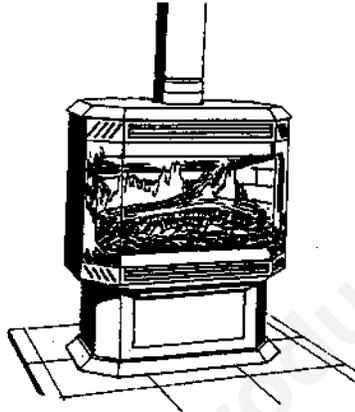


BRECKWELL

G29DV



WARNING: If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

FOR YOUR SAFETY

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

FOR YOUR SAFETY:

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Open windows.
- 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 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 gas installer, service agency, or the gas supplier.

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.

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BRECKWELL

Hearth Products

Manufactured by

National Steelcrafters of Oregon

P.O. Box 24910

Eugene, Oregon 97402-0444

WARNOCK HERSEY



Tested by Inchcape Testing Services

Warnock, Hersey

211 Schoolhouse Street

Coquitlam, BC Canada V3K4X9

INTRODUCTION

The Breckwell G29DV Gas Heater is a listed gas-fired direct vent room heater tested by Inchcape Testing/Warnock Hersey to ANSI standard Z21.11.1-1993, ANSI Z21.44 -1993, CAN 1-2.1-M89, CGA I.R. 41-M91, and CAN/CGA-2.17-M91.

The installation of the Breckwell G29DV Gas Heater must conform with local codes, or in the absence of local codes, with National Fuel Gas Code, ANSI Z223.1—latest edition and CAN 1 B1-149.1 and .2 Installation Code.

Also for use in mobile (manufactured) homes after home is sited.

Mobile (manufactured) home installations must adhere to Title 24 CFR, part 3280, or CSA Z240.4.

CAUTION: This appliance must be vented to the outside.

Installation and repair of the Breckwell G29DV Gas Heater should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners, and circulating air passageways of the G29DV be kept clean.

When operating your Breckwell G29DV, respect basic safety standards. Read these instructions carefully before you attempt to operate the heater. Failure to do so may result in damage to property or personal injury and may void the product warranty.

Consult with your local building code agency and insurance representative before you begin your installation to ensure compliance with local codes, including the need for permits and follow-up inspections.

Several issues must be addressed when selecting a suitable location for your Breckwell Gas Heater. Observing required clearances to combustible materials, the proximity to a safe chimney or venting system location, and the accessibility of the gas and electrical supply must all be considered. In addition, selecting a location that takes advantage of the building's natural air flow is also desirable to maximize the heating effectiveness of the heater. In many cases, this is a central location within the building.

INSTALLATION

DUE TO HIGH TEMPERATURES, THE BRECKWELL G29DV SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

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 CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CLOTHING OR OTHER FLAMMABLE MATERIALS SHOULD NOT BE PLACED ON OR NEAR THE BRECKWELL G29DV.

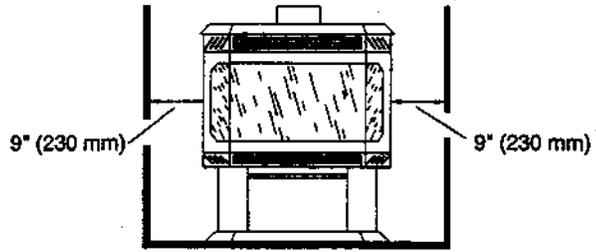
The following clearances to combustibles must be observed:

Heater to left sidewall	9" (230 mm)
Heater to right sidewall	9" (230 mm)
Heater corner to walls	3" (80 mm)
Heater to back wall (measured from rear of heater to wall)	3" (80 mm)
Heater to alcove ceiling (minimum)	17" (430 mm)
Maximum alcove depth	21" (530 mm)
Minimum alcove width	48" (1220 mm)
From mantel to top of stove	22" (560 mm)

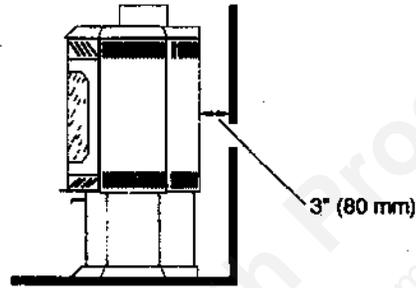
In addition to the clearances mentioned previously, adequate accessibility clearance for servicing and proper operation must be maintained.

If this appliance is to be installed on carpeting, vinyl tile, or other combustible material other than wood flooring the appliance must be installed on a metal or wood panel extending at least the full width and depth of the appliance.

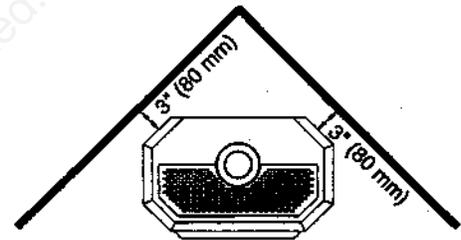
CLEARANCES



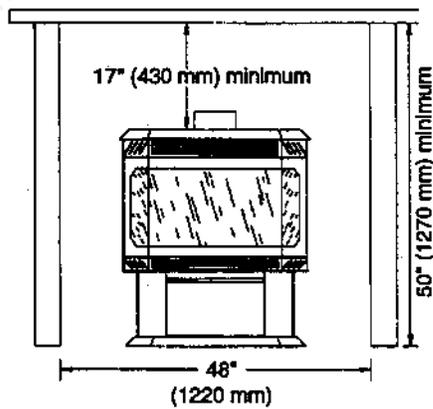
Clearance to side wall



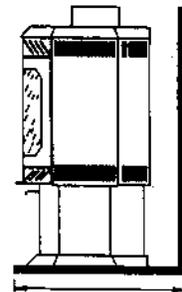
Clearance to back wall



Clearance from corner of unit to walls.



Minimum clearance to alcove ceiling and minimum alcove width.



Maximum alcove depth

VENTING

Use Only Approved Venting

The Breckwell G29DV has been tested and is listed for installation with Simpson DuraVent GS venting components. The Simpson DuraVent GS warranty will be voided, and serious fire, health, or other safety hazards may result from any of the following actions:

- Installation of any damaged DuraVent GS component.
- Unauthorized modification of the DuraVent GS System.
- Installation of any component part not manufactured or approved by Simpson DuraVent.
- Installation other than as instructed by Simpson DuraVent and the appliance manufacturer.

