum inlet gas supply pressure is 4.5 inches water column for natural gas and 11 inches water column for propane. Maximum inlet gas pressure is 7 inches water column for natural gas and 13 inches water column for propane. Manifold pressure under flow conditions is 3.5 inches water column for natural gas and 10 inches water column for propane. When the fireplace is installed at elevations above 4,500ft, and in the absence of specific recommendations from the local authority having jurisdiction, the certified high altitude input rating shall be reduced at the rate of 4% for each additional 1,000ft.

Change in flame appearance from "HI" to "LO" is more evident in natural gas than in propane. Expansion / contraction noises during heating up and cooling down cycles are normal and to be expected.

**GDS50:** Maximum input is 44,000 BTU/hr for natural gas and 40,000 BTU/hr for propane. Maximum output for natural gas is 37,000 BTU/hr at an efficiency of 84% with the fan on; Maximum output for propane is 34,400 BTU/hr at an efficiency of 86% with the fan on. Maximum A.F.U.E. (annual fuel utilization efficiency) rating is 77% for natural gas and 79% for propane. This stove is not approved for closet or recessed installations. It is approved for bathroom, bedroom and bed-sitting room installations and is suitable for mobile homes. The natural gas model is suitable for installation in a mobile home that is permanently positioned on its site and fueled with natural gas.

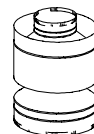
**GDI50:** This insert must be recessed into a vented noncombustible woodburning fireplace (prefabricated or masonry) only. The minimum fireplace size in which the heater is to be installed is:

**HEIGHT 21 inches WIDTH 27 INCHES DEPTH 14 inches**

The minimum distance, from the bottom of a combustible mantle projecting 2" maximum from the wall to the top of the unit, is 18".

Maximum input is 44,000 BTU/hr for natural gas and 40,000 BTU/hr for propane. Maximum output for natural gas is 37,000 BTU/hr at an efficiency of 84% with the fan on; Maximum output for propane is 34,000 BTU/hr at an efficiency of 85% with the fan on. Maximum A.F.U.E. (annual fuel utilization efficiency) rating is 73% for natural gas and 74% for propane. The insert is approved for bathroom, bedroom and bed-sitting room installations.

**GS50:** Maximum input is 44,000 BTU/hr for natural gas and 40,000 BTU/hr for propane. Maximum output for natural gas is 31,200 BTU/hr at an efficiency of 77% with the fan on and 71% with the fan off; and 30,000 BTU/hr for propane at an efficiency of 78% with the fan on and 73% with the fan off. Minimum A.F.U.E. (annual fuel utilization efficiency) rating is 65% for natural gas and 67% for propane. This stove is approved for bedroom and bed-sitting room installations.



### CARE OF GLASS, AND PLATED PARTS

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

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.

# LOCATION AND CLEARANCES <sup>5</sup>

*Provide adequate ventilation and combustion air.*

*Provide adequate accessibility clearance for servicing and operating the stove.*

*Never obstruct the front opening of the stove.*

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

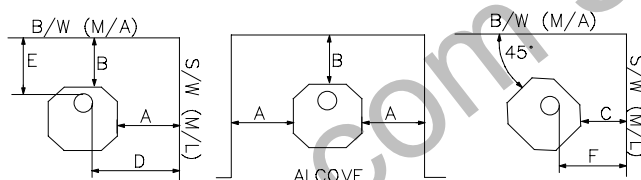
## GDS50 AND GS50:

As long as clearance to combustibles is kept within the required distances, the most desirable and beneficial location for a Napoleon stove is in the centre of a building, thereby allowing the most efficient use of the heat created. The location of windows, doors and the traffic flow in the room where the stove is to be located should be considered. If possible, you should choose a location where the vent will pass through the house without cutting a floor or roof joist.



## MAINTAIN THESE MINIMUM CLEARANCES TO COMBUSTIBLES:

- A. 7"
- B. 2"
- C. 1"\*
- D. 17 1/2"
- E. 6 1/4"
- F. 9 1/2"

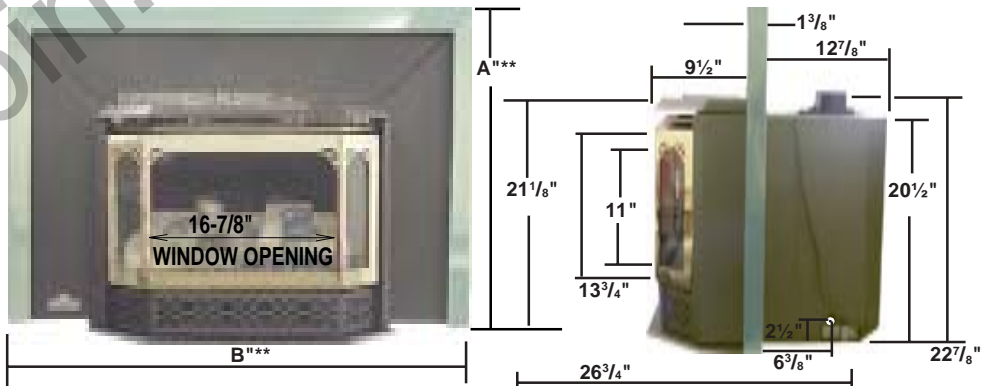


**FIGURE 2**

No ADDITIONAL FLOOR PROTECTION IS REQUIRED  
MINIMUM 20" FROM STOVE TOP TO CEILING

\*AT A DISTANCE OF 1" FROM THE WALL, ACCESS  
TO THE BLOWER SWITCH, ON-OFF SWITCH OR THE  
BLOWER POWER CORD MAY NOT BE PRACTICAL.

GDI50: Clean out ashes from the inside of the wood-burning fireplace. Make sure that the chimney and woodburning fireplace are in a clean and sound condition. Do not remove bricks or mortar from the wood-burning fireplace. If necessary have any repair work done by a qualified person before installing the insert. Remove the existing fireplace damper or lock into an open position.



**FIGURES 3**

\*\* Flashing & trim kits are available in 2 sizes:

	GDI 345-K / GDI-1PB (7")	GDI 545-K / GDI-2PB (10")
Dimension A	27 3/4"	31"
Dimension B	40 3/4"	46 1/2"



# 6 DIRECT VENT SPECIFICS - MODEL GDS50

## VENTING LENGTHS AND AIR TERMINAL LOCATIONS

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

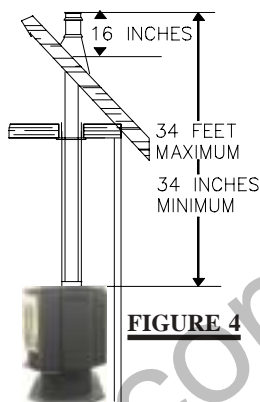
When using Napoleon venting components, use only the following vent kits: **WALL TERMINAL KIT GD175** (7-1/2' of venting included), or **1/12 TO 7/12 PITCH ROOF TERMINAL KIT GD110**, **8/12 TO 12/12 ROOF TERMINAL KIT GD111**, **FLAT ROOF TERMINAL KIT GD112** or **STOVE PERISCOPE KIT GD180** (for wall penetration below grade) in conjunction with the appropriate venting components.

These vent kits allow for either horizontal or vertical venting of the stove. **FIGURES 4, 5, & 6.** The maximum number of 4" flexible connections is two horizontally or three vertically (excluding the stove and the air terminal connections).

When terminating vertically, the minimum vertical rise is 34 inches above the stove and the maximum vertical rise is 34 feet. **FIGURE 4.** *Deviation from the minimum vertical vent length can create difficulty in burner start-up and/or carboning.*

*Use an adjustable pipe as the final length of rigid piping to the stove for ease of installation.*

*We recommend that exhaust vents that pass through unheated spaces be wrapped in a protective sleeve to minimize condensation and reverse flow symptoms. See Trouble Shooting for details.*

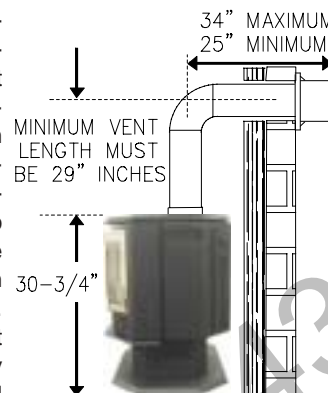


**FIGURE 4**

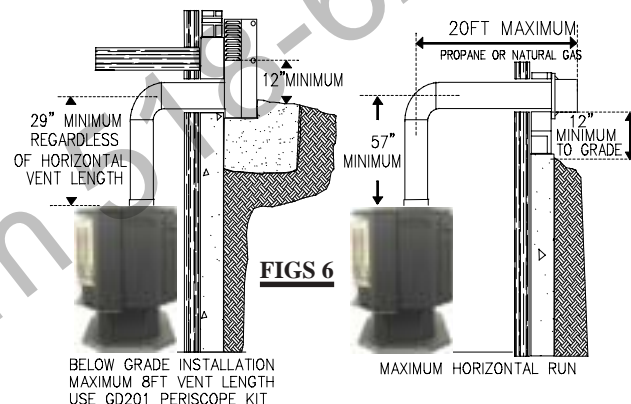
For optimum flame appearance and stove performance, keep the vent length and number of elbows to a minimum. On extreme vent configurations, allow several minutes (5-15) for the flame to stabilize after lighting. The air terminal must remain unobstructed at all times. Examine the air terminal at least once a year to verify that it is unobstructed and undamaged.

The maximum horizontal run is 34 inches with a 90° elbow located 29" above the stove. **FIGURE 5.**

The maximum horizontal run with a 57 inch vertical rise immediately above the stove is 20 feet **FIGURES 6.**



**FIGURE 5**



**FIGS 6**

BELOW GRADE INSTALLATION  
MAXIMUM 8FT VENT LENGTH  
USE GD201 PERISCOPE KIT

MAXIMUM HORIZONTAL RUN

HORIZONTAL RUN NOT TO EXCEED VERTICAL RISE

IF VERTICAL RISES GREATER THAN 57 INCHES ARE NECESSARY, THE INCREASED RISE MUST BE DEDUCTED FROM THE HORIZONTAL RUN.

