

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



INSTALLATION AND OPERATION INSTRUCTIONS

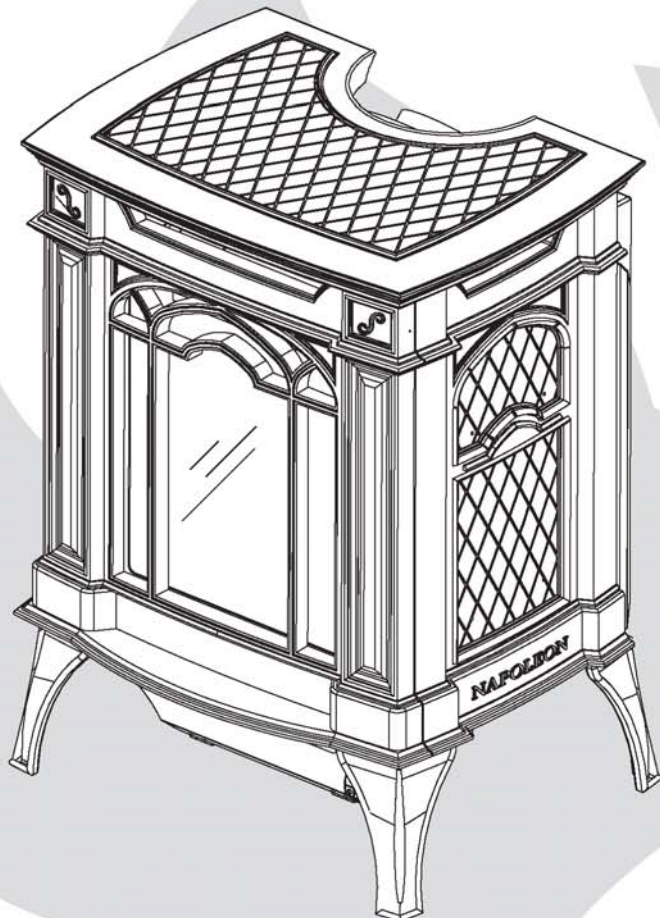
CERTIFIED UNDER CANADIAN AND AMERICAN NATIONAL STANDARDS: ANSI Z21.88, CSA 2.33 FOR VENTED GAS FIREPLACE HEATERS.

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

Arlington™

GDS20N
NATURAL GAS

GDS20P
PROPANE



W415-0496 / B / 08.10.05

**Wolf Steel Ltd., 103 Miller Drive, Crittenden, Kentucky, USA, 41030 / 24 Napoleon Rd., Barrie, ON, L4M 4Y8, Canada
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WARNINGS & SAFETY PRECAUTIONS



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



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

WHAT TO DO IF YOU SMELL GAS



Do not try to light any appliance.



Do not use any phone in your building. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.



Do not touch any electrical switch.



If you cannot reach your gas supplier, call the fire department.



If this fireplace is not properly installed, a house fire may result.

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PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE

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. Keep young children and animals away when the stove is hot.
- 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.
- This fireplace uses and requires a fast acting thermocouple. Replace only with a fast acting thermocouple supplied by Wolf Steel Ltd.

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

*NAPOLEON 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 test-fired and 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 aluminium extrusion trims.

Electrical (110V and millivolt) components and wearable parts such as catalytic tiles, 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.

Any labour related to warranty repair is not covered.

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 STOVE 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 CAN1-B149 Installation Code in Canada or to the National Fuel Gas Code, ANSI Z223.1, and NFPA 54 in the United States. Mobile home installation must conform with local codes. In the absence of local codes, install to the current standard for gas equipped mobile housing CAN/CSA Z240 MH Series in Canada or the manufactured home construction and safety standard, Title 24 CFR, part 3280, or the Fire Safety Criteria for manufactured home installations, Sites and Community Standard ANSI/NFPA 501A in the United States.

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

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

It is recommended that all horizontal runs have a ¼ inch rise per foot.

Objects placed in front of the stove 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).

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 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. When the valve is set to "HI", the 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.

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

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

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 discoloration and / or blemishes may result.

GDS20: Maximum input is 20,000 BTU/hr for natural gas and propane. Maximum output for natural gas and propane is 15,600 BTU/hr at an efficiency of 78%.

This stove is approved for closet or recessed installations, as well as for bathroom, bedroom and bed-sitting room installations and is suitable for mobile home installations. The natural gas model can be installed in a mobile home that is permanently positioned on its site and fueled with natural gas.

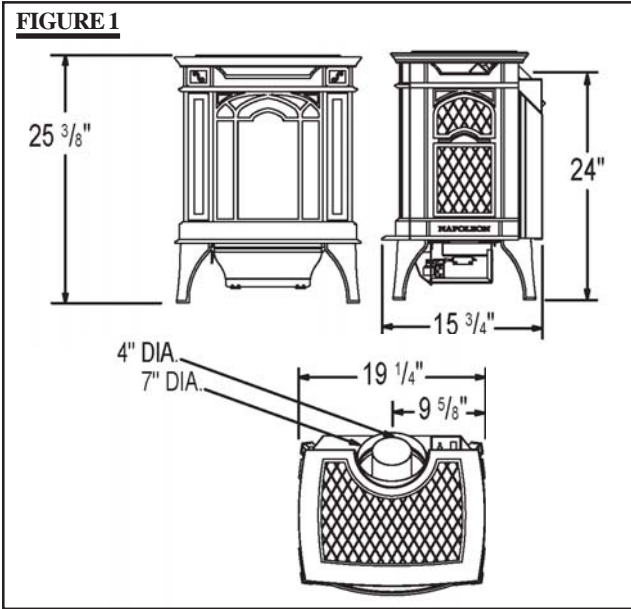
LOCATION & CLEARANCES

Provide adequate accessibility clearance for servicing and operating the stove.

Never obstruct the front opening of the stove.

GDS20

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:

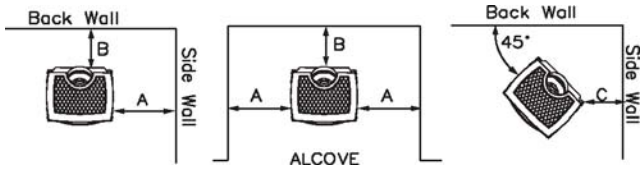


FIGURE 2
A. 4" B. 2"* C. 2"

STOVE SHOULD NOT BE INSTALLED DIRECTLY ON CARPETING.

MINIMUM 48" FROM STOVE TOP TO CEILING
 TO CEILING FROM STOVE TOP.....48"

HORIZONTAL VENT
 SIDES AND BOTTOM1"
 TOP.....2"

VERTICAL VENT
 ALL SIDES.....1"

If less than 5" clearance is maintained between the back of the stove and the back wall, it will be necessary to disconnect the venting and gas pipe to move the stove out for installation or service of the blower.

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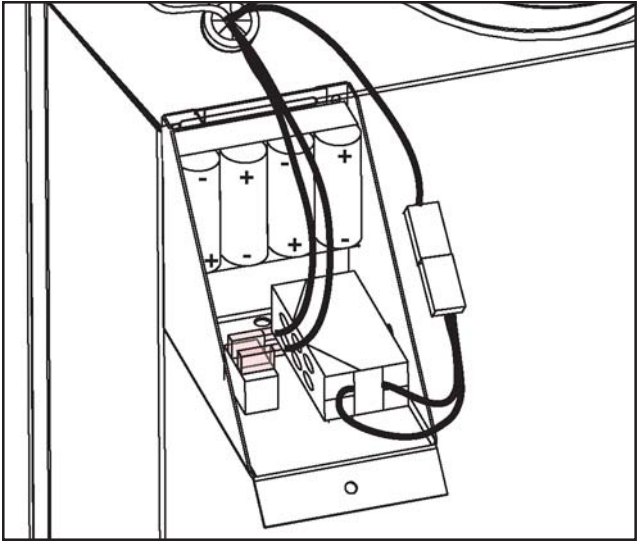
*AT A DISTANCE OF 2" FROM THE WALL, INSTALLATION OR SERVICE TO THE BLOWER MAY NOT BE PRACTICAL. A MINIMUM OF 5" WILL BE REQUIRED IN ORDER TO INSTALL THE BLOWER.

PILOT INDICATOR LIGHT BATTERY REPLACEMENT

If the pilot indicator light no longer flashes and the pilot is burning, the batteries may require replacing.

Four "AA" batteries are required and should be replaced annually.

1. Open the switch housing by removing the top screw, then pivoting the box open.
2. Remove the 4 "AA" batteries and replace using the new ones.
3. Pivot the box closed and re-secure using the screw removed in step 1.

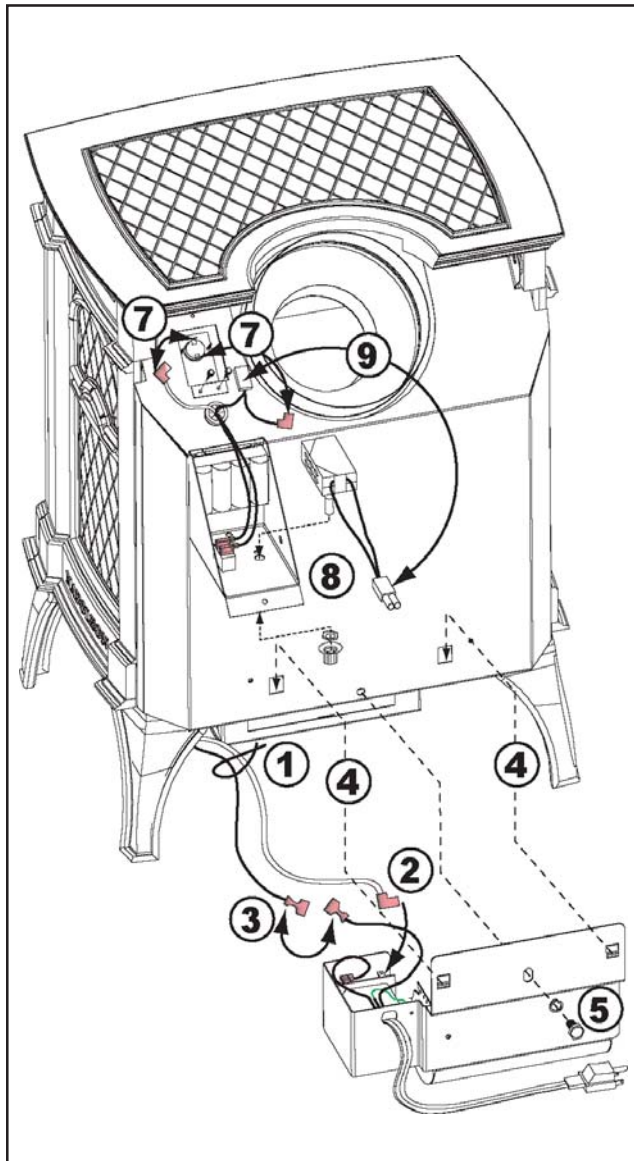


BLOWER INSTALLATION

Blower (SEE LOCATION AND CLEARANCES)