Consult your local building codes before beginning the installation, and follow the manufacturer's instructions exactly. The following Simpson DuraVent GS 4" X 6 5/8" venting components are approved for use with the Breckwell G29DV.

SIMPSON DURAVENT COMPONENT NO.

Basic Termination Kit	970
Horizontal Termination Kit A	971
Vertical Termination Kit A	973
Horizontal Square Termination Cap	984
High Wind Horizontal Square Termination Cap	985
Vertical Termination Cap	983
Vinyl Siding Standoff	950
Wall Thimble	942
Round Ceiling Support/Wall Thimble Cover	940
Cathedral Ceiling Support Box	941
Storm Collar	953
Firestop Spacer	963
Adjustable Roof Flashing, 0/12-6/12 pitch	943
Steep Roof Flashing, 7/12-12/12 pitch	943S
Wall Strap	988
Designer Series Trim Kits	3951, 3952, 3953, 3960, 3961, 3962
High Wind Vertical Termination Cap	991
Low Profile Termination Cap	980
Restrictor Plate	929

Direct Vent Pipe Lengths and DuraVent Component Numbers

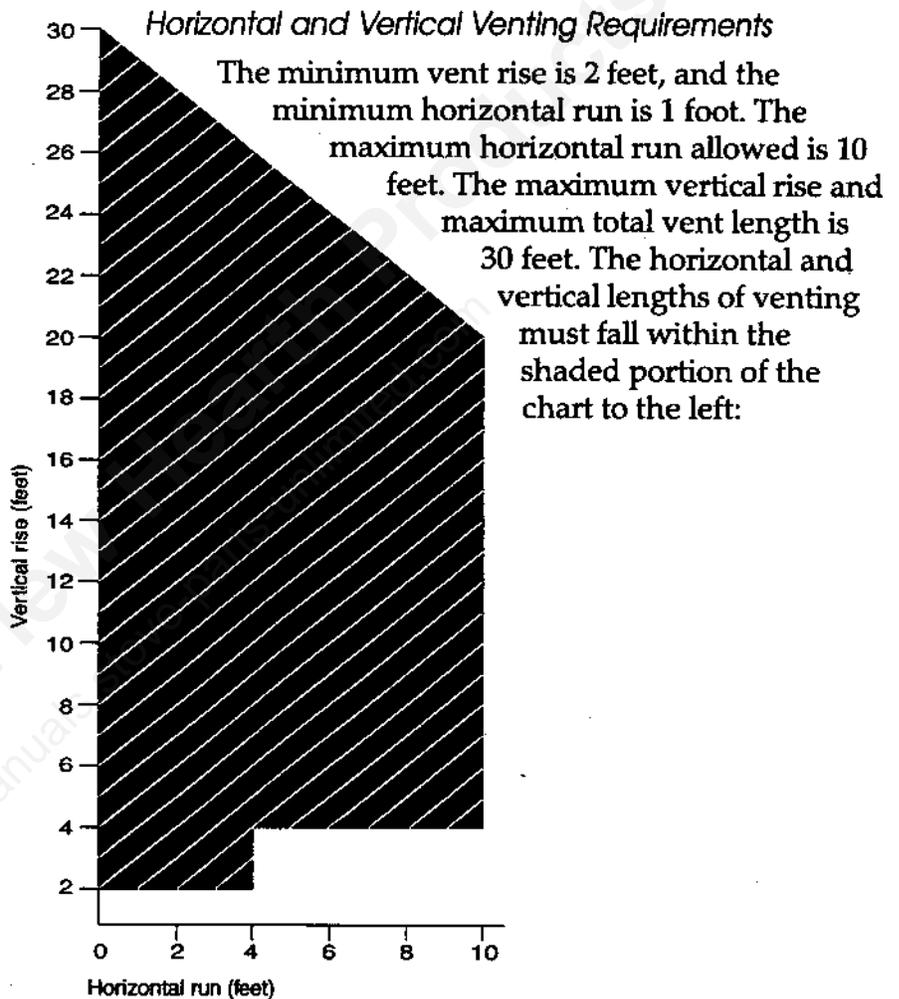
	<i>Galvanized</i>	<i>Black</i>
6" length	NA	908B
9" length	NA	907B
12" length	906	906B
24" length	904	904B
36" length	903	903B
48" length	902	902B
11-14 5/8" Adjustable	NA	911B
45° Elbow	945	945B
90° Elbow	990	990B

VENTING

The Breckwell G29DV should be installed with no more than 2 elbows. The elbows may be either 45° or 90°. All pipe joints must be sealed with Milpac.

The G29DV must not be connected to a chimney flue serving any other appliance.

WARNING: The flow of ventilation air must not be obstructed.



Restrictor Plates

Simpson Dura-Vent part no. 929 restrictor plates must be added in straight vertical installations above 10' for either NG or LPG. No more than four restrictor plates may be used. Use one restrictor plate for each 5' rise above 10 feet.

For venting systems that utilize one or two elbows (either 45° or 90°), restrictor plates should not be used.

VENTING

Intake Termination Clearances

For the Breckwell G29DV, the vent/air intake termination clearances above the high side of an angled roof are as follows:

<i>Roof Pitch</i>	<i>Feet</i>	<i>Meters</i>
Flat to 6/12	1	0.3
7/12 to 9/12	2	0.6
10/12 to 12/12	4	1.2
13/12 to 16/12	6	1.8
17/12 to 21/12	8	2.4

Requirements for Terminating the Venting

WARNING: Venting terminals must not be recessed into a wall or siding.