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

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

**All horizontal runs must have a minimum 1/4 inch rise per foot.**

# AIR TERMINAL INSTALLATIONS:

7

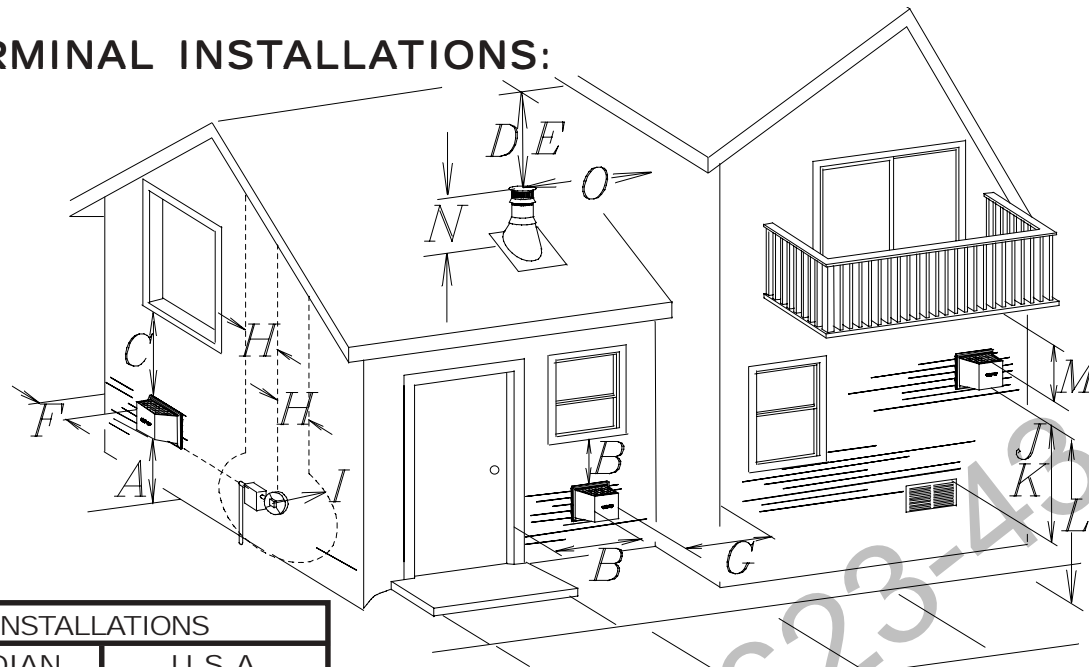


FIGURE 7

	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**	
F	0 INCHES	0 INCHES	Clearance to an outside corner wall.
G	0 INCHES***	0 INCHES***	Clearance to an inside <b>non-combustible</b> corner wall or protruding <b>non-combustible</b> 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.
I	6 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 family dwellings and serves both dwellings.

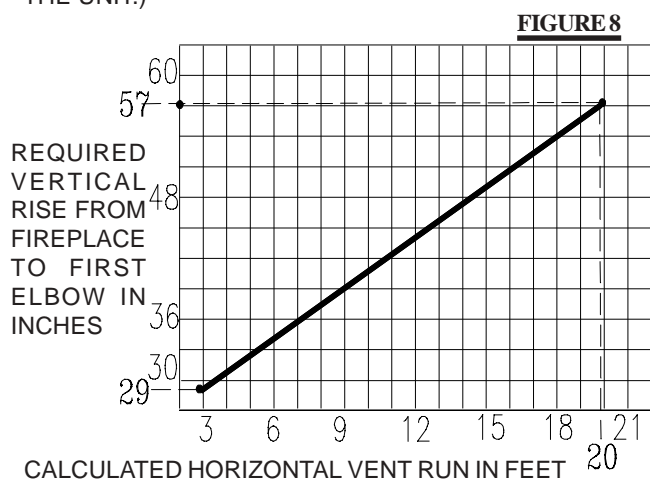
†† Permitted only if the veranda, porch, or deck is fully open on a minimum of two sides beneath the floor.

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

**8** Use the chart on this page to calculate horizontal runs for vertical rises between 29 and 57 inches. **FIGURE 8.**

When calculating maximum run lengths, include 10 feet for each 90° elbow or 5 feet for each 45° elbow.

(DO NOT INCLUDE THE FIRST ELBOW DIRECTLY OFF THE UNIT.)



### SPECIAL INSTALLATION EXAMPLE

When a horizontal run is introduced, even though the terminal may be vertical, the installation must be considered **HORIZONTAL**.

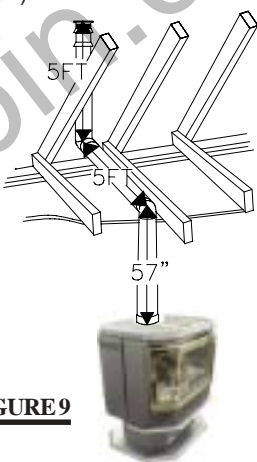
A through the roof installation requires a total 5 foot rise. **FIGURE 9.** The location of the fireplace dictates a horizontal run of 5 feet. What is the required vertical rise to the centre of the initial 90° elbow?

The total run is:

- 5 ft. (through the roof vertical rise)
- 10 ft. (90° elbow)
- 5 ft. (horizontal run)
- 20 ft. (total run)

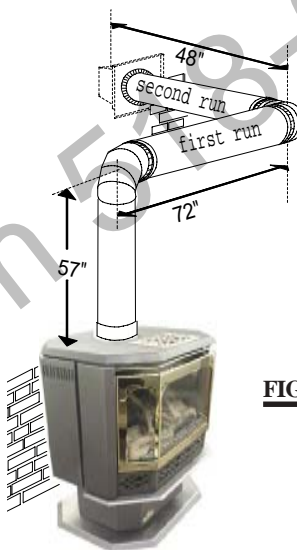
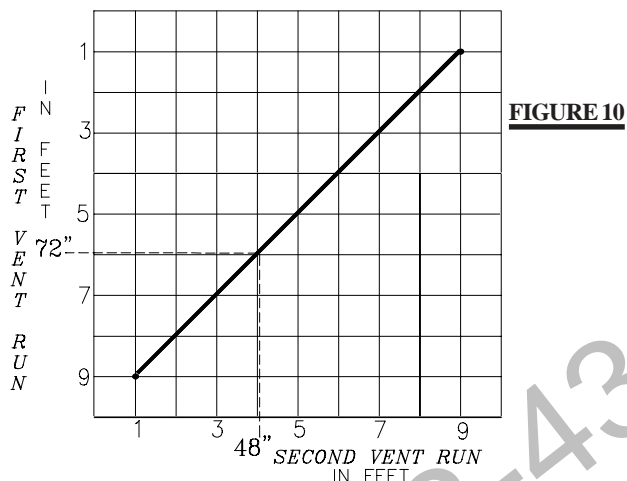
Using the chart, will determine that a 57 inch minimum vertical rise immediately off the unit is required for satisfactory venting conditions.

ALTHOUGH THE IMMEDIATE VERTICAL RUN MAY BE GREATER THAN 57 INCHES THE MAXIMUM COMBINATION OF HORIZONTAL AND VERTICAL RUNS, BEYOND THE 57 INCHES, MUST NOT EXCEED 20 FEET.



**FIGURE 9**

### OFFSET INSTALLATION EXAMPLE



If a first run of 72 inches is required, using the "First Vent Run" on the chart shows that a **maximum second run of 48 inches** is allowable.

IF NECESSARY, THE FIRST RUN AND THE SECOND RUN MAY BE REVERSED.

**FIGURE 11**



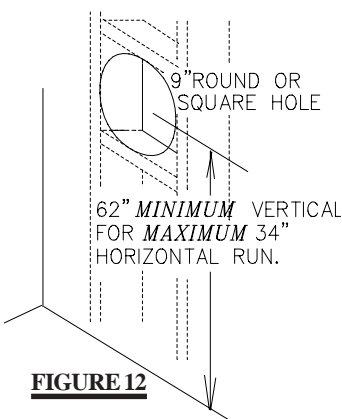
# WALL AND CEILING PROTECTION

9

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

## HORIZONTAL INSTALLATION:

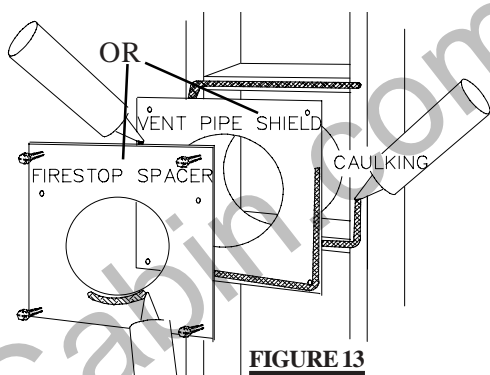
This application occurs when venting through an exterior wall. **FIGURES 5, 6, & 13.** Having determined the air terminal location, cut and frame a hole in an exterior wall with a minimum square or round opening of 9". (As an alternative to framing, a vent pipe shield may be installed, ensuring a 1" clearance to combustibles. See **Figure 12.**)



**FIGURE 12**

THE STOVE PIPE MUST RISE  $\frac{1}{4}$ " PER FOOT OF RUN.

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. Do not fill this cavity with any type of material.

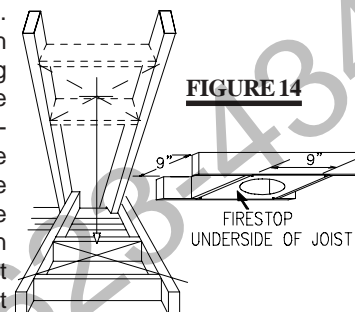


**FIGURE 13**

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

**VERTICAL INSTALLATION:** This application occurs when venting through a roof. **FIGURE 4.** Installation kits for various roof pitches are available from your Napoleon dealer. See Accessories to order the specific kit required.

1. Determine the air terminal location and move the stove into position. Cut and frame 9 inch openings in the ceiling and the roof to provide the minimum 1 inch clearance between the stove pipe 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.

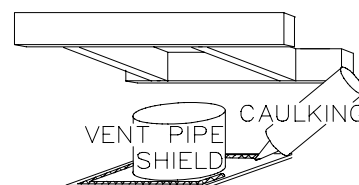


**FIGURE 14**

**Do not fill this space with any type of material.**

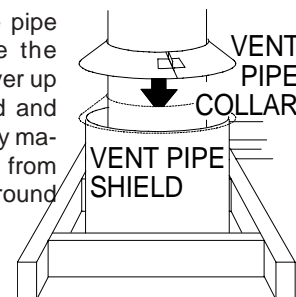
A vent pipe shield will prevent any materials such as insulation, from filling up the 1" air space around the pipe. **FIGURE 16.** Nail headers between the joist for extra support.

**FIGURE 15**



2. Apply a bead of caulking (not supplied) to the framework or to the Wolf Steel vent pipe shield plate or equivalent (in the case of a finished ceiling), and secure over the opening in the ceiling. **FIGURE 15.** A firestop must be placed on the bottom of each framed opening in a roof or ceiling that the venting system passes through. **FIGURE 14.** 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 stove. Ensure that both spacer and shield maintain the required clearance to combustibles. Once the vent pipe is installed in its final position, apply sealant between the pipe and the firestop spacer.

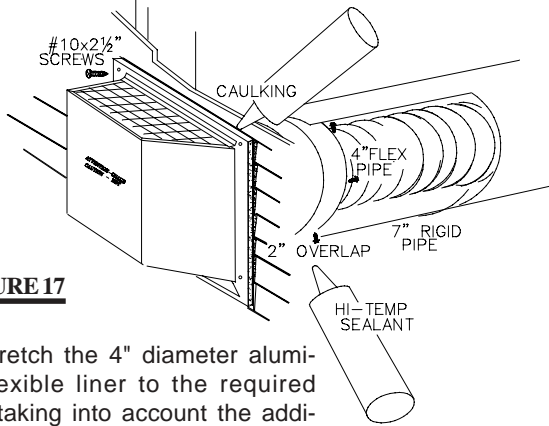
3. In the attic, after the pipe has been installed, slide the vent pipe collar down to cover up the open end of the shield and tighten. This will prevent any materials, such as insulation, from filling up the 1" air space around the pipe.



**FIGURE 16**

# 10 HORIZONTAL VENTING INSTALLATION

FOR SAFE AND PROPER OPERATION OF THE STOVE,  
FOLLOW THE VENTING INSTRUCTIONS EXACTLY.  
ALL HORIZONTAL RUNS MUST HAVE A MINIMUM  
INCH RISE PER FOOT.



