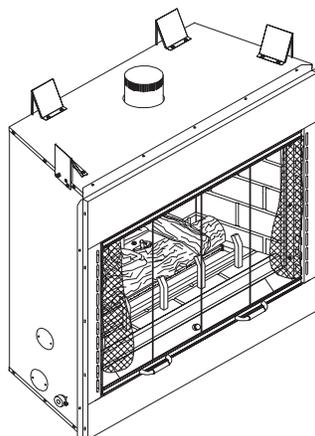


# VANGUARD®

## B-VENT DECORATIVE GAS FIREPLACE OWNER'S OPERATION AND INSTALLATION MANUAL



### EVGL850N (NATURAL) ELECTRONIC IGNITION

**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 any other flammable vapors or 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 neighbor'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.

#### SAVE THIS BOOK

This book is valuable. In addition to instructing you on how to install and maintain your appliance, it also contains information that will enable you to obtain replacement parts or optional accessory items when needed. Keep it with your other important papers.

**WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

**NOT FOR USE WITH SOLID FUEL  
CHECK LOCAL CODES PRIOR TO  
INSTALLATION**

This appliance may be installed in an aftermarket\* manufactured (mobile) home, where not prohibited by state or local codes.

This appliance is only for use with the type of gas indicated on the rating plate.

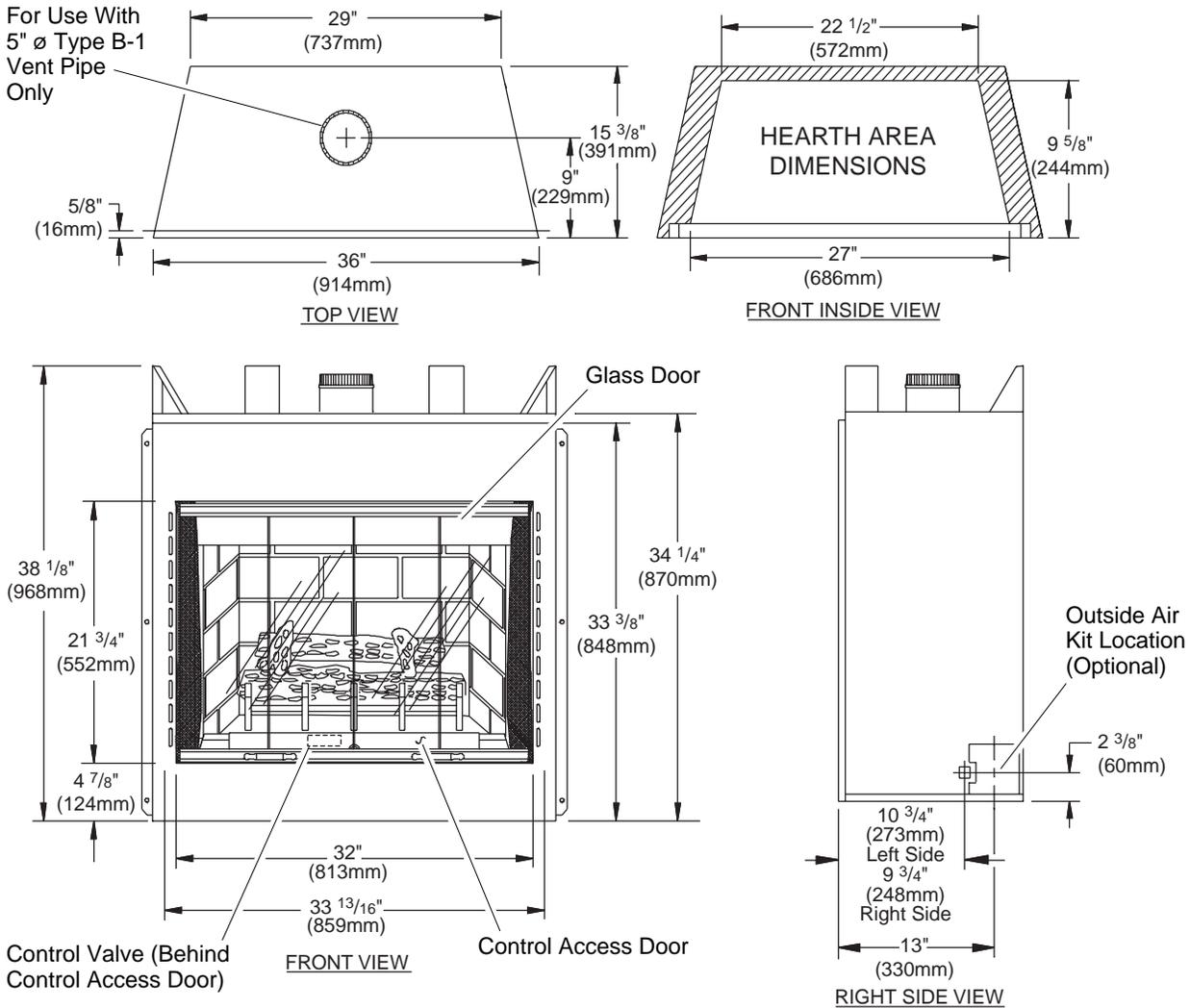
This appliance is not convertible for use with other gases, unless a certified kit is used.

\*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

**Save this manual for future reference.**

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE



**Figure 1 - Appliance Dimensions**

# OWNER'S MANUAL

## INTRODUCTION

Model EVGL850N is a radiant heat decorative gas appliance that use an electronic gas control valve with electronic ignition system. A 5" B-Type venting system and a listed type vent cap are not supplied but are required for proper operation. See venting instructions on pages 6 and 7.

**⚠ WARNING: This gas appliance must not be connected to a chimney flue servicing a solid fuel burning appliance.**

- Model EVGL850N uses NATURAL GAS ONLY.

If you have any doubts as to which gas your particular unit is approved and tested for use with, please check the rating plate located behind the control access door (Figure 1, page 2).

## BEFORE YOU BEGIN

Before beginning the installation of your appliance, read these instructions through completely.

This DESA appliance and its approved components are safe when installed according to this installation manual and are operated as recommended by DESA. Unless you use DESA approved components tested for this appliance, **YOU MAY CAUSE A FIRE HAZARD!**

The DESA warranty will be voided by, and DESA disclaims any responsibility for the following actions :

- A) Modification of the appliance or any of the components.
- B) Use of any component part not approved by DESA in combination with this appliance.
- C) Installation and/or operation in a manner other than instructed in this manual.
- D) The burning of anything other than the type of gas approved for use in this gas appliance.

This appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the *National Electrical Code, ANS/NFPA 70* or the *Canadian Electrical Code, CSA C22.1*.

The installation must conform with local codes or, in the absence of local codes, with the current *National Fuel Gas Code, ANS Z223.1* or with the current *CAN/CGA B149 Installation Codes*.

This appliance complies with *ANS Z21.50-1998* and *CSA 2.22-M98 as Vented Gas Fireplaces* and is listed and tested by the *Canadian Standards Association* to the above test standards.

**⚠ WARNING: Installation of this appliance must be done by a qualified service person well trained in the installation of such appliances. You will also need a building permit from your local Building and Safety Commissioner before installing this appliance; otherwise your insurance co. may not cover this appliance.**

**This appliance is not intended to be used as a primary source of heat.**

**⚠ CAUTION: Do not connect appliance before pressure testing gas piping. Damage to gas valve may result and an unsafe condition may be caused.**

The appliance and its individual equipment 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 appliance must be isolated from the gas supply piping system by closing its individual equipment 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).

For the purpose of input adjustment two pressure taps (for IN and OUT pressures) are provided on the gas control valve for test gauge connections to the appliance.

### GAS RATING

GAS RATING	
Type of Gas	Natural
Max. Input Rating:	21,000 Btu/hr
Manifold Pressure:	3.5 in. WC (.87 kPa)
Minimum Supply Pressure:	4.5 in. WC (1.12 kPa)
Maximum Supply Pressure:	10.5 in. WC (2.66 kPa)
Orifice Size:	# 45

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### SELECTING LOCATION

To determine the safest and most efficient location for your appliance, you must take into consideration the following guidelines:

1. The location must allow for proper clearances (see *Clearances*).
2. Consider a location where heat output would not be affected by drafts, air conditioning ducts, windows, or doors.
3. A location that avoids the cutting of joists or roof rafters will make installation easier. Figure 2 shows a plan view of a few common locations.
4. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

**Flush installations** are recommended where living space is limited or at a premium, and since the space required to enclose the appliance would be located beyond an outside wall, this would also reduce the cutting of joists, roof rafters, and such. Check local codes for any restrictions.