In addition, the following must be observed:

- A. The clearance above grade, or a veranda, porch, deck or balcony must be a minimum of 12" (30 cm).¹
- B. The clearance to a window or door that may be opened must be a minimum of 12" (30 cm).¹
- C. A 12" (30 cm) clearance to a permanently closed window is recommended to prevent condensation on the window.
- D. The vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal must be a minimum of 18" (46 cm).
- E. The clearance to an unventilated soffit must be a minimum of 12" (30 cm).
- F. The clearance to an outside corner is 9" (23 cm).
- G. The clearance to an inside corner is 12" (30 cm).
- H. A vent must not be installed within 3 feet (90 cm) above a meter/regulator assembly when measured from the horizontal center-line of the regulator.¹
- I. The clearance to service regulator vent outlet must be a minimum of 6 feet (1.8 m).¹
- J. The clearance to a non-mechanical air supply inlet to the building or the combustion air inlet to any other appliance must be a minimum of 12 feet (3.6 m).¹
- K. The clearance to a mechanical air supply inlet must be a minimum of 6 feet (1.8 m).¹
- L. The clearance above a paved sidewalk or a paved driveway located on public property must be a minimum of 7 feet (2.1 m).^{1,2}

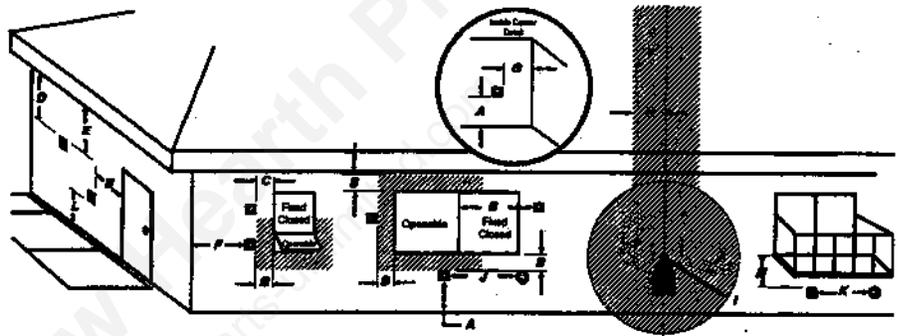
VENTING

M. The clearance under a veranda, porch, deck or balcony must be a minimum of 12 inches (30 cm).^{1,3}

¹ As specified in CAN 1 B1-149 Installation Codes (1991) Note: local codes or regulations may require different clearances.

² A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.

³ Only permitted if veranda, porch, deck, or balcony is fully open on a minimum of 2 sides beneath the floor.



V = Vent terminal

A = Air supply inlet

//// = Area where terminal is not permitted

ASSEMBLY

The G29DV is shipped from the factory with the log set carefully packed inside the heater. Before using the unit, remove the foam packing material and check the position of the logs. This will require the removal of the front door:

Removing the Front Door

Please note that the front door is somewhat heavy. Be prepared to handle the weight to avoid damage or injury.

WARNING: Do not abuse the G29DV's glass by striking, slamming, or similar trauma. Do not operate the unit with the glass panel removed, cracked or broken. Use only glass supplied by Breckwell and approved for use with this heater. Do not use substitute materials. Replacement of the panel should be done by a licensed or qualified service person.

Open the left and right side sheets. They are hinged with magnetic latches. The front door is held in place with four spring-loaded latches. The latches may be released by applying pressure on the spring while pushing upward on the latch. See illustration.

When all four latches are released, the door can be pulled straight forward to remove. This operation is best accomplished with two people, one on each side. Although the door will hang in place with the latches disconnected, it is a good idea to keep a hand on the door to prevent it from dislodging until you are ready to remove it. Whenever the door is removed, it should be set aside in a safe location.



To release the latch, apply pressure on the spring while pushing up on the latch.

Unpackaging the Log Set and Brick Panels

Remove the foam packing material from the top and sides of the log set and brick panels. No rearrangement of the log set and brick panels is required, although a quick check for location is necessary.

ASSEMBLY

1. Make sure the rear brick panel and rear log are in place and pushed to the rear of the firebox.
2. Make sure the center log is behind the two guide bars and pushed flat to bottom.
3. Pour the 8-oz. bag of loose ember chunks into the containment area in the front of the front burner. Care must be taken to ensure a uniform "proper ember look."

Special Circumstance: Installing a Log Set in an Empty Firebox

If for any reason the log set ever needs to be replaced, or in the unlikely event that a log set must be installed in an empty firebox, follow the procedure below:

Handle the logs and panels gently as you unwrap them. The following pieces are included:

1. Rear log
2. Front log
3. 8-oz. bag of embers
4. Left brick panel
5. Right brick panel
6. Rear brick panel

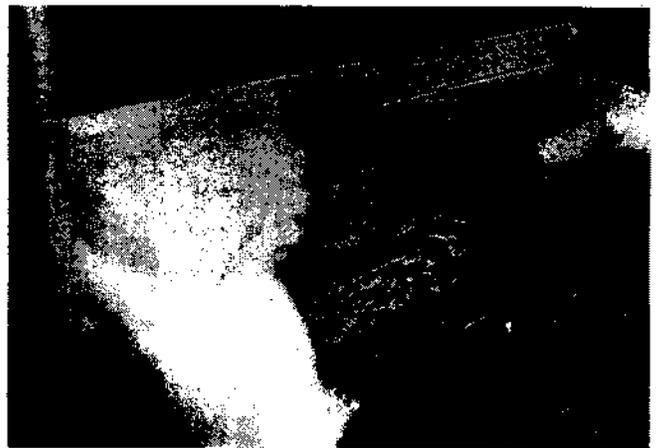
Install the Rear Log and Rear Brick Panel

Install these two pieces as a single unit.

Place the back brick panel on the shelf that is on the back of the rear log, and center it.

While holding the two pieces as a single unit, angle the top slightly

forward and guide it to the rear of the firebox.



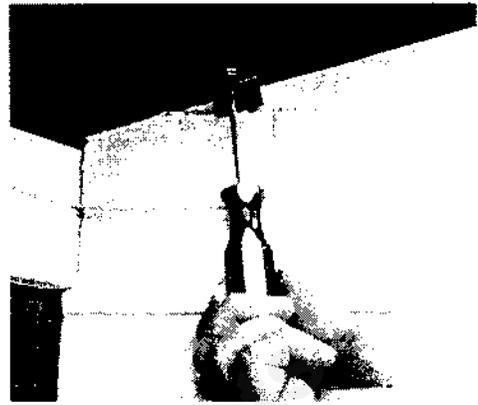
Install the rear log and rear brick panel as a single unit.

Make sure that the top corners clear the front opening. Place these combined components against the back wall.