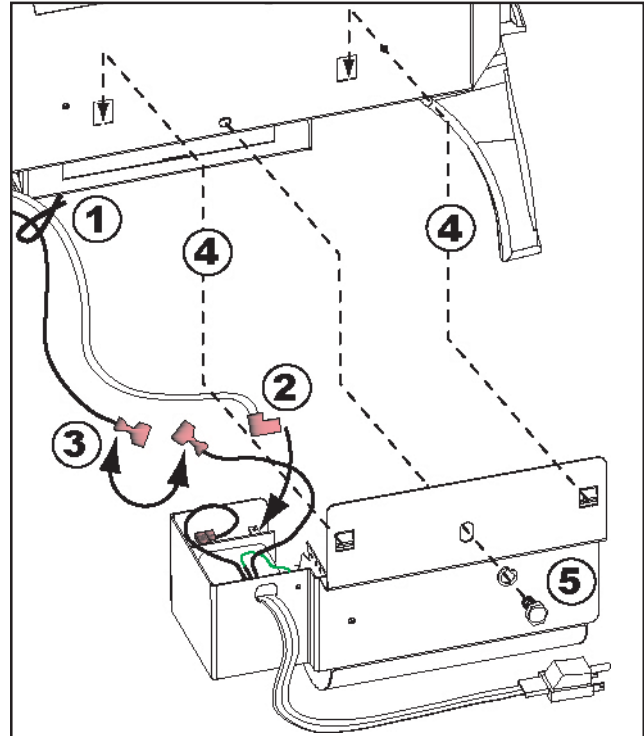
1. Cut and remove the tie securing the blower switch wires to the heat shield.
2. Connect the white wire coming from below the unit to the terminal on the blower.
3. Connect the black blower wire to the black wire coming from below the unit.
4. Insert the clips on the blower housing into the cutouts in the rear shield. Push down to lock the clips into position.
5. Secure the blower using the screw and lock washer supplied.

Note: Ensure that all the wires are tucked into the blower switch housing.



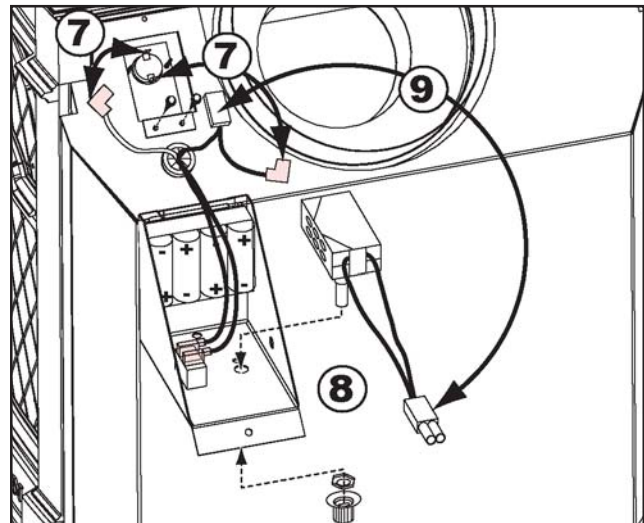
This unit comes equipped with a pilot indicator light that blinks every few seconds when the pilot is on.

For more information see step #10.



Switches

6. Open the switch housing by removing the top screw.
7. Install the thermodisc bracket as shown, using 2 of the screws supplied. Connect the flagged leads to the terminals of the thermodisc. Remove the knock out from the housing label.
8. Install the variable speed switch (rheostat) into the housing with the wires facing up. Secure the switch to the housing using the pal nut and the knob supplied.
9. Connect the male connector on the switch to the female connector coming from the unit.
10. **Pilot Indicator Light:** Install the batteries as shown. Replace the batteries annually. **Note: If replacing the pilot indicator light, ensure that the red wire lead connects to the red lead of the thermopile and black to white.**
11. Tuck all of the wires into the housing and close. Secure using the screw removed in step 6.



VENTING

VENTING LENGTHS & AIR TERMINAL LOCATIONS

Use only Wolf Steel, Simpson Dura-Vent, Selkirk Direct Temp or American Metal Amerivent venting components.

For Simpson Dura-Vent, Selkirk Direct Temp and American Metal Amerivent, follow the installation procedure provided with the venting components.

All outer pipe joints of these venting systems must be sealed using Red RTV High Temperature Sealant. Wolf Steel, Simpson Dura-Vent, Selkirk Direct Temp and American Metal Amerivent venting systems must not be combined.

A starter adaptor must be used and may be purchased from the corresponding supplier:

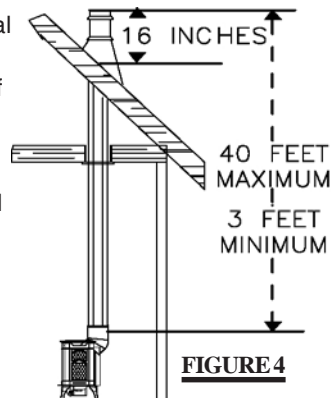
Supplier	GAS STOVE
Duravent	GDS924N
Amerivent	4DSCB-N1
Direct Temp	4DT-AAN

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. High temperature sealant must be ordered separately.

When using Wolf Steel venting components, use only the following vent kits: **WALL TERMINAL KIT GD175** (7-1/2' of venting included), **WALL TERMINAL KIT GD176** (24" 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.

For optimum performance, it is recommended that all horizontal runs have a minimum ¼ inch rise per foot.

- These vent kits allow for either horizontal or vertical venting of the stove.
- The maximum number of 4" flexible connections is 3 horizontally or three vertically (excluding the stove and the air terminal connections).
- When terminating vertically, the minimum vertical rise is 3 feet above the stove and the maximum vertical rise is 40 feet. **FIGURE 4.**

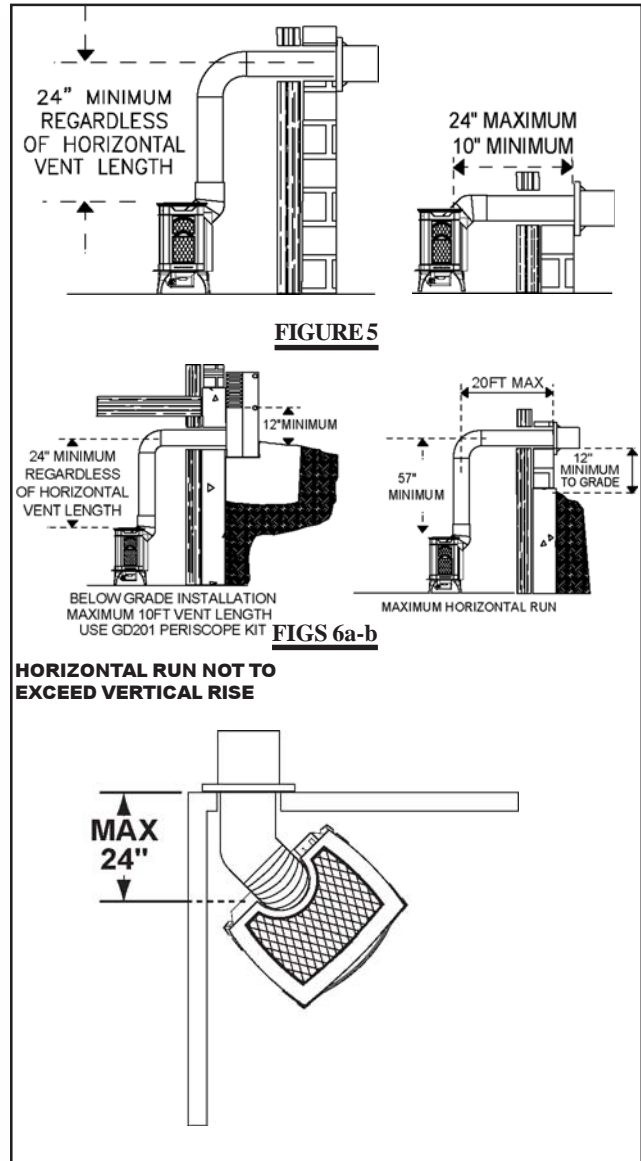


Deviation from the minimum vertical vent length can create difficulty in burner start-up and/or carboning.

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

- For optimum flame appearance and stove 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.