**Projected installations** can extend any distance into the room. A projection may be ideal for a new addition on an existing, finished wall.

**Corner installations** make use of space that may not normally be used and provides a wider and more efficient range for radiant heat transference.

**Internal wall installations** provide a discreet option for room separation and can also be ideal as an addition to an existing wall.

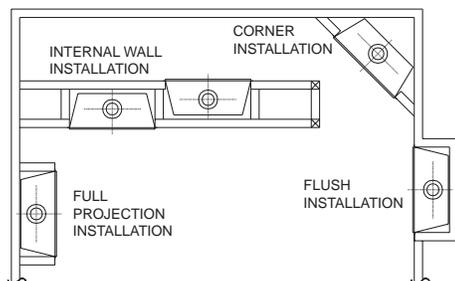


Figure 2 - Possible Locations for Installing Appliance

Also, in selecting a location, the following precautions must be observed:

1. Do not connect this appliance to a chimney system used for a solid fuel burning fireplace.
2. Install in an area providing ventilation and adequate combustion air.
3. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
4. NEVER obstruct the front opening of the appliance or the flow of combustion and ventilation air. Keep control compartments accessible.
5. Do not locate in the vicinity where gasoline or other flammable liquids may be stored. The appliance area must be kept clear and free from these combustible materials.
6. A hearth extension is not required with this appliance. If one is installed, it is for aesthetic purposes only and does not have to meet the standard requirements.
7. If the appliance is installed on a surface other than wood flooring (such as carpeting, tiles, etc.) a metal or wood panel should be added, extending the full width and depth of the appliance.

### PRE-INSTALLATION PREPARATION

#### CLEARANCES

Minimum clearances to combustibles are:

- Back and Sides of Outer Surround: ..... 1/2" min.
- Drywall to Sides of Front Face (Nailing Flanges): .. 0" min.
- "B" Vent Surfaces: ..... 1" min.
- Ceiling to Opening: ..... 41 1/2" min.
- Floor: ..... 0" min.

**⚠ CAUTION: Do not block required air spaces with insulation or any other material. Do not obstruct effective opening of appliance with any type of facing material.**

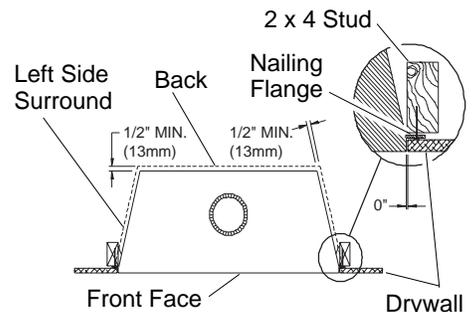


Figure 3 - Minimum Clearances (Top View)

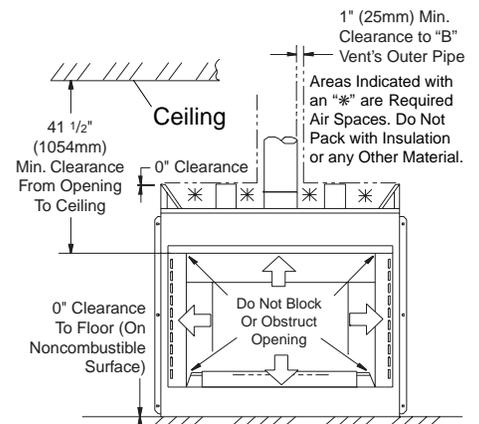


Figure 4 - Minimum Clearances (Front View)

# OWNER'S MANUAL

## MANTEL CLEARANCES AND WALL DETAILS

A combustible mantel shelf may be installed a maximum 9" (229mm) from the wall and must have a minimum distance of 18" (457mm) above the fireplace opening. Figures 5 and 6 show the minimum allowable distances from various combustible mantel components in relation to the fireplace opening.

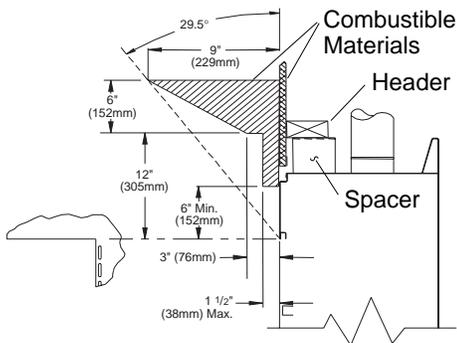


Figure 5 - Mantel Clearances - Side View (Cross Section)

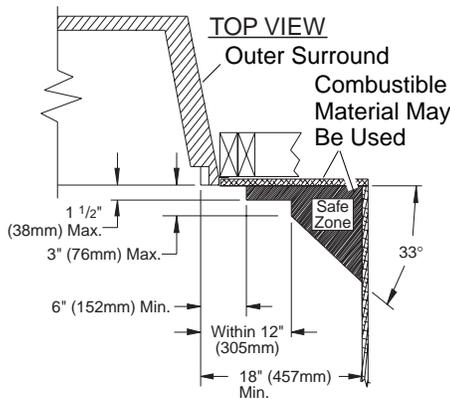


Figure 6 - Side Clearances - Top View (Cross Section)

## FRAMING

1. Frame appliance enclosure as illustrated in Figures 7 and 8.

**Note:** If a wall covering is used to line the enclosure, then all measurements must be from the surface of the covering.

2. Place the appliance into the framing and secure it.

**Note:** If appliance is to be raised above floor level, a platform must be built to support the appliance.

3. Install the supply line to the appliance using a 1/2" NPT black iron gas line terminating 2 5/16" above the bottom of the appliance. The gas line may be installed from either side or from the rear of the appliance (see Figure 15, page 9).

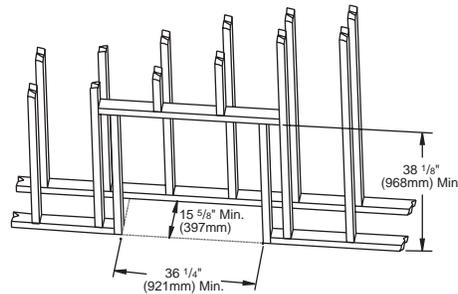


Figure 7 - Rough Opening for Installing in Wall

4. Feed flexible gas line through one of three gas line conduit sleeve and repack insulation to cover any openings. Prepare the incoming gas line with teflon tape or pipe joint compound and hook-up incoming gas line to the flexible gas line.

**Note:** If 1/2" NPT black iron pipe does not mate with fitting at the end of flexible gas line, remove fitting and replace with a 37 degree flare 3/4"-12, 1/2" NPT (female) fitting.

**WARNING:** When finishing appliance, Do not overlap combustible material onto the black front face. Brick, tile, or other noncombustible materials may be applied to the face provided that any gap is between the material used and the face is caulked with a noncombustible caulking.

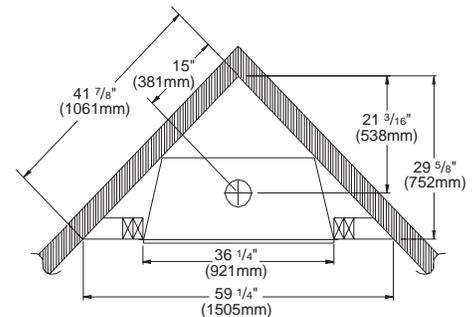


Figure 8 - Rough Opening for Corner Installation

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### VENTING INSTALLATION

A B-type venting system must be connected to the appliance for venting to the outside of the building.

The following section is provided as a guide to a standard B-type vent installation.

Standing codes requirements concerning B-type vent installations may vary within your state, province or local codes jurisdiction. Therefore, it is recommended that you check with your local building codes for specific requirements or in absence of local codes, follow Section 7.0 of the current *National Fuel Gas Code NFPA No. 54/ANS Z223.1* and in Canada with *CAN/CGA B149 for Category I systems using double wall B-1 vent pipe*.

This gas appliance must be vertically vented to the outdoors only and may not be terminated into an attic space or into a chimney flue servicing a solid-fuel burning appliance.