ASSEMBLY

Install the Side Brick Panels

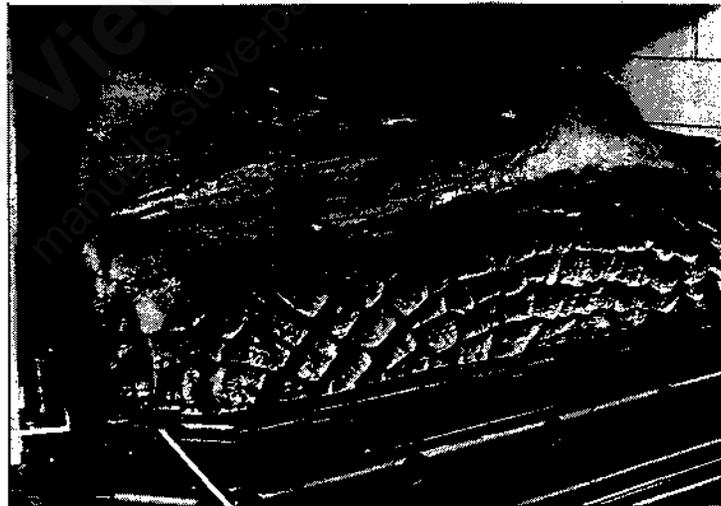
These slide into place. First, slide the rear log and rear brick panel fully to the right. This provides a little extra working space for installation of the left brick panel. The left panel must be angled in behind the pilot assembly and then pushed to the rear. Slide the rear log and rear brick panel to the left. Install the right brick panel. Finally, center the rear log and brick panel and double-check that they are pushed fully to the rear of the firebox. Secure the side brick panels at the top by tightening the two clips and screws.



The brick panels are secured by retainer clips located at the top.

Install the Front Log

The front log sits on the log support plate directly behind the front burner. Make sure it is pushed to the rear and behind the two guide bars on the log support plate.



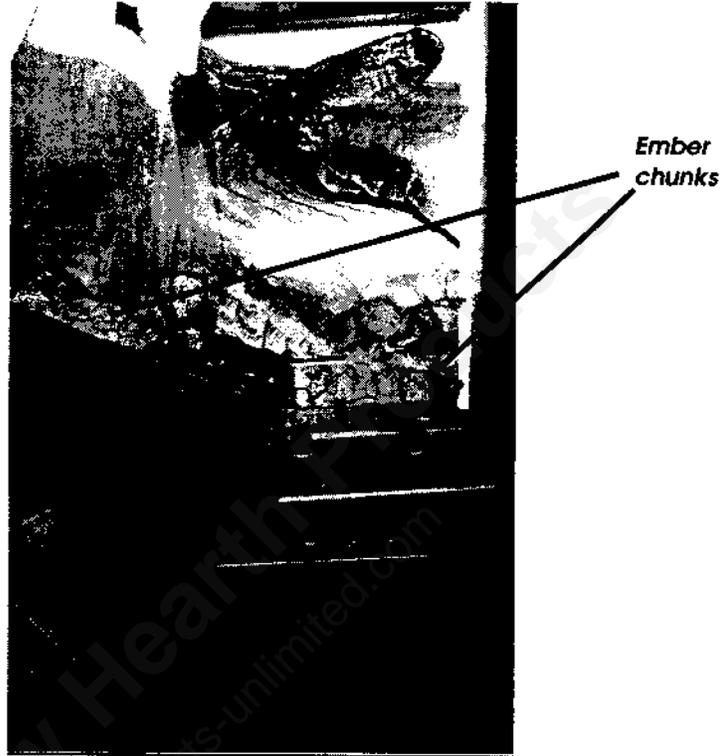
Push the front log to the rear and make sure it is behind the two guide bars on the log support plate.

Front log guide bar

ASSEMBLY

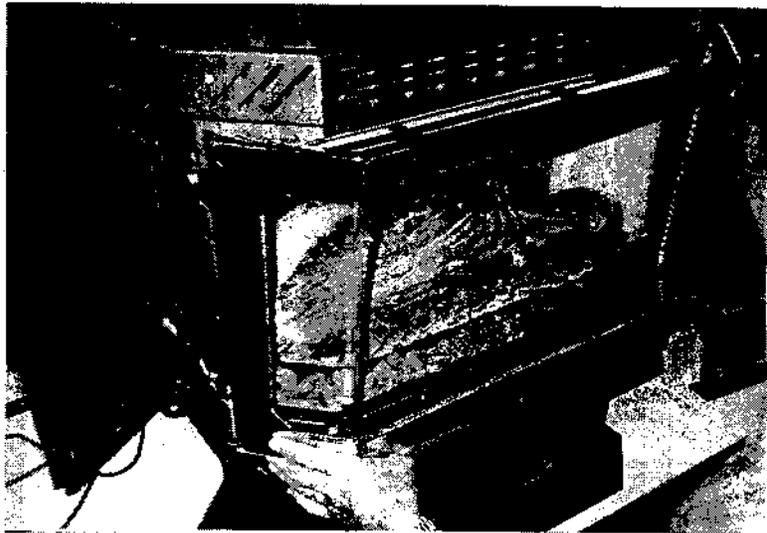
Install the Bag of Embers

Pour the 8-oz. bag of loose ember chunks into the containment area in front of the front burner. Care must be taken to ensure a uniform "proper ember look."



Reinstall the Front Door

Lift the door carefully and support it on the heater front using the three locating tabs on the top of the door. See photo below. Push on the door firmly, reattaching the latches to the latch springs. After all four latches are secured, again push on the door to be sure it seats properly. Close the outer side sheets.



Lift the door carefully and use the three locating tabs on the top of the door to support it.

CONNECTING THE HEATER TO A GAS SUPPLY

Burn Only the Fuel for Which the Heater is Equipped

The Breckwell G29DV is available in either a natural gas or propane version. The label on the inside of the hinged right side panel of the heater indicates the fuel for which it is equipped. See Appendix A for instructions on converting the heater from one fuel to the other.

Making The Connection

The gas inlet is located at the bottom right of the stove. The inlet fitting is a 1/2" male flare fitting.



The inlet fitting is a 1/2" male flare fitting.

A separate gas shut-off valve and a 1/8" N.P.T. plugged tapping should be installed immediately upstream of the connection to the appliance.

The G29DV must be disconnected from the gas supply piping during any pressure testing of that system at pressures in excess of 1/2 psig (3.5 kPa).

The G29DV gas control valve must be in the OFF position during any pressure testing of the gas supply system at pressures equal to or less than 1/2 psig (3.5 kPa).

WARNING: To avoid pipe compounds from entering into the gas train, apply compounds only to male pipe threads and do not apply compound to the first two threads.

