

# Installation Instructions

Listed Certified for USA. and Canada

Models ZDV4228N, ZDV4228LP, ZDV4232N and ZDV4232LP

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or mobile home, where not prohibited by 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.

Model Numbers ZDV4224, ZDV4228, ZDV4232

Stock #'s: ZDV4224N, ZDV4224LP are Certified to: ANSI 21.50a-2000 CSA 2.22a-2000, CGA 2.17-M91, CSA P.4.1-02

Stock #'s ZDV4228N, ZDV4228LP, ZDV4232N and ZDV4232LP are Certified to: ANSIZ21.88b-2003, CSA 2.33b-2003, CGA 2.17-M91, CSA P.4.1-02

## “Zero Clearance” Direct Vent Gas Fireplace



**Read this complete manual before beginning installation.  
These instructions must be kept with the unit for future reference.**

### FOR YOUR SAFETY

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

Warning: Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Refer to this manual. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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

#### What To Do If You Smell Gas

Do not try to light any appliance.

Extinguish any open flame.

Do not touch any electrical switch.

Do not use any phone in your building.

Immediately call your gas supplier from a neighbour's phone.

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

#### **KINGSMAN INDUSTRIES**

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## PRE-INSTALLATION QUESTIONS and ANSWERS

### Why does my fireplace or stove give off odour?

It is normal for your fireplace to give off some odour. This is due to the curing of the paint, adhesives, silicones and any undetected oil from the manufacturing process as well as the finishing materials used with the installations (e.g. marble, tile and the adhesives used to adhere this product to the walls can react with heat and cause odours).

It is recommended that you burn your gas fireplace or stove for a minimum of four hours at a time with the fan off after the curing of the paint has been completed. These odours can last upward to 40 hours of burn time, keep burning at a minimum of four hours per use until odours dissipate.

### About curing of the paint

Your stove or fireplace has been painted with the highest quality silicone stove paint. This paint dries quickly in 15-20 minutes when first applied at the factory. However, due to the high temperature silicone components, the paint will cure when heat is applied to the appliance as it is first used.

The following information **applies to the curing process** to get the paint fully hard and durable.

Fire the appliance four successive times for 10 minutes each firing and a 5 minute cool down between each. Be aware during log and firebox paint curing that a white deposit may be developing on the inside of the glass doors. It is important to remove this white deposit from the glass doors with an appropriate cleaner to prevent build-up (such as Windex or a commercial fireplace glass cleaner).

- Babies, small children, pregnant women and pets should leave the area during the cure phase.
- Ventilate well, open doors and windows.
- Do not touch during curing.

### Noise coming from the fireplace?

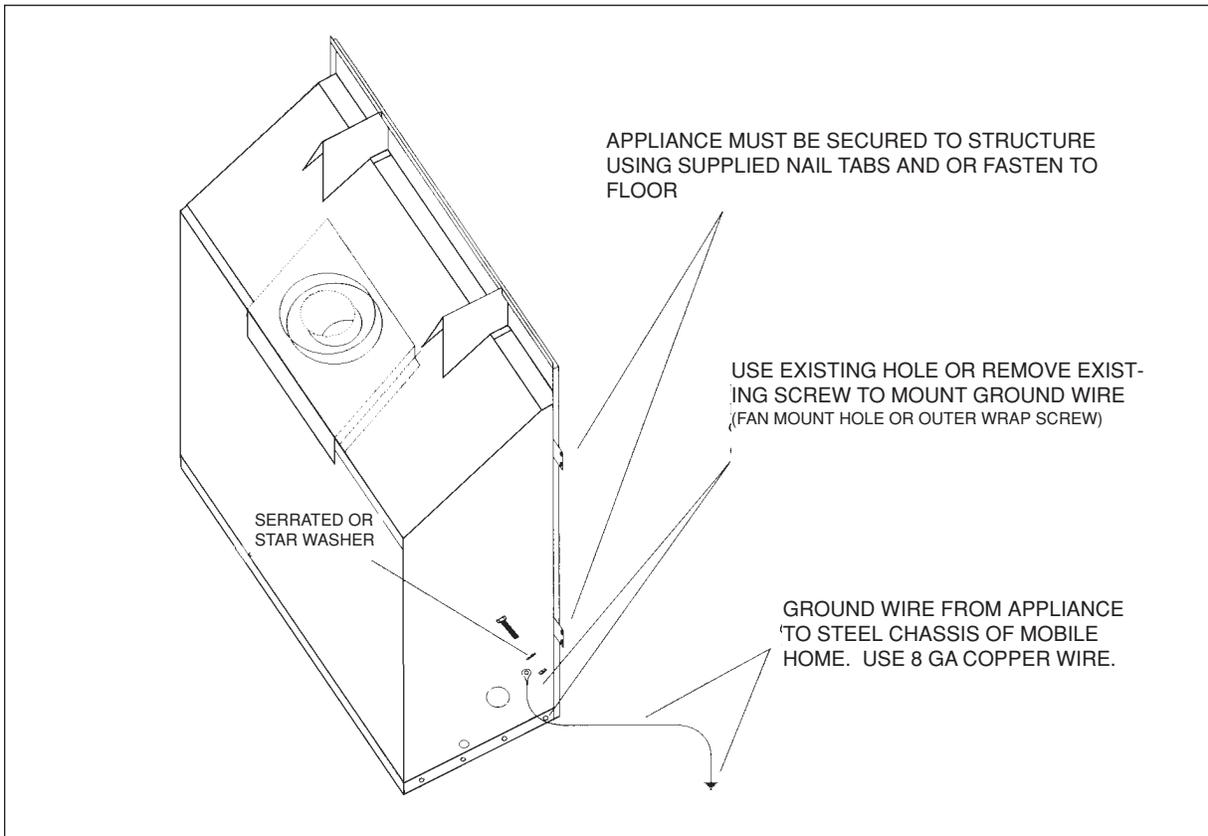
- Noise caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of your fireplace.

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## Mobile Home/Manufactured Housing Installation

This Direct Vent System Appliance must be installed in accordance with the manufacturer's installation instructions and the Manufactured Home Construction and Safety Standard Title 24 CFR, Part 3280, or the current Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities ANSI/NFPA 501A, and with CAN/CSA Z240 MH Mobile Home Standard in Canada.



**THE ZDV4228N, ZDV4228LP, ZDV4232N, and ZDV4232LP MAY BE INSTALLED IN MANUFACTURED (MOBILE) HOMES AFTER FIRST SALE. IN CANADA THE ZDV4228N, ZDV4228LP, ZDV4232N, and ZDV4232LP MAY BE INSTALLED IN MANUFACTURED (MOBILE) HOMES.**

Please follow the current ANSI/NFPA 70 National Electrical Code in the USA and CAN/CSA C22.1 Canadian National Electrical Code in Canada.

An appliance must be grounded to the steel chassis of the home with 8 ga. copper wire using a serrated or star washer to penetrate paint or protective coating to insure grounding.

Use carriage bolt at the attachment point (see diagram above) to secure the appliance to the floor.

Certified for installation in a bedroom or bedsitting room. In Canada must be installed with listed milli volt thermostat. In USA see local codes.

**Warning:** Do not compromise the structural integrity of the manufactured home wall, floor or ceiling, during installation of appliance or venting.

*For required venting components see venting installation in appropriate section of this manual.*

# Installation and Operation

## Installation Regulations

This gas appliance must be installed by a qualified installer in accordance with local building codes, or in the absence of local codes, with the current CAN/CGA-B149.1 or .2 Installation Code (in Canada) or the current National Fuel Gas Code Z223.1 when installed in the United States.

This appliance, when installed, must be electrically connected and grounded in accordance with local codes, or in the absence of local codes, with the current CSA C22.1 Canadian Electrical Code or with the national Electrical Code; ANSI/NFPA 70-1987 when installed in the United States.

### FOR SAFE INSTALLATION AND OPERATION OF YOUR GAS FIREPLACE PLEASE NOTE THE FOLLOWING:

1. **This appliance gives off high temperatures and should be located out of heavy traffic areas and away from furniture and draperies.**
2. **Children and adults should be alerted to the hazards of the high surface temperatures of this appliance and should stay away to avoid burns or ignition of clothing.**
3. **Children should be carefully supervised when they are in the same room as your fireplace appliance.**
4. Under no circumstances should this appliance be modified. Any parts that have to be removed for servicing should be replaced prior to operating this appliance.

5. **Installation and any repairs to this appliance should be done by a qualified service person. A professional service person should be called to inspect this appliance annually. Make it a practice to have all your gas appliances checked annually.**
6. **Control compartments, burners and air passages in this appliance should be kept clean and free of dust and lint. Make sure that the gas valve and pilot light are turned off before you attempt to clean this unit.**
7. The venting system (chimney) of this appliance should be inspected at least once a year and if needed, your venting system should be cleaned.
8. **Clothing or other flammable material should not be placed on or near the appliance. This appliance should not be used as a drying rack for clothing nor should Christmas stockings or decorations be hung from it.**
9. Under no circumstances should any solid fuels (wood, paper) be used in this appliance.
10. **For safe operation, glass doors must be closed.**
11. Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.
12. Do not operate appliance unless completely installed as per installation instructions.

**13. WARNING:** Do not operate appliance with the glass front removed, cracked or broken. Replacement of glass should be done by a licensed or qualified service person.

## Operating and Maintenance Instructions

This gas appliance should be installed by a qualified installer in accordance with local building codes and with current CAN/CGA - B149 (.1 or .2) installation codes for Gas Burning Appliances and Equipment.

**Warning:** When purging the gas line, the glass front must be removed.

### For safe installation and operation note the following:

Never use your gas fireplace as a cooking device.

The Burner/Log Assembly has been engineered and permanently adjusted for proper flame control.

#### Do not alter gas orifice.

Periodically remove the logs from the grate assembly and vacuum any loose particles from the grate and burner areas.

Control compartments, burners and air passages in this appliance should be kept clean and free of dust and lint. Make sure that the gas valve and pilot light are turned off before you attempt to clean this unit.

See Log Placement on Pages 10-20 to remove logs, vacuum burner parts and replace logs.

**Note: It is normal for your gas fireplace to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.**

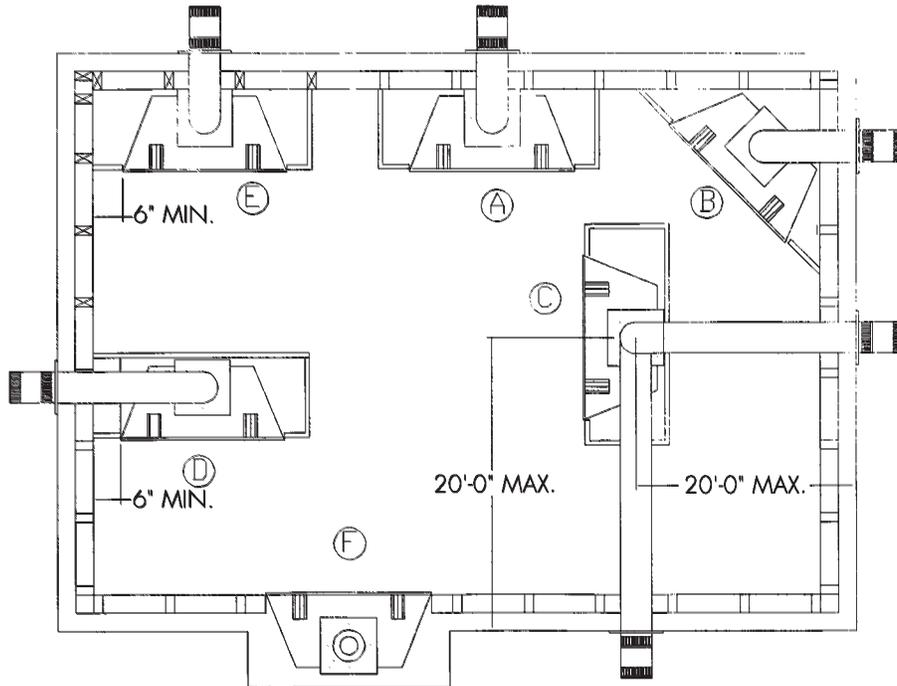
Please ensure that your room is well ventilated - open all windows.

It is recommended that you burn your gas fireplace for at least four (4) hours the first time you use it without the fan on.

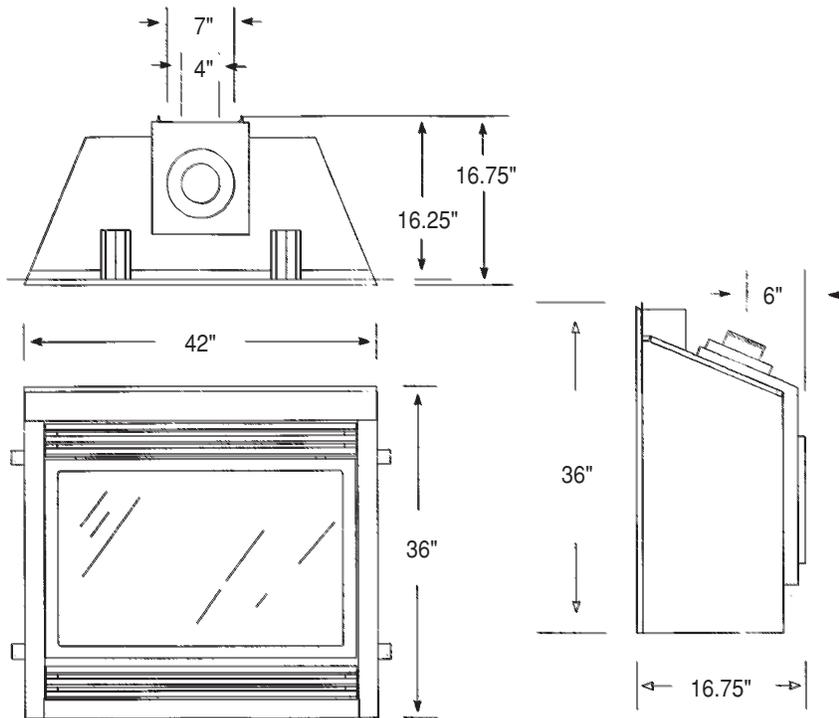
# Locating your Appliance

(above or below grade)

## Installing with Slope Top Vent



Island installation with a top vent is possible as long as the horizontal portion of the vent system does not exceed 20 feet (6.1m). When you install your fireplace as in position 'B', 'D' or 'E', a minimum of 6 inches (153mm) clearance must be maintained from the perpendicular wall and the front of the appliance.