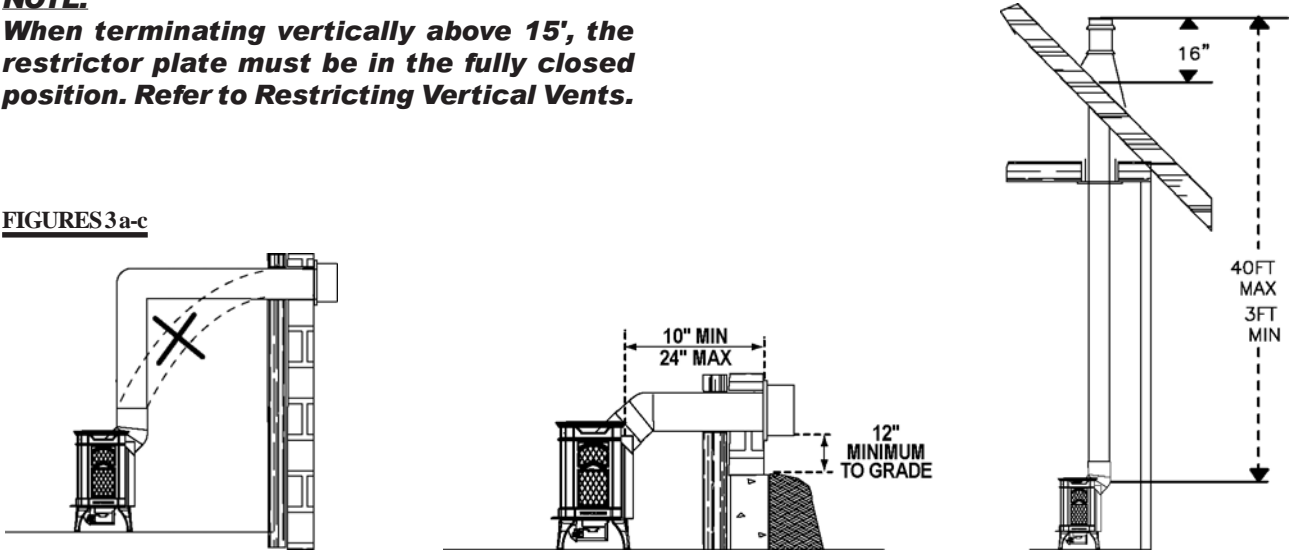
The maximum horizontal run with a 57 inch vertical rise immediately above the stove is 20 feet. **FIGURES 6a-b.**



TYPICAL VENT INSTALLATIONS

NOTE:
 When terminating vertically above 15', the restrictor plate must be in the fully closed position. Refer to Restricting Vertical Vents.

FIGURES 3 a-c



SPECIAL VENT INSTALLATIONS

PERISCOPE TERMINATION

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

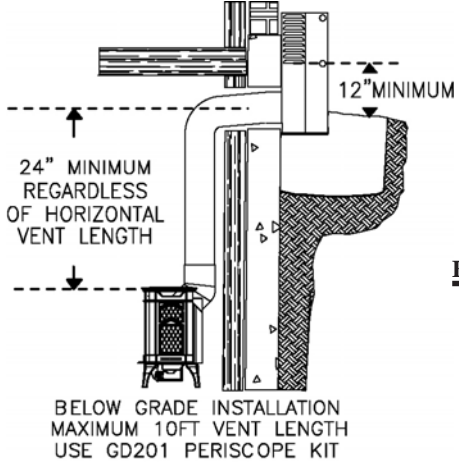


FIGURE 4

BELOW GRADE INSTALLATION
 MAXIMUM 10FT VENT LENGTH
 USE GD201 PERISCOPE KIT

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: $.03(\text{total degrees of offset} - 135^\circ)$ in feet
V_T	- combined vertical vent lengths in feet

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

* the first 45° and 90° offset has a zero value and is shown in the formula as -45° and -90° respectively or -135° when combined.

HORIZONTAL TERMINATION

when $(H_T) \leq (V_T)$

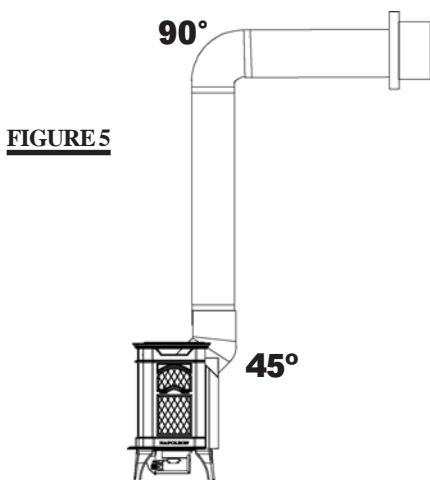


FIGURE 5

Simple venting configuration (only one 45° and 90° elbow)

For vent configurations requiring more than one 45° and 90° elbow, the following formulas apply:

Formula 1: $H_T \leq V_T$

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

Example 1:

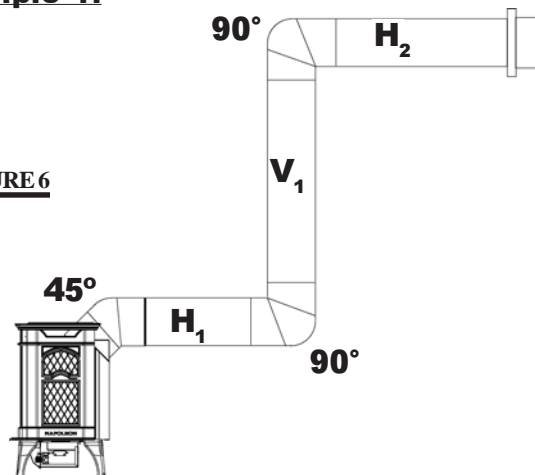
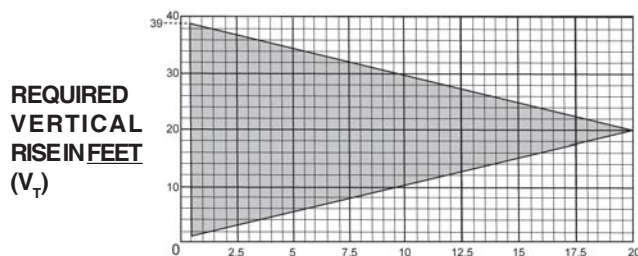


FIGURE 6



REQUIRED VERTICAL RISE IN FEET (V_T)

CALCULATED HORIZONTAL VENT RUN PLUS OFFSETS IN FEET (H_T)

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

$$\begin{aligned}
 V_1 &= 8 \text{ ft} \\
 V_T &= V_1 = 8 \text{ ft} \\
 H_1 &= 2.5 \text{ ft} \\
 H_2 &= 2 \text{ ft} \\
 H_R &= H_1 + H_2 = 2.5 + 2 = 4.5 \text{ ft} \\
 H_o &= .03(\text{one } 45^\circ \text{ elbow} + \text{two } 90^\circ \text{ elbows} - 135^\circ) \\
 &= 0.3(225 - 135^\circ) = 2.7 \text{ ft} \\
 H_T &= H_R + H_o = 4.5 + 2.7 = 7.2 \text{ ft}
 \end{aligned}$$

$$H_T + V_T = 7.2 + 8 = 15.2 \text{ ft}$$

Formula 1: $H_T \leq V_T$
 $7.2 \leq 8$

Formula 2: $H_T + V_T \leq 40$ feet
 $15.2 \leq 40$

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

HORIZONTAL TERMINATION

when $(H_T) > (V_T)$
 Simple venting configuration (only one 45° and 90° elbow)

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

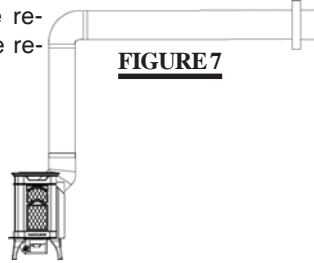
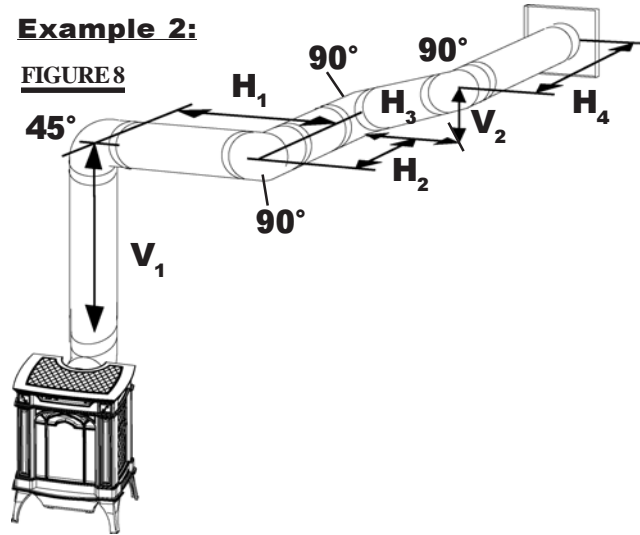


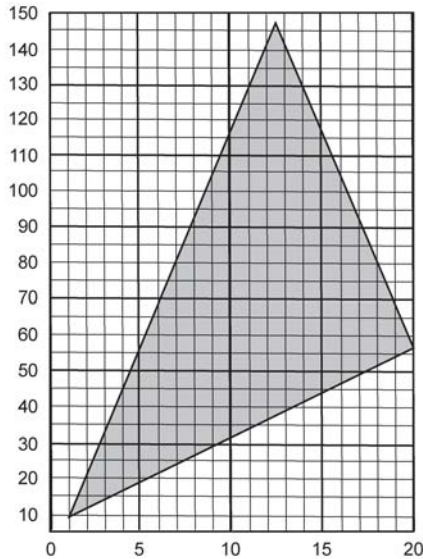
FIGURE 7

Example 2:

FIGURE 8



REQUIRED VERTICAL RISE IN INCHES (V_T)



HORIZONTAL VENT RUN PLUS OFFSETS IN FEET (HT)

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

For vent configurations requiring more than one 45° and 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

- $V_1 = 4$ ft
- $V_2 = 1.5$ ft
- $V_T = V_1 + V_2 = 4$ ft + 1.5 ft = 5.5 ft
- $H_1 = 2$ ft
- $H_2 = 1$ ft
- $H_3 = 1$ ft
- $H_4 = 1.5$ ft
- $H_R = H_1 + H_2 + H_3 + H_4 = 2 + 1 + 1 + 1.5 = 5.5$ ft
- $H_O = .03(\text{one } 45^\circ \text{ elbow} + \text{three } 90^\circ \text{ elbow} - 135^\circ) = .03(315 - 135) = 5.4$ ft
- $H_T = H_R + H_O = 5.5 + 5.4 = 10.9$ ft
- $H_T + V_T = 10.9 + 5.5 = 16.4$ ft