This appliance may be vented through a manufactured chimney system or a masonry chimney using a B-vent adapter or a chimney liner system if all are listed, inspected and approved by local codes and/or building authorities.

The examples shown in Figure 9 are typical of most B-vent installations and codes practices.

**Example 1:** Shows the minimum allowable system height and lateral offset for a 60° degree or greater inclination. Code specifies that offsets at 60° degrees or greater are considered horizontal and must follow the 75% percent rule for lateral to total vertical system height. Codes also allows only one offset in the total system when at 60° degrees or greater. The total vertical height in this example represents the minimum height of 8 feet and therefore the allowable lateral is 6 feet when the 75% percent rule applies. If the lateral length must exceed 75% then the system must be sized in accordance with the Category I venting tables.

**Example 2:** Shows a multiple offset each at 45° degrees of inclination. Multiple offsets are permitted if they do not exceed 60° degrees of inclination. The total lengths of the two offsets are not required to meet the 75% percent allowable rule.

**Example 3:** Shows a single offset at 45° degrees of inclination and therefore the lateral length at 10 feet of offset does not have to meet the 75% percent rule.

In each case the offsets must be supported and firestops must be positioned wherever the vent must pass through a sub-floor, ceiling joist or an attic overhang. The vent pipe must terminate vertically into a listed type vent cap and extend a sufficient height through an approved roof flashing, roof jack or a roof thimble. At all points the listed clearances must be maintained.

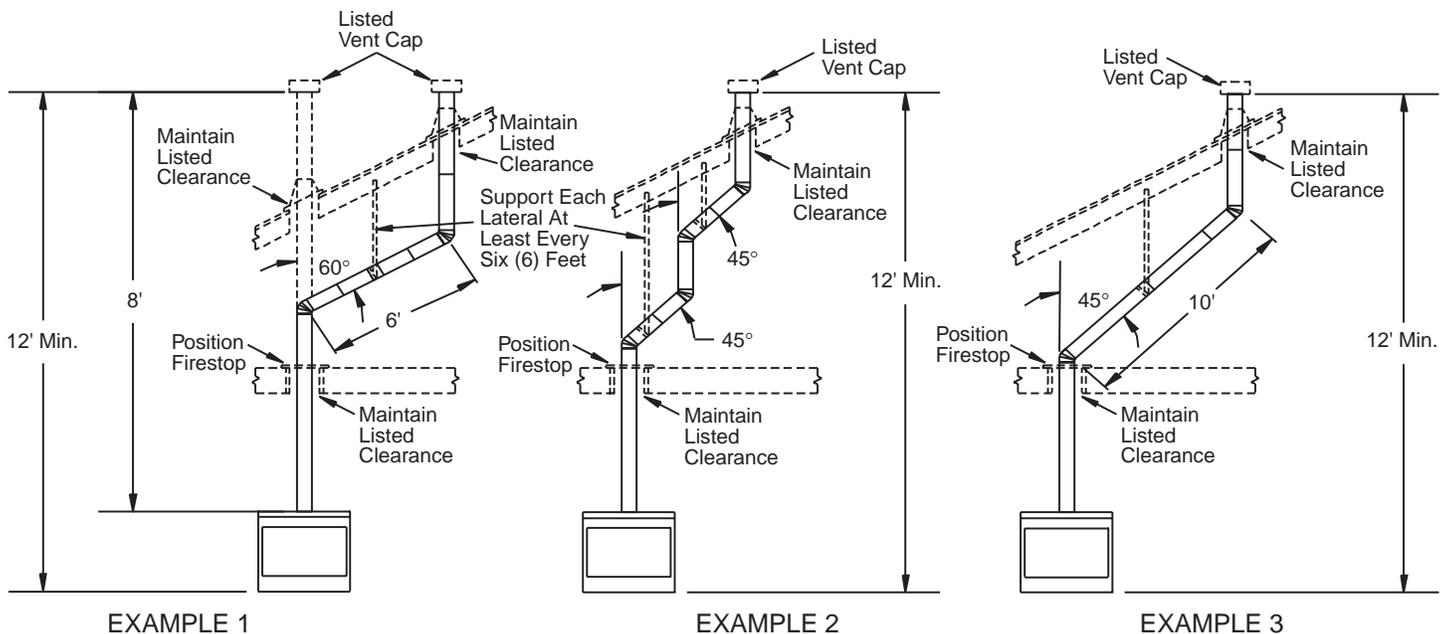
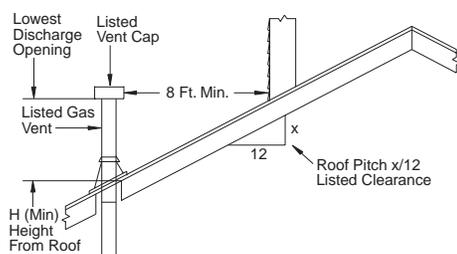


Figure 9 - Typical B-Vent Configuration

## VENTING INSTALLATION

### Continued

Vent terminations must be located in accordance with height and proximity rules of NFPA No. 54 or CAN/CGA B149. These rules apply to vents at 12 in. diameter or less and require a minimum height in accordance with the roof pitch and a minimum of 8 ft. distance from a vertical wall or obstruction (see Figure 10).



Roof Pitch	H (Min.) Ft.	m
Flat to 6/12	1.0	0.30
6/12 to 7/12	1.25	0.38
Over 7/12 to 8/12	1.5	0.46
Over 8/12 to 9/12	2.0	0.61
Over 9/12 to 10/12	2.5	0.76
Over 10/12 to 11/12	3.25	0.99
Over 11/12 to 12/12	4.0	1.22
Over 12/12 to 14/12	5.0	1.52
Over 14/12 to 16/12	6.0	1.83
Over 16/12 to 18/12	7.0	2.13
Over 18/12 to 20/12	7.5	2.27
Over 20/12 to 21/12	8.0	2.44

Figure 10 - B-Vent Terminations

If venting horizontally through a side wall becomes necessary, a listed thimble approved for use with B-type vent must be used. Check with your local codes before venting through a side wall.

Some codes areas allow the use of existing B-type vent systems if the system is at or above the recommended diameter of the flue; in this case 5".

The flue connection must be made using listed B-type connectors and the existing system must be code inspected for damage and proper installation.

It is not recommended that this appliance be common vented with an existing gas burning appliance. However, if it becomes necessary to common vent this appliance, the venting system must be sized and configured in accordance with the common venting guides Appendix G of the current *National Fuel Gas Code NFPA No. 54/ANS Z223.1* and in Canada with *CAN/CGA B149*.

*Note:* Before connecting this appliance to an existing vent system or a common venting system consult with your local architect, planner, or building official.

**⚠ WARNING:** This appliance must be properly connected to a B-Vent system and must not be connected to a chimney flue servicing a separate solid fuel burning appliance.

## CHECKING FOR PROPER VENTING

After completing and checking the electrical, gas and vent connections, follow the lighting instructions and allow the main burner to run for approximately 5 minutes. Hold a lighted match or cigarette near the top edge of the window frame and play it along the entire length of the window (see Figure 11). Proper venting should tend to draw the flame or smoke into the appliance. Improper venting or escaping of spillage of burned gas, is indicated when the match flickers or goes out. Smoke from a cigarette will also tend to disperse away from the appliance.

If the appliance is found to be improperly venting, shut it off and notify your installer or a qualified service agency to inspect the venting system.

**NOTICE:** This appliance is equipped with a vent safety shutoff switch which will shut down the appliance in the case of a venting problem. Do not bypass the vent safety switch. If the appliance should shut down, contact a qualified installer, service agency, or your gas supplier to have the vent inspected before operating.

Check this area along the entire top edge of the glass frame. Smoke or flame should be drawn into the appliance opening.