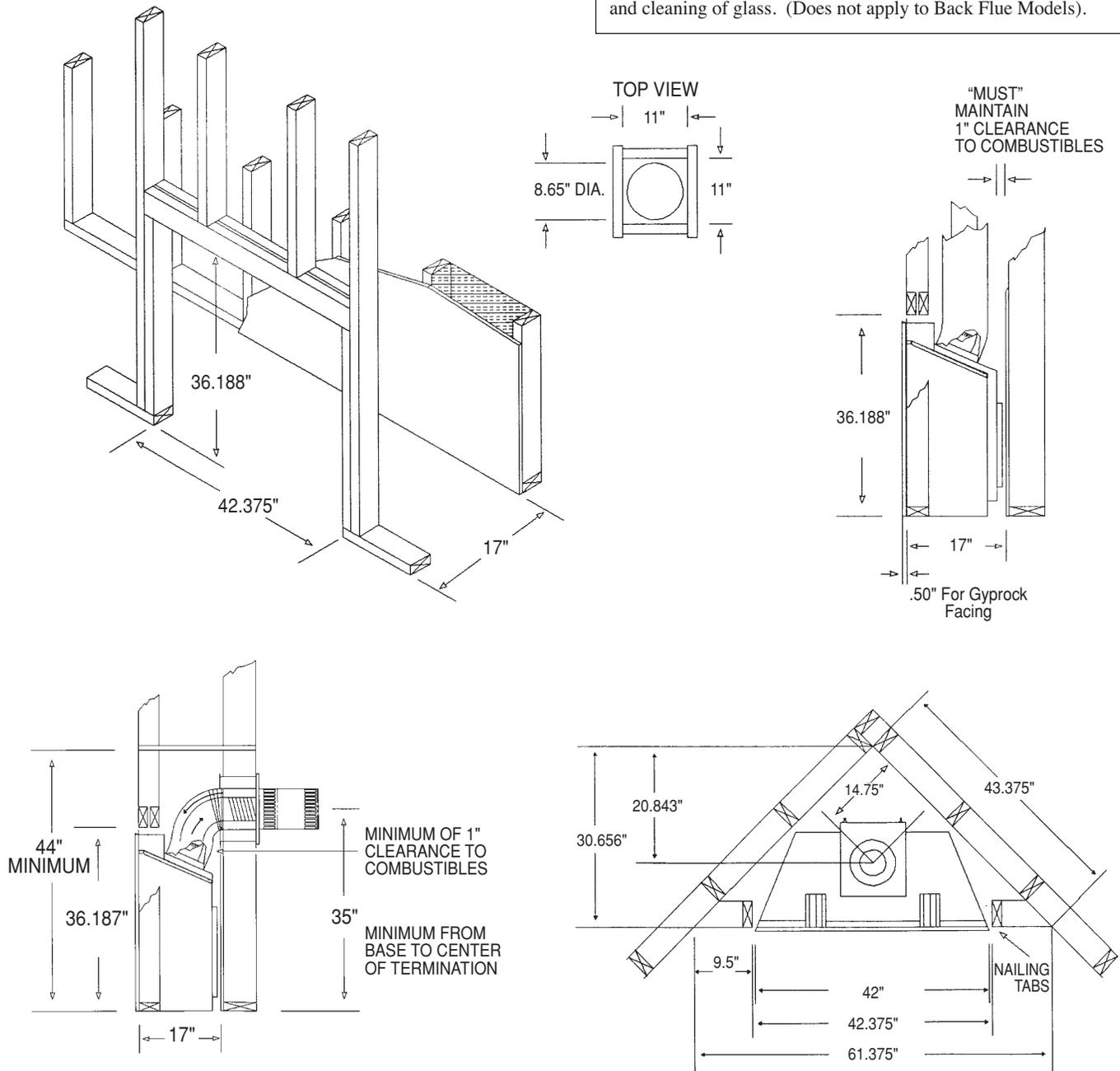
- A - Flat on a wall
- B - Across the corner
- C - As an island
- D - As a room divider
- E - Flat on wall corner
- F - Exterior wall

# Framing for your Gas Fireplace

## Framing Specifications

1. Cold climate installation recommendation: When installing this fireplace against non insulated exterior wall or chase, it is recommended that the outer walls be insulated to conform to applicable insulation codes. Drywall should be installed over insulation to prevent contact of insulation and unit.
2. Choose fireplace location and frame in accordance with the fireplace framing dimensions specified (See Framing Diagrams). Bend nailing tabs forward on left and right of unit and place fireplace into framed enclosure. This allows for 1/2" in front of framing tabs for finishing materials.
3. Drywall or other material can extend flush with the appliance on the bottom, sides and top of fireplace.
4. When installing horizontal with a 90 degree bend maintain a minimum of 2 1/2 inches (64mm) above the bend in enclosures.
5. Hearth is not mandatory but is recommended for aesthetic purposes. Combustible floors cannot raise above the bottom of the fireplace. We recommend a non-combustible hearth projecting out 12" (305mm) or more in front of the fireplace.

It is recommended for **Propane Horizontal Installations** that the venting should be a minimum of one foot vertical off the flue before the elbow on any horizontal runs of one foot or greater. This allows for cleaner combustion and greatly reduces carboning and cleaning of glass. (Does not apply to Back Flue Models).



# Clearances to Combustibles

## Clearance to Combustibles

|   |   |
|---|---|
| Back (from Standoffs)                                   | 0 inches/0 mm                               |
| Side (from standoffs)                                   | 0 inches/0 mm                               |
| Floor   | 0 inches/0 mm                               |
| Top (from standoffs)                                    | 0 inches/0 mm                               |
| Top of 90 degree bend in Minimum Enclosure of 44 inches | 5 1/2 inches/140 mm / Kingsman Vent Systems |
| Top of 90 degree bend in Enclosure over 44 inches       | 2 1/2 inches/64 mm / Kingsman Vent Systems  |
| Top of Horizontal Pipe                                  | 1 1/2 inches/38 mm / Kingsman Vent Systems  |
| Side & Bottom of Horizontal Pipe                        | 1 inch/25.5mm / Kingsman Vent Systems       |
| Vertical Vent Pipe                                      | 1 inch/25.5mm / Kingsman Vent Systems       |
| Vertical Vent Pipe                                      | 1 1/4 inch/32mm / Simpson Duravent Systems  |

(NOTE -Floor) if installing the appliance directly on carpeting or other combustible materials other than wood flooring, the appliance shall be installed on a metal or wood panel, the full width and depth of the appliance. Carpet may extend 1/2 inch above the floor of appliance.

**Note:** See Mantel Chart

## Mantels

Depending on the depth of the fireplace mantel, it may be installed higher or lower from the top of the fireplace opening. See drawings for proper installation height of your combustible mantel. Non-combustible mantels may be installed at any height above the fireplace opening.

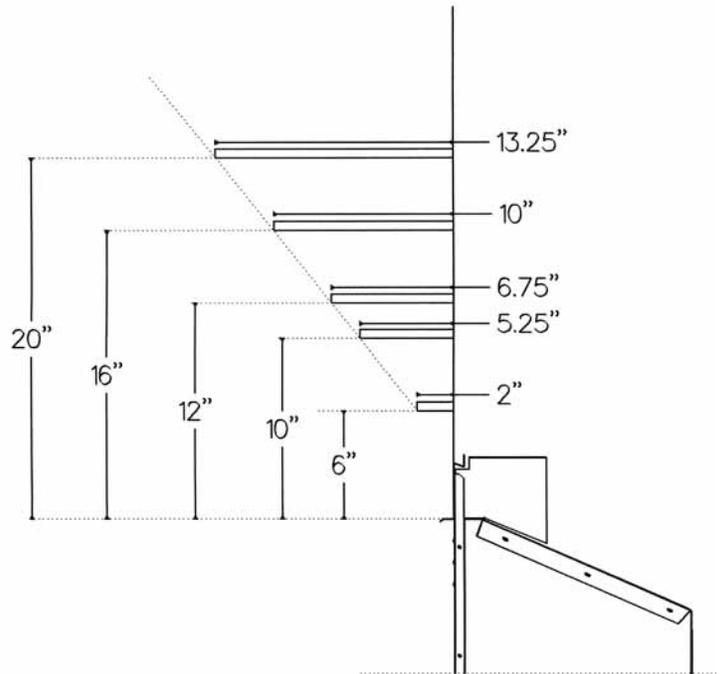
Non combustible materials such as brick, tile, etc. can extend up to or over the front face of the fireplace (NO PORTION OF GRILL AREA OR DOOR AREAS CAN BE COVERED).

Combustible material can extend flush to unit up to the top, bottom and sides of fireplace to stand-offs.

If slim line brass surround is used, brick, tiles or other NON-COMBUSTIBLE materials may extend past the front of unit giving a recessed appearance. For COMBUSTIBLE materials extending in front of fireplace consult (Mantel and Mantel Leg Drawings).

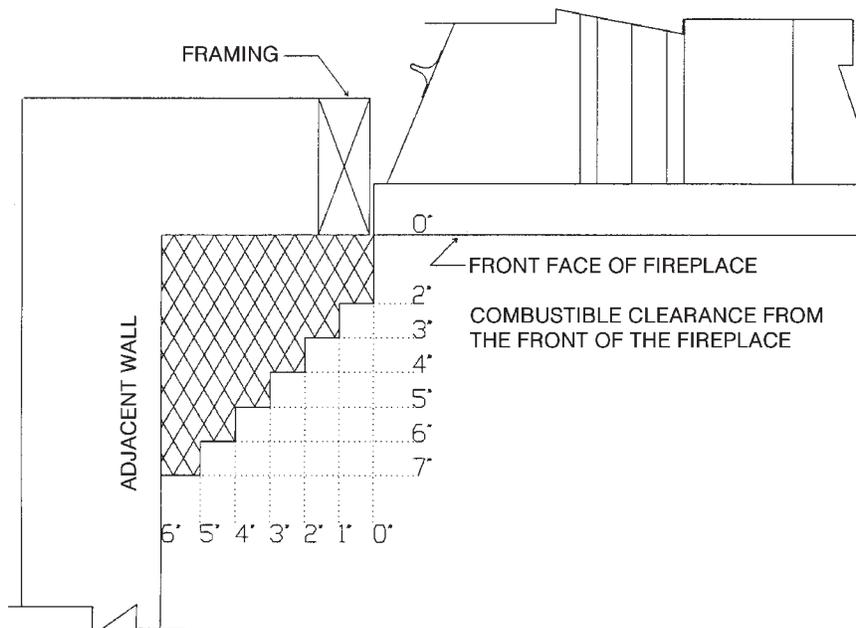
If wide brass surround is used finish materials must be flush with front of unit.

**Note:** When using paint or lacquer to finish the mantel, such paint or lacquer must be heat resistant (250°F) to prevent discoloration.



**Warning:** Combustible objects must not be placed on a non-combustible mantel unless the non-combustible mantel meets the minimum height and width requirements for a combustible mantel.

## Mantel Leg Clearances

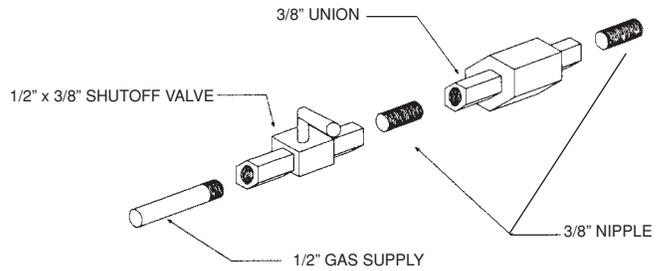


# Gas Line Installation

This gas appliance should be installed by a qualified installer in accordance with local building codes and with current CAN/CGA - B149.1 or .2 installation codes for Gas Burning appliances and equipment in Canada and the National Fuel Gas Code ANSI Z223 in the U.S.A.

1. The gas pipeline can be brought in through either the right or the left side of the appliance. A knockout is provided at either location to allow for the gas pipe installation and testing of any gas connection.
2. The gas control inlet is 3/8" NPT. Typical installation layout for rigid pipe is shown at right.
3. When using **copper** or **flex connector**, use only approved fittings. Always provide a union so that gas line can be easily disconnected for burner or fan servicing. See gas specification for pressure details and ratings.
4. When a vertical section of gas pipe is required for the installation, a condensation trap is needed. See CAN/CGA-B149.1 or .2 for code details.
5. For natural gas, a minimum of 3/8" iron pipe with gas minimum pressure of 4.5 w.c. must be used for supply from the gas meter. Consult with the local gas utility if any questions arise concerning pipe sizes.
6. A 1/8" NPT plugged tappings are accessible for test gauge connection both on the inlet and outlet of the gas valve.
7. Turn the gas supply ON and check for leaks. **DO NOT USE OPEN FLAME FOR THIS PURPOSE.** Use an approved leak testing solution.
8. The appliance 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).
9. The appliance must be isolated from the gas supply piping system by closing its individual 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).

**Note: The gas line connection may be made of 1/2" rigid pipe, 1/2" copper pipe or an approved flex connector. Since some municipalities have additional local codes, it is always best to consult your local authorities and the current CAN/CGA - B149.1 or .2 installation code in Canada or the National Fuel Gas code ANSI Z223.1 in the U.S.A.**



**Important:** Always check for gas leaks with a soap and water solution. Do not use open flame for leak testing.

## Gas Specifications

| Models                            | ZDV4224N                          | ZDV4224LP                         | ZDV4228N                          | ZDV4228LP                         | ZDV4232N                          | ZDV4232LP                         |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>Fuel</b>                       | Natural                           | Propane                           | Natural                           | Propane                           | Natural                           | Propane                           |
| <b>Gas Control</b>                | Millivolt adjustable              |
| <b>Maximum Input</b>              | 24,000 BTU High<br>14,000 BTU Low | 22,000 BTU High<br>15,000 BTU Low | 28,000 BTU High<br>20,000 BTU Low | 26,000 BTU High<br>19,000 BTU Low | 30,500 BTU High<br>20,600 BTU Low | 29,200 BTU High<br>22,200 BTU Low |
| <b>Maximum Output</b>             | n/a                               | n/a                               | 21,000 BTU High                   | 19,500 BTU High                   | 22,900 BTU High                   | 21,900 BTU High                   |
| <b>Orifice Size (0 - 4500 ft)</b> | #42                               | #53                               | #37                               | #52                               | #36                               | #51                               |
| <b>Air Shutter</b>                | 1/8" Open                         | Fully Open                        | .218" Open<br>.25"                | Fully Open<br>.625" Open/         | .187                              | .312                              |

**Gas Inlet Size** S.I.T. 820 Nova, 3/8" NPT

| Gas Supply Pressure      | Minimum             | Normal | Maximum               |
|--------------------------|---------------------|--------|-----------------------|
| <b>Natural Gas</b>       | 5.5"                | 7"     | 9"                    |
| <b>Liquid Propane</b>    | 11"                 | 11"    | 12"                   |
| <b>Manifold Pressure</b> | <b>Natural Gas</b>  |        | <b>Liquid Propane</b> |
| Manifold Pressure High   | 3.5 IN. W.C./87 KPa |        | 10 IN. W.C./2.61 KPa  |
| Manifold Pressure Low    | 1.6 IN. W.C./40 KPa |        | 6.3 IN. W.C./1.57 KPa |

For the state of Massachusetts a **T-handle gas shut-off valve** must be used on a gas appliance. This T-handle gas shut-off valve must be listed and approved by the state of Massachusetts. This is in reference to the state of Massachusetts state code CMR238.