**FIGURE 17**

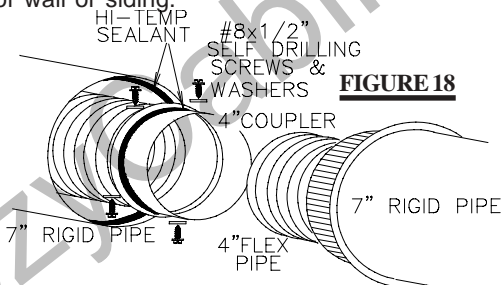
1. Stretch the 4" diameter aluminum flexible liner to the required length taking into account the additional length needed for the finished wall surface.

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

Slip a 4" diameter length of aluminum flexible liner a minimum of 2" over the inner sleeve of the air terminal. Secure to the sleeve using 3 screws. Seal the joint and screw heads using the high temperature sealant provided.

2. Slip the first section of 7" diameter stove pipe a minimum of 2" over the outer sleeve of the air terminal. Secure to the sleeve using 3 screws. Seal the joint and screw heads using high temperature sealant.

3. Insert the liners through the firestop / vent pipe shield. Holding the air terminal (lettering in an upright, readable position), secure to the exterior wall. Make weather tight by sealing with caulk (not supplied). The air terminal mounting plate may be recessed (up to 3/4" maximum) into the exterior wall or siding.

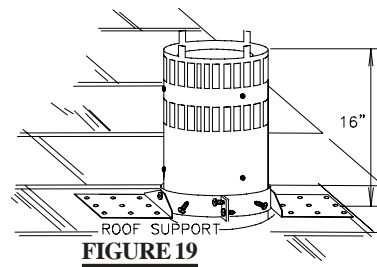


**FIGURE 18**

4. If more than one length of liner needs to be used to reach the stove, couple them together as illustrated in **FIGURE 18**. Seal the joints using the same procedure as described above.

The vent system must be supported approximately every 10 feet along a horizontal run. Use supports or equivalent non-combustible strapping to maintain the 1" clearance from combustibles.

# VERTICAL VENTING INSTALLATION



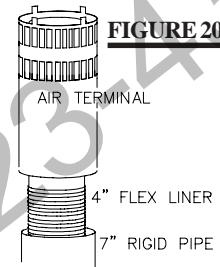
**FIGURE 19**

1. 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.

2. Slip a 4" diameter length of aluminum flexible liner a minimum of 2" over the inner sleeve of the air terminal.

Secure to the sleeve using 3 screws and flat washers. Seal the joint and screw heads using high temperature sealant. Repeat using a 7" diameter length of rigid piping.

If the attic space is tight, we recommend adding sufficient lengths of 7" rigid piping, secured and sealed as necessary.



**FIGURE 20**

3. 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. The air terminal must be located vertically and plumb.

4. 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 caulk. Where possible, cover the sides and top edges of the flashing with roofing material.

5. Apply a heavy bead of waterproof caulk 2 inches above the flashing. Slide the storm collar around the air terminal and down to the caulk. 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.

6. Attach the vertical rain cap.

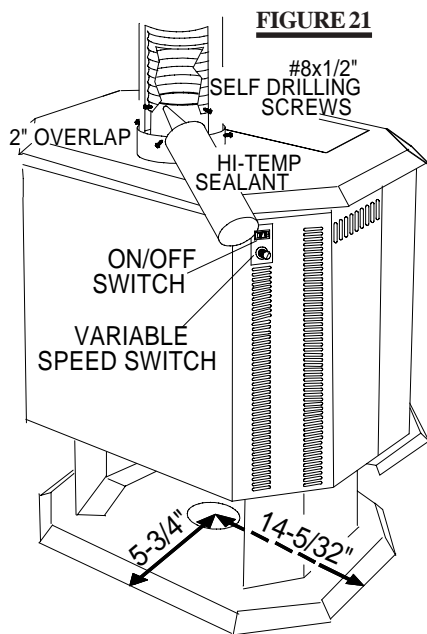
7. In the attic, slide the vent pipe collar down to cover up the open end of the shield and tighten. This will prevent any materials, such as insulation, from filling up the 1" air space around the pipe.

## STOVE VENT CONNECTION

1. Attach the adjustable pipe to the last section of rigid piping. Secure with screws and seal.

2. Install the 4" aluminum flexible liner to the stove. Secure with 3 screws and flat washers. Seal the joint and screw holes using the high temperature sealant provided.

3. Run a bead of high temperature sealant around the inside of the air intake collar. Pull the adjustable pipe a minimum 2" into the air intake collar.



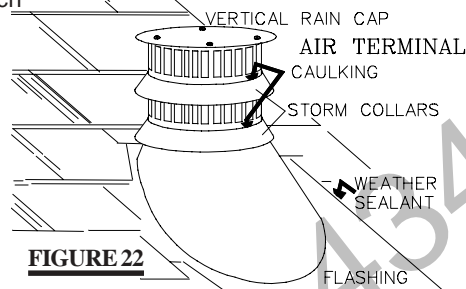
**FIGURE 21**

**Ensure that the sealant is not visible on the exterior pipes once installation is completed. An optional decorative brass band is available for this use. (Standard with a GD175 kit). In the event that the venting must be disassembled, care must be taken to reseal the venting.**

## MOBILE HOME INSTALLATION

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

The fireplace is equipped with two 5/16" diameter holes located near each corner of the base. For mobile home installations, the fireplace must be fastened in place. Use #10 screws, inserted



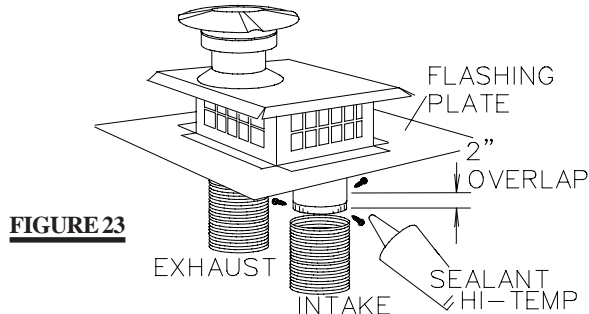
**FIGURE 22**

through the holes in the base to secure. It is recommended that the fireplace be secured in all installations.

Continue with "Gas Installation" Page 15

# 12 INSERT VENT SPECIFICS - MODEL GDI50

## CHIMNEY CONNECTION



Chimney installation must conform to both national and local code requirements. The chimney must be lined with two 3" diameter liners. The minimum and maximum liner lengths are 10 and 35 feet respectively. Recommended Napoleon kits come in 3 lengths: 20 foot (GDI-320KT), 25 foot (GDI-325KT), and 35 foot (GDI-335KT). While the liners must be continuous from the fireplace to the chimney cap, to achieve the needed length, they may be coupled, using an approved coupler.

**We recommend that exhaust vents that pass through unheated spaces, such as a garage or attic, be wrapped in a protective sleeve to minimize condensation and reverse flow symptoms. See Trouble Shooting for details.**

1. **OUTSIDE:** Slip the one end of a liner a minimum of 2" over the sleeve of the air terminal. Secure using 3 screws. Then seal the joint and screw heads with high temperature sealant. Repeat with the other liner.

**NOTE:** We recommend that the other end of the exhaust liner be marked to eliminate the exhaust liner being connected to the intake collar at the unit.

2. Gently stretch the liners to the required lengths and insert into the chimney. Trim and fit the flashing plate to suit the chimney termination. Place the air terminal onto the top of the chimney. Make weather tight by sealing with caulking (not supplied). Fasten to the chimney with screws and plugs.

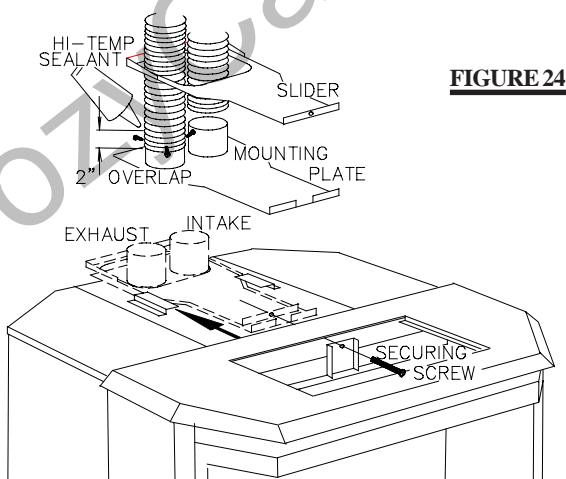


FIGURE 24

3. **INSIDE:** Remove the securing screw from the front of the vent mounting plate. (The screw can be accessed through the trivet opening.) Remove the vent mounting plate and the slider from its track. **FIGURE 24.**

4. Route the flex liners through the slider. Attach and secure the liners to the vent mounting plate using the same procedure as before, **ensuring that the marked exhaust liner is attached to the exhaust collar.**

## GAS INSTALLATION

Install rigid black pipe, or 1/2" type L, copper tubing with a 3/8" to 1/2" adapter and a shut off valve to the fireplace. **FIGURE 25.** The adapter will be required between the gas valve and the copper tubing or flex connector. **DO NOT KINK FLEXIBLE CONNECTOR!**



FIGURE 25

## INSERT VENT CONNECTION

1. Move the insert close to its final position inside the woodburning fireplace. Level using the four leveling screws located front and back on either side of the insert base. Leveling the unit will eliminate rocking or excessive noise when the fan is in operation. Once the unit is level, pull it out to a convenient position to allow for all connections to be made. *The levelling bolts are awkward to access once the burner has been installed.*

2. Pull the gasketed vent mounting plate *only*, back into the track, to the front stop. Start the slider back into position. Re-secure the screw. The insert may now be pushed into its final position inside the woodburning fireplace, and the screw tightened until the slider has been pulled tight to the front stop.

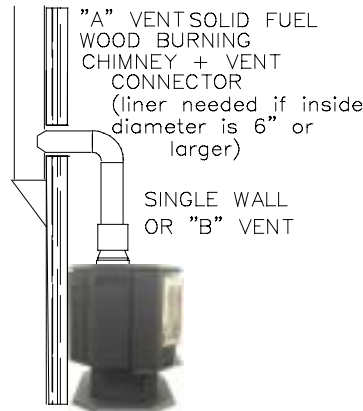
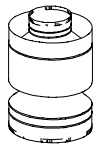
Continue with "Gas Installation" Page 15

# B-VENT SPECIFICS - MODEL GS50

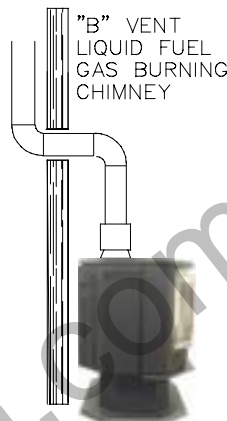
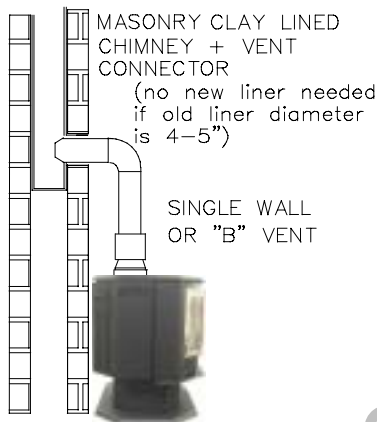
13

## CHIMNEY INSTALLATION

Three types of chimney systems may be used with this stove:



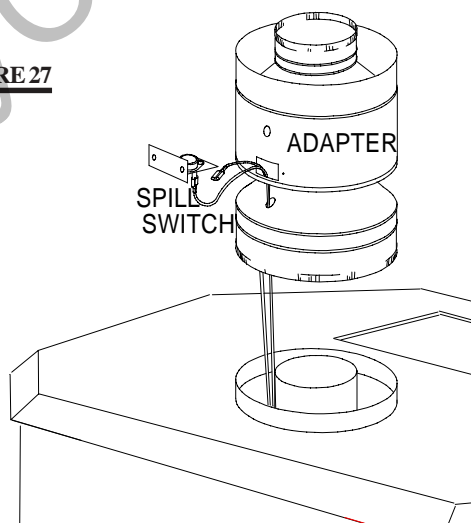
**FIGURE 26**



A CHIMNEY VENTING THIS STOVE SHALL NOT VENT ANY SOLID FUEL BURNING APPLIANCE.