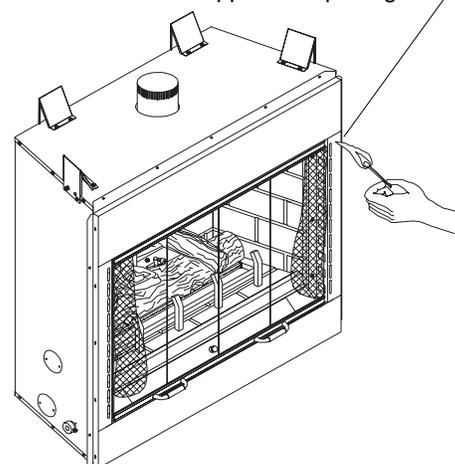


Figure 11 - Checking for Spillage

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### INSTALLATION

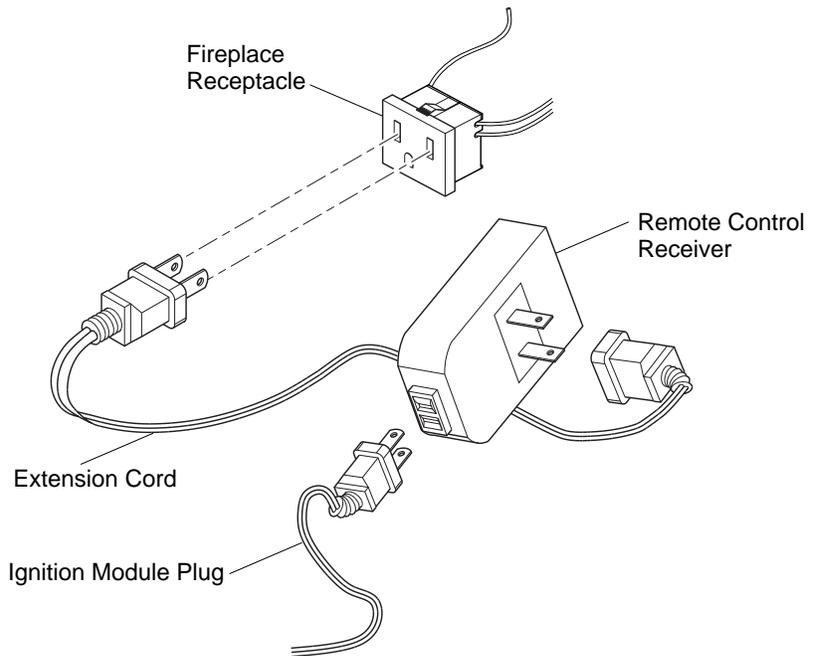
#### WALL SWITCH INSTALLATION (EVGL850N)

The installation of a wall switch allows you to activate the gas control valve and turn the fireplace on and off. The wall switch is to be connected to the incoming 120 volt regular household wiring that supplies the electricity to the fireplace. Refer to wiring diagram in this manual on page 14.

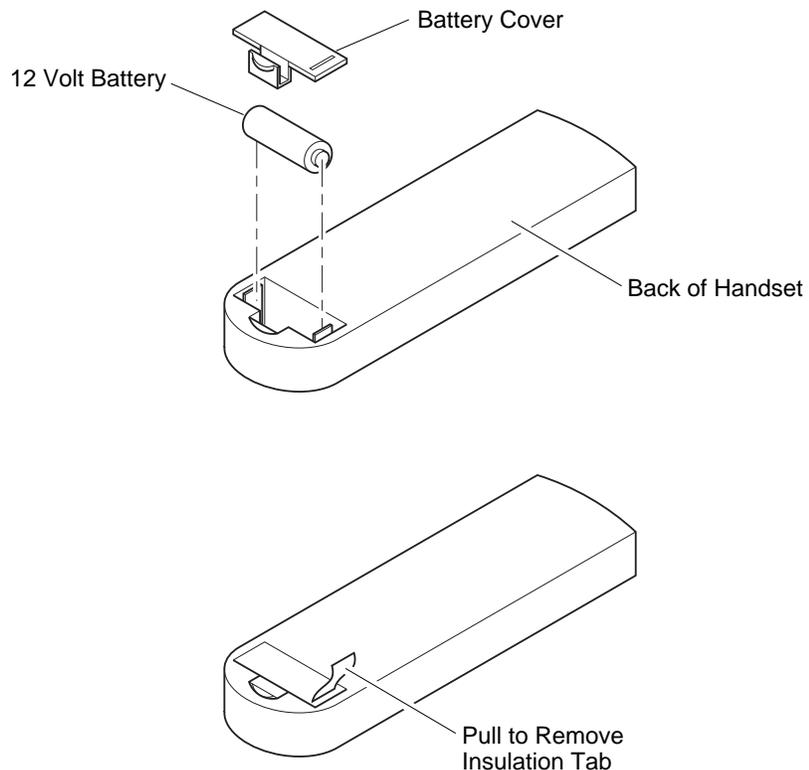
#### OPTIONAL REMOTE CONTROL INSTALLATION (Model WRC)

*Note:* If using optional wireless hand-held remote control, the wall switch must be in the ON position to be operational. The remote control then becomes the switching mechanism for fireplace operation.

1. The WRC model receiver does not require a battery. The receiver can be installed by first plugging the short extension cord into the fireplace receptacle. Then plug the receiver unit into the extension cord. Finally plug the ignition module plug into the receiver unit (see Figure 12).
2. Activate the remote handset battery by removing the insulating tab on the back of the handset (see Figure 13). The battery is included pre-installed.
3. Once the battery is activated the unit is ready to use.



**Figure 12 - Installing the WRC Remote Receiver**



**Figure 13 - Installing Battery into Back of Handset**

# OWNER'S MANUAL

## INSTALLATION

*Continued*

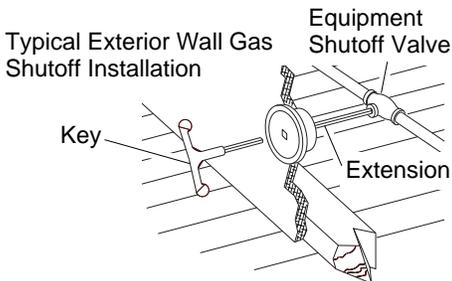
### GAS LINE HOOK-UP

**⚠ WARNING: Gas line hookup should be done by your gas supplier or a qualified service person.**

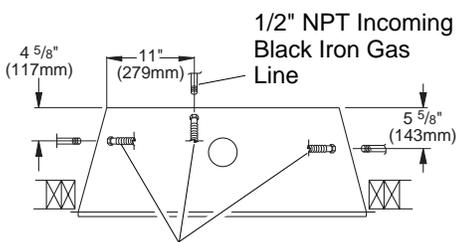
**⚠ WARNING: Before you proceed, make sure your gas supply is OFF.**

An equipment shutoff valve has been included in the appliance's gas supply system. You may consider installing an extra gas shutoff valve outside the appliance's enclosure (check with local codes) where it can be accessed more conveniently with a key through a wall as shown in Figure 14.

In conformance with local codes, route a 1/2" NPT gas line towards the appliance coming in from any of the 3 directions shown in Figure 15.



**Figure 14 - Equipment Shutoff Valve Installation**



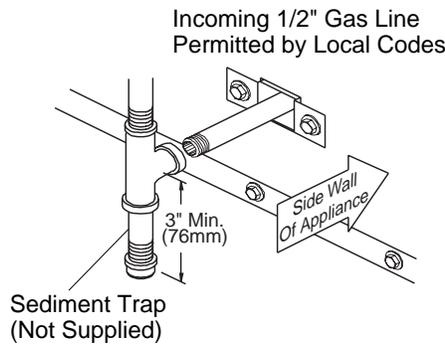
Flexible Gas Line (1 Provided) Can Be Extended Out from 3 Sides

**Figure 15 - Routing Incoming Gas Line**

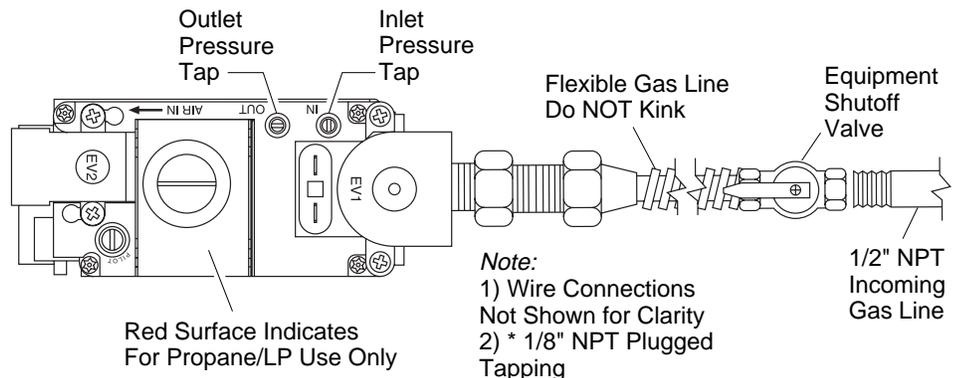
**⚠ CAUTION: Do not kink flexible gas line.**

DESA recommends that a black iron gas line be routed from the gas source, through a sediment trap (shown in Figure 16), and into the appliance. Once connected through the appliance, a flexible gas line may be used for ease of installation to gas control valve (see Figure 17).