# General Glass Information

## Glass Cleaning

It will be necessary to clean the glass periodically. During start-up, condensation, which is normal, forms on the inside of the glass and causes dust, lint etc. to cling to the glass surface. Also, initial paint curing can deposit a slight film on the glass. It is therefore recommended that initially the glass be cleaned two or three times with non-abrasive common household glass cleansers and warm water. After that, the glass should be cleaned two or three times a season depending on the circumstances.

## Cautions and Warnings

- Do not clean when the glass is hot.
- The use of substitute glass will void all product warranties.
- Care must be taken to avoid breakage of the glass.
- Do not operate this fireplace without the glass front or with a broken glass front.
- Do not strike or abuse glass.

## Glass Replacement

**REPLACEMENT GLASS FOR BOTH DIRECT VENT UNITS**

Model ZDV4224N and ZDV4224LP can use either tempered glass or Robax ceramic or coated Neoceram glass. Must be 5mm thick.

Only Robax ceramic or coated Neoceram glass may be used for replacement for Model ZDV4228N, ZDV4228LP, ZDV4232N and ZDV4232LP. Must be minimum 5mm thick.

## Removal of the Glass Door

1. Remove the two screws located behind upper grill or unfasten latches if so equipped.
2. To remove, pull frame forward and lift from bottom door retainer.
3. To replace glass, clean all materials from door frame. Using a high heat silicone temperature-resistant to 500°F (260°C) apply a bead of approximately 1/32" to all four sides of frame and insert glass with new gasket. Frame should be on flat surface, with a small amount of weight pressing glass into silicone. Let dry approximately 15 to 20 minutes. The door can be re-installed by reversing Steps 1 & 2.

# Log Placement

## Removal of Door

Units are equipped with screws and/or latches. To remove glass door, either remove screws or unfasten latches and lift door off bottom door retainer channel.

The following is a list of models and appropriate log sets that can be used with each model. It is important that the appropriate log set is used with the correct model in order for the appliance to work properly.

## Appliance/Log Reference Chart

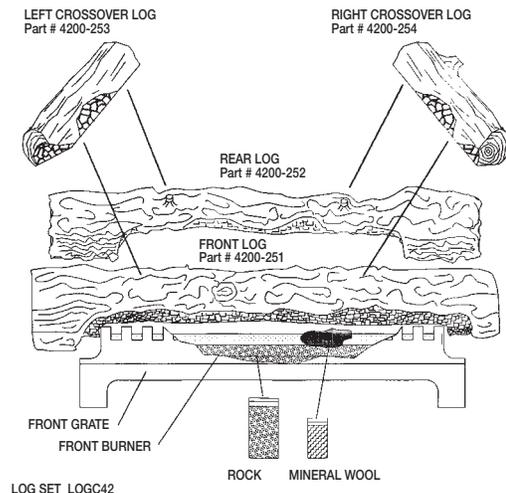
| Appliance      | LOGC42 | LOGC43 | LOGC44 | LOGC60 |
|----------------|--------|--------|--------|--------|
| ZDV4224N or LP | ✓      | ✓      | ✓      |        |
| ZDV4228N or LP | ✓      | ✓      | ✓      |        |
| ZDV4232N or LP |        |        |        | ✓      |

## Log Assembly for Models ZDV4224/ZDV4228

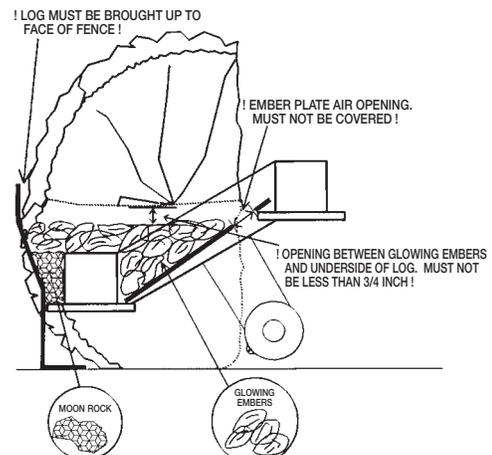
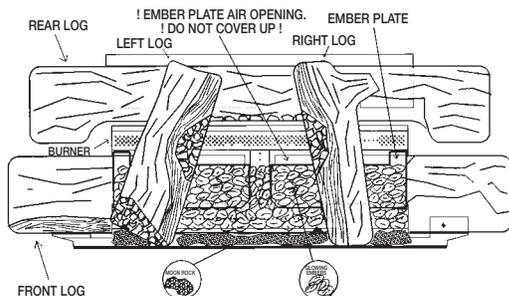
### Log Assembly

1. Remove glass door by removing two (2) screws behind upper grills and lifting door off bottom door retainer or unfasten latches if so equipped.
2. Remove logs from carton and inspect.
3. Verify to see that ember plates (2 pcs) are between front and back burner, air opening to top (as per diagram). The ember plates are used to hold the glowing ember, thus simulating a glowing bed of embers.
4. Place moon rock across opening at front burner, level with front burner. Some moon rock can be on top of burner.
5. Place glowing embers on surface of front burner and surface of ember plates.  
Height on front burner 1/2" - 3/4"  
Height on ember plates 3/4" - 1"  
Do not cover back air opening on ember plates.
6. Place rear log on log shelf 1/2" away from back of fireplace.
7. Place front log over front burner, and resting against decorative grate.
8. Place right and left logs across front and back log. Bark should be to the outside, and right log as a knot.
9. Adjust right and left log so that black charred area sits between front and rear log.
10. **Make sure that a space of at least 3/4" is maintained between glowing ember and underside of front log ember bed area.**
11. Front log should be centered on the log supports between the front and rear burners. Pull log against the front of the supports.

12. Top logs can then be placed across the front and back logs in the slots provided.
13. Purge lines and test pilot operation.
14. Replace glass door. The door must be installed before operating the fireplace.



LOG SET LOGC42



# LOG C42 - LOGC43 LOG PLACEMENT GUIDELINES - FOR MODELS ZDV4224/ZDV4228



**FIGURE A** - Log set Ember kit and Crushed rock



**Step (4)** Break glowing embers into thumbnail size. Place glowing embers on to the surface of the front burner, to the surface of the ember plates and over crossover to the same height as ember plates. Height on front burner 1/2" to 3/4". Height on ember plates 3/4" to 1". Do not cover back air openings on ember plates.



**FIGURE B** - Rear log holder.

**Step (1)** Units are equipped with screws or latches. To remove glass door, either remove screws or unfasten latches and lift door off bottom door retainer.

**Step (2)** Remove logs from carton and inspect each log.

**Step (3)** Verify to see that the ember plates (2 pcs) are between front and back burner.



**Step (5)** Place front log over burner, against decorative grate. Be sure that front log is tight up against the decorative grate.

# LOG C42 - LOGC43 LOG PLACEMENT GUIDELINES - FOR MODELS ZDV4224/ZDV4228 (continued)



**Step (6)** Place rear log on to the log retainer 1/2" away from back of fireplace. (If refractory liner is used, make sure refractory liner is installed first then back log is to be pushed up against it as tight as possible.)



**Step (8)** Place left crossover log across front and back logs using the log placement pin as a guide.

**Step (9)** Place decorative moon rock on bottom of fireplace to simulate ash. DO NOT PUT ANY ROCK ON BURNERS!



**Step (7)** Place right crossover log across front and back logs using the log placement pin as a guide.



**Step (10)** Purge lines and test pilot operation.

**Step (11)** Replace glass door.

# LOGC44 LOG PLACEMENT GUIDELINES - FOR MODELS ZDV4224/ZDV4228

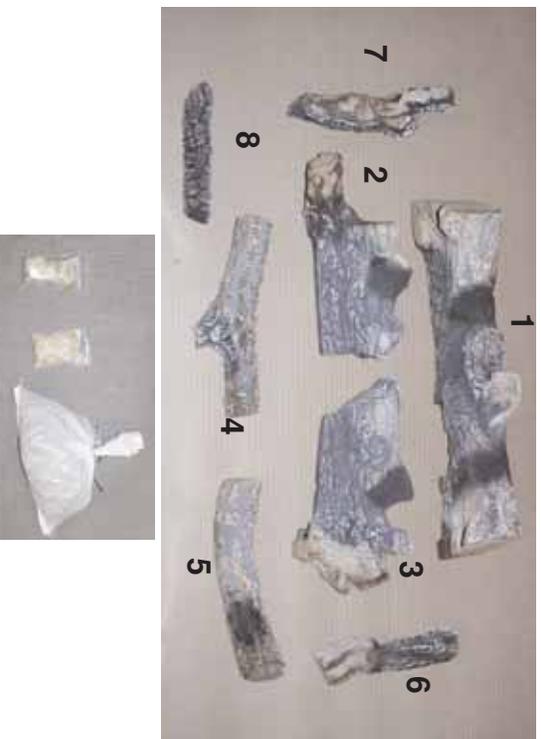


FIGURE A - Log set Ember kit and Crushed rock



**Step (1)** Position rear log over rear log holder and lower into position. Be sure that the log does not sit on rear burner, but behind and lower than burner.



FIGURE B - Rear log holder. If using LOGC44, bend rear tabs 90° down.



**Step (2)** Locate flat surface on Log (2) and place directly onto left ember plate, push log fully to the right until it touches the crossing-tube.

# LOGC44 LOG PLACEMENT GUIDELINES - FOR MODELS ZDV4224/ZDV4228 (continued)



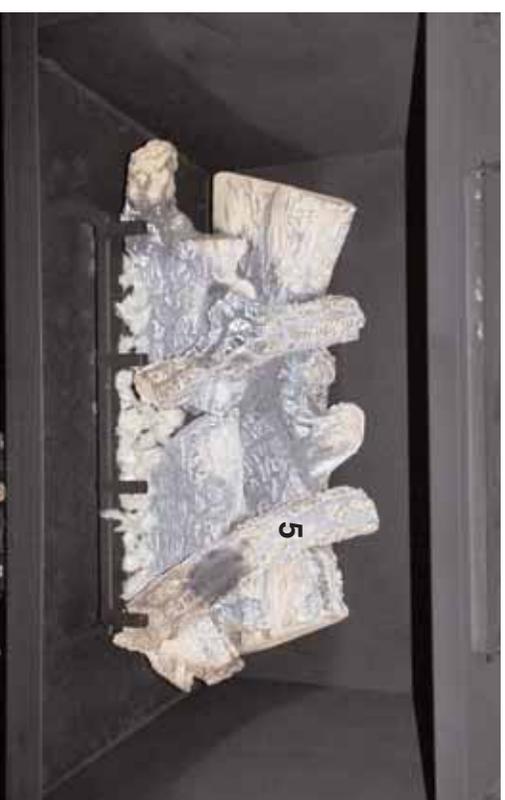
**Step (3)** Locate flat surface on Log (3) and place directly on to right Ember plate, push log fully to the left until it touches Log (2)



**Step (5)** Position Log (4) into grooved areas of Logs (1) and (2).



**Step (4)** Remove Ember material from plastic bag, tear off dime and nickel sized pieces and place directly onto front burner tube and crossover tube. (NOTE: Do not place embers onto rear burner tube)



**Step (6)** Position Log (5) into grooved area of Logs (1) and (3).

# LOGC44 LOG PLACEMENT GUIDELINES - FOR MODELS ZDV4224/ZDV4228 (continued)



**Step (7)** Position Log (6) up against the 2nd grate post from the right, and position upper section of Log (6) into grooved area of Log (5).



**Step (9)** Position Log (8) up against the 3rd grate post from the right, and position upper section of Log (8) against Logs (2) and (7).

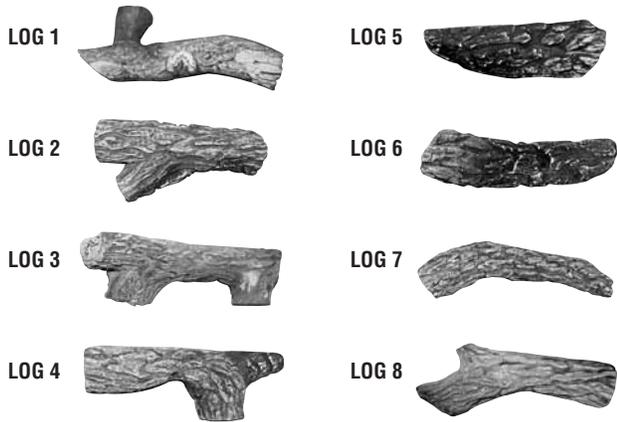


**Step (8)** Slide Log (7) between Log (1) and Log (2)

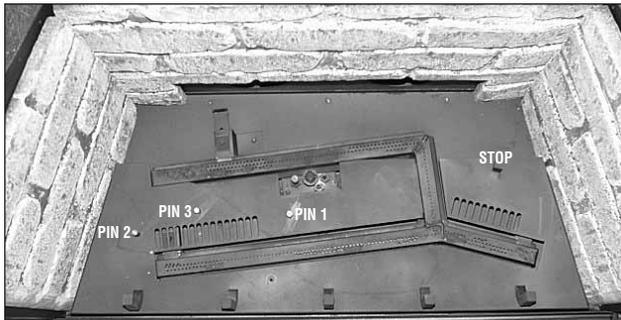


**Step (10)** Place crushed rocks onto firebox bottom.  
(NOTE: Do not place crushed rock onto burner tubes)

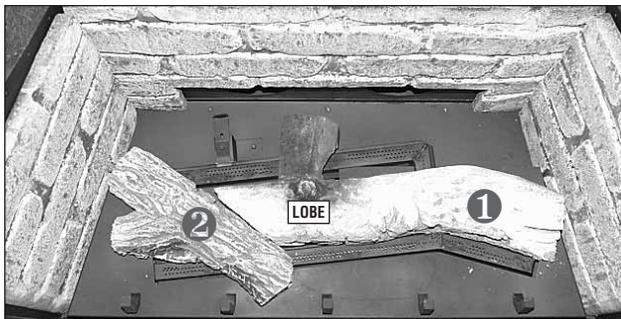
## Instructions for installing Log Set C-60 for Models ZDV3632, ZDV4232, and ZDV4732



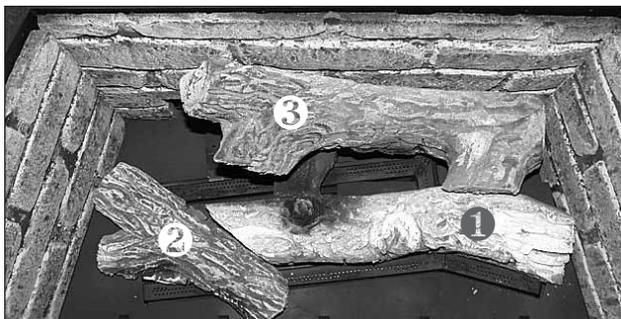
**STEP 1:** Log 1 is to be positioned onto Pin 1 with locating hole on bottom of log. The rear right of Log 1 will be placed against stop. (Do not place log on top of stop.)