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

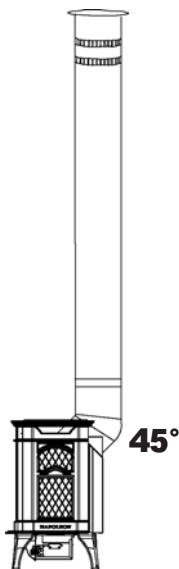
$10.9 \leq 16.8$
 Formula 2: $H_T + V_T \leq 24.75$ feet
 $16.4 \leq 24.75$

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

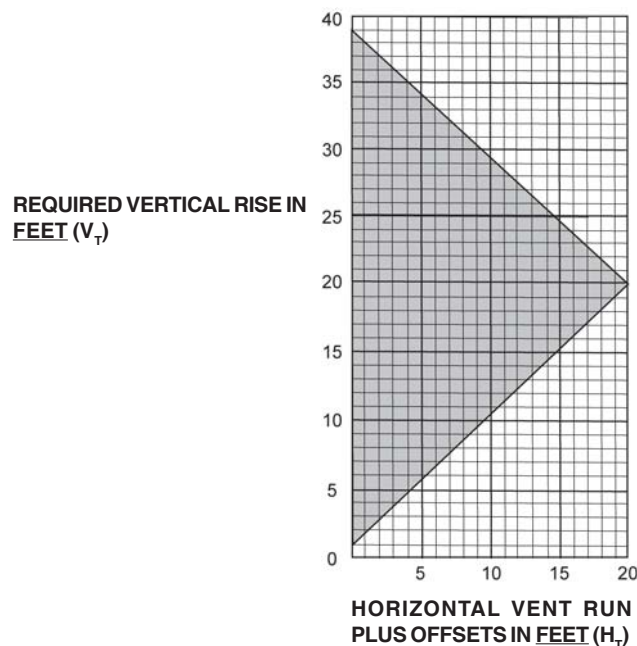
VERTICAL TERMINATION

when $(H_T) \leq (V_T)$

FIGURE 9



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 .

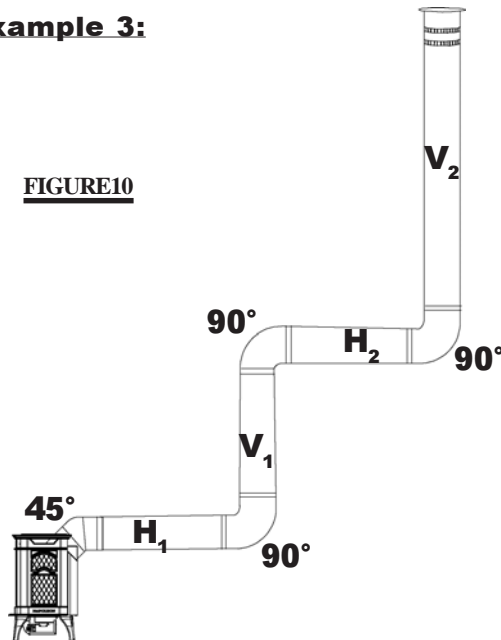
For vent configurations requiring more than one 45° and one 90° elbow, the following formulas apply:

Formula 1: $H_T \leq V_T$

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

Example 3:

FIGURE 10



- $V_1 = 5$ ft
- $V_2 = 10$ ft
- $V_T = V_1 + V_2 = 5 + 10 = 15$ ft
- $H_1 = 3$ ft
- $H_2 = 2.5$ ft
- $H_R = H_1 + H_2 = 3 + 2.5 = 5.5$ ft
- $H_o = .03(\text{one } 45^\circ \text{ elbow} + \text{three } 90^\circ \text{ elbows} - 135^\circ)$
 $= .03(45+90+90+90-135)=5.4$
- $H_T = H_R + H_o = 5.5 + 5.4 = 10.9$ ft
- $H_T + V_T = 10.9 + 15 = 25.9$ ft

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

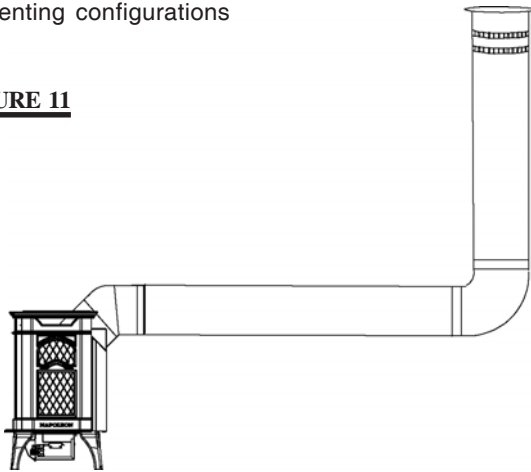
Formula 2: $H_T + V_T \leq 40$ feet
 $25.9 \leq 40$

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

VERTICAL TERMINATION

when $(H_T) > (V_T)$
Simple venting configurations

FIGURE 11



Example 4:

$$\begin{aligned} V_1 &= 1 \text{ ft} \\ V_2 &= 1.5 \text{ ft} \\ V_T &= V_1 + V_2 = 1 + 1.5 = 2.5 \text{ ft} \\ H_1 &= 6 \text{ ft} \\ H_2 &= 2 \text{ ft} \\ H_R &= H_1 + H_2 = 6 + 2 = 8 \text{ ft} \\ H_o &= .03(\text{one } 45^\circ \text{ elbow} + \text{three } 90^\circ \text{ elbow} - 135^\circ) \\ &= .03(45 + 90 + 90 + 90 - 135) = 5.4 \text{ ft} \\ H_T &= H_R + H_o = 8 + 5.4 = 13.4 \text{ ft} \\ H_T + V_T &= 13.4 + 2.5 = 15.9 \text{ ft} \end{aligned}$$

Formula 1: $H_T \leq 3V_T$
 $3V_T = 3 \times 2.5 = 7.5 \text{ ft}$
 $13.4 > 7.5$

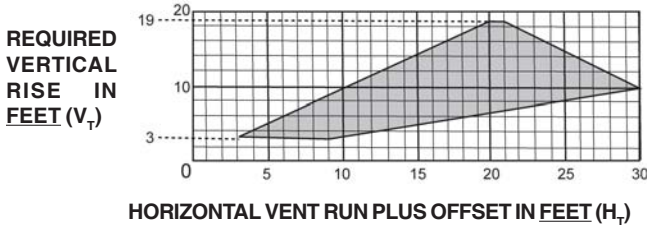
Since this formula is not met, this vent configuration is **unacceptable**.

Formula 2: $H_T + V_T \leq 40 \text{ feet}$
 $15.9 \leq 40$

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

Example 5:

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 45° and one 90° elbow, the following formulas apply:

Formula 1: $H_T \leq 3V_T$
Formula 2: $H_T + V_T \leq 40 \text{ feet}$

FIGURE 12

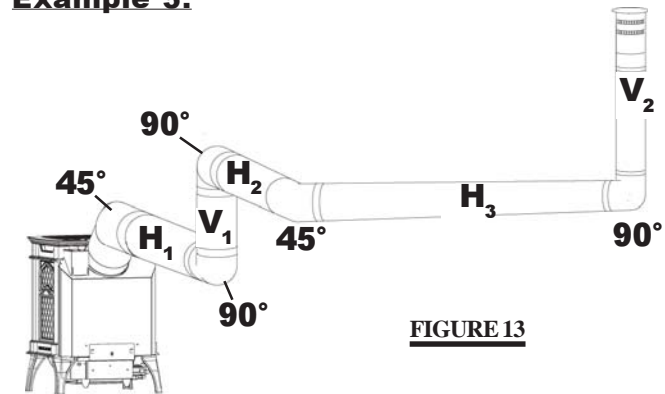
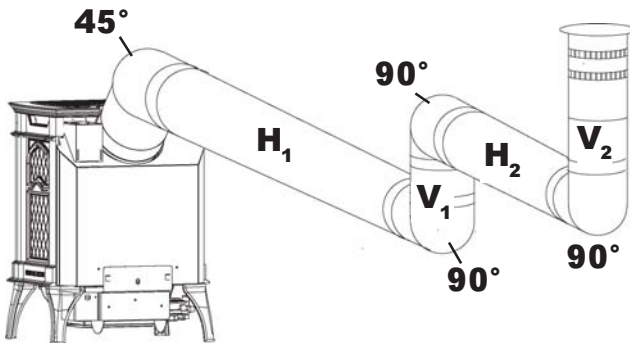


FIGURE 13

$$\begin{aligned} V_1 &= 1.5 \text{ ft} \\ V_2 &= 8 \text{ ft} \\ V_T &= V_1 + V_2 = 1.5 + 8 = 9.5 \text{ ft} \\ H_1 &= 1 \text{ ft} \\ H_2 &= 1 \text{ ft} \\ H_3 &= 10.75 \text{ ft} \\ H_R &= H_1 + H_2 + H_3 = 1 + 1 + 10.75 = 12.75 \text{ ft} \\ H_o &= .03(\text{three } 90^\circ \text{ elbows} + \text{two } 45^\circ \text{ elbow} - 135^\circ) \\ &= .03(90 + 90 + 90 + 45 + 45 - 135) = 6.75 \text{ ft} \\ H_T &= H_R + H_o = 12.75 + 6.75 = 19.5 \text{ ft} \\ H_T + V_T &= 19.5 + 9.5 = 29 \text{ ft} \end{aligned}$$

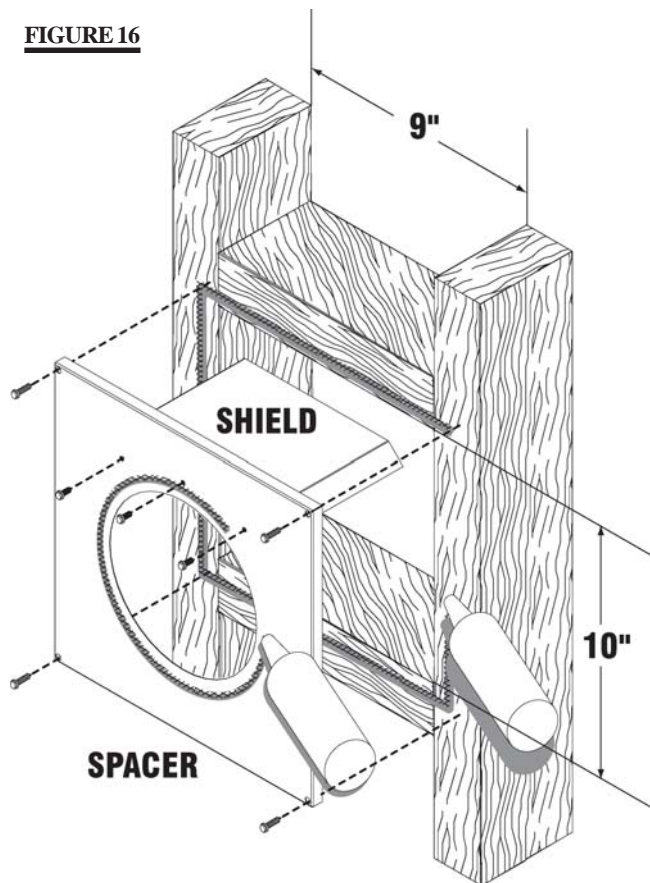
Formula 1: $H_T \leq 3V_T$
 $3V_T = 3 \times 9.5 = 28.5 \text{ ft}$
 $19.5 \leq 28.5$

Formula 2: $H_T + V_T \leq 40 \text{ feet}$
 $29 \leq 40$

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

WALL AND CEILING PROTECTION

FIGURE 16



HORIZONTAL INSTALLATION

This application occurs when venting through an exterior wall. Having determined the air terminal location, cut and frame a hole in an exterior wall with a minimum rectangle opening of 10" x 9".