**CAUTION: TEST ALL JOINTS FOR LEAKS
BEFORE OPERATING**

CONNECTING THE HEATER TO A GAS SUPPLY

Gas Pressure Requirements

Correct gas pressure and the use of a properly sized gas supply line are essential for the safe and efficient performance of this appliance. Make sure that the plumber or gas supplier checks the gas supply line and gas pressure at installation. The pressure should be checked with all appliances that are connected to the gas supply system in full operation. This includes hot water heater, furnace, boilers, kitchen stoves, etc.

NOTE: Improper gas pressure can affect heater performance, flame color, or cause pilot outage.

Natural Gas:

Maximum inlet pressure 7.0" w.c. (1.74 kPa)

Minimum inlet pressure 5.0" w.c. (1.25 kPa)

Gas manifold pressure 3.5" w.c. (0.87 kPa)

LPG Gas:

Maximum inlet pressure 13" w.c. (3.24 kPa)

Minimum inlet pressure 11" w.c. (2.74 kPa)

Gas manifold pressure 10" w.c. (2.49 kPa)

DO NOT USE THIS HEATER IF ANY PART HAS BEEN UNDER WATER OR EXPOSED TO MOISTURE CORROSION. IMMEDIATELY CALL A QUALIFIED SERVICE TECHNICIAN TO INSPECT THE HEATER AND REPLACE ANY PART OF THE CONTROL SYSTEM AND ANY GAS CONTROL WHICH HAS BEEN UNDER WATER.

RECOMMENDED GAS PIPE DIAMETER				
Pipe Length (Feet)	Schedule 40 Pipe Inside Diameter		Tubing, Type L Outside Diameter	
	N.G.	L.P.	N.G.	L.P.
0-10	1/2" 1.3 cm	3/8" 1.0 cm	1/2" 1.3 cm	3/8" 1.0 cm
10-40	1/2" 1.3 cm	1/2" 1.3 cm	5/8" 1.6 cm	1/2" 1.3 cm
40-100	1/2" 1.3 cm	1/2" 1.3 cm	3/4" 1.6 cm	1/2" 1.3 cm
100-150	3/4" 2.0 cm	1/2" 1.3 cm	7/8" 2.3 cm	3/4" 2.0 cm

NOTE: NEVER USE PLASTIC PIPE. CHECK TO CONFIRM WHETHER YOUR LOCAL CODES ALLOW COPPER TUBING OR GALVANIZED PIPE.

CONNECTING THE WIRING

The Breckwell G29DV must be installed in accordance with local codes or, in the absence of local codes, with the most recent edition of the National Electrical Code ANSI/NFPA 70, or the current Canadian Electrical Code C22.1.

NOTE: The convection fan requires a 120 VAC supply for operation, but the heater can be operated without the fan as in the case of a power outage.

Plug the 3-prong grounded electrical cord plug into the wall.



*Connecting the Optional
Thermostat*

If the optional thermostat is used, it must be plugged into the terminal strip located behind the lower access panel on the rear of the heater.

Terminal strip

*The terminal strip is located
behind the lower access panel
on the rear of the heater.*

When installing a millivolt control system, use only a special low resistance thermostat. Do not use a regular heating thermostat.

Be sure that all electrical connections are clean, free from corrosion, and tight. Inspect connections periodically to confirm that no corrosion has built up over time.

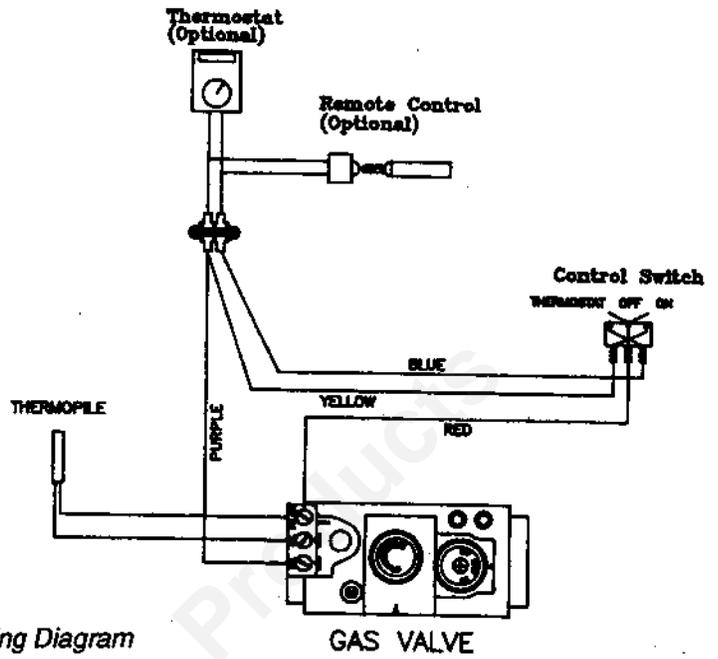
When properly installed and maintained, a millivolt control system should give many years of trouble-free service.

It is important to use wire of a gauge proper for the length of the wire:

RECOMMENDED WIRE GAUGES

<i>Maximum Length</i>	<i>Wire Gauge</i>
100'	14
60'	16
40'	18
25'	20
15'	22

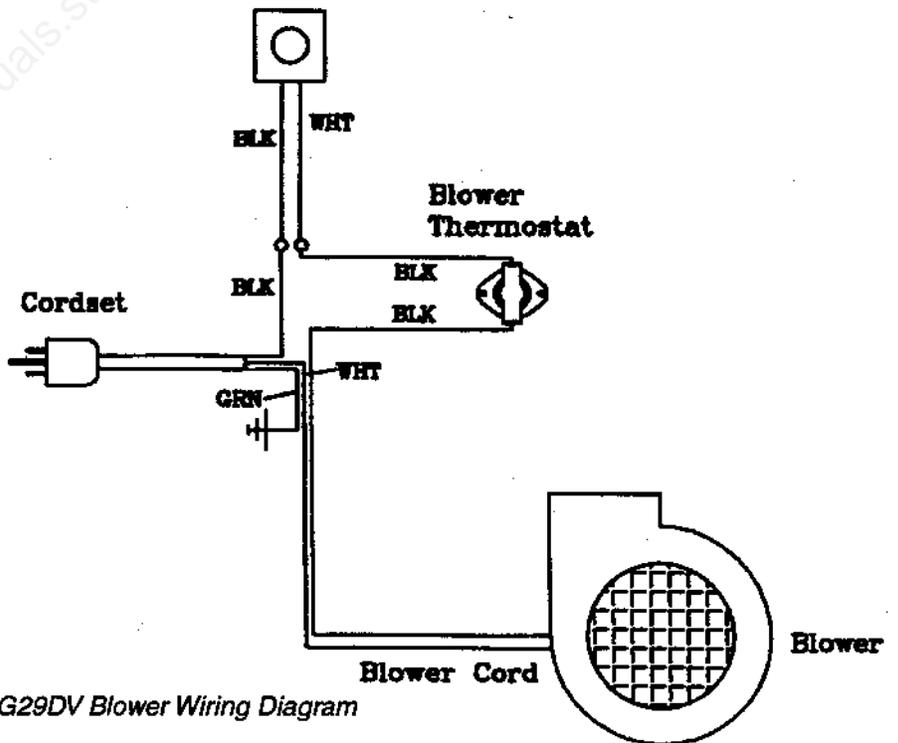
CONNECTING THE WIRING



G29DV Wiring Diagram

CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

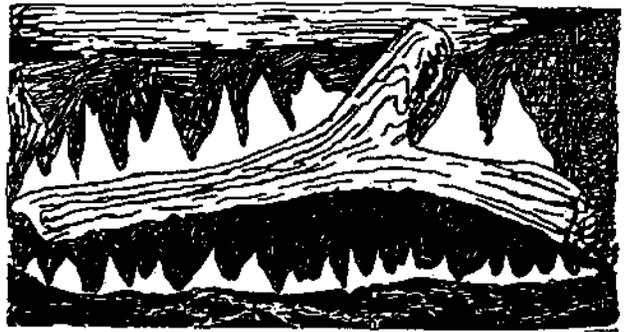
Blower Speed Control w/ On-Off



G29DV Blower Wiring Diagram

AIR SHUTTER ADJUSTMENT

The final step of the installation is to check the flame pattern, which should resemble the pattern illustrated to the right: The flames should be relatively well-defined and stable. They



The G29DV flame pattern will resemble this when the unit is burning properly.

They should be yellow with a blue base where attached to the burner ports, and should not look orange or sooty.

Start the heater according to the directions on page 19 and allow the heater to burn for approximately 15 minutes. The flames will increase in length and become more yellow in color as the G29DV heats up.

If the flames do not resemble the description and the illustration above, the air shutters may be adjusted.

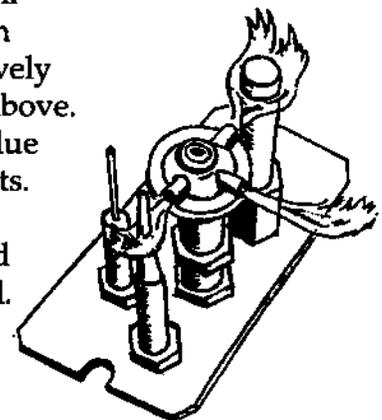
Remove the control plate access plate as explained in Appendix A on page 26. The air adjustment screws are accessible through the opening above the control valve.

Two separate adjustment screws are used to adjust the flames for a particular installation. The front screw adjusts the front burner; the rear screw adjusts the rear burner. Turn the two screws as needed to increase or decrease the brightness and length of the flame: turning clockwise will decrease the flame; turning counterclockwise will increase the flame.

Repeat the procedure as needed until the desired flame effect is achieved.

MONITORING THE FLAME

Periodically, the flames of the Breckwell G29DV should be checked while it is in operation. The flames should be relatively well-defined and stable as illustrated above. They should be bright yellow with a blue base where attached to the burner ports. The flames should not look orange or sooty. Portions of the logs will glow red when the flames are properly adjusted.

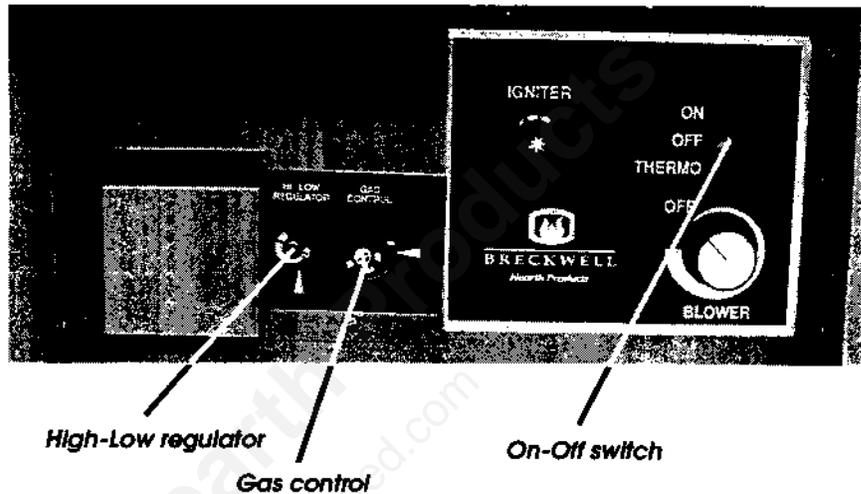


The properly-burning pilot will resemble the illustration above.

If you find the flames to be other than described here, do not operate the heater. Consult a qualified service person or your Breckwell dealer for advice.

HOW TO LIGHT THE FIRE

1. STOP! Read the safety information on the left side of the panel on page 21.
2. If using the optional thermostat, set thermostat to the lowest setting.
3. Turn off electric power to the appliance.
4. Turn the ON-OFF/THERMOSTAT switch to the OFF position.



5. Push in the gas control knob slightly and turn it clockwise to "OFF." NOTE: The knob cannot be turned from "PILOT" to "OFF" unless it is pushed in slightly. Do not force it.
 6. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information on the left panel of the lighting instruction label on page 21. If you don't smell gas, go to the next step.
 7. Set the High-Low Regulator to High by turning it fully counterclockwise.
 8. Press in the gas control knob slightly and turn counterclockwise to "PILOT."
 9. Find the pilot by looking through the round opening on the left end of the center log.
 10. Push the control knob fully down and hold. Immediately push the red piezo igniter button to light the pilot. It is normal to have to push the red button several times before the pilot ignites. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 9.
- If the knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.

HOW TO TURN OFF THE FIRE

11. Turn the gas control knob counterclockwise to "ON."
12. Place the ON-OFF/THERMOSTAT switch in the ON position or in the THERMOSTAT position if the optional thermostat is used.
13. Turn on the electric power to the heater.
14. Set the optional thermostat to the desired room temperature.
15. Set the High-Low Regulator to desired setting; turn fully counterclockwise for High and fully clockwise for Low.