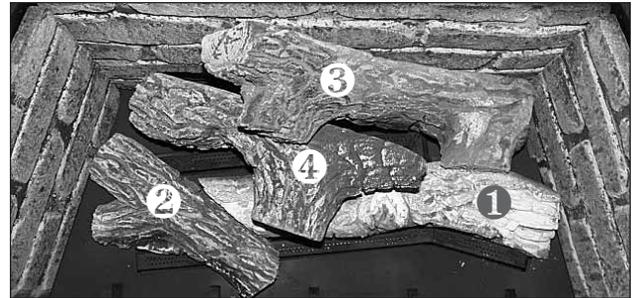
**STEP 2:** Locate the two holes on bottom of Log 2 and position these down onto the locating Pins 2 and 3.



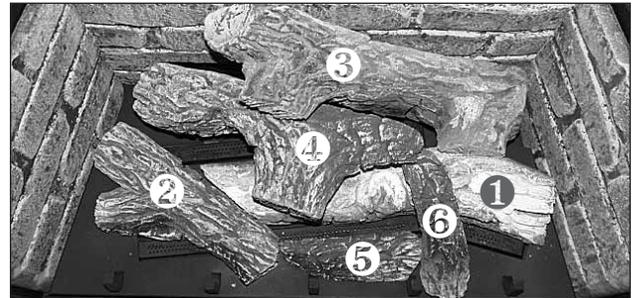
**STEP 3:** Place log 3 behind the rear burner tube as shown in the photograph.



**STEP 4:** (Note hole on Log 4, bottom of main knot and flat area near end of log.) Raise Log 3 approx. 2 inches and position Log 4 under the top knot of Log 3. Position the hole of Log 4 onto locating lobe of Log 1, lower Log 3 down into place as shown. Place flat area of Log 4 onto left rear burner log mount and push back against tab.

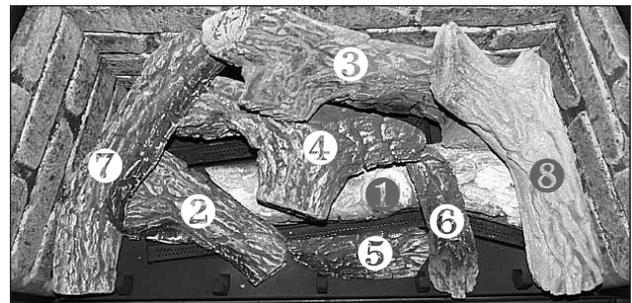


**STEP 5:** Place Log 5 against grate bars and position Log 6 along side of Log 5 and onto Log 1 as shown in the photograph.

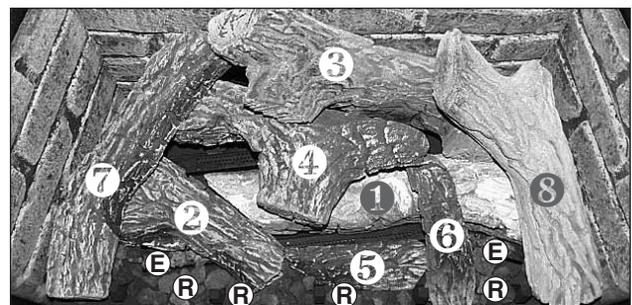


**STEP 6:** Place the narrow end of Log 7 onto Log 4. The left front of Log 7 should touch the firebox wall or brick panel.

**STEP 7:** Place Log 8 onto Log 3. The right front of Log 8 should touch the firebox wall or brick panel. Verify that Logs 7 and 8 do not extend into the glass front or enter into the flame path.



**STEP 8:** Place a small amount of glowing ember material (E) onto the front burner tube ends. (Too much ember material causes a blue flame.) (When placing embers onto burner, leave an air space between the log and the embers; this will help produce a yellow flame in these areas.) Place rocks (R) onto false bottom only. Do not place rocks onto burner tubes.



# Fan Kit Installation

## Automatic On/Off Thermostat Controlled Fan Kit (Part # Z36FK)

1. Open the lower front access cover.
2. The sensor (thermo-disc) needs to be secured under the firebox, the sensor needs to be in contact with fire box bottom.
3. The two (2) #8x1/2 screws are factory installed in the back of the fireplace. Mount the fan using the keyhole slots in the fan body.
4. Install a junction box (type to except three prong plug) on the inside wall of the access area opposite the fan. Large holes are provided to allow wiring to enter the access area on the left of the unit. Connect the power, sensor and variable speed wall switch as shown in the wiring diagram.

### Fan Mounting Instructions:

1. Install thermodisc provided with fan kit. Screws and washer spacers are factory installed in bottom of firebox. Washer spacers are to be placed between firebox and thermodisc.
2. (NEW STYLE MOUNTING SYSTEM) The bottom of the unit has 2 tabs prepunched (bent upwards) for the rubber grommets in fan bracket. Place fan bracket over tabs. This will secure the fan.
3. Junction box should be mounted to opposite side and wired to variable speed control and 120 V power.
4. Plug fan into junction box and attach the 2 leads exiting the fan housing into the thermodisc.

5. Close lower access cover.
6. Turn the wall switch on (clockwise). Turn the fireplace on. Once the sensor unit reaches operating temperature in approximately 10 to 15 minutes the fan will turn on. The fan can be switched off, if desired, by turning the wall switch fully counter-clockwise.
7. To set the minimum fan speed if desired. Remove the variable speed switch from the wall mount. Turn the variable speed wall controller to its minimum setting (fully clockwise). Use the set screw on the side of the variable speed controller to increase or decrease the minimum fan speed. (It may be desirable to lower minimum fan speed to decrease the sound level created by the fan.) Reinstall switch into wall mount and cover with face plate.

### Electrical Services

All optional fan kits are equipped with a 120V, 60Hz blower.

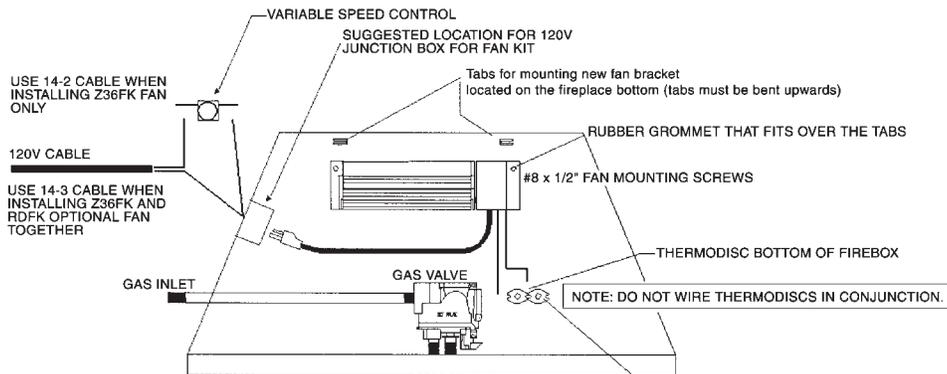
Note: All electric connections are to be made in accordance with CSA Standard C22.1 - Canadian Electrical Code part I or with the National Electrical Code, ANSI/NFPA 70 (latest addition) and/or in accordance with local codes.

**WARNING: Electrical Grounding Instructions. This appliance is equipped with a three-pronged (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.**

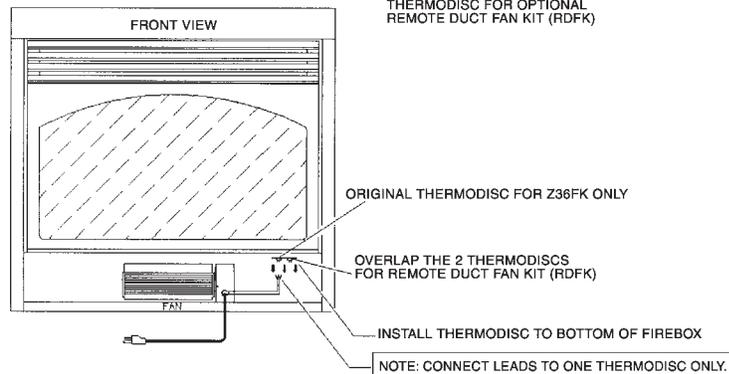
**Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.**

**Verify proper operation after servicing.**

TOP VIEW



FRONT VIEW



### PARTS LIST:

- 1 ea. fan c/w 4 ft. cord, 2-14" leads (female ends)
- 2 ea. #8 x 1/2" screws
- 1 ea. variable speed control (wall mount type)
- 1 ea. thermodisc

**Caution:** Should this fan require servicing, the power supply must be disconnected.

# Millivolt System, Lighting & Burner Control

## Lighting Instructions

1. Open access grill on bottom.
  2. Push in gas control knob slightly and turn clockwise to "OFF".
- NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.
3. Wait five (5) minutes to clear out any gas remaining in burner combustion chamber.
  4. Turn knob on gas control counter-clockwise to "PILOT".
  5. Push in control knob all the way and hold in. Immediately light the pilot with piezo-electric ignitor while continuing to push knob in for one (1) minute. Release knob. Pilot should remain lit. If it goes out, repeat steps 2 through 5 until pilot remains lit.
    - If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
    - If pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
  6. Turn gas control knob counter-clockwise to "ON".
  7. All models are supplied with a wall switch that turns the main burner on or off. If main burner does not light immediately when you turn the gas control valve to "ON" ensure that the wall switch is in the "ON" position.

**NOTE: The "On/Off" wall switch may be replaced with a wall thermostat allowing main burner to light and turn off automatically depending upon thermostat setting and room temperature.**

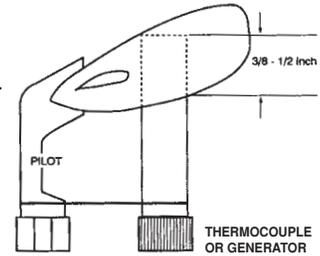
8. Adjust the gas flow (flame height) with the HI/LOW gas control knob on valve.
9. Close control access grill.

## Recommended Maximum Lead Length (Double Wire) When Using Wall Switch or Thermostat

| Wire Size | Max. Length |
|-----------|-------------|
| 14 GA.    | 100 FT.     |
| 16 GA.    | 64 FT.      |
| 18 GA.    | 40 FT.      |
| 20 GA.    | 25 FT.      |
| 22 GA.    | 16 FT.      |

## Pilot Burner Adjustment

1. Remove pilot adjustment cap.
2. Adjust pilot screw to provide proper sized flame.
3. Replace pilot adjustment cap.
4. Leak Test.

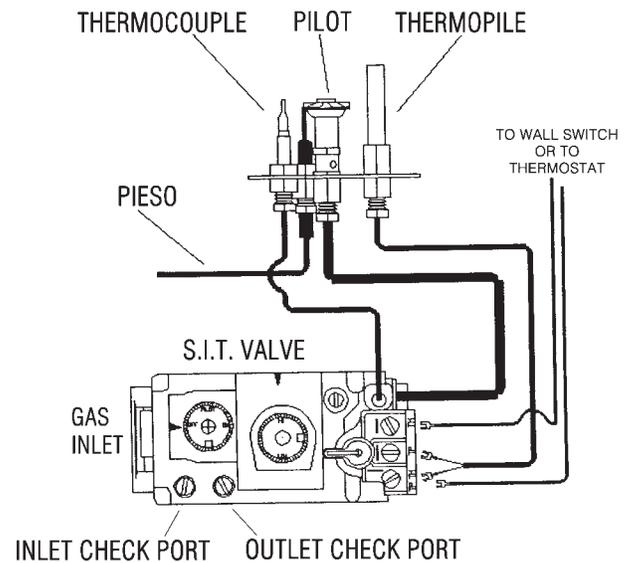


Caution: Do Not Wire 120 Volt Power To Millivolt Switches Or Thermostats.

## To Turn Off Gas Appliance

Turn off all electric power to the appliance if service is to be performed. Open control access grill.

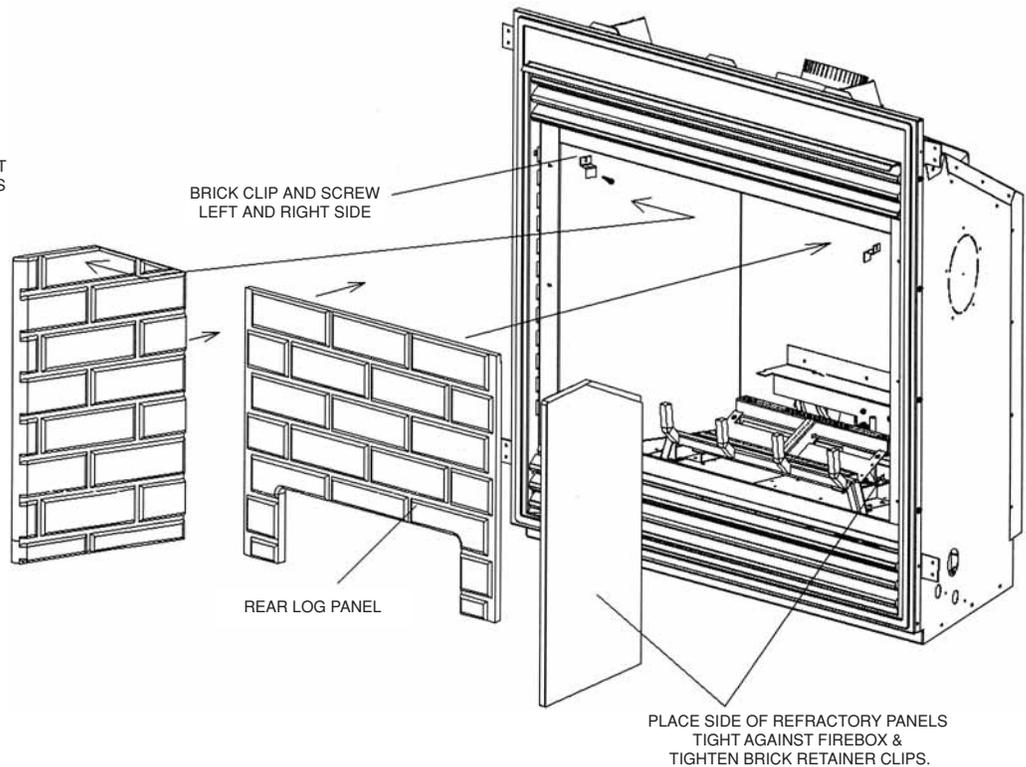
Push in gas control knob slightly and turn clockwise to "OFF". Do not force. Close control access grill.