Before connecting the black iron gas line to the inside of the appliance a sediment trap must be included outside the appliance between the gas line and the equipment shutoff valve. It must extend down three (3) inches beyond the center of the pipe. Prepare incoming black iron gas line with teflon tape or pipe joint compound (Check with local building codes).



**Figure 16 - Sediment Trap**



**Figure 17 - Connecting Flexible Gas Line to Electronic Valve**

**⚠ CAUTION: Compounds used on threaded joints of gas piping shall be resistant to the action of Liquefied Petroleum (LP or propane), and should be applied lightly to ensure excess sealant does not enter the gas line.**

**⚠ WARNING: All gas piping and connections must be tested for leaks after the installation is completed.**

**After ensuring that the gas valve is on, apply a soap and water solution to all connections and joints. If bubbles appear, leaks can be detected and corrected.**

**Do not use an open flame for leak testing and do not operate any appliance if a leak is detected.**

Complete your gas installation by connecting incoming gas line with flexible gas line. Secure tightly with wrench but **Do NOT Overtighten.**

# VANGUARD® EVGL850N

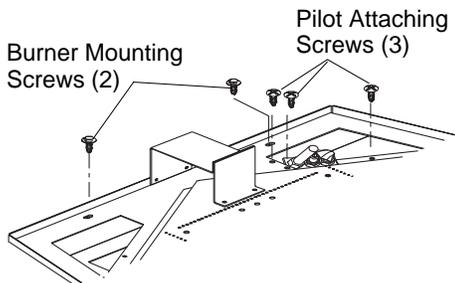
## VENTED TYPE DECORATIVE APPLIANCE

### INSTALLATION

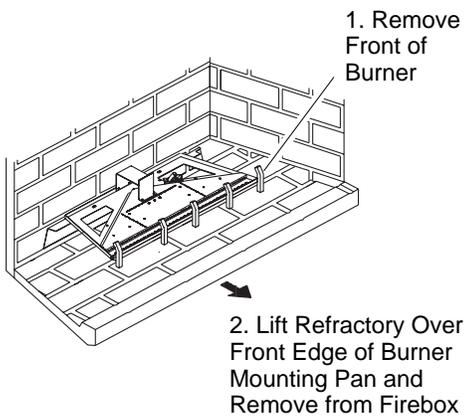
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#### GAS BURNER SUPPLY HOOK-UP

1. Disconnect the burner from the burner mounting flange by removing two screws (see Figure 18).
2. Disconnect the pilot from the burner by removing three screws holding the pilot mounting bracket (see Figure 18).
3. Rotate the back of the burner forward and lift out of the firebox. **Note:** Do not damage pilot and gas line.
4. Remove the bottom refractory by lifting and sliding out the front (see Figure 19). **Note:** Do not kink or damage the flex line connector.
5. Remove the hearth pan with controls intact by removing two screws at either side of the pan.
6. Follow steps 1,2,3,4, and 5 in reverse order to reinstall burner assembly.



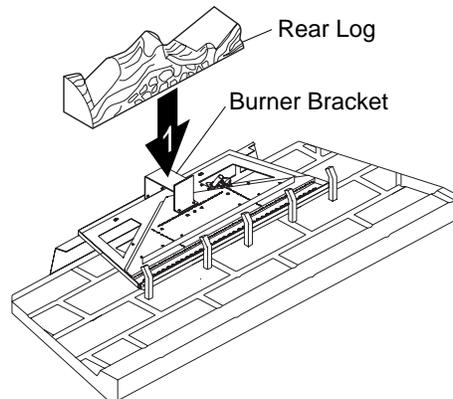
**Figure 18 - Removing Burner Assembly**



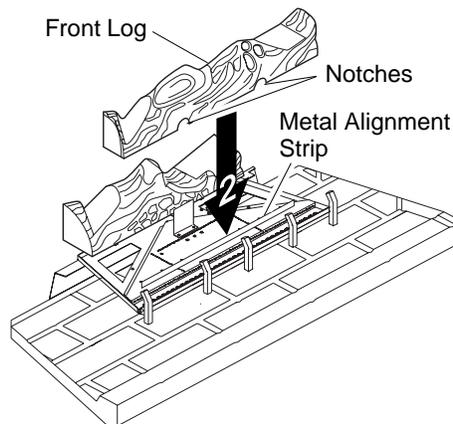
**Figure 19 - Removing Bottom Refractory**

#### LOG & EMBER PLACEMENT

1. Center the rear log on the support bracket welded to the back of the burner. Press the log down onto the bracket (see Figure 20).
2. Align the groove cut into the bottom of the front log over the metal strip on the burner. Make sure the metal strip is completely in the groove. Also make sure the notches in the bottom of the log align over the burner holes as shown in Figure 21.
3. Place the straight, left log piece into the notches on the left side of the front and rear logs (see Figure 22).
4. Place the "T"-shaped, right log piece into the notches on the right side of the front and rear logs (see Figure 23).



**Figure 20 - Installing Rear Log**

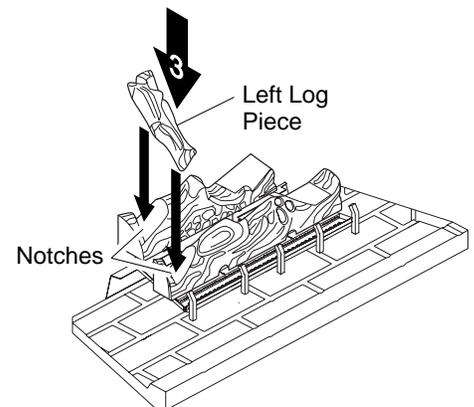


**Figure 21 - Installing Front Log**

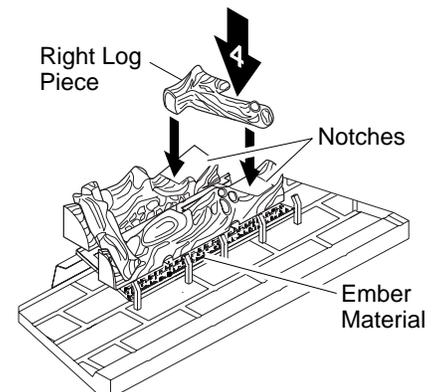
Next remove the ember material from the bag and flatten small amounts into pieces about the size of a dime. Place the pieces loosely onto the exposed section of the burner ember tray, which is located on the very front of the burner grate. This will create the glowing appearance as the flame touches the ember material. Do not block burner ports by using too much ember material in one area. Sprinkle a small amount of vermiculite provided in the separate bag over the embers to complete the effect. It is not necessary to use all of the ember or vermiculite materials provided.

To enhance the look of the hearth you may optionally place the lava rock provided around the front and sides of the burner. When finished replace the glass door, see *Glass Door Removal and Replacement* on page 11.

**NOTICE: Do not put lava rock on burner or under burner. Placing lava rock on burner could cause performance problems.**



**Figure 22 - Installing Left Log Piece**



**Figure 23 - Installing Right Log Piece**

## INSTALLATION

*Continued*

### COMBUSTION AIR KIT MODEL AKGL (OPTIONAL)

The outside air kit may be installed on the right side of the fireplace only. The vent can be installed through the outside wall or a ventilated crawl space. The handle to operate the damper door for the outside air inlet will be located behind the burner valve access door when the kit is installed (see Figure 24). Pull the handle to open or push to close.

**CAUTION:** Air inlet ducts are not to terminate in attic space.

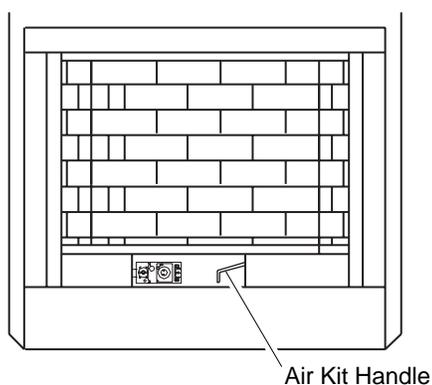


Figure 24 - Air Kit Handle Location

### APPLIANCE ENCLOSURE

Before finishing the enclosure around the appliance, inspect all joints around the outer surround. Any gaps between the nailing flanges and the framing should be sealed with noncombustible insulation or caulking.