ALL HORIZONTAL RUNS MUST HAVE A 1/4 INCH RISE PER FOOT.

**FIGURE 27**



## INSTALLING 'B' VENT:

Follow the instructions for "**Wall and Ceiling Protection**".

## ADAPTER INSTALLATION FIGURE 27

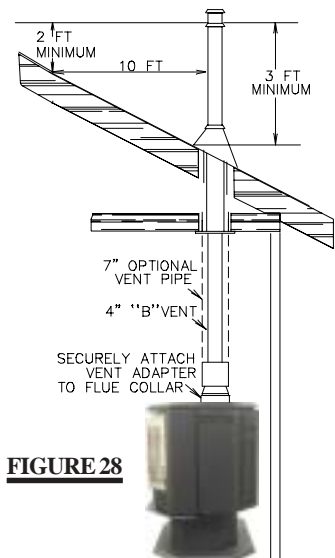
1. Remove the spill switch bracket from the rear of the adapter.
2. Gently pull the two wire terminals (located inside the 7" flue collar at the top of the stove) out approximately 8 inches.
3. Bring the wires through the lower hole in the adapter and out the spill switch opening. *To pass the wires through the hole more easily, temporarily tape the two terminals together.*
4. With the spill switch opening aligned to the back of the stove, take hold of the adaptor base and push the crimped edge into the stove flue collar.
5. Connect the wire terminals to the spill switch and re-secure the bracket.

For aesthetics, the adapter has been designed to accept a standard matte black 7" stove pipe and the Napoleon decorative brass band (standard with the GS150KT). Both are available from your Napoleon dealer.

## ADDING VENT SECTIONS:

For ease of assembly, a 7" telescoping stove pipe may be installed over the 4" vent connection of the adapter. Add vent sections, twist locking (clockwise) securely, to the required height. The vent should extend, at least, 3 feet above its point of contact with the roof and, at least, 2 feet higher than any wall, roof or building within 10 feet. **FIGURE 28.**

(This is a guideline only; local venting codes should be followed which may differ in height and clearance requirements.)

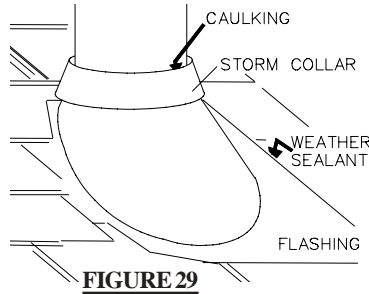


**FIGURE 28**



## 14 INSTALLING FLASHING AND STORM COLLAR

Remove nails from the shingles above and to the sides of the chimney. Place the flashing over the vent pipe and slide it underneath the sides and upper edge of the shingles. Ensure that the vent pipe is properly centered within the flashing, giving a 3/4" margin all around. Fasten to the roof on the top and sides. **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. Apply waterproof caulking around the vent, 1" above the top of the flashing and push the storm collar down into the caulking. Attach a rain cap to the top of the last vent section.



**FIGURE 29**

### 'B' VENT ADAPTATIONS

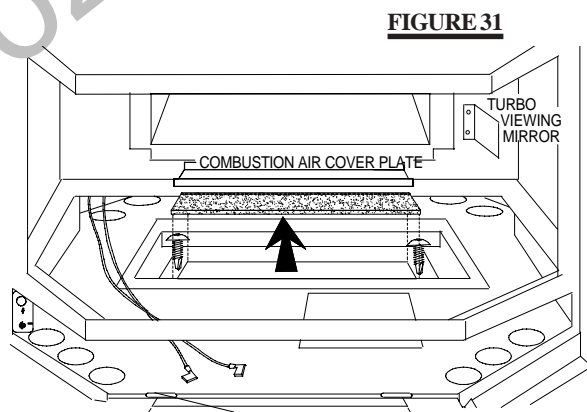
**Read the section on opening the door in "Finishing" prior to proceeding to prevent damaging the unit.**

1. Remove both burners and the log support bracket.

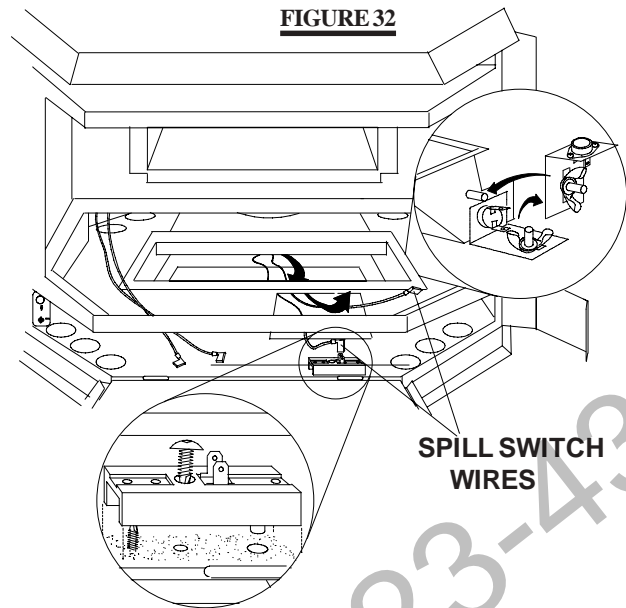


**FIGURE 30**

2. Remove the combustion air cover plate and its gasket. **THE TWO SCREWS MUST BE RE-SECURED. FIGURE 30.**
3. Undo the bracket holding the thermodisc, turn 90° as shown and reattach to the weld stud located on the right air manifold side. **FIGURE 31.** (Do not tighten the wing nut until burner is installed; then ensure that the switch firmly touches the underside of the burner tray and tighten. This enables the blower to function properly.)



**FIGURE 31**



**FIGURE 32**

4. Secure the terminal block into place as shown with the screw supplied. **FIGURE 32.**
5. Gently pull the two white spill switch wires to take up any slack. Feed these wires down through the combustion air opening and back up through the 4x6 inch cut-out in the base. Connect the shorter of the 2 wires to the terminal block.
6. Attach the black on/off switch wire with the 3/16" tab to the other side of the terminal block. (The other black wire has a 1/4" tab and is to be attached to the gas valve.)
7. Replace and re-secure the log support bracket and the two burners ensuring that each venturi fits over the burner orifice.

### COMBUSTION AIR

**ANY STOVE NEEDS AIR FOR SAFE OPERATION AND MUST BE INSTALLED IN SUCH A WAY THAT ADEQUATE COMBUSTION AIR IS AVAILABLE. THIS UNIT IS DESIGNED TO FUNCTION USING EITHER OUTSIDE OR INSIDE (ROOM) AIR.**

If using outside air, connections can be made through a hole in the floor to line up with the hole in the pedestal base. Use a fresh air kit available through your Napoleon Fireplace dealer or Wolf Steel Ltd. Secure the 4" diameter aluminium liner to the hole in the base of the pedestal. Avoid cutting away floor joist, electrical wiring or plumbing. Seal around the outside pipe with insulation to prevent drafts.

*Continue with "Gas Installation" Page 15*

# GAS INSTALLATION

15

## GAS INSTALLATION

**Read the section on opening the door in "Finishing" prior to proceeding to prevent damaging the unit.**

Bring the gas line to the stove through either the opening in the pedestal back or through the floor directly beneath the pedestal base.

### MODELS GDS50 AND GS50 ONLY:

Install rigid black pipe or ½" type L copper tubing with a shut-off valve to the stove.

Seal and tighten the gas line securely to the flex connector supplied.

**Do not kink the flexible connector.**

Mark the two appropriate boxes on the rating plate label. One to indicate the model type depending on the installation (direct vent or B-vent). Mark the second box to indicate the altitude type and the type of fuel being used (natural gas or propane).

CERTIFIED UNDER CSA 2.33A-M88, ANSI Z21.88A-1998  
 VENTED GAS FIREPLACE HEATER APPLIANCE MUST BE  
 INSTALLED USING BURNER KIT: GDS50BNKT,  
 OR GDS50BP-KIT.

**WOLF STEEL LTD**

HOMOLOGUE SELON LES NORMES FOYER DE CHAUFFAGE  
 AU GAZ AVEC EVACUATION CET APPAREIL DOIT ETRE  
 INSTALLE EN UTILISANT UN ENSEMBLE DU BRULEUR:  
 GDS50BNKT, OU GDS50BP-KIT.

MODEL	ALTITUDE/ELEVATION	BTU/H	INPUT/ALIMENTATION	OUTPUT (MODEL GDS50) RENDMENT	FRONT ORIFICE / INJECTEUR AVANT	TURBO ORIFICE / INJECTEUR TURBO
CDV/S500-N	0-2000ft (0-610m)	44,000 BTU/h	20,000 BTU/h	33,000 BTU/h	31,200 BTU/h	#34
GS50-N	2000-4500ft (610-1370m)	40,000 BTU/h	18,000 BTU/h	30,000 BTU/h	28,400 BTU/h	#36
GS50-P	40,000 BTU/h	21,000 BTU/h	30,400 BTU/h	30,000 BTU/h	#53	
CDV/S500-P	2000-4500ft (610-1370m)	36,000 BTU/h	18,000 BTU/h	27,400 BTU/h	26,400 BTU/h	#57

\* ALTITUDE DOWNRATING CONDITIONS APPLY TO CANADA ONLY.  
 LES CONDITIONS DE BAISSE D'EVALUATION SELON L'ALTITUDE S'APPLIQUENT AU CANADA SEULEMENT

MANIFOLD PRESSURE: 35 INCHES W.C. (NG) / 10 INCHES W.C. (LP)  
 PRESSION AU COLLECTEUR: 3.5" DUNE COLONNE D'EAU (NG) / 10" DUNE COLONNE D'EAU (LP)

MIN SUPPLY PRESSURE: 4.5" W.C. (NG) / 11" W.C. (LP)  
 PRESSION D'ALIMENTATION MIN: 4.5" DUNE COLONNE D'EAU (NG) / 11" DUNE COLONNE D'EAU (LP)

MAX. SUPPLY PRESSURE: 7" W.C. (NG) / 13" W.C. (LP)  
 PRESSION D'ALIMENTATION MAX: 7" DUNE COLONNE D'EAU (NG) / 13" DUNE COLONNE D'EAU (LP)

FOR USE WITH GLASS DOORS CERTIFIED WITH THIS UNIT ONLY.  
 UTILISER AVEC LES PORTES VITREES HOMOLOGUEES SEULEMENT AVEC CETTE UNITE.