## Brick Installation

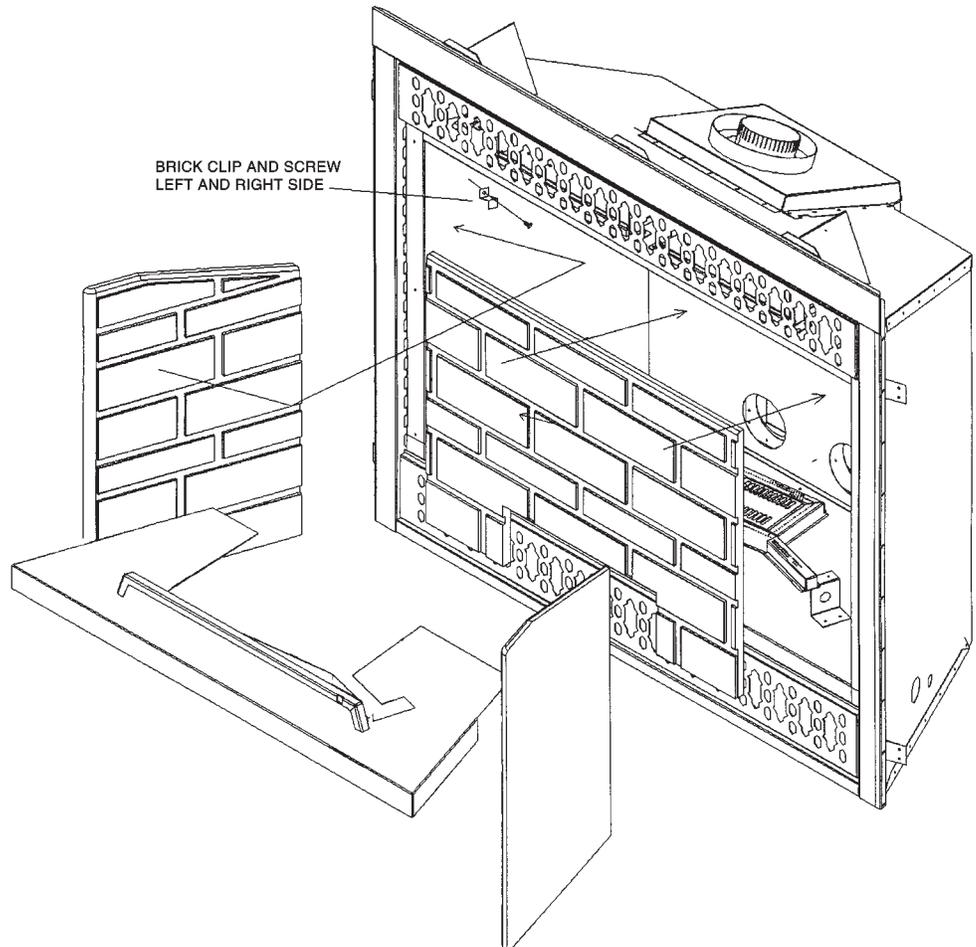
### INSTALLING BRICK PANELS FOR MODEL ZDV4224 AND ZDV4228

1. PLACE REAR BRICK PANEL AGAINST REAR OF FIREPLACE.
2. LOOSEN SCREWS HOLDING BRICK CLIPS IN POSITION, ROTATE CLIPS UP OUT OF THE WAY. PLACE SIDE BRICKS UP TO REAR BRICK AND FLUSH AGAINST SIDE WALL OF FIREBOX. POSITION CLIPS OVER BRICK AND TIGHTEN SCREWS.

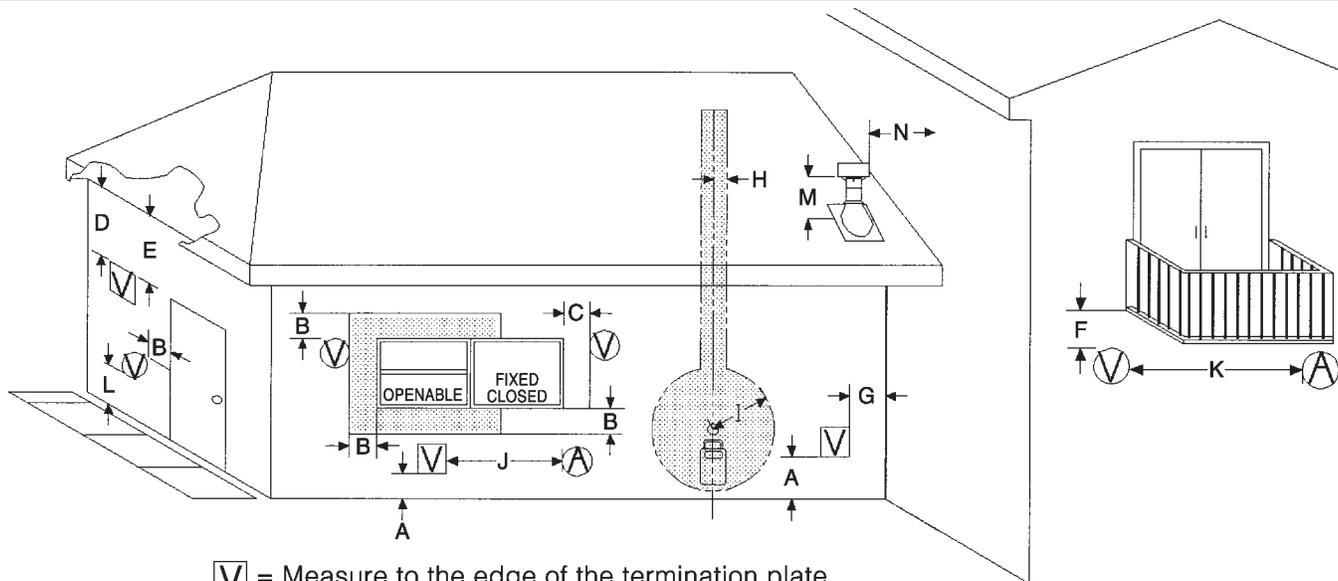


### INSTALLING BRICK PANELS FOR MODEL ZDV4232

1. REMOVE DOOR GLASS FROM THE UNIT BY UNLATCHING THE 2 LATCHES ON TOP OF THE UNIT.
2. REMOVE THE FALSE BOTTOM FROM THE UNIT BY LIFTING STRAIGHT UP. IT MAY NEED TO BE WIGGLED.
3. PLACE REAR BRICK PANEL UP AGAINST THE REAR OF THE FIREBOX.
4. LOOSEN SCREW HOLDING BRICK CLIP IN POSITION. MOVE CLIP UP OUT OF THE WAY AND PLACE SIDE BRICK UP TO REAR BRICK AND FLUSH AGAINST SIDE WALL OF FIREBOX. POSITION CLIP OVER BRICK AND TIGHTEN SCREW.
5. REPLACE FALSE BOTTOM.
6. INSTALL LOG SET AS PER INSTRUCTIONS AND RE-INSTALL DOOR.



# Vent Termination



☐V = Measure to the edge of the termination plate.

○V = Measure to the edge of the round termination.

☐V Vent Terminal

○ Air Supply

■ Area Where Terminal Not Permitted.

A - Clearance above grade, veranda, porch, deck, or balcony 12 inches (30cm) minimum.<sub>1,2</sub>

B - Clearance to window or door that may be opened. 12 inches (30cm) minimum for appliances 100 000 Btuh (30 kW) and lower, in Canada. 9 inches<sub>2</sub> (23cm) for appliances 50 000 Btuh and lower, in USA.

C - Clearance to permanently closed window minimum 12 inches (30cm) recommended to prevent condensation on window, in Canada. 9 inches<sub>2</sub> (23cm) for appliances 50 000 Btuh and lower, in USA.

D - Vertical clearance to ventilated soffit located above the termination within a horizontal distance of 2 feet (60cm) from the center line of the termination. 18 inches (46cm) minimum.<sub>3</sub>

E - Clearance to unventilated soffit 12 inches (30cm) minimum.

F - Clearance under veranda, porch, deck or balcony 12 inches<sub>1</sub> (30cm) minimum.<sub>4 US<sub>5</sub></sub>

G - Clearance from a perpendicular inside wall or outer corner to the edge of the vent terminal plate is 3" (minimum).

H - Clearance to each side of center line extended above meter/regulator assembly 3 feet (91cm) within a height 15 feet (4.5m) above the meter/regulator assembly.

I - Clearance to service regulator vent outlet 3 feet (91cm) minimum.<sub>1 US<sub>3</sub></sub>

J - Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance: In Canada, 6 inches (15cm) for appliances ≤10,000 Btuh (3kW), 12 inches<sub>1</sub> (30cm) minimum for appliances >10,000 Btuh (3kW) and ≤100,000 Btuh (30kW), 36 inches (91cm) for appliances >100,000 Btuh (30kW). In the USA, 6 inches<sub>2</sub> (15cm) for appliances ≤10,000 Btuh (3kW), 9 inches (23cm) for appliances >10,000 Btuh (3kW) and ≤50,000 Btuh (15kW), 12 inches (30cm) for appliances >50,000 Btuh (15kW).

K - Clearance to a mechanical air supply inlet 6 feet (1.8m) minimum.<sub>1, in Canada. In USA, 3 feet (91cm) above if within 10 feet<sub>2</sub> (3m) horizontally.</sub>

L - Clearance above paved sidewalk or a paved driveway located on public property 7 feet (2.1m) minimum.<sub>3</sub>

M - Clearance above highest point of exit on roof 18 inches (45cm).

N - Clearance to perpendicular wall 24 inches (60 cm). (Recommended to prevent re-circulation of exhaust products. For additional requirements check local codes.)

**NOTE: Clearances are to the edge of terminal plate, add 6-3/4" to clearances to arrive at center line.**

**NOTE: Local Codes or Regulations may require different clearances.**

## Termination

It is imperative that the vent termination be located observing the minimum clearances as shown. There must not be any obstruction such as bushes, garden sheds, fences, decks or utility buildings within 24" from the front of the termination plate.

Do not locate termination where excessive snow or ice build-up may occur. Be sure to check vent termination area after snow falls and clear to prevent accidental blockage of venting system. When using snow blowers, make sure snow is not directed towards vent termination area.

## General Venting Information

The gas fireplace is approved to be vented either through the side wall or vertically through the roof.

This appliance is approved with Kingsman flex vent system and also approved for use with Simpson Duravent Direct Vent System (model DV-GS series), and AmeriVent Direct Vent Pipe System.

Kingsman flex vent system can be used with Simpson Duravent Direct Vent termination's (model DV-GS series).

When using Simpson Duravent or AmeriVent Direct Vent pipe a Kingsman/Duravent adapter must be used.

**ONLY VENTING COMPONENTS SPECIFICALLY APPROVED AND LABELLED FOR THIS FIREPLACE MAY BE USED.**

Minimum clearance to combustibles on venting is 1" with the following exceptions as follows: Top of horizontal 1 1/2". Top of 90 degree elbow in an enclosure under 44" is 5 1/2". Top of 90 degree elbow in an enclosure over 44" is 2 1/2".

Venting terminal shall not be recessed into a wall or siding.

1 - In accordance with the current *CSA B149.1, Natural Gas and Propane Code.*

2 - In accordance with the current *ANSI Z223.1/NFPA 54, National Fuel Gas Code.*

3 - A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

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

5 - Clearance in accordance with local installation codes and the requirements of the gas supplier.

## Venting Routes And Components

**A gas appliance must not be connected to a chimney flue serving a separate solid-fuel burning appliance.**

Since it is very important that the vent system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

The table showing the relationship between vertical and horizontal side wall venting will help to determine the various vent lengths.

The maximum horizontal run with the 90 degree bend at the fireplace flue outlet is 4 ft/122cm (Figure #1). The maximum horizontal run is 20 ft/6.1m when the vertical run is 7 ft/2.1m. (Figure #2). Note: 1/4" vertical rise is required for every 12" of horizontal run.

The maximum number of 45 degree bends per side wall installation is two (2) in the horizontal run and then you must reduce the length of the horizontal by 18 inches for each 45 degree bend.

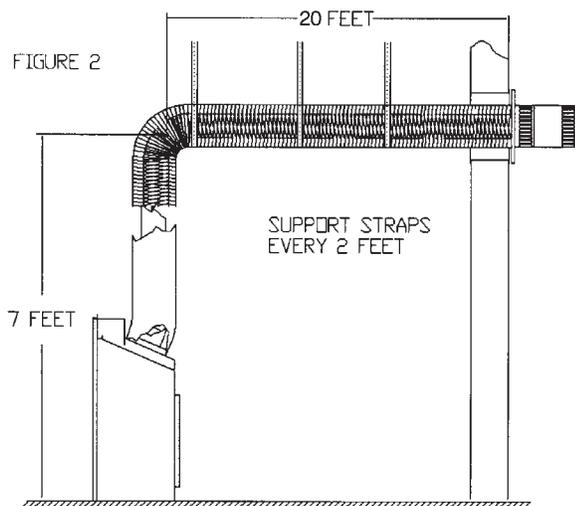
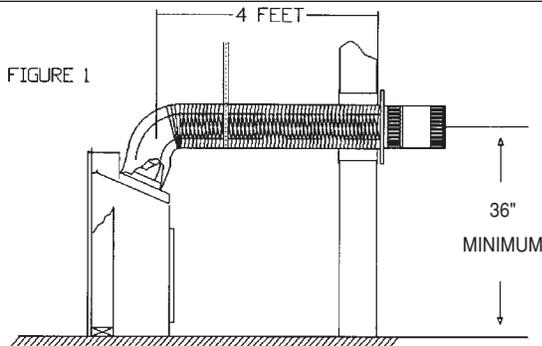
The maximum vertical run is 40 ft/12.2 meters.

**Special Note: For each 45 degree bend installed in the horizontal run, the length of the horizontal run must be reduced by 18" (45cm). This does not apply if the 45 degree bends are installed on the vertical part of the vent system.**

**Example:** If according to the table, the length of the horizontal run is 10 feet, and two 45 degree bends are required, the horizontal run length must be reduced to 7 feet.

2 additional 90 degree bends or equals are allowed. The horizontal run must be reduced by 36" per each 90 degree bend, or 18" per each 45 degree bend.