If the appliance is mounted on a raised platform, it must be a continuous surface and not on blocks without a solid surface. This will prevent the entry of cold air by means of conduction through the total bottom of the appliance. (see Figure 25).

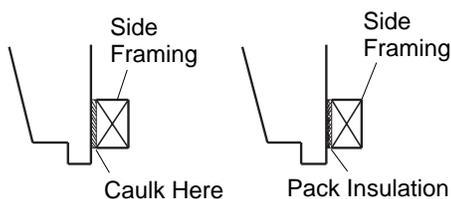


Figure 25 - Sealing Between Appliance and Framing

### GLASS DOOR REMOVAL AND REPLACEMENT

To remove, hold the glass door firmly at handles and evenly push straight up until bottom pins are free from location slots (see Figure 26). Slightly swing door towards you. At this point, while maintaining glass door secured at one handle, grasp the side of glass panel for better grip and slightly pull glass door down to free top pins from spring clips.

**Note:** Glass door may be heavy for some individuals. If this is the case, please request help from someone else.

**CAUTION:** For use with glass doors certified with the appliance only.

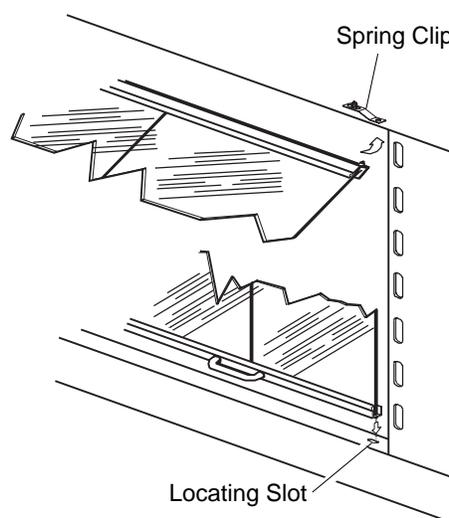


Figure 26 - Removing Glass Door

To replace, insert top door pins into spring clips located on the top face. Make sure pins are properly secured to the clips. As you hold top portion in place, swing bottom of door towards bottom face until the bottom door pins clear the flange and then insert the lower pins into the locating slots until seated (see Figure 26).

**Note:** some adjustment maybe required in order to align door pins to clip (top) and locating slots (bottom).

This can be done by loosening the screw securing both spring clip and pivot plate and sliding it to the proper location.

Instructions for the installation of the gas kit are included with the glass door package. Use of any other glass door assembly not tested with the EVGL850N model may constitute a fire hazard and will void the DESA International warranty. Please read and follow the maintenance instructions for your glass doors as outlined below.

- Never use an abrasive material to clean the glass. Use a rag and a liquid cleaner.
- Never clean the glass while they are hot.
- Always operate the appliance with the glass door in place. (If the glass is left off the unit while operating hot combustion gas may enter the room)

**CAUTION:** Do not operate the appliance with the glass door removed.

**WARNING:** Installation and repair should be done by a qualified service person. The appliance should be inspected before each use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, pet hair, etc. It is imperative that the control compartments, burners, and circulating air system be kept clean.

**WARNING:** Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition. Young children should be supervised when they are in the same room as the appliance.

- When ordering replacement or accessory items please have your appliance's model name or number and the part number of the item (s) you are ordering ready. The model name or number for your particular appliance may be found on the rating plate located inside the appliance.
- Refer to *Replacement Parts*, page 17 when ordering replacement parts for your appliance.
- Repair parts or accessory items may be bought from your local representative.
- All product specifications are subject to change without notice.

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### OPERATING FIREPLACE

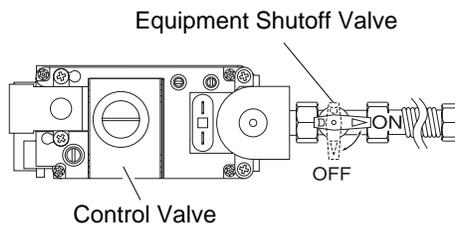
#### FOR YOUR SAFETY READ BEFORE LIGHTING

**⚠ 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 appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.  
**WHAT TO DO IF YOU SMELL GAS**
  - 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 neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

#### LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information, column 1.
2. Turn off all electric power to the appliance.
3. Turn wall switch to the OFF position.
4. Remove the glass door.
5. Open control access panel.
6. Turn the equipment shutoff valve clockwise  to the OFF position (see Figure 27). Do not force.
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information, column 1. If you don't smell gas, go to the next step.
8. Turn the equipment shutoff valve counterclockwise  to the ON position. Do not force.
9. Close control access panel.
10. Replace the glass door.
11. Turn on all electric power to the appliance.
12. Turn the wall switch to the ON position.
13. Visually locate the pilot. The ignitor should begin to spark and the main burner should ignite once flame appears at pilot.
  - If lighting the appliance for the first time each season, it may take several attempts before the supply gas can reach the pilot and main burners.
  - If the appliance will not stay lit after several attempts, follow the instructions *To Turn Off Gas To Appliance*, column 3, and call your service technician or gas supplier.



**Figure 27 - Turning the Equipment Shutoff Valve to the OFF position**

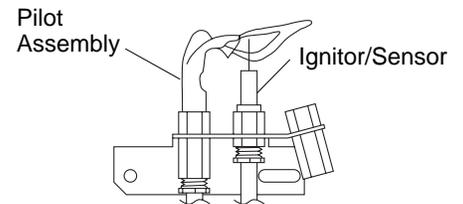
#### TO TURN OFF GAS TO APPLIANCE

1. Turn off the wall switch.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove the glass door.
4. Open control access panel.
5. Turn equipment shutoff valve clockwise  to "OFF". Do not force.
6. Close control access panel.
7. Replace the glass door.

#### OPTIONAL REMOTE OPERATION

**Note:** The WRC receiver and hand-held remote control kit must be purchased separately (see *Accessories*, page 17). Follow installation instructions on page 8.

1. Turn equipment shutoff valve to ON position. You can now turn the burner on and off with the hand-held remote control unit.  
**IMPORTANT:** Be sure to press the ON/OFF buttons on the hand-held remote control unit for up to 3 seconds to assure proper operation.
2. Press the ON/OFF button to turn the burner on and off.



**Figure 28 - Pilot**

## PILOT ASSEMBLY ADJUSTMENT

Turn the adjustment screw marked pilot clockwise to decrease or counterclockwise to increase the flame to proper size (see Figure 29).

Do not remove the adjustment screw.

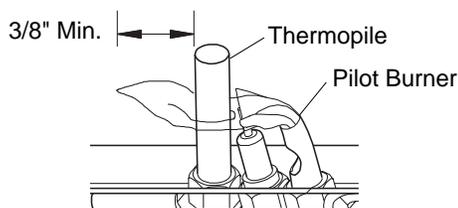


Figure 29 - Correct Pilot Flame Pattern

## BURNER FLAME ADJUSTMENT

The main burner flame should be a blue flame somewhere between a long blue flame and a short, sharp flame that tends to blow off the ports. If flame is short, very sharp or blowing, the burner air shutter should be closed enough to obtain a long blue flame (see Figure 30). Long yellow flame produce excess carbon monoxide and could cause sooting.

### TO SHUT OFF

1. For temporary shutoff, turn off electrical power to unit either by wall switch or remote control.
2. For long term shutoff, depress the gas valve cock valve, located under the fire-box, turn clockwise to the OFF position.