WARNING: DO NOT ADD ANY MATERIAL TO THE APPLIANCE, WHICH WILL COME IN CONTACT WITH THE FLAMES, OTHER THAN THAT SUPPLIED BY THE MANUFACTURER WITH THE APPLIANCE.  
 AVERTISSEMENT: N'AJOUTEZ PAS A CET APPAREIL AUCUN MATERIAU DEVANT ENTRER EN CONTACT AVEC LES FLAMMES AUTRE QUE CELUI QUI EST FOURNI AVEC CET APPAREIL PAR LE FABRICANT.

MINIMUM CLEARANCE TO COMBUSTIBLE MATERIAL / DEGAGEMENTS MINIMUM AUX DES MATERIAUX COMBUSTIBLES

TO CEILING / FROM STOVE TOP	TO CEILING / FROM STOVE TOP
A 7"	D 17"
B 2"	E 6"
C 1"	F 9"

20" TO CEILING FROM STOVE TOP  
 20" ENTRE LE DESSUS DU FOYER ET LE PLAFOND

ELECTRICAL RATING / CLASS: 115V 1.5AMP 60HZ

**B-VENT MODELS GS50/CS500 APPROVED FOR BEDROOM & BEDSITTING ROOM INSTALLATION. HOMOLOGUE POUR INSTALLATION DANS UNE CHAMBRE A COUCHER & UN STUDIO.**

STEADY STATE EFFICIENCY (NG): 71% FAN OFF / 77% FAN ON  
 EFFICACITE CONSTANTE (GN): 71% VENT. ARRETE / 77% VENT. FONCTIONNE

STEADY STATE EFFICIENCY (LP): 73% FAN OFF / 78% FAN ON  
 EFFICACITE CONSTANTE (GP): 73% VENT. ARRETE / 78% VENT. FONCTIONNE

STEADY STATE EFFICIENCY APPLIES TO CANADA ONLY / L'EFFICACITE CONSTANTE S'APPLIQUENT SEULEMENT AU CANADA.

AFUE (NG/LP) (GN/GP): 65% / 67%  
 THIS APPLIANCE MUST BE INSTALLED USING AN ADAPTER KIT GS-150KT. CET APPAREIL DOIT ETRE INSTALLE EN UTILISANT UN ENSEMBLE ADAPTEUR GS-150KT.

NOT FOR USE WITH SOLID FUEL  
 UN COMBUSTIBLE SOLIDE NE DOIT PAS ETRE UTILISE AVEC CET APPAREIL

**WOLF STEEL LTD**  
 BARRIE, ONTARIO CANADA  
 MADE IN CANADA / FABRIQUE AU CANADA  
 SERIAL NUMBER / NO. DE SERIE: GDS50  
 WS-385-181

FIGURE 33

### B-VENT MODEL GS50 ONLY:

Attach one lead from the spill switch (white wire) to terminal #3 located on the gas valve and the other (black) on/off switch lead to valve terminal #1.

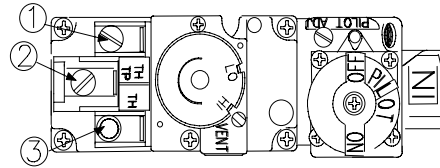
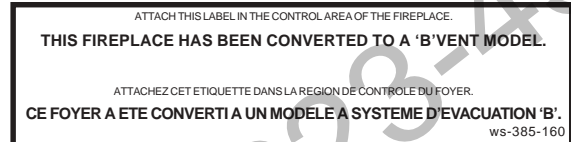


FIGURE 34

Attach the B-Vent label, shown below, in the control area of the appliance.

FIGURE 35



Check for gas leaks by brushing on a soap and water solution. **DO NOT USE OPEN FLAME.**

### MODEL GDI50:

Position unit into its final position inside the fireplace. Tighten slider with securing screw. *We recommend that the flashing be installed before the unit is placed into its final position.*

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 from the gas stove to the wall switch / millivolt thermostat. The recommended maximum lead length depends on the wire size:

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

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

### DIRECT VENT MODEL GDS50:

Disconnect the existing wires from terminals 1 and 3 (from the on/off switch) and replace with the leads from the wall switch/millivolt thermostat.

### B-VENT MODEL GS50:

Disconnect the existing on/off switch wire from terminal 1 on the valve and the black switch wire from the terminal block. Replace each connection using the wires from the wall switch/millivolt thermostat. **FIGURE 34.**

# FINISHING



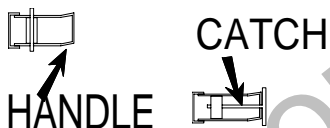
**FIGURE 36**

## ALL MODELS

### DOOR OPENING AND CLOSING

When opening the fire viewing door, a simple procedure must be followed in order to not damage the door. First open the valve control door. Next open both side doors *fully*. Pull the latch handles towards you and release each catch. The door may now be safely opened. To close the door, repeat in reverse order.

**FIGURE 37**



### TRIVET INSTALLATION

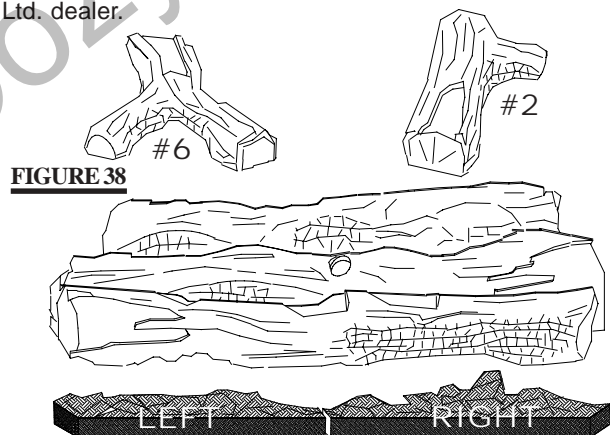
Insert the trivet into the space on the stove top.

### LOG PLACEMENT INSTRUCTIONS

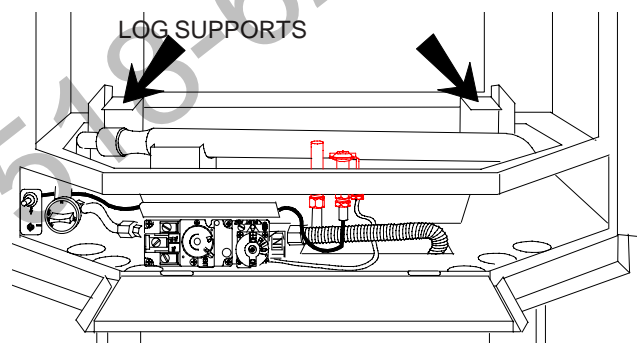
**FIGURES 38, 39, & 40.**

**POSITIONING THE LOGS IMPROPERLY WILL CAUSE FLAME IMPINGEMENT AND CARBONING.**

**PHAZER™** logs and charcoal embers strips, exclusive to Napoleon Fireplaces, glow when exposed to direct flame and provide a unique and realistic glowing effect that is different in every installation. Use only certified **PHAZER™** logs and charcoal embers available from your Napoleon / Wolf Steel Ltd. dealer.



**FIGURE 38**

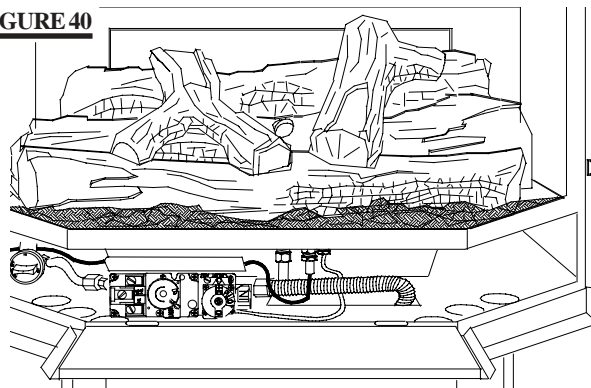


**FIGURE 39**

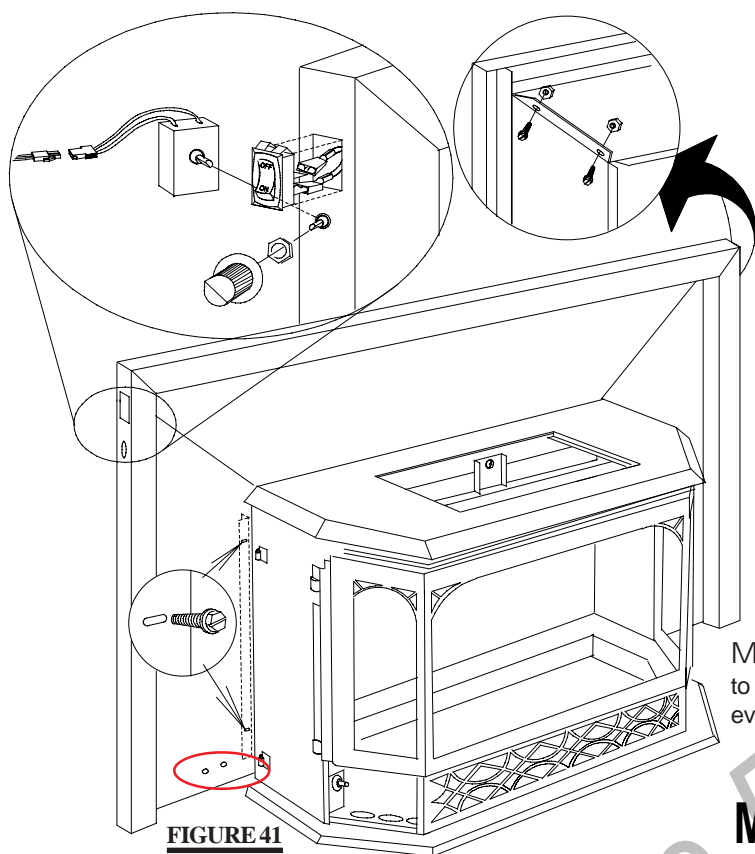
Place the charcoal ember strip into the front of the firebox. Place the 3pc log assembly between the two log support brackets. **Figure 39.** Set the two smaller logs into the pockets and grooves of the 3pc log assembly. For ease of installation, the left and right logs are numbered 6 and 2 respectively.

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

**FIGURE 40**



## INSERT MODEL GDI50 ONLY

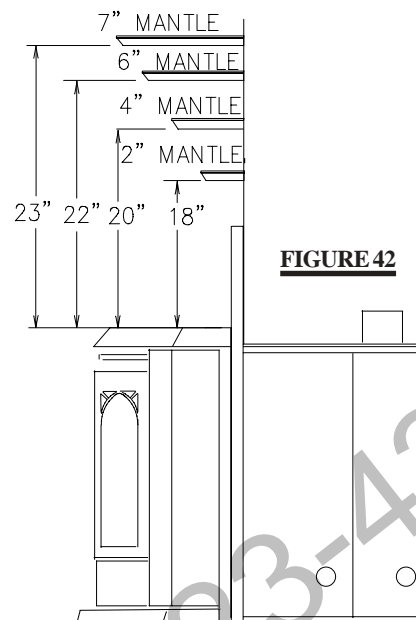
**FIGURE 41****VARIABLE SPEED SWITCH INSTALLATION**

To mount the variable speed switch: from the rear, insert the rheostat stem through the 3/8" diameter hole in the left side flashing. From the front, secure with the pal nut and add the knob. Push the on/off switch into the square opening. Attach wiring as shown.