**Important:** Always locate the fireplace in such a way that a minimum of offsets and/or horizontal runs are required. 1/4" vertical rise is required for every 12" horizontal run.



## How To Use The Horizontal Vent Table

1. Determine the height of the system and the number of bends required.
2. Having determined the vertical distance determine the maximum horizontal section allowed.
3. Vent table has been established for 90° horizontal/vertical runs. With use of flex pipe distance not having 90° bends will not fall into vent table standards. See Fig. B.

## Horizontal Venting Table From Bottom of Fireplace

for venting to a maximum of 40 ft. (12.2 meters)

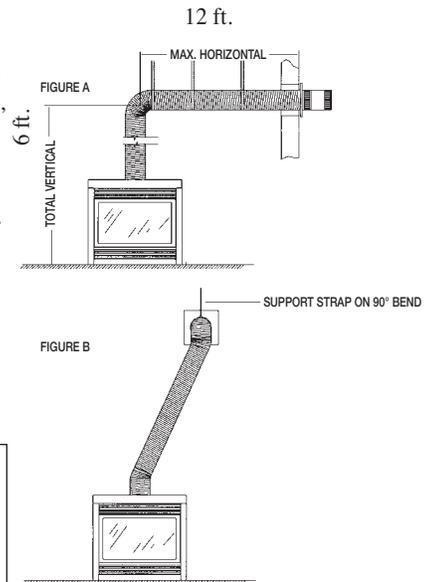
| Total Vertical |        | Max Total Horizontal |        |
|----------------|--------|----------------------|--------|
| Feet           | Meters | Feet                 | Meters |
| 4              | 1.2    | 5                    | 1.5    |
| 5              | 1.5    | 8                    | 2.4    |
| 6              | 1.8    | 12                   | 3.7    |
| 7              | 2.1    | 20                   | 6.1    |
| 8              | 2.4    | 20                   | 6.1    |
| 9              | 2.7    | 20                   | 6.1    |
| 10             | 3.0    | 20                   | 6.1    |
| 11             | 3.4    | 20                   | 6.1    |
| 12             | 3.7    | 20                   | 6.1    |
| 13             | 4.0    | 20                   | 6.1    |
| 14             | 4.3    | 20                   | 6.1    |
| 15             | 4.6    | 20                   | 6.1    |
| 16             | 4.9    | 20                   | 6.1    |
| 17             | 5.2    | 20                   | 6.1    |
| 18             | 5.5    | 20                   | 6.1    |
| 19             | 5.8    | 20                   | 6.1    |
| 20             | 6.1    | 20                   | 6.1    |
| 25             | 7.5    | 15                   | 4.6    |
| 30             | 9      | 10                   | 3.0    |
| 40             | 12.2   | 0                    | 0      |

Example A:

If the vertical dimension from the floor of the fireplace is 6ft, the horizontal run to the wall flange of the vent termination must not exceed 12ft.

**NOTE: The final location of the fireplace must be such that the horizontal vent dimensions fall within those stated on the graph. The Maximum Vertical vent run is 40ft. (12.2 meters).**

**Important:** Minimum clearance between vent pipes and combustible materials is 1 inch (25mm).



It is recommended for **Propane Horizontal Installations** that the venting should be a minimum of one foot vertical off the flue before the elbow on any horizontal runs of one foot or greater. This allows for cleaner combustion and greatly reduces carboning and cleaning of glass. (Does not apply to Back Flue Models).

# General Vent Installation Information

This gas appliance is approved to be vented either through the side wall or vertically through the roof. **Only Kingsman venting kits and components specifically approved and labelled for this stove may be used.** This appliance is also approved for use with Simpson-DuraVent Direct Vent system, Model DV-GS Series, and Ameri-Vent Direct Vent Pipe System.

## SIMPSON DURAVENT OR AMERIVENT

When using Simpson DuraVent or AmeriVent pipe a DuraVent adapter must be used (part # ZDVDF A for fireplaces). Follow installation instructions provided by Simpson DuraVent for installation of pipe and adhere to the clearance to combustibles provided in this manual. Apply a bead of Mill Pac high temp sealant to all joints of pipes, adapters and termination as recommended.

## Flex Pipe Venting

Flex pipe is shipped in unexpanded length. When installing pipe expand the lengths. Pipe can be expanded to twice their lengths e.g. 4ft. to 8ft.

Do not use more than 2 couplers to extend short pipes. Single sections are preferred in an installation attaching at the fireplace and termination.

Place the spring spaces provided approximately every two feet to stabilize 4" flex in the center of 7" flex. When forming bends place spring in bend or before and after. (See Fig. 1).

Horizontal runs require support metal straps every 2 feet. In off set installation support straps should be used to stabilize pipe.

Expand 4" and 7" flex pipe to the point that the 7" protrudes approximately 2 to 3 inches past outer wall and the 4" flex protrudes approximately 2 to 3 inches past the 7" flex. See Fig. 1. Attach the 4" pipe to the termination first and secure with sealant and screws then attach the 7" flex to the termination with caulking and screws. Termination may then be moved back to the outer wall and attached to home screwing into the framing. Silicone around termination to waterproof. If siding shield is going to be used attach this using same attaching hole as the top of termination after termination has been caulked for water proofing.

## Use Hi Temp Sealant

Apply a bead of mill pac high temp sealant to all joints and use four screws to secure each pipe at fireplace, termination and any joint if joining any sections of pipe.

## FRAMING DIMENSION

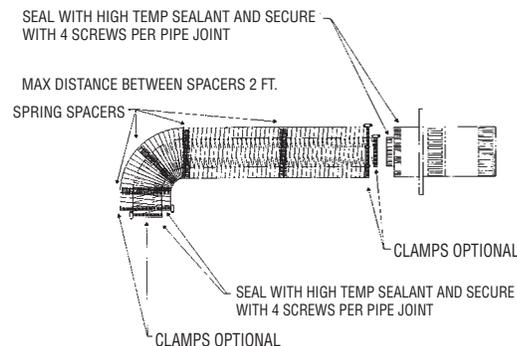
### Combustible Wall

Cut a 11" hole through exterior wall and frame as shown below.

### Non combustible Wall

Cut or drill 8" or 204mm diameter hole.

FIGURE 1



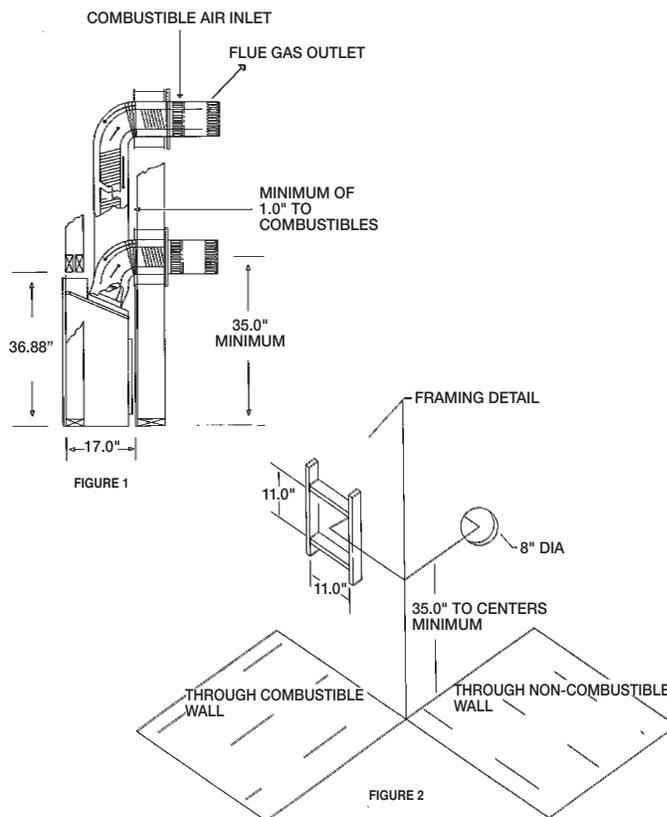
**NOTE:** It is critical to the proper and safe operation of this fireplace that on all connections the inner liner and the outer casing are both caulked with liberal amounts of sealant. Do not use any kind of tape or silicone other than that recommended in this manual. Mill Pac Sealant

# Installation Of Side Wall Venting

1. The minimum distance from the bottom of fireplace to centre of vent is 35 inch (89 cm) (See Figure 1). Cut a hole through the wall allowing for a 11" x 11" (inside diameter) in combustible walls for wall thimble or an 8" diameter hole in a non-combustible wall (See Figure 2).
2. Note clearance to combustible above 90 degree bend is 2 1/2".
3. Select the approximate vent length, precise measurements are not needed as your flex pipe can be expanded to twice its shipped length for ease of installation.
4. To install wall thimble centre over 11" x 11" (inch) framing from both sides of wall and secure. Route flex vent pipe through wall thimble (See Figure 1).
5. Before joining pipes, apply a bead of high temperature sealant (Mill Pac) to end of pipe. First attach the four inch (4") flue pipe to the vent termination with sealant, secure with 4 screws provided. At this time make sure the spacer springs are attached to the (4") flex pipe as required. Then attach the seven inch (7") pipe by the same method.
6. Mount vent termination and seal to wall using caulking around the wall thimble to weather proof. After installing the vent termination, double check to make sure the pipe extends properly through wall thimble and into vent termination.
7. Before joining pipes to fireplace flue, apply a bead of high temperature sealant (Mill Pac) to end of pipe. First attach the four inch (4") flue pipe to fireplace with sealant, and secure with 4 screws provided. At this time verify that the spacer springs are attached properly to the (4") flex pipe as required. Then attach the seven inch (7") pipe by the same method.
8. Support horizontal pipes every two (2) feet (61 cm) with metal strap bands. Re-check fireplace to make sure it is levelled and properly positioned and secured.
9. Support vertical pipes to maintain a minimum of 1" or greater clearance to combustibles with metal strapping bands.

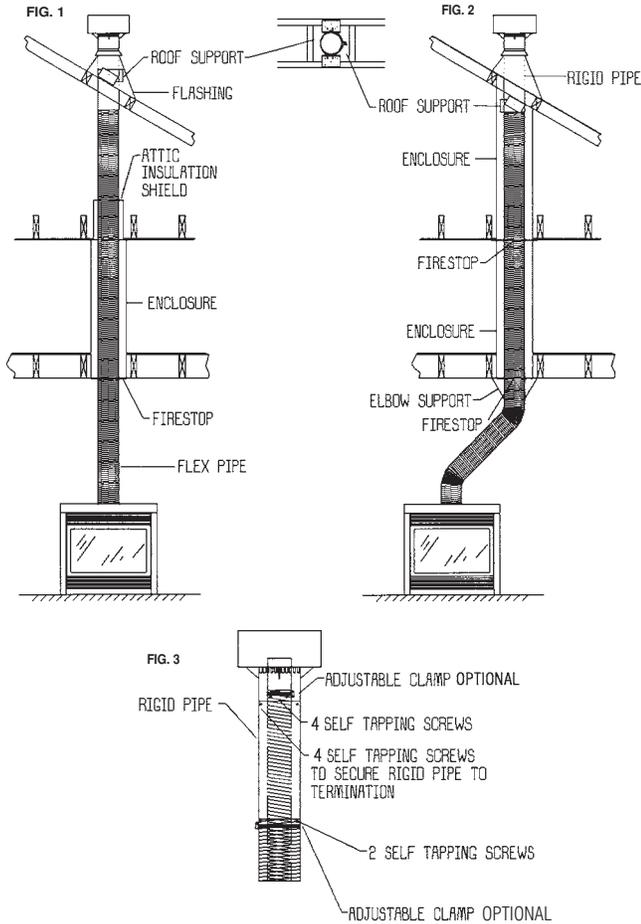
Note: Wall thimbles covers combustible wall up to 11" thick.

Note: Venting terminals shall not be recessed into wall or siding.



## Venting Straight Up Through Roof

1. An Attic Insulation Shield must be installed where the vent passes from a lower living space into an attic space where the chimney is not enclosed. It is designed to keep insulation materials away from the chimney. See Fig. 1.
2. When installing the Attic Insulation Shield where the chimney passes from a living space to an attic space, install the shield from below and nail in place using 1" spiral nails.
3. A fire stop must be installed on the bottom side of the joists when passing through a ceiling or floor. If an attic insulation shield is to be used, a fire stop is not required.



## Using Flex Bends

4. Avoid cutting joists by offsetting the flex pipe. See Fig. 2.
5. When using 45° bends a bend support is required directly above the highest bend.
6. When installing a bend in a joist area a minimum of 2 1/2" clearance to combustibles to the top of bend must be maintained, sides and bottom of pipe, a 1" clearance to combustibles must be maintained. If running horizontal through an area a 1 1/2" minimum clearance to the top of the horizontal pipe must be maintained.
7. Maximum vertical height of system should not exceed 40 feet.
8. Use roof support and 7" rigid pipe at roof level. Flex not permitted within roof support.
9. When penetrating the roof a rigid 7" galvanized pipe must be used. Attach the 7" flex to the 7" rigid with high temperature sealant, secure with four screws assuring the flex and rigid pipe are secured. 4" flex pipe must be secured the same way with 4 screws but must penetrate the 4" flex and 4" section of termination. Attach 7" rigid pipe to 7" termination with sealant and screw with 4 sheet metal screws. (See Fig. 3).
10. Vertical termination clearance is 18" (inches) above the roof, measured from highest point of exit on the roof line.
11. Support vertical pipes to maintain minimum of one inch or greater clearances to combustibles.

## Roof Flashing

Ensure that you have the proper roof flashing by checking your roof pitch using a level and two rulers, or by using a roof pitch card. See figure below.

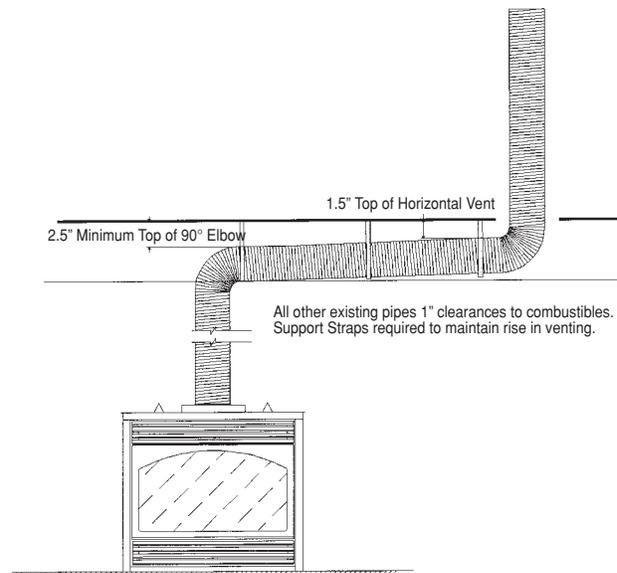
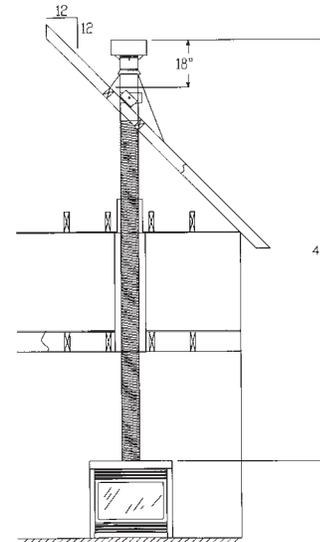
Slide a Roof Flashing suitable to your roof slope over the vent. Place the edge of the flashing plate that will be on the higher part of the roof slope under the shingles. Both the sides and the lower edge lay on top of the shingles.