IMPORTANT: FOR OPTIMUM PERFORMANCE, THE STOVE PIPE SHOULD RISE 1/4" PER FOOT OF RUN.

1. Assemble the shield to the spacer as shown, using the 3 shorter screws supplied.

The shield is meant to protect combustible materials within the wall. If the shield is deeper than the combustible portion of the wall, cut to fit.

2. Apply a bead of caulking all around and place the firestop spacer over the framework 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. Secure the spacer in place using the 4 longer screws supplied. 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.

Installation kits for various roof pitches are available from your Napoleon dealer. See Accessories to order the specific kit required.

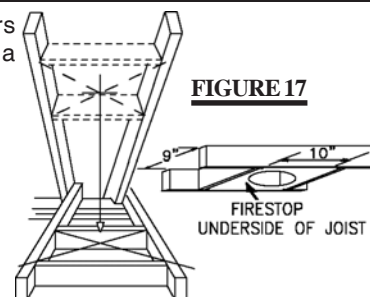


FIGURE 17

1. Determine the air terminal location and move the stove into position. Cut and frame 9" x 10" 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.

DO NOT FILL THIS SPACE WITH ANY TYPE OF MATERIAL.

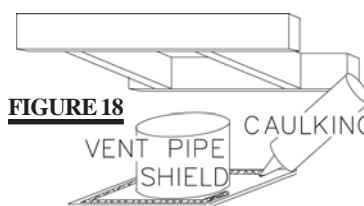


FIGURE 18

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

2. Apply a bead of caulking (not supplied) to the framework or to the Wolf Steel vent pipe shield plate or equivalent (in the case of a finished ceiling), and secure over the opening in the ceiling. A firestop must be placed on the bottom of each framed opening in a roof or ceiling that the venting system passes through. Apply a bead of caulking all around and place a firestop spacer over the vent shield to restrict cold air from being drawn into the room or around the 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.

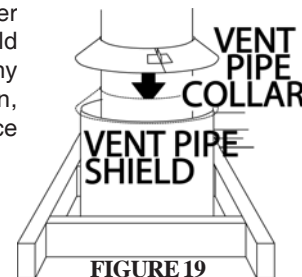


FIGURE 19

HORIZONTAL VENTING INSTALLATION

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

FOR HORIZONTAL RUNS, BOTH WOLF STEEL AND SIMPSON DURA-VENT VENTING COMPONENTS MAY HAVE A 0" RISE PER FOOT.

FOR OPTIMUM PERFORMANCE IT IS RECOMMENDED THAT ALL HORIZONTAL RUNS HAVE A MINIMUM ¼ INCH RISE PER FOOT.

ALL INNER EXHAUST AND OUTER INTAKE VENT PIPE JOINTS MAY BE SEALED USING EITHER RED RTV HIGH TEMP SILICONE SEALANT OR BLACK HIGH TEMP MILL PAC WITH THE EXCEPTION OF THE FIREPLACE EXHAUST FLUE COLLAR WHICH MUST BE SEALED USING MILL PAC (NOT SUPPLIED).

1. Stretch the 4" diameter aluminium 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 aluminium 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.

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 caulking (not supplied). The air terminal mounting plate may be recessed (up to 1½" maximum) into the exterior wall or siding.

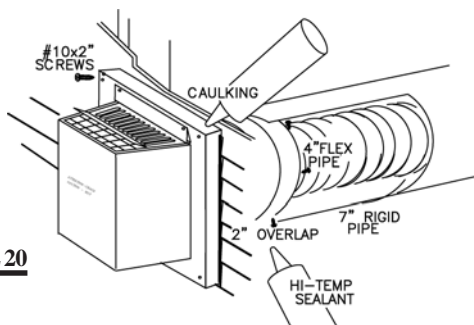


FIGURE 20

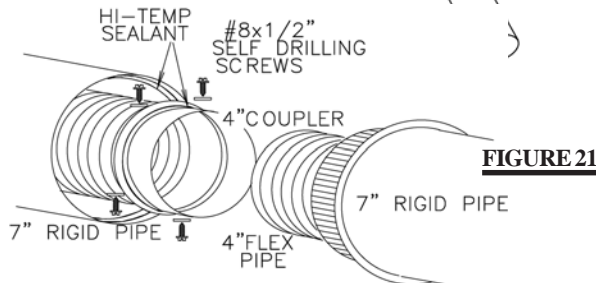


FIGURE 21

4. If more than one length of liner needs to be used to reach the stove, couple them together as illustrated in **FIGURE 24**. 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

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

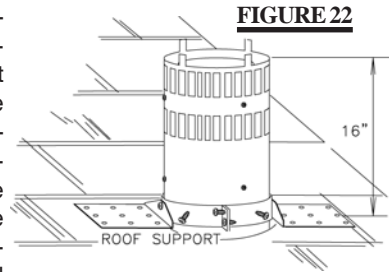


FIGURE 22

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

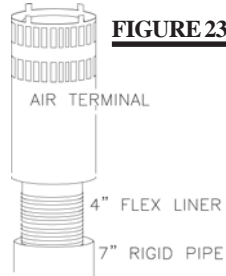


FIGURE 23

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.

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.

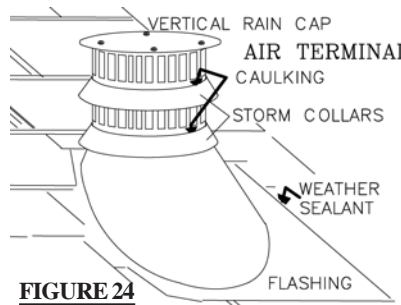


FIGURE 24

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.

5. 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.

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

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

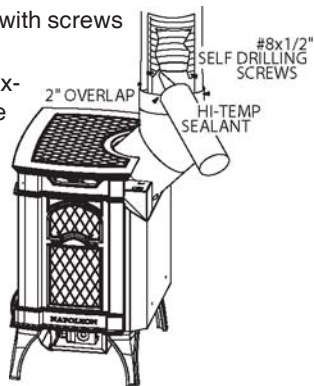


FIGURE 26

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 AND GD-176). IN THE EVENT THAT THE VENTING MUST BE DISASSEMBLED, CARE MUST BE TAKEN TO RESEAL THE VENTING.

MOBILE HOME INSTALLATION

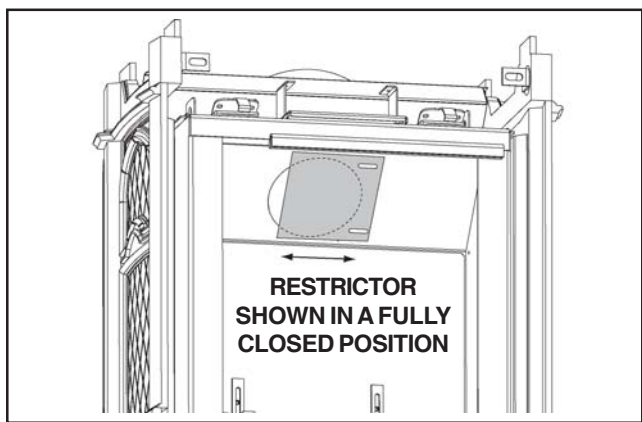
In Canada, mobile home installation may be vented horizontally or vertically. In the United States, it may only be installed vertically. See "Vertical Venting" or "Horizontal Air Terminal Installation" for installation.

For mobile home installations, the fireplace must be fastened in place. It is recommended that the fireplace be secured in all installations. Use the levelling/securing kit, GDSLL-KT for this purpose.

RESTRICTING VERTICAL VENTS



Vertical installations may display a very active flame. Loosen the two screws and slide the restrictor plate blocking the exhaust path. This reduces the velocity of the exhaust gases, slowing down the flame pattern and creating a more traditional flame appearance. For vertical vents greater than 15 feet, this restrictor must be fully closed.



GAS INSTALLATION

1. Install rigid black pipe, or 1/2" type L copper tubing with a shut-off valve to the stove.
2. Seal and tighten the gas line securely to a flex connector.

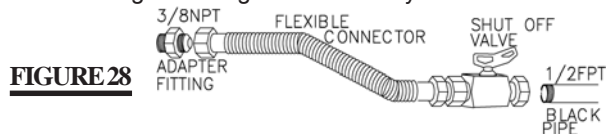
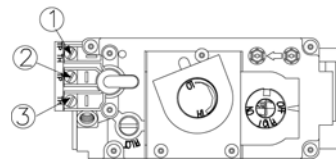


FIGURE 28

DO NOT KINK FLEXIBLE CONNECTOR.