NOTE: An odor resulting from the initial heating of new materials in your heater is not unusual during the first fire, and in most cases will disappear after an hour or two.

HOW TO TURN OFF THE FIRE

1. If using optional thermostat, set thermostat to the lowest position.
2. Turn off the electric power to the appliance.
3. Turn the ON-OFF/THERMOSTAT switch to the OFF position.
4. Push in the gas control knob slightly and turn it clockwise to "OFF"

NOTE: The knob cannot be turned from "PILOT" to "OFF" unless it is pushed in slightly. Do not force it.

G29DV LIGHTING INSTRUCTION PLATE

FOR YOUR SAFETY READ BEFORE OPERATING

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

A. This appliance has a pilot. When lighting the pilot, follow these instructions exactly.

B. BEFORE OPERATING 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 gas 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. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this 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.

LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information on the panel above.
2. If using optional thermostat, set thermostat to lowest setting.
3. Turn off electric power to the appliance.
4. Turn ON-OFF/THERMOSTAT switch to "OFF" position.

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.

Wait five (5) minutes to clear out any gas. If you then smell gas, **STOP!** Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.

7. Set High-Low Regulator to High by turning fully counterclockwise.

8. Press in the gas control knob slightly and turn it counterclockwise to "PILOT".

9. Find the pilot by looking through the round opening in the left end of the center leg.

10. Push the control knob fully down and hold. Immediately push the red piezo ignitor button to light the pilot. It is normal to have to push the red button several times before the pilot ignites. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 9.

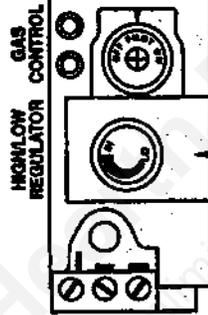
11. Turn gas control knob counterclockwise to "ON". If knob does not pop up when released, stop and immediately call your service technician or gas supplier. If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.

12. Place the ON-OFF/THERMOSTAT switch in "ON" position or in the "THERMOSTAT" position if the optional thermostat is used.

13. Turn on electric power to appliance.

14. Set the optional thermostat to desired room temperature.

15. Set the High-Low Regulator to desired setting; turn fully counterclockwise for High and fully clockwise for Low.



TO TURN OFF GAS TO APPLIANCE

1. If using optional thermostat, set thermostat to the lowest position.
2. Turn off electric power to the appliance.
3. Turn ON-OFF/THERMOSTAT switch to OFF position.
4. 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.

CAUTION: HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING, FURNITURE, GASOLINE, OR LIQUIDS WITH FLAMMABLE VAPORS AWAY.

ATTENTION: CHAUD PENDANT LE FONCTIONNEMENT, NE TOUCHEZ PAS. TENIR ÉLOIGNÉS LES ENFANTS, LE VÊTEMENTS ET LES MEUBLES.

Refer to label on rear of appliance for venting information. Keep burner and control compartment clean. Refer to owner's manual accompanying this appliance. Maintenir propres le brûleur et le compartiment de commandes. Voir les instructions relatives à l'installation et au fonctionnement qui accompagnent le radiateur.

Manufactured by National Steelcrafters of Oregon
P.O. Box 24910, Eugene, OR 97402-0444.
DO NOT REMOVE OR COVER THIS LABEL

MAINTENANCE

A qualified service person recommended by your Breckwell dealer should conduct an annual inspection and maintenance of your G29DV, its venting, and the installation to keep it running safely and efficiently. The following procedures should be performed only by a qualified service person. The gas supply should be turned off whenever a maintenance procedure is performed.

If the front access door, front door, rear sheet, or top are removed for servicing, they must be replaced prior to operating the unit.

Removing the Front Door for Replacement of Glass Panel

Refer to page 10 for directions on removing the front door. Use only authorized Breckwell replacement glass available from your Breckwell dealer.

Replacing the Gasket

The G29DV has 5/8" diameter fiberglass gasket in the front door. Should it ever need replacement, use only the proper replacement gasket that is available from your Breckwell dealer. To replace the gasket, follow this procedure.

1. Remove the door
2. Remove the existing gasket and clean its channel with a scraper or wire brush.
3. Lay a thin bead of high temperature silicone the entire length of the channel.
4. Lay the gasket in the channel with sufficient pressure that it stays in place.
5. Trim the excess from the end of the gasket so that it butts snugly against the other end without leaving a gap. Seal the end joint with high temperature silicone.
6. Re-install the door and apply firm pressure to seat the gasket evenly throughout.

Cleaning the Glass

The glass may be cleaned with ordinary household glass cleaner and a soft cloth or paper towel.

WARNING: Never clean the glass when it is hot. Do not use abrasive cleaners on the glass.

MAINTENANCE

Inspecting the Venting

An inspection of both the inner and outer pipes of the venting system should be made during the annual service appointment. They must have no blockage and be in good repair. The vent manufacturer's instructions may provide specific suggestions or details on vent inspection. Any sections that are taken apart for the inspection must be reassembled and sealed as required.

Cleaning the Log Set and Firebox

During the annual inspection and maintenance appointment, the service person should clean dust, lint, and any light accumulation from the logs and the firebox area. An extra-soft brush should be used on the logs as they are extremely fragile; a vacuum cleaner may be used on the firebox. If at any time the logs cannot be removed or installed without forcing, the cause must be found. The logs must never be forced.

Removing the Front Door

See directions on page 10.

Removal and Reinstallation of the Log Set for Cleaning

CAUTION: The ceramic logs and brick panels are durable when handled and installed properly. However, they are delicate and may be damaged easily if not handled with care. Handling damage to the ceramic logs and brick panels is not covered by warranty.

DO NOT HANDLE LOGS WHILE THEY ARE HOT. ALLOW PLENTY OF TIME FOR THE STOVE TO COOL COMPLETELY BEFORE HANDLING.

Remove the Ember Chunks

Carefully remove the ember chunks and place them with the other logs.

Remove the Front Log

Lift the center log and remove it. Brush it gently and carefully place it to one side.

Remove the Side Brick Panels

Carefully remove first one side panel, and then the other. Clean and place to one side.

MAINTENANCE

Remove the Rear Log and Rear Brick Panel

Finally, carefully remove these two components as a single piece. Brush them gently and place them to the side.