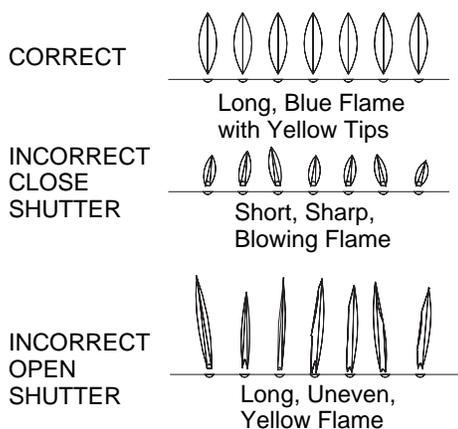


Figure 30 - Burner Flame Patterns

## OPERATING GUIDELINES AND MAINTENANCE INSTRUCTIONS

1. Upon completing your gas line connection, a small amount of air will be in the lines. When first lighting the appliance it will take the appliance a few minutes to purge the air. Once purging is complete, the pilot and burner will light and operate as indicated in the instruction manual. Subsequent lighting of the appliance will not require such purging.
1. When lit for the first time, the appliance will emit a slight odor for an hour or two. This is due to the "curing" of the logs and "burn-in" of internal paints and lubricants used in the manufacturing process.
2. Keep control compartment, logs burners, and area surrounding the logs clean by vacuuming or brushing at least twice a year. Do not vacuum the mineral wool located in the front of the burner assembly.
3. Always turn off gas to pilot before cleaning. For example relighting, refer to the lighting instructions.
4. A qualified field service technician should inspect the appliance and venting system before use or at least annually.

**WARNING: The logs can be hot. Handle only when cool.**

5. Always keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
6. Never obstruct the flow of combustion and ventilation air. Keep the front of the appliance clear of all obstacles and materials.
7. Never leave children unattended when the appliance is operating.

## MAINTENANCE

**WARNING: Turn off gas and electrical power before servicing appliance. It is recommended that a qualified serviceman perform these checkups at the beginning of each heating season.**

In order to properly clean the burner and pilot assembly remove the logs exposing the burner and pilot assembly.

## CLEANING BURNER AND PILOT

Clean all foreign materials from the top of burner and from bottom panel below. Check to make sure that burner orifice is clean. Visually inspect pilot. Brush or blow away any dust and lint accumulations. If pilot orifice is plugged, disassembly maybe required to remove any foreign materials from orifice and/or tubing. When appliance is put back in service, check pilot flame patterns (see Figure 29).

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### SERVICE HINTS

#### When Gas Pressure Is Too Low

- pilot will not stay lit
- burner will have delayed ignition
- fireplace will not produce specified heat
- propane/LP gas supply may be low

#### When Gas Quality Is Bad

- pilot will not stay lit
- burner will produce flames and soot
- fireplace will backfire when lit

You may feel your gas pressure is too low or gas quality is bad. If so, contact your local propane/LP gas supplier.

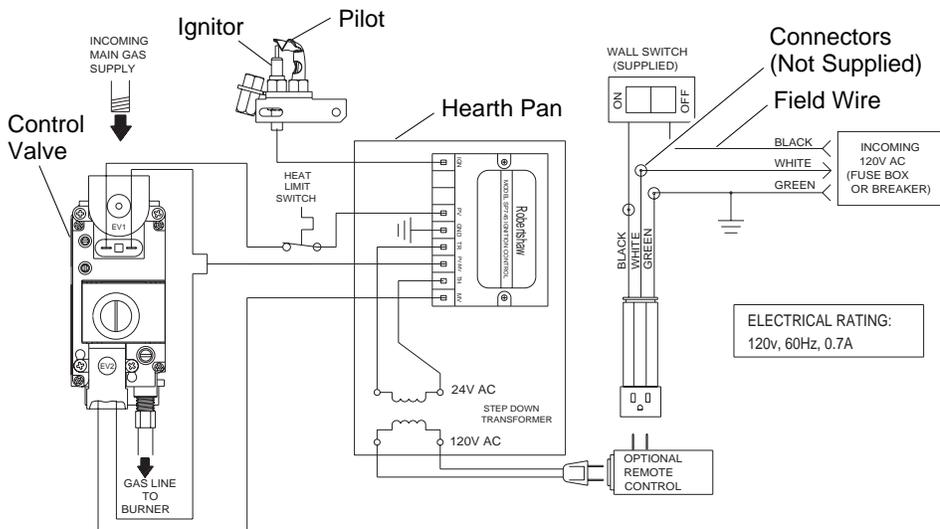
### TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting.

If so, contact DESA International's Technical Service Department at 1-800-323-5190.

You can also visit DESA International's technical services web site at [www.desatech.com](http://www.desatech.com).

### WIRING DIAGRAM



# OWNER'S MANUAL

## TROUBLESHOOTING

*Note:* For additional help, visit DESA International's technical service web site at [www.desatech.com](http://www.desatech.com).

*Note:* Before troubleshooting the system, make sure the equipment shutoff valve is ON.

The two most common causes of a malfunctioning gas appliance are:

1. Loose wiring connections
2. Construction debris clogging the pilot and/or gas control valve filter

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Ignitor will not spark or pilot will not light	<ol style="list-style-type: none"> <li>1. No gas supply, or equipment shutoff valve is OFF</li> <li>2. Air in gas line</li> <li>3. Construction debris clogging pilot orifice</li> <li>4. Low gas pressure</li> <li>5. Kinked pilot line</li> <li>6. Control valve knob is not opening</li> <li>7. No power to unit or the ignition module or power transformer is bad</li> </ol>	<ol style="list-style-type: none"> <li>1. Check to see if you have gas supply and that the equipment shutoff valve is opened</li> <li>2. Repeat lighting procedure several times to purge all air out of lines. If after repeated attempts appliance does not light call for qualified service and repair</li> <li>3. Remove debris and dirt, inspect and clean any other possible obstructions</li> <li>4. Contact your gas supplier to check pressure</li> <li>5. Have a qualified technician replace pilot line</li> <li>6. Replace control valve (Refer to <i>Replacement Parts</i>, page 17)</li> <li>7. Check that main power is on and that all wire connections are made correctly to the ignition model (see <i>Wiring Diagram</i>, page 14). Check for 24 VAC at the secondary side of the transformer. If 24 VAC is present and the module does not operate, have the module replaced otherwise have the transformer replaced</li> </ol>
Pilot lights but will not stay lit	<ol style="list-style-type: none"> <li>1. Loose wiring on ignitor wire to ignition module and/or poor ground to ignition module</li> <li>2. Pilot flame too low to sense</li> </ol>	<ol style="list-style-type: none"> <li>1. Check ignitor wire connection. Refer to wiring diagram (see <i>Wiring Diagram</i>, page 14) and/or check ground wire to ignition module</li> <li>2. Clean and adjust pilot burner and check gas supply and inlet pressure to unit</li> </ol> <p><i>Note:</i> Have a qualified technician replace pilot assembly if broken or corroded</p>
No gas to main burner, although wall switch and valve are set to the ON position	<ol style="list-style-type: none"> <li>1. Wall switch wires defective or too long</li> <li>2. Sensor, valve, or ignition module is not operating</li> </ol>	<ol style="list-style-type: none"> <li>1. Check electrical connections</li> <li>2. Recheck problems 1 and 2</li> </ol>
Frequent main burner outage	<ol style="list-style-type: none"> <li>1. Pilot flame may be too low, causing safety pilot to "drop out"</li> <li>2. Vent may be blocked or restricted</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean and adjust pilot flame for maximum flame impingement on sensor</li> <li>2. Have vent inspected for blockage or damage</li> </ol>

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

### TROUBLESHOOTING

*Continued*

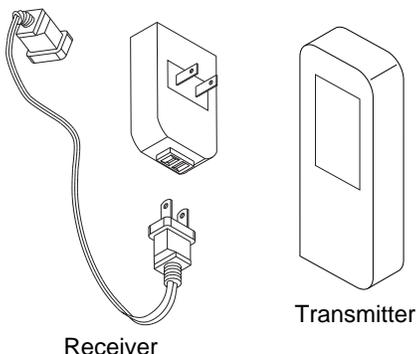
- ⚠ WARNING:** If you smell gas
- Shut off gas supply.
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.