**NOTE: At the top edge of the flashing plate, lift the shingles and nail the plate to the roof deck, then cement the shingles to the plate with a suitable waterproof mastic.**

Ensure that the chimney is plumb. Square up the flashing plate and nail in place to the roof deck. Use 12 nails with neoprene washers or cover the heads with a suitable waterproof mastic.

Wrap the storm collar around the vent above the flashing. Secure the ends together loosely with nut and bolt supplied. Slide the collar down the vent until it comes in contact with the flashing. Tighten the bolt and seal the Storm Collar to the vent with a suitable waterproof non-combustible mastic.

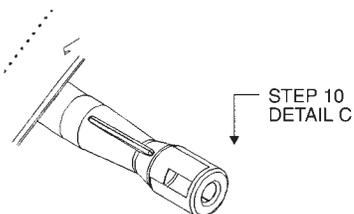
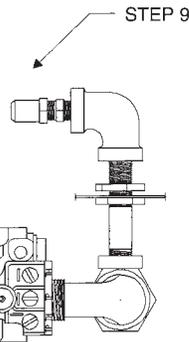
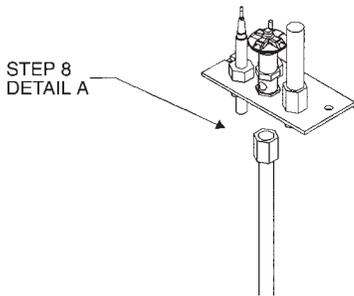
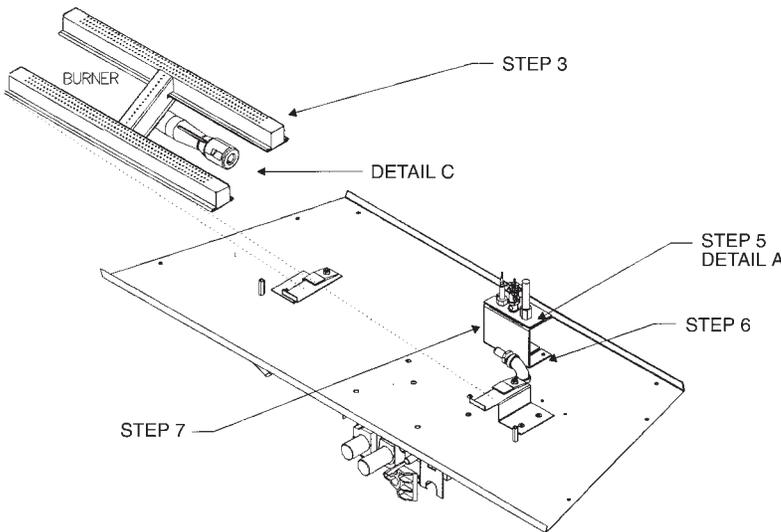
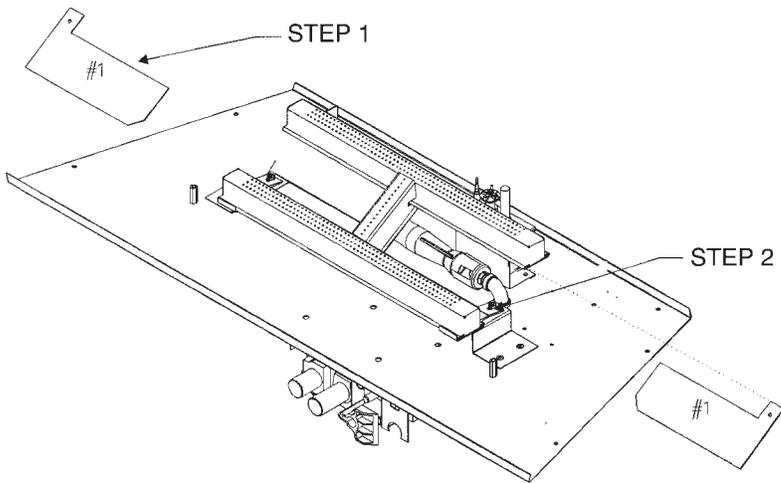
The flashing and storm collar should be painted to match the roof shingles. This will extend its life and improve the appearance. Clean, prime and paint with suitable painting products.





# CONVERSION KIT INSTRUCTIONS

PLEASE CONFIRM THAT STEP 4 IS UNDERSTOOD BEFORE PROCEEDING WITH CONVERSION.



**“Warning”**  
This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer’s instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer’s instructions supplied with the kit”

## SECTION A

- Step 1: Remove the 2 ember plates from the burner. This step may not be required, depending on the type of burner assembly.
- Step 2: Loosen the 2 screws holding the burner in place.
- Step 3: Slide the burner to the left to expose the orifice.

**Step 4: Before going any further you need to verify which pilot system is in use:**  
– If there is a spring clip below the pilot hood, proceed to the other side of page, Section B, Step 5.

- Step 5: Remove the 2 screws that hold the pilot to the bracket.
- Step 6: Remove the 2 screws that attach the pilot bracket to the firebox bottom.
- Step 7: Remove the pilot bracket to expose the pilot assembly.
- Step 8: Remove the pilot tube and nut from the pilot assembly using a 10mm wrench, slide the tube and nut down. You may have to tap the pilot hood lightly to release the pilot orifice. Place new pilot orifice into the pilot assembly and reinstall the pilot tube and nut. Tighten with wrench.  
Reinstall pilot bracket at this time.
- Step 9: Remove main orifice using a 1/2” wrench and replace with new conversion orifice.
- Step 10: Adjust the primary air setting to the correct setting as specified in the manual or label plate. To adjust the air setting, loosen the screw on the side of the tube and rotate to the correct opening using a drill bit or tape measure. Retighten screw.  
Reinstall burner at this time reversing STEPS 3, 2 and 1.
- Step 11: Follow instructions supplied with the conversion HI LOW to convert the valve from one type of fuel to the other.
- Step 12: Check for gas leaks around the pilot burner tube and face of valve.
- Step 13: Attach conversion label to label plate on bottom of unit, writing information as needed.

# Section B Installation Instructions

## GAS CONVERSION KIT FOR TOP CONVERTIBLE PILOT **SERIES 019065X**



Instructions for converting SIT 190 series pilot burner injection from NG to LPG and from NG to LPG Only. This information should be considered as supplemental to the Appliance Manufacturer's Instructions.

### WARNING!

**The installation of this conversion kit must only be undertaken by a qualified and certified gas appliance installer.**

- 1 Shut off the gas supply to the appliance.
- 2 Allow the pilot burner to cool to room temperature.  
**WARNING: Touching a hot pilot burner can result in injury.**
- 3 The pilot hood is held in place by spring pressure. Remove the hood by pulling it directly up from the pilot bracket (1).
- 4 Insert a 5/32" or 4mm Allen wrench into the hexagonal key-way of the injector (2), and rotate it counter clockwise until it is free of the injector journal (3).
- 5 Verify that the new injector is proper for the application. The injector size is stamped on the side of the injector near the top. LPG injectors have a groove machined around their circumference near the top, while NG injectors do not have a groove (5). Refer to the Appliance Manufacturers instruction sheet for the proper injector size.
- 6 Insert the Allen wrench into the end of the injector. Then, insert into injector journal, and rotate the injector clockwise until a torque of 9 in-lbs. is achieved.
- 7 Replace the pilot hood by aligning the tab on the base of the hood with the slot in the side of the pilot journal, and push the hood down, directly onto the pilot bracket (4). The hood must sit squarely on the bracket for proper operation. Check to insure that the hood is properly seated onto the pilot bracket.
- 8 Proceed to Section A, Step 9.



fig. 1



fig. 2



fig. 3



fig. 4

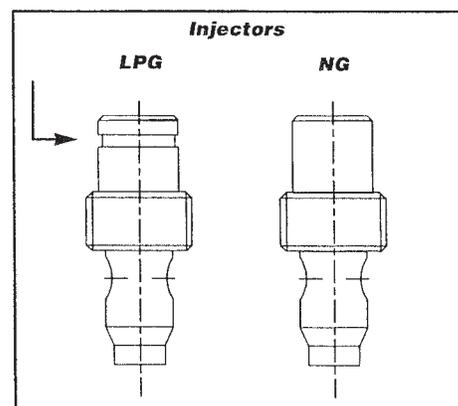


fig. 5

### WARNING!

**This conversion kit must only be applied as part of a conversion kit supplied by the appliance Manufacturer for the specific appliance, and type of gas being converted.**

**INSTALLER NOTICE. These instructions must be left with appliance.**

# Parts List

| PART NO.  | DESCRIPTION  |
|---|--|
| <b>Fireplace Part Numbers</b>   |  |
| ZDV4224N  | FIREPLACE DECORATIVE RATED NG, TEMPERED GLASS, 24,000 BTU WITH GLOWING EMBER BED. APPROVED FOR BEDROOM OR BED SITTING ROOM |
| ZDV4224LP   | FIREPLACE DECORATIVE RATED LP, TEMPERED GLASS, 22,000 BTU WITH GLOWING EMBER BED. APPROVED FOR BEDROOM OR BED SITTING ROOM |
| ZDV4228N  | FIREPLACE HEATER RATED NG, CERAMIC GLASS, 28,000 BTU AT 75% WITH GLOWING EMBER BED. APPROVED FOR BEDROOM AND MOBILE HOME   |
| ZDV4228LP   | FIREPLACE HEATER RATED LP, CERAMIC GLASS, 26,000 BTU AT 75% WITH GLOWING EMBER BED. APPROVED FOR BEDROOM AND MOBILE HOME   |
| ZDV4232N  | FIREPLACE HEATER RATED NG, CERAMIC GLASS, 30,500 BTU AT 75%. APPROVED FOR BEDROOM AND MOBILE HOME                          |
| ZDV4232LP   | FIREPLACE HEATER RATED LP, CERAMIC GLASS, 29,000 BTU AT 75%. APPROVED FOR BEDROOM AND MOBILE HOME.                         |
| <b>Replacement Burner Assembly</b>  |  |
| 4224-BNGSI  | BURNER ASSEMBLY - NATURAL GAS C/W VALVE SYSTEM (ZDV4224N)  |
| 4224-BLPSI  | BURNER ASSEMBLY - LIQUID PROPANE C/W VALVE SYSTEM (ZDV4224LP)  |
| 4228-BNGSI  | BURNER ASSEMBLY - NATURAL GAS C/W VALVE SYSTEM (ZDV4228N)  |
| 4228-BLPSI  | BURNER ASSEMBLY - LIQUID PROPANE C/W VALVE SYSTEM (ZDV4228LP)  |
| 4232-BNGSI  | BURNER ASSEMBLY - NATURAL GAS C/W VALVE SYSTEM (ZDV4232N)  |
| 4232-BLPSI  | BURNER ASSEMBLY - LIQUID PROPANE C/W VALVE SYSTEM (ZDV4232LP)  |
| <b>Valve System Parts</b>   |  |
| (If Serial Number is LESS than: ZDV4224LP - 8970 / ZDV4224N - 9249<br>ZDV4228LP - 3709 / ZDV4228N - 3710 / ZDV4230LP - 420323<br>ZDV4230N - 420324) |  |
| 1000-P136WR   | Thermopile GOAI-524  |
| 1001-P035SI   | Electrode Sparker 915.035 SIT  |
| 1001-P129SI   | Thermocouple 290.129 SIT unified   |
| 1001-P157SI   | Orifice Pilot LP 977.157 SIT   |
| 1001-P159SI   | Orifice Pilot NG 977.159 SIT   |
| 1001-P508SI   | HT Cable 16  |
| 1001-P633SI   | Valve Nova LP Hi/Lo 0820633  |
| 1001-P634SI   | Valve Nova NG Hi/Lo 0820634  |
| 1001-P605SI   | Pilot Burner LP 190.605 unified SIT  |
| 1001-P606SI   | Pilot Burner NG 190.606 unified SIT  |

## Valve System Parts

(If Serial Number is GREATER than above - New Top Convertible SIT SYSTEM

|             |                                  |
|-------------|----------------------------------|
| 1000-P136WR | Thermopile GOAI-524              |
| 1001-P069SI | Electrode Sparker 915.069 TC SIT |
| 1001-P216SI | Thermocouple 290.216 TC SIT      |
| 1001-P165SI | Orifice Pilot NG 977.165 TC SIT  |
| 1001-P167SI | Orifice Pilot LP 977.167 TC SIT  |
| 1001-P508SI | HT Cable 16                      |
| 1001-P633SI | Valve Nova LP Hi/Lo 0820633      |
| 1001-P634SI | Valve Nova NG Hi/Lo 0820634      |
| 1001-P713SI | Pilot Burner LP 199.713 TC SIT   |
| 1001-P714SI | Pilot Burner NG 199.714 TC SIT   |

## Miscellaneous Parts

|            |  |
|------------|--|
| 1000-150GE | #SILICONE GE RED IS806 #736                |
| 1000-150MP | #HI-TEMP MILL PAC SEALANT 840099           |
| 1000-214   | #PIEZO-IGNITOR 1244-17 MARK 21             |
| 1000-215   | #PAL NUT (18MMX1.5MM)BLK (1364.03)         |
| 1000-218   | #SWITCH IVORY (1451/001)                   |
| 1000-227   | #COVER IVORY (86001/001)                   |
| 1000-255   | #ORIFICE BRASS - (State Size)              |
| 1000-EMBER | #GLOWING MOON ROCK                         |
| 6000-130   | #EXPLOSION FELT GASKET                     |
| 2000-080   | #THERMODISC 2450 (For Blower)              |
| 2000-081   | #BLOWER MOTOR QLN65/2400                   |
| 1000-085   | #CONTROL VARIABLE SPEED KBWC-13BV          |
| 1000-306   | THERMALCORD - ADHESIVE BACK FOR DOOR FRAME |
| 4200-310   | CERAMIC GLASS - FOR ALL ZDV4200 SERIES     |
| 4200-311   | TEMPERED GLASS - FOR ZDV4224 MODEL ONLY    |