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

FIGURE 29



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

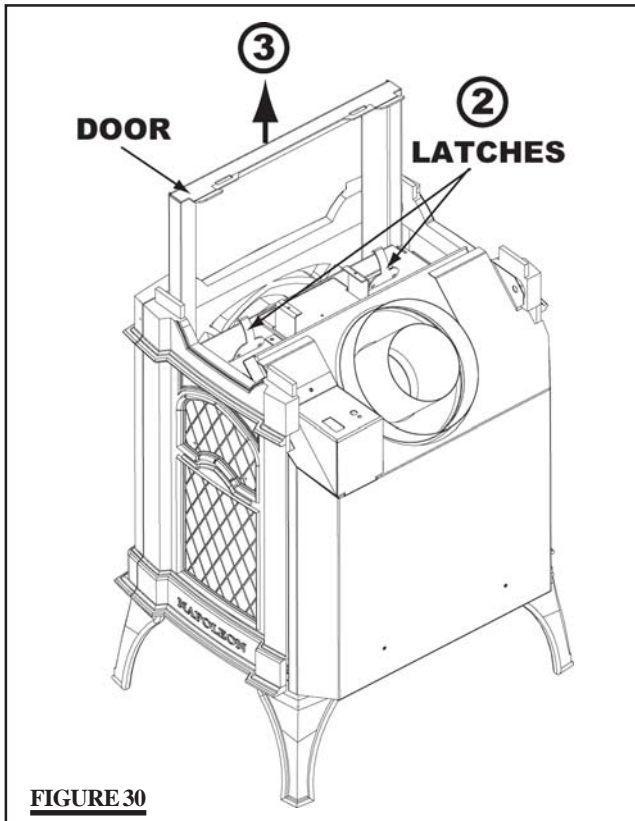
Disconnect the existing wires from terminals 1 and 3 (from the on/off switch) and replace with the leads from the wall switch/millivolt thermostat.

FINISHING

GLASS DOOR INSTALLATION AND REMOVAL

Note: It is not necessary to remove the cast front, in order to remove the door.

1. Lift the top cast piece off of the unit.
2. Unlatch the door latches from the door.
3. Slide the door straight up to remove.



Follow the above steps in reverse in order to reinstall the door. Ensure that the bottom of the door meets the door retainer before closing the latches.

Follow the above steps in reverse in order to reinstall the cast front. Ensure that the tabs on the underside of the front fit behind the front legs.

CAST FRONT INSTALLATION AND REMOVAL

1. Lift the top cast piece off of the unit.
2. Detach the front cast piece from the side pieces by removing the screws from the brackets located in the upper inside corners.
3. Slide the front straight up to remove.

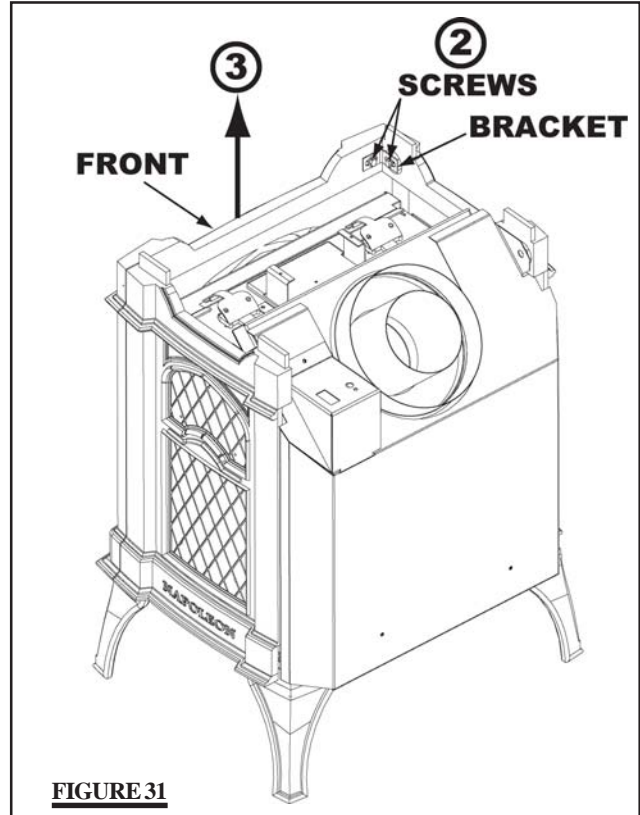
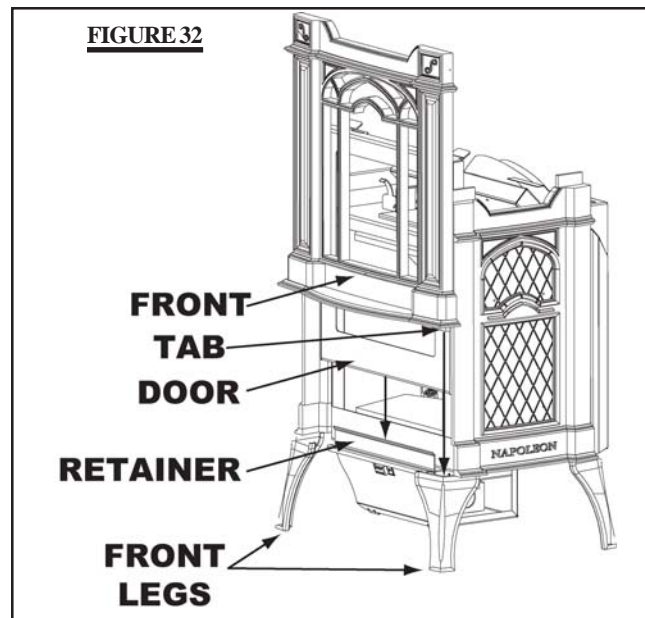
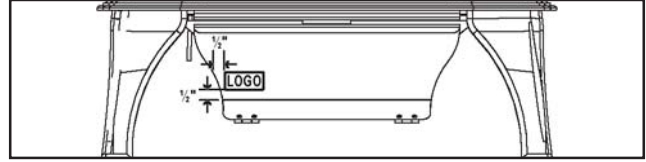


FIGURE 32



LOGO PLACEMENT

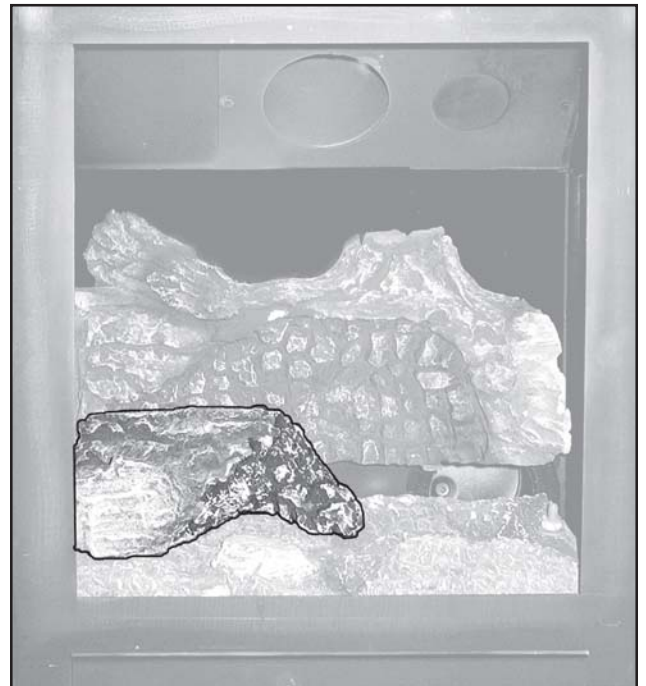
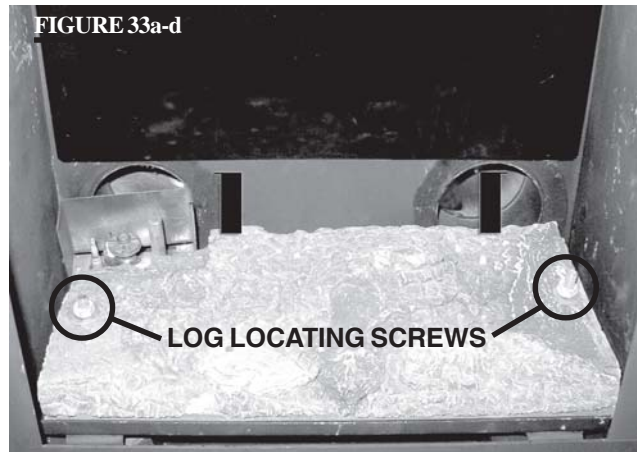
Remove the backing from the the logo and position onto the control door as shown.



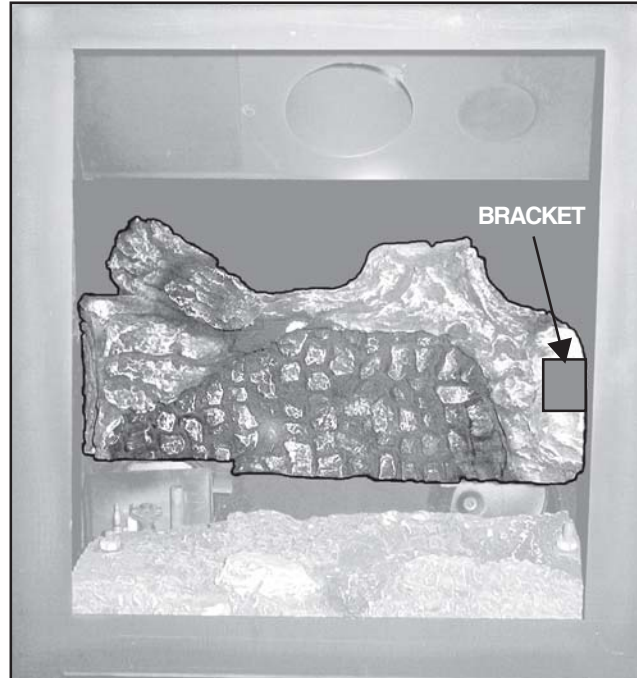
LOG PLACEMENT

It is not necessary to remove the cast front, however, this will make for a more simple log installation.