*IMPORTANT:* Operating fireplace where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Fireplace produces a clicking/ticking noise just after burner is lit or shut off	1. Metal expanding while heating or contracting while cooling	1. This is common with most fireplaces. If noise is excessive, contact qualified service person
Fireplace produces unwanted odors	1. Fireplace burning vapors from paint, hair spray, glues, etc. (See <i>IMPORTANT</i> statement above) 2. Gas leak. <b>See Warning statement at top of page</b>	1. Ventilate room. Stop using odor causing products while fireplace is running 2. Locate and correct all leaks (see <i>Gas Line Hook-Up</i> , page 9)
Gas odor even when control knob is in OFF position	1. Gas leak. <b>See Warning statement at top of page</b> 2. Control valve defective	1. Locate and correct all leaks (see <i>Gas Line Hook-Up</i> , page 9) 2. Replace control valve
Gas odor during combustion	1. Foreign matter between control valve and burner 2. Gas leak. <b>See Warning statement at top of page</b>	1. Take apart gas tubing and remove foreign matter 2. Locate and correct all leaks (see <i>Gas Line Hook-Up</i> , page 9)
Dark residue on logs or inside of fireplace	1. Improper log placement 2. Air holes at burner inlet blocked  3. Burner flame holes blocked	1. Properly locate logs (see <i>Log &amp; Ember Placement</i> , page 10) 2. Clean out air holes at burner inlets. Periodically repeat as needed 3. Remove blockage or replace burner

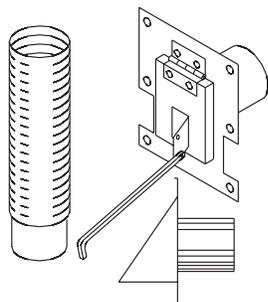
# OWNER'S MANUAL

## ACCESSORIES



### RECEIVER AND HAND-HELD REMOTE CONTROL KIT 00710 (WRC)

For all models. Allows the gas log heater to be turned on and off by using a hand-held remote control.



### AIR KIT - 90325 (AKGL)

Optional kit helps offset the negative pressure often existing in today's tightly constructed homes.

## REPLACEMENT PARTS

*Note:* Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

### PARTS UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s) call DESA International's Technical Service Department at 1-800-323-5190 for referral information.

When calling DESA International, have ready

- your name
- your address
- model and serial numbers of your fireplace
- how fireplace was malfunctioning
- type of gas used (propane/LP or natural gas)
- purchase date

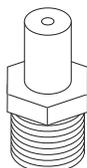
Usually, we will ask you to return the defective part to the factory.

### PARTS NOT UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s) call DESA International's Parts Department at 1-800-972-7879 for referral information.

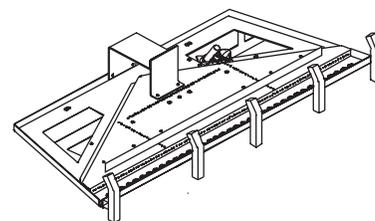
When calling DESA International, have ready

- model number of your fireplace
- the replacement part number

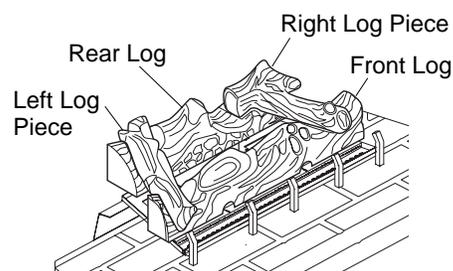


### ORIFICE

Natural - 23099 (105862-01)



### BURNER ASSEMBLY 27109 (107223-01)



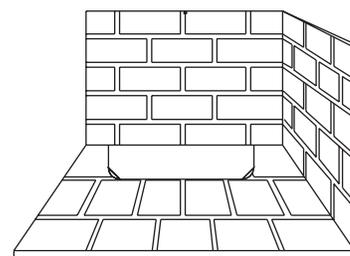
### LOG SET - 14586 (105855-01)

Top Left Log - 105856-01

Top Right Log - 105857-01

Bottom Rear Log - 105858-01

Bottom Front Log - 105859-01



### REFRACTORY PIECES

Back - 20938 (105864-01)

Left/Right Side - 20939 (105865-01)

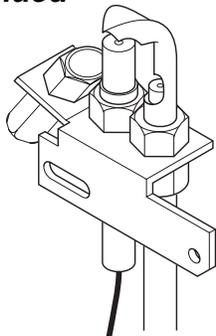
Bottom - 20937 (105866-01)

# VANGUARD® EVGL850N

## VENTED TYPE DECORATIVE APPLIANCE

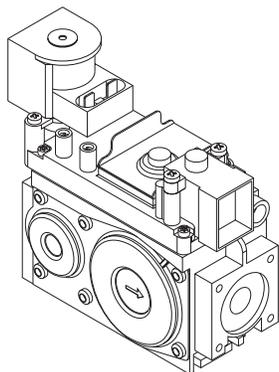
### REPLACEMENT PARTS

*Continued*



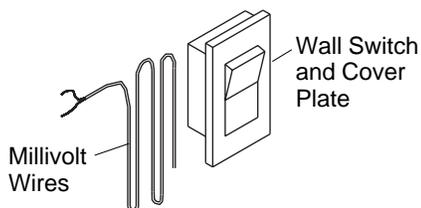
**PILOT ASSEMBLY**  
Natural (Electronic) - 27197  
(107220-01)

If in need of replacing, have a qualified technician replace it.



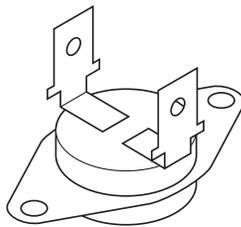
**GAS CONTROL VALVE**  
Natural - 14569 (107219-01)

If in need of replacing, have a qualified technician replace it.



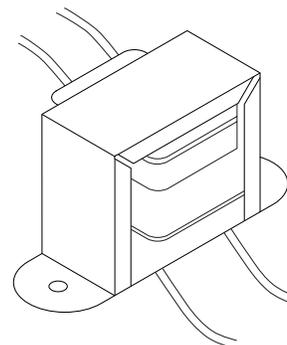
**WALL SWITCH**  
22180 (105742-01)

Wall switch, cover plate, and wires are supplied with the appliance. If wires need replacing, use proper gauge.

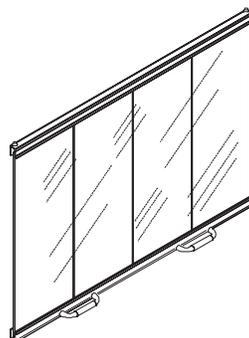


**HEAT LIMIT SWITCH**  
14519 (105911-01)

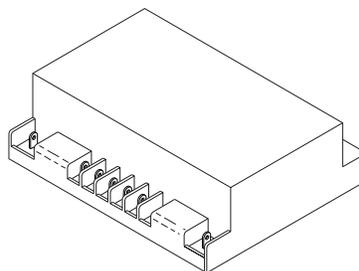
Should the limit switch need replacing, have a qualified technician replace it (see *Wiring Diagram*, page 14). The limit switch is located under the top door track on the right hand side.



**TRANSFORMER**  
14129 (107222-01)



**FIXED GLASS DOORS**  
01605 (105863-01)



**IGNITION MODULE**  
14301 (107221-01)



# WARRANTY INFORMATION

## KEEP THIS WARRANTY

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

Date Purchased \_\_\_\_\_

Always specify model and serial numbers when communicating with the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

### LIMITED WARRANTY B-VENT FIREPLACE

DESA International warrants this product to be free from defects in materials and components for four (4) years from the date of first purchase, provided that the product has been properly installed, operated and maintained in accordance with all applicable instructions. To make a claim under this warranty the Bill of Sale or cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers the cost of part(s) required to restore this heater to proper operating condition and an allowance for labor when provided by a DESA Authorized Service Center. Warranty part(s) MUST be obtained through authorized dealers of this product and/or DESA International who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater MUST be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance or defects caused by improper installation. Travel, diagnostic cost, labor, transportation and any and all such other costs related to repairing a defective heater will be the responsibility of the owner.

TO THE FULL EXTENT ALLOWED BY THE LAW OF THE JURISDICTION THAT GOVERNS THE SALE OF THE PRODUCT; THIS EXPRESS WARRANTY EXCLUDES ANY AND ALL OTHER EXPRESSED WARRANTIES AND LIMITS THE DURATION OF ANY AND ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO FOUR (4) YEARS ON ALL COMPONENTS FROM THE DATE OF FIRST PURCHASE; AND DESA INTERNATIONAL'S LIABILITY IS HEREBY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND DESA INTERNATIONAL SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES WHATSOEVER INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow a limitation on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties, or exclusion or limitation on damages may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

For information about this warranty write:

**DESA**  
**INTERNATIONAL**

2701 Industrial Drive  
P.O. Box 90004  
Bowling Green, KY 42102-9004  
www.desatech.com



107050 01

NOT A UPC

107050-01  
Rev. A  
02/00