## Conversion Kit (SIT valve only)

|           |                               |
|-----------|-------------------------------|
| 4224-CKLP | LP Conversion Kit for ZDV4224 |
| 4224-CKNG | NG Conversion Kit for ZDV4224 |
| 4228-CKLP | LP Conversion Kit for ZDV4228 |
| 4228-CKNG | NG Conversion Kit for ZDV4228 |
| 4232-CKLP | LP Conversion Kit for ZDV4232 |
| 4232-CKNG | NG Conversion Kit for ZDV4232 |

## FIREPLACE REQUIREMENTS

### Grills: (Required for each unit)

|        |   |
|--------|---|
| Z42GBA | Grill Kit - Classic Builder Antique Brass |
| Z42GBC | Grill Kit - Classic Builder Chrome        |
| Z42GBP | Grill Kit - Classic Builder Polish Brass  |
| Z42GBL | Grill Kit - Black                         |
| Z42GAB | Grill Kit - Antique Brass                 |
| Z42GPB | Grill Kit - Polish Brass                  |
| Z42GCR | Grill Kit - Chrome                        |
| Z42PBL | Panel Grill Kit - Black                   |

### Log Sets (Required for each unit)

|        |   |
|--------|---|
| LOGF60 | Log Set - 7 pce. - Fibre Burnt Oak (ZDV3632, ZDV4232) |
| LOGC42 | Log Set - 4 pce. - Classic Oak (ZDV4224, 4228)        |
| LOGC43 | Log Set - 4 pce. - Traditional Oak (ZDV4224, 4228)    |
| LOGC44 | Log Set - 8 pce. - Burnt Oak (ZDV4224, 4228)          |
| LOGC60 | Log Set - 7 pce. - Burnt Oak (for use in ZDV4232)     |

### Fireplace Accessories Options:

|         |  |
|---------|--|
| Z42SAB  | Surround - Antique Brass<br>(Coverage 36 5/8" H x 45 1/8" W)             |
| Z42SCR  | Surround - Chrome<br>(Coverage 36 5/8" H x 45 1/8" W)                    |
| Z42SPB  | Surround - Polish Brass<br>(Coverage 36 5/8" H x 45 1/8" W)              |
| Z42SLAB | Surround Slim Line - Antique Brass<br>(Coverage 36 3/8" H x 43 3/8" W)   |
| Z42SLCR | Surround Slim Line - Chrome<br>(Coverage 36 3/8" H x 43 3/8" W)          |
| Z42SLPB | Surround Slim Line - Polish Brass<br>(Coverage 36 3/8" H x 43 3/8" W)    |
| Z42SLBL | Surround Slim Line - Gun Metal Black<br>(Coverage 36 3/8" H x 43 3/8" W) |
| Z42ADBL | Arch Door Frame - Black  |
| Z42ADDX | Arch Door Frame - Deluxe Black (352)                                     |
| Z42ADTH | Arch Door Frame - Top Half Black (353T)                                  |
| Z42ADDA | Arch Door Frame - Double Arch Black (354)                                |
| Z42ADDD | Arch Door Frame - Double Door Arch Black (355)                           |
| Z42ADAB | Arch Door Frame - Antique Brass  |
| Z42ADCR | Arch Door Frame - Chrome   |
| Z42ADPB | Arch Door Frame - Polish Brass   |
| Z36FK   | Fan Kit w/Variable Speed Wall Mount Control<br>(Temperature Sensing)     |
| RDFK    | Remote Duct Fan Kit<br>(For use on ZDV4228/ZDV4232)                      |
| Z1MT    | Thermostat Millivolt Wall Mount  |
| Z80PT   | Thermostat Programmable Digital Millivolt<br>Wall Mount (1F80-40)        |
| Z1RC    | Remote Control Millivolt (On/Off with LED)<br>(Model I)                  |
| ZART    | Remote Control Thermostat Millivolt (Model K)                            |
| DCHS    | Remote Control Heatshield  |
| Z42RL   | Refractory Liner (3 Piece)   |

### Bay Window Kits: (for ZDV4228, ZDV4230 & ZDV4232 only)

|         |   |
|---------|---|
| Z42BWAB | Bay Window (as above) with<br>Antique Brass Louvres |
| Z42BWCR | Bay Window (as above) with Chrome Louvres           |
| Z42BWPB | Bay Window (as above) with<br>Polish Brass Louvres  |

### Designer Doors for 42" Fireplaces - Operative

|           |   |
|-----------|---|
| Z42DDA1BL | Designer Door Arch - Series 1 - Black       |
| Z42DDTA1A | Trim - Antique for Designer Arch - Series 1 |
| Z42DDTA1C | Trim - Chrome for Designer Arch - Series 1  |
| Z42DDTA1P | Trim - Polish for Designer Arch - Series 1  |

|           |   |
|-----------|---|
| Z42DDS1BL | Designer Door Straight - Series 1 - Black       |
| Z42DDS2BL | Designer Door Straight - Series 2 - Black       |
| Z42DDS3BL | Designer Door Straight - Series 3 - Black       |
| Z42DDTS1A | Trim - Antique for Designer Straight - Series 1 |
| Z42DDTS1C | Trim - Chrome for Designer Straight - Series 1  |
| Z42DDTS1P | Trim - Polish for Designer Straight - Series 1  |

### Child Safety Screens

|        |   |
|--------|---|
| Z42CSS | Child Safety Screen - 42" DV Fireplaces |
|--------|---|

## Kingsman Fireplace Venting

### Catalog Number Description

|          |  |
|----------|--|
| ZDVHSK   | Horizontal Vent Starter Kit - 3 FT Length<br>Horizontal Vent Termination, Wall Thimble,<br>36" Flex Pipe, Mill Pac, 12 screws/washers                          |
| ZDVHSK5  | Horizontal Vent Starter Kit - 5 FT Length<br>Horizontal Vent Termination, Wall Thimble,<br>60" Flex Pipe, Mill Pac, 12 screws/washers                          |
| FDVVT15  | Vertical Vent Termination (ONLY) (Good to 15' Vertical)  |
| FDVVT30  | Vertical Vent Termination (ONLY) (For over 15' Vertical)   |
| FDVHT    | Horizontal Vent Termination  |
| FDVHSQ   | Horizontal Square Termination  |
| ZDVST    | Horizontal Snorkel Termination<br>(34" Tall, 24" Center to Center)   |
| FDVHSC   | Safety Cage for Horizontal Termination   |
| ZDVAIS   | Attic Insulation Shield  |
| ZDVVOS   | Offset Support   |
| ZDVFS    | Firestop Spacer  |
| ZDVRS    | Roof Support   |
| ZDVWT    | Wall Thimble (Horizontal Venting)  |
| ZDVSS    | Siding Shield  |
| ZDV48GP  | Galvanized Pipe 7" Dia. x 48" (Vertical Installations)   |
| ZDVAAF   | Flashing 7" c/w Storm Collar (1/12 to 7/12)  |
| ZDVAF2   | Flashing 7" c/w Storm Collar (8/12 to 12/12)   |
| ZDVAF3   | Flashing 7" c/w Storm Collar Flat  |
| ZDV7SC   | Storm Collar 7"  |
| ZDVFK5   | Flex Kit (4" & 7" Dia.) x 2.5' (Unexpanded) 5' Expanded  |
| ZDVFK8   | Flex Kit (4" & 7" Dia.) x 4' (Unexpanded) 8' Expanded  |
| ZDVFK20  | Flex Kit (4" & 7" Dia.) x 10' (Unexpanded) 20' Expanded<br>*Kits are complete with spring stand-offs, silicone,<br>12 screws/washers                           |
| ZDV4FC   | Flex Connector 4" Diameter   |
| ZDV7FC   | Flex Connector 7" Diameter   |
| ZDV4SS   | Spring 4" Standoff Spacer  |
| ZDVFDA   | Simpson Dura-Vent Fireplace Adapter<br>(for ZDV33/36/42/47, ZDV6000, MDV30/38)   |
| ZDVHSKSQ | <b>Horizontal Square Termination Vent Starter Kit -<br/>3 FT Length</b><br>Horizontal Vent Termination, Wall Thimble,<br>Wall Thimble, 36" Flex Pipe, Mill Pac |
| FDVHSQ   | Horizontal Square Vent Termination   |
| ZDVSSLR  | Siding Shield - Large Return   |

## Trouble Shooting The Gas Control System

**WARNING:** BEFORE DOING ANY GAS CONTROL SERVICE WORK, REMOVE THE GLASS FRONT.

**NOTE:** Before troubleshooting the gas control system, be sure external gas shut off is in the “On” position.

| Problem   | Possible Causes  | Corrective Action  |
|---|--|--|
| Spark igniter will not light.   | Defective or misaligned electrode at pilot.  | Check for spark at electrode and pilot: if no spark and electrode wire is properly connected, replace igniter.   |
|   | Defective igniter (push-button)  | Using a match, light pilot. If pilot lights, turn off pilot and push the red button again. If pilot will not light - check gap at electrode and pilot should be 1/8” to 1/4” to have a strong spark.   |
| Pilot will not stay lit after carefully following lighting instructions.    | Defective thermocouple (flame switch where applicable)                             | Check pilot flame. Must impinge on generator and thermocouple. Clean and/or adjust pilot for maximum flame impingement on generator and thermocouple. Replace thermocouple if pilot will not hold. (Hand tight 1/8 turn on replacement)                                    |
|   | Defective valve magnet.  | Replace valve, if pilot won't hold after the thermocouple is replaced.   |
| Pilot burning, no gas to burner, Valve knob “ON”, Wall Switch “ON”          | Wall switch or wires defective.  | Check wall switch and wires for proper connections. Jumper wire across terminals at wall switch. If burner comes on, replace defective wall switch. If okay, jumper wires, across wall switch wires at valve. If burner comes on, wires are faulty or connections are bad. |
|   | Generator may not be generating sufficient voltage.                                | Check generator with millivolt meter. Take reading at generator terminals of gas valve. Should read 325 millivolts minimum while holding valve knob depressed in pilot position and wall switch “off” Replace faulty generator if reading is below specified minimum.      |
|   | Plugged burner orifice.  | Check burner orifice for stoppage and remove.  |
|   | Defective automatic valve operator.  | Remove wall switch wires from gas valve. Install jumper wires from top bottom terminals of gas valve. Turn valve on “ON”. If main burner does not light, replace valve.  |
| Frequent Pilot outage problem.  | Pilot flame may be too low or blowing (high) causing the pilot safety to drop out. | Clean and/or adjust pilot flame for maximum flame impingement on generator and thermocouple.   |
| Flame lifts off burner and goes out in less than 30 seconds                 | Inner 4” liner has come off flue or termination, flame is starving for oxygen      | Attach 4” liner to flue or termination using screws, silicone and clamps as stated in manual   |
| Flame lifts off burner on one side while the rest of the flame remains lit. | Improper installation of firebrick. Firebrick is likely leaning.                   | Be sure to position firebrick against firebox walls and be sure to use brick clips attached to the inner side of firebox.  |



## LIMITED LIFETIME WARRANTY

This Limited Lifetime Warranty applies only while the unit remains at the site of the original installation and only if the unit is installed inside the continental United States, Alaska, Hawaii, and Canada. The warranty applies only if the unit is installed and operated in accordance with the printed instructions and in compliance with applicable installation and building codes and good trade practices.

### BASIC ONE YEAR WARRANTY

During the first year after installation, we will provide a replacement for any component part of your unit found to be defective in materials or workmanship, including labour costs. Repair work requires prior approval by Kingsman, labour costs are based on a predetermined rate schedule and any repair work must be done through an authorized Kingsman dealer.

### LIMITED LIFETIME WARRANTY

The heat exchanger, combustion chamber and burner of every Kingsman product excluding the Outdoor Firepit are warranted against materials or workmanship during the period the product is owned by the original owner. The part to be replaced must be returned to our distributor in exchange for the replacement part. Any labor, material, freight and/or handling charges associated with any repair or replacement pursuant to this Limited Lifetime Warranty will not be covered by this warranty.

### GENERAL TERMS

In lieu of providing a replacement part, we may, at our option, provide the distributor's component purchase price from us or a credit equal to the distributors component purchase price from us toward the purchase of any new unit which we distribute. If a credit is given in lieu of a replacement part, the rating plate from the unit being replaced must be submitted on a warranty claim, and the unit being replaced must be made available to our distributor for disposition.

In establishing the date of installation for any purpose, including determination of the starting date for the term of this Limited Lifetime Warranty, reasonable proof of the original installation date must be presented\*, otherwise the effective date will be based upon the date of manufacture plus thirty (30) days.

We will not be responsible for and you, the user, will pay for: (a) damages caused by accident, abuse, negligence, misuse, riot, fire, flood, or Acts of God (b) damages caused by operating the unit where there is a corrosive atmosphere containing chlorine, fluorine, or any other damaging chemicals (other than in a normal residential environment) (c) damages caused by any unauthorized alteration or repair of the unit affecting its stability or performance (d) damages caused by improper matching or application of the unit or the unit's components (e) damages caused by failing to provide proper maintenance and service to the unit (f) any expenses incurred for erecting, disconnecting or dismantling the unit (g) parts or supplies used in connection with service or maintenance (h) damage repairs, inoperation or inefficiency resulting from faulty installation or application (i) electricity or fuel costs or any increase in electricity or fuel cost whatsoever including additional or unusual use of supplemental electric heat.

We shall not be liable for any incidental, consequential, or special damages or expenses in connection with any use or failure of this unit. We have not made and do not make any representation or warranty of fitness for a particular use or purpose, and there is no implied condition of fitness for a particular use or purpose. We make no express warranties except as stated in this Limited Lifetime Warranty. No one is authorized to change this Limited Lifetime Warranty or to create for us any other obligation or liability in connections with this unit. Any implied warranties shall last for one year after the original installation. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty or condition lasts, so the above limitations or exclusions may not apply to you. The provisions of this limited warranty are in additions to and not a modification of or subtraction from any statutory warranties and other rights and remedies provided by law.

Save this certificate. It gives you specific legal rights, and you may also have other rights which may vary from state to state and province to province.

In the event your unit needs servicing, contact your dealer or contractor who installed or serviced your unit. When requesting service, please have the model and serial number from each unit readily available. If your dealer needs assistance, the distributor is available for support and we, in turn support the distributor's efforts.

Fill in the installation date and model and serial numbers of the unit in the space provided below and retain this limited warranty for your files.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_ Date installed \_\_\_\_\_

Dealer or Contractor Name: \_\_\_\_\_

\*To receive advantage of your warranty, you must retain the original records that can establish the installation date of your unit.