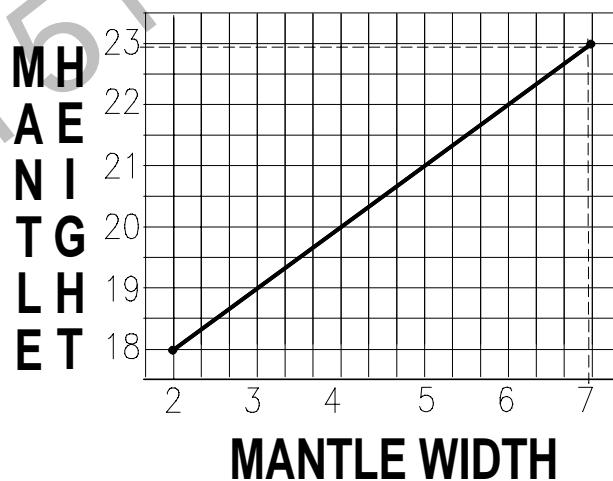
**FLASHING INSTALLATION** The insert is equipped with a flashing kit to finish off the fireplace opening. Assemble the flashings using the four #8 x 3/8" screws and nuts. Prior to installing the flashing kit, open the side doors, and lift the door off its hinges. Mount the flashing to the two pieces of angle steel secured to the units' outer shell using the four #6 x 7/16" screws. These angles are adjustable. Ensure that the flashing is tight to the extreme back end of the outer top and vertically plumb.

Remove the paper backing from the tape located on the back of the logo. Push the logo plugs into the two holes located at the bottom left corner of the flashing to secure the logo.

Rehang the side doors. **FIGURE 41.**

**FIGURE 42**

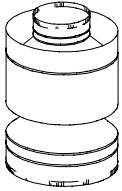
**MANTLE CLEARANCE** This can vary according to the mantle depth. **FIGURE 42.** Use the graph to help evaluate the clearance needed.



# 18 OPERATION / MAINTENANCE

**Purge all gas lines with the glass door open. Assure that a continuous gas flow is at the burner before closing the door. Allow several minutes (5-15) for the flame to stabilize after ignition.**

## MODEL GS50 ONLY: SPILL SWITCH

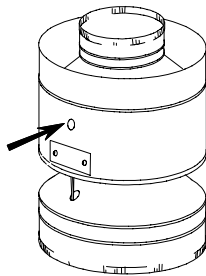


This is a thermally activated switch, attached to the back of the chimney adapter, which senses the change in temperature and shuts down the gas valve in the event of a severe downdraft of air or a blocked or disconnected vent. It acts as a safety shut-off to prevent a build up of carbon monoxide or an explosion of unburnt gases during start up. If the flue is blocked or has no "draw", the spill switch will automatically shut off the supply of gas within about 5-10 minutes.

**TAMPERING WITH THE SWITCH CAN RESULT IN CARBON MONOXIDE (CO) POISONING AND POSSIBLE DEATH.**

**VENTING ACTION CHECK:** A CHECK FOR CORRECT VENTING ACTION MUST BE MADE BEFORE THE INSTALLED STOVE IS LEFT WITH THE CUSTOMER. Test in the following manner:

1. Close all doors and windows in the room / start exhaust fans in the home / turn fireplace blower off (if equipped).
2. Set controls to "high" and light the unit.
3. Wait 5 minutes. Light a match and extend it 1" into the hole located above the spill switch bracket on the adapter.
4. Venting action is satisfactory if the flame stays lit. Venting action is unsatisfactory if the flame extinguishes.
5. If venting action is unsatisfactory, turn the unit off, wait 10 minutes and try again. If the match does not stay lit, turn the unit off and check for vent blockage or restriction. If necessary, consult with a qualified inspector.



**FIGURE 43**

## TURBO BURNER OPERATION AND MAINTENANCE

The purpose of the turbo burner is to increase heat output or BTUs of the unit and will only operate when the main burner is functioning. To turn the turbo burner on, simply depress the burner control knob (located in the valve compartment at the left hand side below the piezo ignitor) and rotate the knob counter-clockwise to 'high'.

The turbo burner flame can be observed on the reflective surface in the back right corner of the firebox.

The burner flame height may now adjusted to achieve the heat output required. Because the flame is very efficient it will burn a very blue, almost transparent colour.

To turn off the burner, rotate the control knob clockwise to 'high'; depress the knob and turn to 'off'.

## OPERATING INSTRUCTIONS - ALL MODELS

The on-off switch is located on the back of the unit at the top left corner on models GDS50 and GS50. On model GDI50, the switch is located to the left on the upper flashing.

**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. Simply open a window to sufficiently ventilate the room. 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. Open a window to sufficiently ventilate the room.**



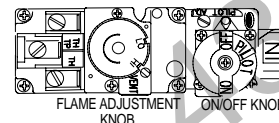
## PURGE THE GAS LINE WITH THE GLASS DOOR OPEN.

**FOR YOUR SAFETY READ BEFORE OPERATING**

- 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.

**LIGHTING INSTRUCTIONS:**

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.

**INSTRUCTIONS TO TURN OFF GAS:**

1. Turn off all electrical power to the unit if service is to be performed.

2. Push in gas control knob slightly and turn clockwise to off. **DO NOT FORCE.**

**MAINTENANCE INSTRUCTIONS****TURN OFF THE GAS AND UNPLUG ELECTRICAL POWER BEFORE SERVICING THE STOVE!**

**CAUTION:** Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing. This insert 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 exposing 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 on one leg and reaches toward the burner on the other leg.

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 5-10 second total light-up period is satisfactory. If ignition takes longer, consult your Napoleon dealer/distributor.

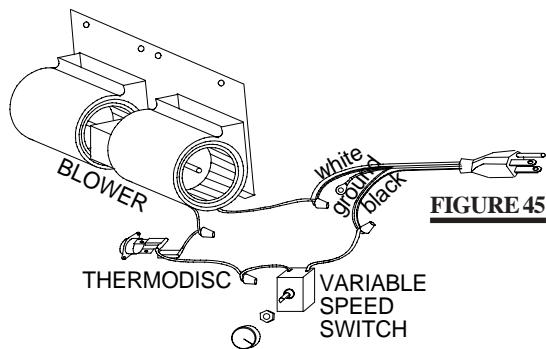
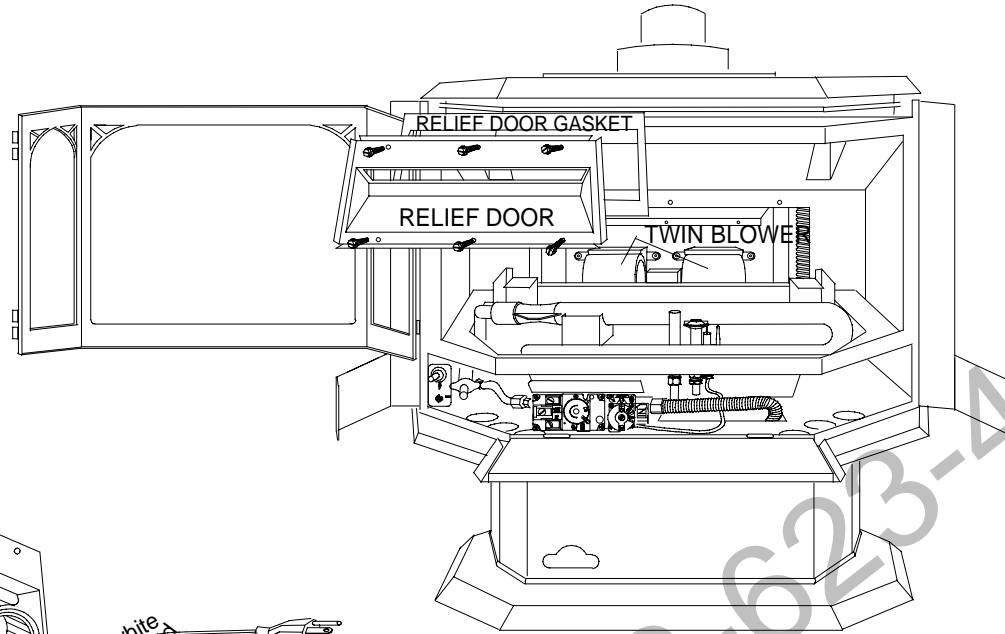
7. Check that the door gasketing is not broken or missing. Replace if necessary.

8. Lift the door from its hinges to clean hinge pins and lubricate using high-temp dry graphite as necessary. Replace.

**NOTE:** Due to the high temperatures that the hinges experience, wet lubricants such as oil and WD40 will cause the hinge to seize and are therefore not suitable.

# 20 REPLACEMENT BLOWER INSTALLATION

**FIGURE 44**



**FIGURE 45**

1. Turn off the electrical power and the gas supply to the stove.
2. Open the lower louvre control door, the two side doors, and the fire viewing door. Remove the logs.
3. Remove the relief door held on with 6 screws. Discard the gasket.
4. Disconnect the two blower wires. Remove the blower bracket held on with 4 screws.

5. Replace the blower using the existing bracket. When connecting the replacement blower, tighten the screws without distorting the rubber grommets. Replace the bracket/blower assembly on the unit.

6. Reconnect the two wires. Hold the replacement gasket in place and reattach the relief door body. Replace the logs. Close all doors.

7. Turn the gas supply and electricity back on.

*Because the blower is thermally activated, when turned on, it will automatically start approximately 15-30 minutes after lighting the stove and will run for approximately 30-45 minutes after the stove has been turned off. Use of the fan increases the output of heat.*

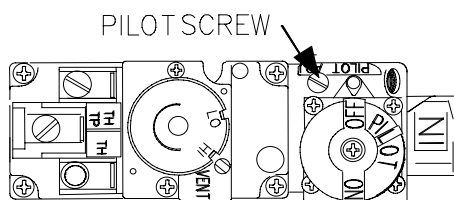
*Drywall dust will penetrate into the blower bearings causing irreparable damage and must be prevented from coming into contact with the blower or its compartment. Any damage resulting from this condition is not covered by the warranty policy.*

# ADJUSTMENTS

## PILOT BURNER ADJUSTMENT

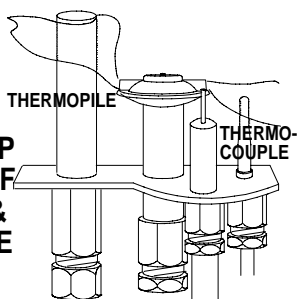
Remove the pilot screw cap. Adjust the pilot screw to provide properly sized flame. Turn in a clockwise direction to reduce the gas flow. Replace the pilot screw cap.