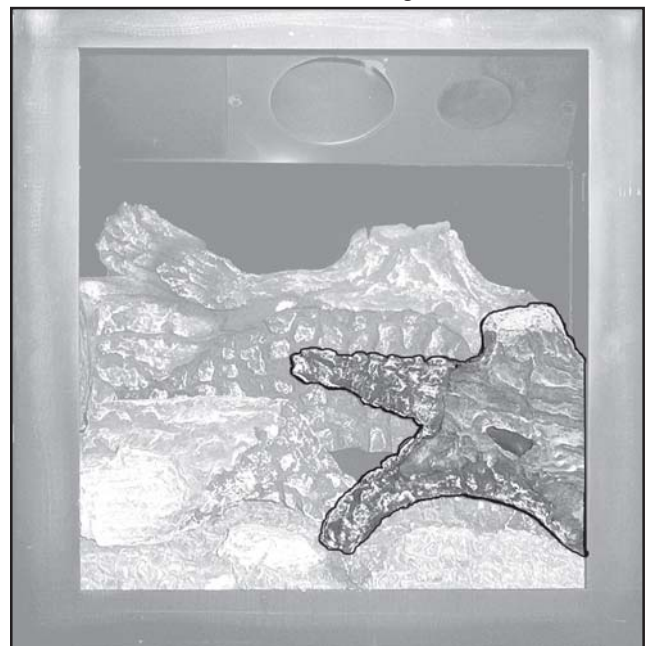
In order to assemble the log set, the door must be removed, see **Cast Front / Glass Door Removal** in the **FINISHING** section of this manual.



2. Place the hole in the underside of log #2 onto the locating screw, on the left side of the burner. The fibre burner is formed to cradle the centre of the log.



1. Place the rear log, as shown, onto the rear log support brackets. Ensure the cutout on the left underside of the log, fits over the pilot assembly. Bend the bracket on the right side to help retain the rear log.



3. Place the hole in the underside of log #3 onto the locating screw, on the right side of the burner. The bottom branch of log #3 sits in front of, and against, the right end of log #2.

4. Reinstall the glass door & front.

OPERATION / MAINTENANCE

Purge all gas lines with the glass door removed. 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.

OPERATING INSTRUCTIONS

The on-off switch is located on the back of the unit at the top right corner on model GDS20.

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 burning off. Open a window to sufficiently ventilate the room.

FOR YOUR SAFETY READ BEFORE OPERATING

WARNING: if you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- 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.

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.


- C.** Use only your hand to push in or 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.

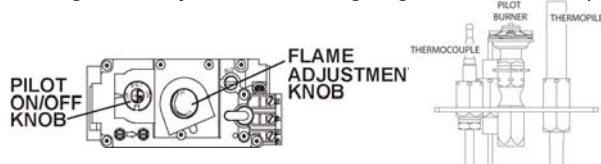
- D.** Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the fireplace and replace any part of the control system and any gas control which has been under water.



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 before attempting to re-light.

When lighting and re-lighting, the gas knob cannot be turned from PILOT to OFF unless the knob is depressed.

1. **STOP!** Read the safety information on the operating 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" on the operating label. If you don't smell gas go to the next step.



5. Find pilot located under the left side of the back log.
6. Turn gas knob counter-clockwise  to pilot.
7. Depress and hold the gas knob while lighting the pilot with the push button igniter. Keep knob fully depressed for one minute, then release. If the pilot does not continue to burn, repeat steps 3 through 6.
8. With the pilot lit (check pilot indicator light), turn the gas knob counter-clockwise  to on.
9. If equipped with a remote ON-OFF switch, main burner may not come on when you turn the valve to ON. The remote switch must be in the ON position to ignite the burner.
10. Turn on all electric power to the fireplace.

TO TURN OFF GAS

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

MAINTENANCE

TURN OFF THE GAS AND 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 stove 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 flames are large enough to engulf the thermocouple and the thermopile on one leg and reaches toward the burner on the other leg.

5. Replace the cleaned logs.

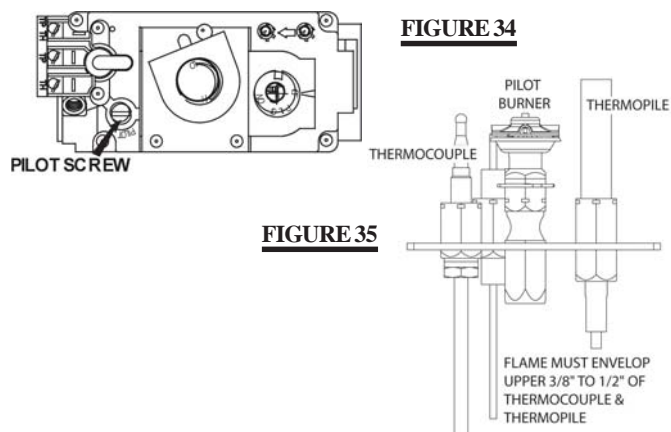
6. Check to see that the main burner ignites completely on all openings when the gas knob for the burner is turned on. A 5-10 second total light-up period is satisfactory. If ignition takes longer, consult your Napoleon dealer/distributor.

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

ADJUSTMENTS

PILOT BURNER ADJUSTMENT

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



ORIFICE REPLACEMENT

1. Remove the cast front and the door, see **Cast Front and Glass Door Removal** in the **FINISHING** section of this manual.

2. Remove the 2 securing screws indicated and remove the burner assembly.

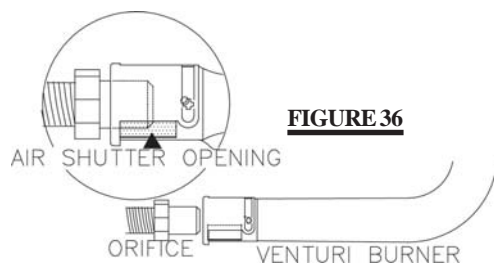
3. The orifice is located on the left hand side.

4. Reinstall the burner ensuring that the venturi tube fits over the orifice and replace the screws.

Care should be taken not to damage the gas pipe. When removing and replacing the orifice, using a 9/16" socket wrench, a 7/8" back-up wrench must be used on the manifold, located below the housing, to ensure that the aluminium tubing does not twist or kink.

VENTURI ADJUSTMENT

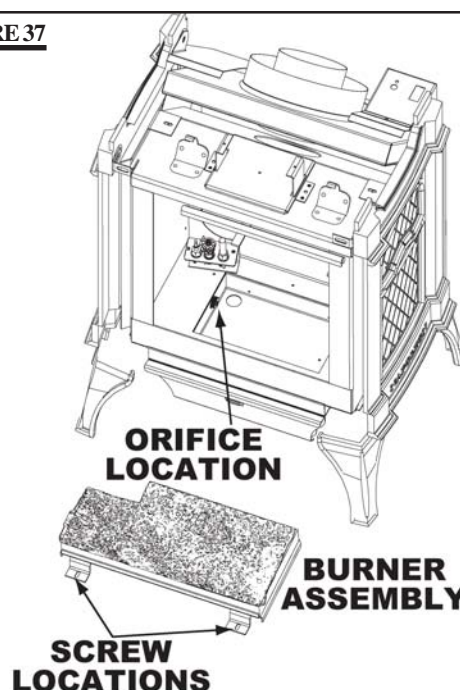
Remove the 2 screws securing the burner. Natural gas models have air shutters set to 0.125" open (1/8"). Propane models have air shutters set to 0.250" open (1/4"). After making adjustments replace the burner ensuring that the venturi tube fits over the orifice and replace the screws.



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

Closing the air shutter will cause a more yellow flame, but can lead to carboning. The flame may not appear yellow immediately; allow 15 to 30 minutes for the final flame colour to be established.

FIGURE 37



REPLACEMENTS

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

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

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

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

REPLACEMENT PARTS

#	PART #	DESCRIPTION
1	W135-0248	LOG #1 - REAR
2	W135-0249	LOG #2 - LEFT
3	W135-0250	LOG #3 - RIGHT
4	GL-651	LOG SET
5	W725-0035	SIT VALVE - NG
5	W725-0043	SIT VALVE - LP
6	W100-0084	BURNER (NATURAL GAS)
6	W100-0086	BURNER (PROPANE)
7	W455-0065	#45 BURNER ORIFICE - NG
7	W455-0050	#55 BURNER ORIFICE - LP
8	W010-0800	PILOT ASSEMBLY - NG
8	W010-0801	PILOT ASSEMBLY - LP
9	W455-0069	PILOT INJECTOR - NG
9	W455-0068	PILOT INJECTOR - LP
10	W680-0005	THERMOCOUPLE
11	W680-0004	THERMOPILE
12	W357-0001	PIEZO IGNITOR
13*	W385-0245	NAPOLEON LOGO
14*	W660-0009	ON/OFF SWITCH
15	W690-0002	THERMODISC
16	KB-35	VARIABLE SPEED SWITCH
17	GZ552	REPLACEMENT BLOWER
18	W135-0233	FRONT
19	W135-0232	SIDE (LEFT OR RIGHT)
20	W135-0231	TOP
21	W225-0162	DOOR
22	W010-1306	GLASS w/ GASKET
23	W430-0013	CONTROL DOOR MAGNET
24	W010-1307	CONTROL COVER
25	W750-0149	PILOT LIGHT ASSEMBLY
26	W615-0072	FIRESTOP SPACER
27	W585-0198	FIRESTOP SPACER SHIELD