**FIGURE 46**



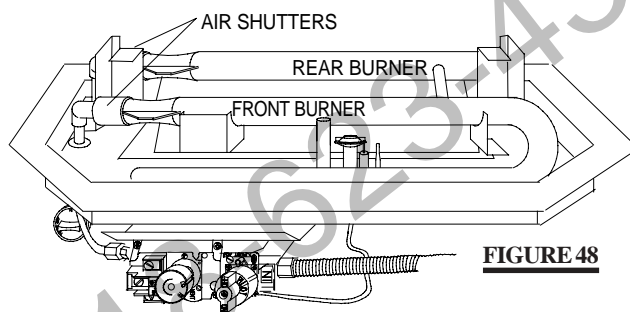
**FLAME MUST ENVELOP  
UPPER 3/8" TO 1/2" OF  
THERMOCOUPLE &  
THERMOPILE**

**FIGURE 47**

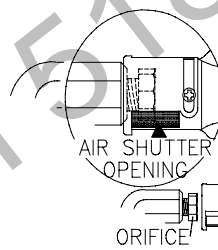


## VENTURI ADJUSTMENT

To access the venturi, remove the screw securing each burner to the burner pan; slide to the right, lift up and out. Natural gas and propane models have air shutters set at  $\frac{3}{16}$  (.188) inch open on the front burner. The rear burner air shutter opening is set at  $\frac{1}{2}$  (.500) inch open. 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 48**



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

**FIGURE 49**

# 22 REPLACEMENTS

## ORDERING REPLACEMENT PARTS

Contact your dealer or the factory for questions concerning prices and policies on replacement parts. Normally all parts can be ordered through your Napoleon dealer or distributor. When ordering replacement parts always give the following information:

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

## REPLACEMENT PARTS

For warranty replacement parts, a photocopy of the original invoice will be required to honour the claim.

GDS50 / GS50 TERMINATION KITS - ALL KIT ITEMS MAY BE PURCHASED SEPARATELY

### PART # DESCRIPTION

#### GD175 - WALL TERMINAL KIT

BM6790 90° ELBOW - 7" DIAMETER  
 GD222 TERMINAL ASSEMBLY  
 BM67ADJ 30" TO 53" ADJUSTABLE PIPE - 7" DIA  
 GDS-500.77 FIRESTOP / WALL PLATE  
 GDS-020.32 HARDWARE  
 BRTC7 BRASS TRIM COLLAR  
 BM6724 24" STOVE PIPE - 7" DIAMETER  
 GS-10.300 10' ALUMINUM FLEX LINER c/w SPACERS - 4" DIA  
 GDS-25.01 DECORATIVE BRASS BAND

#### GD180 - PERISCOPE TERMINAL KIT

BM6790 90° ELBOW - 7" DIAMETER  
 GD201 PERISCOPE  
 BM67ADJ 30" TO 53" ADJUSTABLE PIPE - 7" DIA  
 GDS-500.77 FIRESTOP / WALL PLATE  
 GDS-020.32 HARDWARE  
 BRTC7 BRASS TRIM COLLAR  
 BM6724 24" STOVE PIPE - 7" DIAMETER  
 GS-10.300 10' ALUMINUM FLEX LINER c/w SPACERS - 4" DIA  
 GDS-25.01 DECORATIVE BRASS BAND

#### GD110 - ROOF TERMINAL KIT - 1/12 TO 7/12 PITCH

GD-010.569 AIR TERMINAL  
 GD-120.036 VERTICAL CAP  
 GD-010.567 ROOF SUPPORT  
 WS-170-052 STORM COLLAR  
 WS-263-054 ROOF FLASHING

#### GD111 - ROOF TERMINAL KIT - 8/12 TO 12/12 PITCH

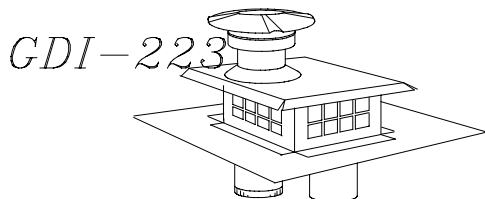
GD-010.569 AIR TERMINAL  
 GD-120.036 VERTICAL CAP  
 GD-010.567 ROOF SUPPORT  
 WS-170-052 STORM COLLAR  
 WS-263-055 ROOF FLASHING

#### GD112 - ROOF TERMINAL KIT - FLAT ROOF

GD-010.569 AIR TERMINAL  
 GD-010.567 ROOF SUPPORT  
 GD-120.036 VERTICAL CAP  
 WS-263-056 ROOF FLASHING  
 WS-170-063 STORM COLLAR

### GDI50 TERMINATION KIT

#### GDI-223 - CHIMNEY AIR TERMINAL

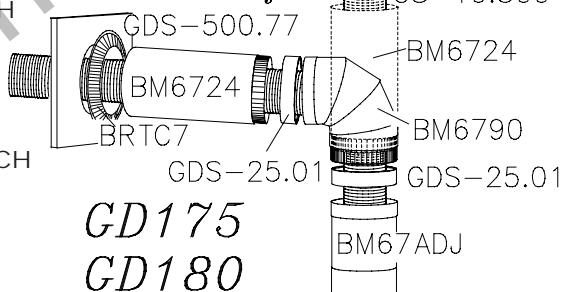


*GDI-223*

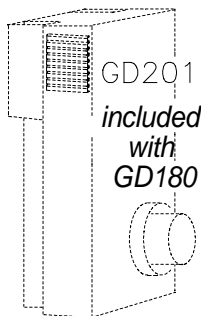


*GD-010.375  
included with GD175*

*1/4 inch rise per foot*

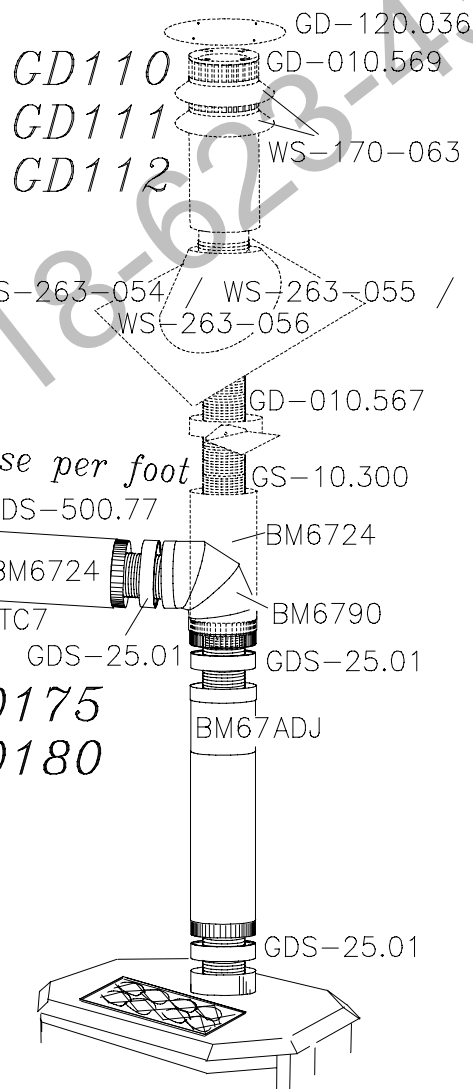
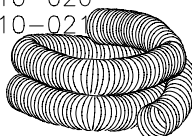


*GD175  
GD180*



*GD201  
included  
with  
GD180*

WS-410-019  
 WS-410-020  
 WS-410-021



# PART # DESCRIPTION

WS-725-028	RBT SHAW VALVE - NG
WS-725-029	RBT SHAW VALVE - LP
WS-100-046	TURBO REAR BURNER
WS-100-040	FRONT BURNER
WS-455-037	#43 REAR BURNER ORIFICE - NG
WS-455-034	#57 REAR BURNER ORIFICE - LP
WS-455-043	#45 REAR BURNER ORIFICE - HiALT NG
WS-455-035	#59 REAR BURNER ORIFICE - HiALT LP
WS-455-045	#34 FRONT BURNER ORIFICE - NG
WS-455-033	#53 FRONT BURNER ORIFICE - LP / HiALT LP
WS-455-044	#36 FRONT BURNER ORIFICE - HiALT NG
WS-010-575	PILOT ASSEMBLY - LP
WS-010-574	PILOT ASSEMBLY - NG
WS-455-052	PILOT ORIFICE - LP
WS-455-053	PILOT ORIFICE - NG
WS-680-008	THERMOCOUPLE
WS-680-04	THERMOPILE
GA-DS-290.029	PILOT GASKET
WS-380-01	TURBO CONTROL KNOB
WS-010.87	TURBO VALVE - NG
WS-010.175	TURBO VALVE - LP
GS-530K	BLACK TRIVET
WS 573-008	HIGH TEMPERATURE SEALANT
WS-357-01	PIEZO IGNITOR
DS-715.195	PEDESTAL TRIM
GL-613	LOG SET ASSEMBLY
GA-DS-135.024	3pc LOG ASSEMBLY
GA-DS-135.026	RIGHT LOG
GA-GD-135.023	LEFT LOG
GA-DS-135.027	CHARCOAL EMBER STRIP - 2 PC
GA-DS-290.030	BURNER GASKET
DS-562-022	GLASS GASKET
WS-385-45	NAPOLEON LOGO
WS-300-029	FRONT WINDOW GLASS
WS-030-021	ACCENT BAR
WS-300-028	SIDE WINDOW GLASS
GDS63	BLOWER c/w GASKET
GA-010-715G	DOOR FRAME
W0100724	GOLD DOOR COMPLETE
GA-DS-290.032	RELIEF HOUSING GASKET
GA-DS-010.432	VALVE CONTROL DOOR
WS-430-002	MAGNETIC CLOSURE
GA-DS-290.031	AIR MANIFOLD GASKET
WS-390-001	LATCH
WS-750-09	ELECTRODE WIRE
WS-660-09	ON/OFF SWITCH
WS-690-02	THERMODISC
GA-GS-434.001	MIRROR

## GDS50

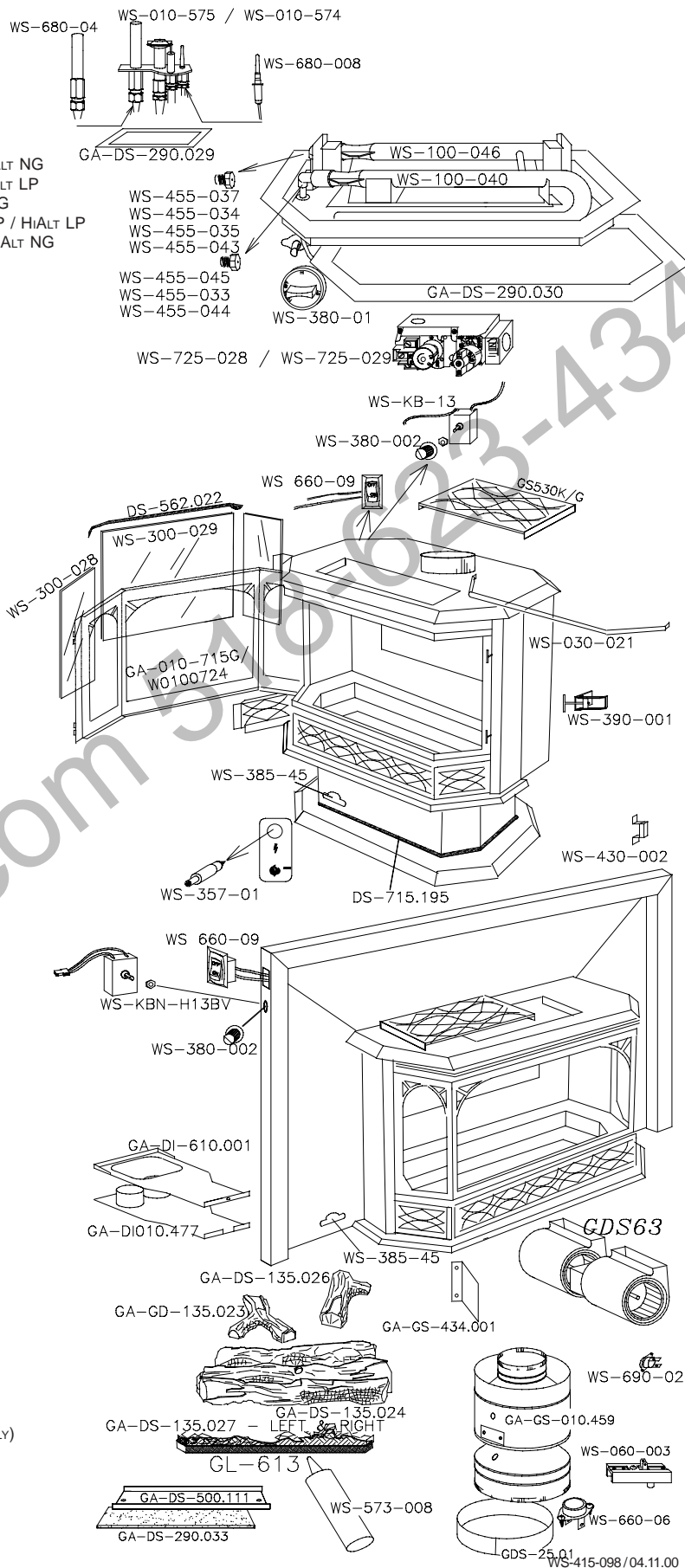
GA-DS-500.111	COMBUSTION AIR COVER PLATE
GA-DS-290.033	COMBUSTION AIR GASKET
WS-380-002	VARIABLE SPEED SWITCH KNOB
WS-KB-13	VARIABLE SPEED SWITCH

## GS50

GA-GS-010.459	ADAPTER c/w SPILL SWITCH
WS-660-06	SPILL SWITCH
WS-060-003	TERMINAL BLOCK
GDS-25.01	DECORATIVE BRASS BAND
WS-380-002	VARIABLE SPEED SWITCH KNOB
WS-KB-13	VARIABLE SPEED SWITCH

## GDI50

GA-DI-610.001	SLIDER
GA-DI-010.477	VENT MOUNTING PLATE
WS-KBN-H13BV	VARIABLE SPEED SWITCH (GDI ONLY)





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PART #	DESCRIPTION
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GDS50 / GS50 / GDI50:

GS-530G	GOLD PLATED TRIVET
WS-690-1	MILLIVOLT THERMOSTAT
WS-660-010	REMOTE CONTROL - ADVANTAGE
WS-660-011	REMOTE CONTROL - ADVANTAGE PLUS

GDS50:

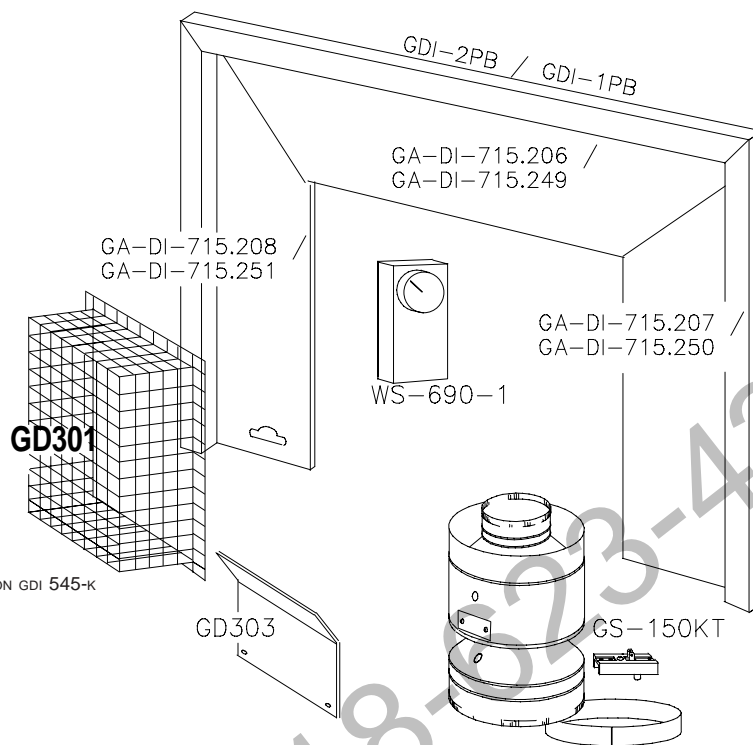
BM6745	45° ELBOW
GD301	HEAT GUARD
WS-175-01	4" COUPLER
GD303	VINYL SIDING SHIELD
GD201	PERISCOPE

GS50:

GS-150KT ADAPTER KIT

GDI50:

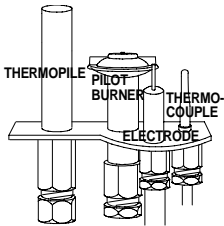
GDI 545-K	BLACK FLASHING KIT - 10"	
GA-DI-715.206	TOP FLASHING - 10"	
GA-DI-715.207	RIGHT HAND FLASHING - 10"	
GA-DI-715.208	LEFT HAND FLASHING - 10"	
GDI-2PB	2" TRIM - POLISHED BRASS FOR USE ON GDI 545-K	
WS-410-019	3"Ø, 2 PLY FLEX LINER - 20 FT	
WS-410-020	3"Ø, 2 PLY FLEX LINER - 25 FT	
WS-410-021	3"Ø, 2 PLY FLEX LINER - 35 FT	
GDI 345-K	BLACK FLASHING KIT - 7"	
GA-DI-715.249	TOP FLASHING - 7"	
GA-DI-715.250	RIGHT HAND FLASHING - 7"	
GA-DI-715.251	LEFT HAND FLASHING - 7"	
GDI-1PB	1½" TRIM - POLISHED BRASS FOR USE ON GDI 345-K	
GA-PER-TRM	GOLD ACCENT TRIM	



# TROUBLE SHOOTING GUIDE

25

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

SYMPTOM	PROBLEM	TEST SOLUTION
	Pilot will not light.	<ul style="list-style-type: none"> <li>- check if pilot can be lit by a match</li> <li>- check that the wire is connected to the push button ignitor.</li> <li>- check if the push button ignitor needs tightening.</li> <li>- replace the wire if the wire insulation is broken or frayed.</li> <li>- replace the electrode if the ceramic insulator is cracked or broken.</li> <li>- replace the push button ignitor.</li> </ul>
	No spark at pilot burner	
	Spark gap is incorrect	<ul style="list-style-type: none"> <li>- 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).</li> </ul>
	No gas at the pilot burner	<ul style="list-style-type: none"> <li>- check that the manual valve is turned on.</li> <li>- check the pilot orifice for blockage.</li> <li>- replace the valve.</li> <li>- call the gas distributor.</li> </ul>
	Out of propane gas.	<ul style="list-style-type: none"> <li>- fill the tank.</li> </ul>
Pilot goes out when the gas knob is released.	System is not correctly purged.	<ul style="list-style-type: none"> <li>- purge the gas line with the glass door open.</li> </ul>
	Out of propane gas	<ul style="list-style-type: none"> <li>- fill the tank.</li> </ul>
	Pilot flame is not large enough	<ul style="list-style-type: none"> <li>- turn up the pilot flame.</li> </ul>
	Pilot flame is not engulfing the thermocouple.	<ul style="list-style-type: none"> <li>- turn up pilot flame.</li> <li>- replace pilot assembly.</li> </ul>
	Thermocouple shorting.	<ul style="list-style-type: none"> <li>- loosen and tighten thermocouple.</li> <li>- clean thermocouple and valve connection.</li> <li>- replace thermocouple.</li> <li>- replace valve.</li> </ul>
	Faulty thermocouple.	<ul style="list-style-type: none"> <li>- replace.</li> </ul>
	Faulty valve.	<ul style="list-style-type: none"> <li>- replace.</li> </ul>
Pilot burning; no gas to main burner; gas knob is on 'HI'; wall switch / thermostat is on.	Main burner orifice is plugged.	<ul style="list-style-type: none"> <li>- remove stoppage in orifice.</li> </ul>
	Faulty thermopile.	<ul style="list-style-type: none"> <li>- replace.</li> </ul>
	Faulty thermostat or switch.	<ul style="list-style-type: none"> <li>- connect a jumper wire across the wall switch terminals; if main burner lights, replace thermostat.</li> <li>- disconnect the switch wires &amp; connect a jumper wire across terminals 1 &amp; 3; if the main burner lights, check the wires for defects and / or replace wires.</li> </ul>
	Faulty valve.	<ul style="list-style-type: none"> <li>- replace.</li> </ul>
Pilot goes out while standing; Main burner is in 'OFF' position.	Gas piping is undersized.	<ul style="list-style-type: none"> <li>- turn on all gas appliances and see if pilot flame flutters, diminishes or extinguishes, especially when main burner ignites. Monitor supply pressure.</li> <li>- check if supply piping size is to code. Correct all undersized piping.</li> </ul>
Main burner goes out; pilot stays on.	Pilot flame is not large enough or not engulfing the thermopile.	<ul style="list-style-type: none"> <li>- turn up pilot flame.</li> <li>- replace pilot assembly.</li> </ul>
	Thermopile shorting	<ul style="list-style-type: none"> <li>- clean thermopile and thermopile connection to valve.</li> </ul>
	Remote wall switch wire is too long, too much resistance in the system	<ul style="list-style-type: none"> <li>- shorten wire to correct length or wire gauge.</li> </ul>
	Faulty thermostat or switch	<ul style="list-style-type: none"> <li>- replace</li> </ul>

Main burner goes out; pilot goes out.	REFER TO "MAIN BURNER GOES OUT; PILOT STAYS ON"	
	Vent re-circulating <b>(MODEL GDS50 ONLY)</b>	- check joint seals and installation.
	Thermocouple shorting or faulty.	- loosen and tighten thermocouple - clean thermocouple and valve connection. - replace thermocouple. - replace valve.
	Vent is reversing <b>(MODEL GDI50 ONLY)</b>	- insulate exhaust vent.
Exhaust fumes smelled in room, headaches.	Fireplace is spilling.	- check all seals.
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 vent liners are free of holes and well sealed at all joints. - check that minimum rise per foot has been adhered to for any horizontal venting.
Blower does not turn on.	Blower switch high limit is reached.	Turn blower switch on, turn turbo rear burner off and front burner to low. When blower turns on, re-adjust burners.
Door sticking.	Dirt / dust adheres to the hinges; is heated and burns causing sticking.	- lift door from its hinges. Lubricate with <i>high-temp dry graphite only</i> . <b>NOTE:</b> Due to the high temperatures that the hinges experience, wet lubricants such as oil and WD40 will cause the hinge to seize and are therefore not suitable.
<b>MODELS GDS50/GDI50 ONLY:</b> 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 22 to ensure correct location of storm collars (Model GDS50 only). - vent liners are reversed (Model GDI50 only). Refer to Figure 24.
White / grey film forms.	Sulphur from fuel is being deposited on glass, logs or combustion chamber surfaces.	- clean the glass with a recommended gas fireplace glass cleaner. <b>DO NOT CLEAN GLASS WHEN HOT.</b> If deposits are not cleaned off regularly, the glass may become permanently marked.

This fireplace must be serviced annually depending on usage.

This fireplace must be serviced annually depending on usage.

[illegible]

NOTES:

Handwriting practice lines consisting of 20 horizontal red lines.

CozyCabin.com 518-623-4349