TERMINAL KITS

28	GD175 - WALL TERMINAL KIT
29	BM6790 90° ELBOW - 7" DIAMETER
30	GD222 TERMINAL ASSEMBLY
31	BM67ADJ 30" TO 53" ADJUSTABLE PIPE - 7" DIA
32	W500-0077 FIRESTOP / WALL PLATE
33	W020-0032 HARDWARE
34	BRTC7 BRASS TRIM COLLAR
35	BM6724 24" STOVE PIPE - 7" DIAMETER
36	W010-0300 10' ALUMINIUM FLEX LINER C/W SPACERS - 4" DIA
37	W025-0001 DECORATIVE BRASS BAND
38	GD180 - PERISCOPE TERMINAL KIT
29	BM6790 90° ELBOW - 7" DIAMETER
39	GD201 PERISCOPE
31	BM67ADJ 30" TO 53" ADJUSTABLE PIPE - 7" DIA
32	W500-0077 FIRESTOP / WALL PLATE
33	W020-0032 HARDWARE
34	BRTC7 BRASS TRIM COLLAR
35	BM6724 24" STOVE PIPE - 7" DIAMETER
36	W010-0300 10' ALUMINIUM FLEX LINER C/W SPACERS - 4" DIA
40	GD176 - WALL TERMINAL KIT
34	BRTC7 BRASS TRIM COLLAR
35	BM6724 24" STOVE PIPE - 7" DIAMETER
37	W025-0001 DECORATIVE BRASS BAND
41	BM6745 45° ELBOW
42	W410-0027 2 PLY FLEX ALUMINIUM LINER - 4" x 32.5"

ROOF TERMINAL KITS

GD110 - 1/12 TO 7/12 PITCH

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

GD111 - 8/12 TO 12/12 PITCH

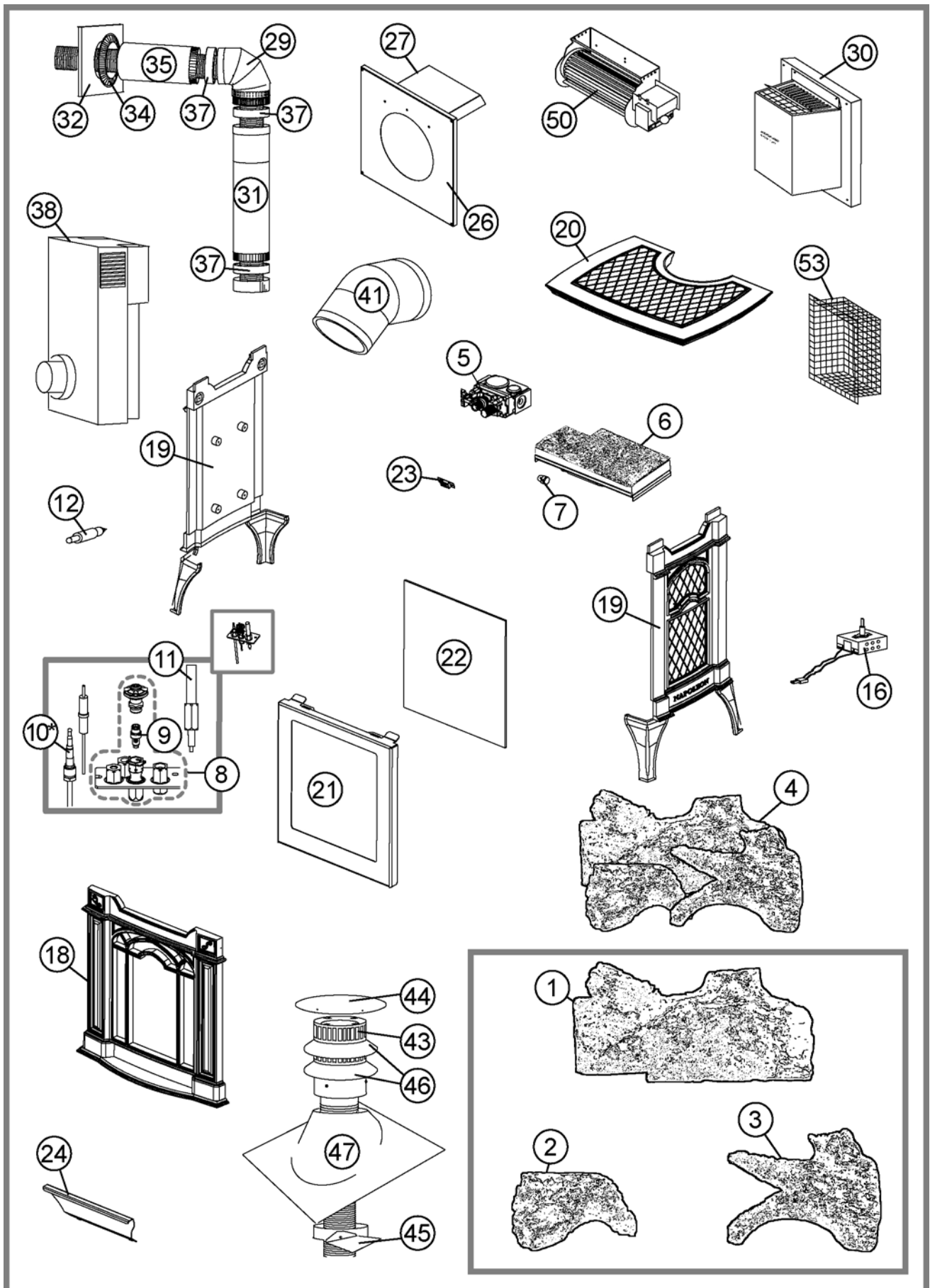
43	W010-0569	AIR TERMINAL
44	W120-0036	VERTICAL CAP
45	W010-0567	ROOF SUPPORT
46	W170-0063	STORM COLLAR
47	W263-0055	ROOF FLASHING

GD112 - FLAT ROOF

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

ACCESSORIES:

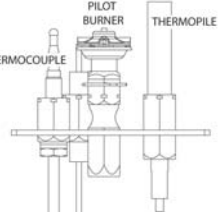
48*	W690-0001	MILLIVOLT THERMOSTAT
49*	W690-0011B	REMOTE CONTROL - ADVANTAGE PLUS
50	GS-65KT	BLOWER KIT
51*	GDSL-KT	LEG LEVELLING KIT
52*	W175-0234	CONVERSION KIT - NG-LP
52*	W175-0237	CONVERSION KIT - LP-NG
41	BM6745	45° ELBOW
53	GD-301	HEAT GUARD
54*	W175-0001	4" COUPLER
55	GD201	PERISCOPE
37	W025-0001	DECORATIVE BRASS BAND
56*	GS331S	STOVE TOP INSET - SOAPSTONE
56*	GS-331F	STOVE TOP INSET - GRANITE - GREEN
56*	GS-331N	STOVE TOP INSET - GRANITE - BROWN



*** 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.

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 will not light. <div style="text-align: center; margin-top: 10px;">  </div>	No spark at pilot burner	<ul style="list-style-type: none"> - check if pilot can be lit by a match - check that the wire is connected to the push button ignitor. - check if the push button ignitor needs tightening. - replace the wire if the wire insulation is broken or frayed. - replace the electrode if the ceramic insulator is cracked or broken.
	Spark gap is incorrect	<ul style="list-style-type: none"> - spark gap should be 0.150" to 0.175" (5/32" to 11/64" approx.) from the electrode tip and the pilot burner. To ensure proper electrode location, tighten securing nut (finger tight plus 1/4 turn).
	No gas at the pilot burner	<ul style="list-style-type: none"> - check that the manual valve is turned on. - check the pilot orifice for blockage. - replace the valve. - call the gas distributor.
	Out of propane gas.	<ul style="list-style-type: none"> - fill the tank.
Pilot goes out when the gas knob is released.	System is not correctly purged.	<ul style="list-style-type: none"> - purge the gas line with the stove door open.
	Out of propane gas	<ul style="list-style-type: none"> - fill the tank.
	Pilot flame is not large enough	<ul style="list-style-type: none"> - turn up the pilot flame.
	Pilot flame is not engulfing the thermocouple.	<ul style="list-style-type: none"> - turn up pilot flame. - replace pilot assembly.
	Thermocouple shorting.	<ul style="list-style-type: none"> - loosen and tighten thermocouple. - clean thermocouple and valve connection. - replace thermocouple. - replace valve.
	Faultly thermocouple.	<ul style="list-style-type: none"> - replace.
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"> - remove stoppage in orifice.
	Faulty thermopile.	<ul style="list-style-type: none"> - replace.
	Faulty thermostat or switch.	<ul style="list-style-type: none"> - connect a jumper wire across the wall switch terminals; if main burner lights, replace thermostat. - disconnect switch wires from the valve & connect a jumper wire across terminals 1 & 3; if the main burner lights, check the wires for defects and / or replace wires. - disconnect the pilot light wires from the valve and connect a jumper wire across terminals 1 & 3; if the main burner lights, check the wires for defects and / or replace wires.
	Faulty valve.	<ul style="list-style-type: none"> - replace.
Pilot goes out while standing; Main burner is in 'OFF' position.	Gas piping is undersized.	<ul style="list-style-type: none"> - turn on all gas appliances and see if pilot flame flutters, diminishes or extinguishes, especially when main burner ignites. Monitor supply pressure. - check if supply piping size is to code. Correct all undersized piping.
	Main burner goes out; pilot stays on.	<ul style="list-style-type: none"> - turn up pilot flame. - replace pilot assembly.
	Thermopile shorting	<ul style="list-style-type: none"> - clean thermopile and thermopile connection to valve.
	Remote wall switch wire is too long, too much resistance in the system	<ul style="list-style-type: none"> - shorten wire to correct length or wire gauge.
	Faulty thermostat or switch	<ul style="list-style-type: none"> - replace

SYMPTOM	PROBLEM	TEST SOLUTION
Main burner goes out; pilot goes out.	REFER TO "MAIN BURNER GOES OUT; PILOT STAYS ON"	
	Vent re-circulating	- check joint seals and installation.
	Thermocouple shorting or faulty.	- loosen and tighten thermocouple - clean thermocouple and valve connection. - replace thermocouple. - replace valve.
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.
Flames are very aggressive.	Door is ajar	- tighten door clamps
	Venting action is too great.	- restrict vent exit with restrictor plate. See Restricting Vents.
Main burner flame is a blue, lazy, transparent flame.	Blockage in vent.	- remove blockage. In really cold conditions, ice buildup may occur on the terminal and should be removed as required.
	Incorrect installation (vertical termination only).	- refer to Figure 24 to ensure correct location of storm collars.
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. DO NOT CLEAN GLASS WHEN HOT. If deposits are not cleaned off regularly, the glass may become permanently marked.
Pilot burning. Pilot indicator light is not flashing.	Batteries exhausted.	- change batteries.