Finish the procedure by vacuuming the interior of the firebox, then reinstall the logs and secure the glass front following the procedures on pages 11 and 12.

REPLACEMENT PARTS

Contact an authorized Breckwell Stove Dealer to obtain any of these parts:

Item

Door glass
Door gasket (8 feet)
Window gasket (11 feet)
Relief plate gaskets
Brick panel set
Log set
Front burner
Rear burner
Burner orifices (front and rear)
Pilot orifices (NG and LP)
Pilot assembly
Quick dropout thermocouple
Thermopile
Pilot gasket
Blower thermodisk (T-22)
Blower rheostat
Convection blower
Blower gasket
Piezo igniter with wire
On/Off/T-Stat switch
Terminal block
Control valve

Extra-Cost Optional Items

Remote control kit
Gold-plated trivet

Appendix A

Converting the Breckwell G29DV from One Gas to Another in the Field

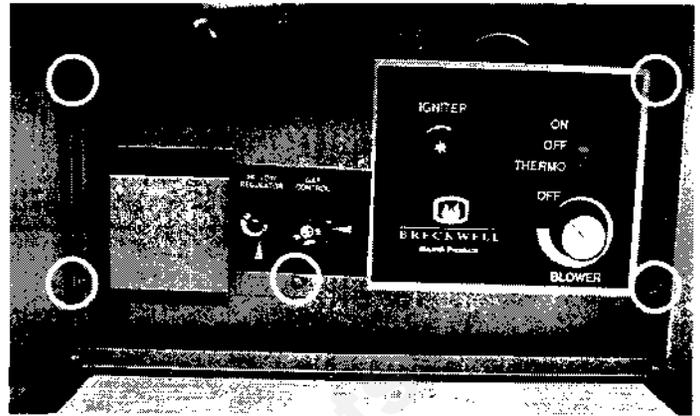
- Control Valve
- Front Burner Injector
- Rear Burner Injector
- Pilot Burner Injector

The G29DV is designed to burn either natural gas or propane (LP) gas. Each heater leaves the factory equipped for one specific fuel but it is a simple operation to convert the heater to the alternate fuel in the field. The original fuel type is marked on the rating label on the inside of the right side sheet.

NATURAL GAS PROPANE

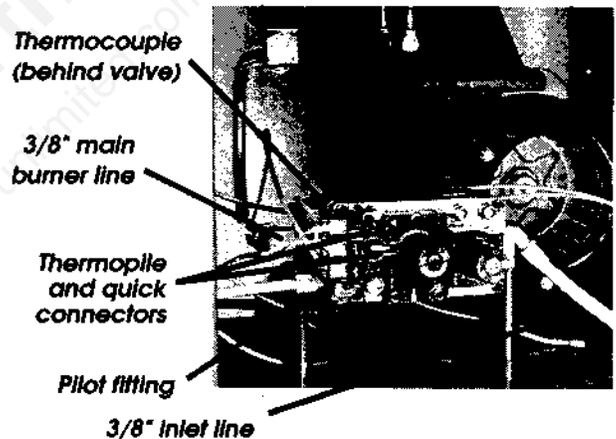
To convert to the alternate fuel, follow these steps: (Please note that these instructions assume the heater is disconnected from any gas supply and the cordset is unplugged.)

1. Remove the front door (See instructions on page 10)
2. Remove the log set and brick panels (See instructions on pages 10-11)
3. Remove the control panel access plate
 - Open the front control access door.
 - Remove the screw that secures the control panel access plate.
 - Lift up on the control panel access plate while pulling forward to remove.
4. Remove the control panel
 - To remove the control panel, unscrew the four fasteners that secure the panel and tip the panel forward. This should provide adequate access without the necessity of disconnecting the electrical connections to the panel.



Remove these five screws.

5. Disconnect the valve plumbing connections
 - Loosen and disconnect the 3/8" inlet fuel line and 3/8" main burner fuel line fittings located on the left and right sides of the valve.



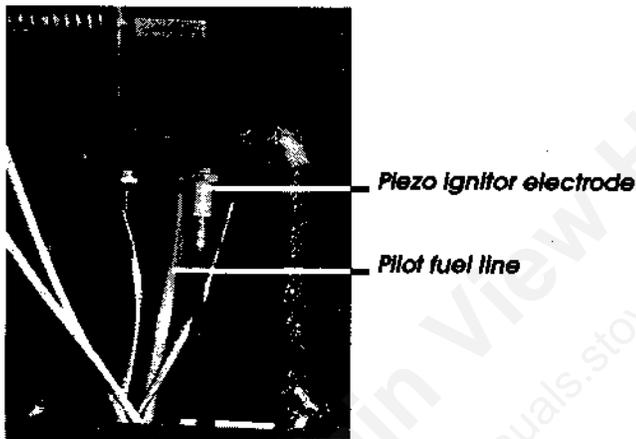
6. Disconnect the valve electrical connections
 - Loosen the two screws that secure the thermopile wires to the valve. Please note the position of the wires as you will need to be sure they are connected to the new valve in exactly the same position.
 - Disconnect the two fast-on connectors from the spade connectors located on the back side of the valve terminal strip. Again note the location of connections.
 - Disconnect the thermocouple from the valve using a 9 mm wrench. The connection is located on the left rear of the valve. If you are having difficulty with access, the lower rear access cover may be removed from the rear of the heater which may provide a better position for your hand and wrench.

7. *Remove the valve*

- Remove the four screws which secure the valve to its mounting brackets and gently pull the valve out toward the front of the heater. Make sure all disconnected components are out of the way.

8. *Replace the pilot burner injector*

- The pilot burner injector is located at the point the 1/4" pilot fuel line attaches to the pilot assembly. This is accessible through the pilot access located on the left side of the heater.
- Loosen the fitting which secures the piezo igniter electrode to the pilot assembly and slide the electrode out to provide better access to the pilot fuel line fitting. Loosen and remove the pilot fuel line.



At the end of the pilot fuel line, you will find the pilot fuel injector. It will easily lift off the end of the pilot fuel line. Set this injector away from the replacement components as it will be difficult to differentiate the new injector from the old. (Note: If the pilot fuel line does not appear to have an injector at the end when removed, gently tap the pilot assembly with your wrench. The old pilot injector will drop out.)

- Place the new pilot injector on the end of the pilot fuel line and insert into the fitting on the pilot assembly. Tighten the fitting hand tight for now.

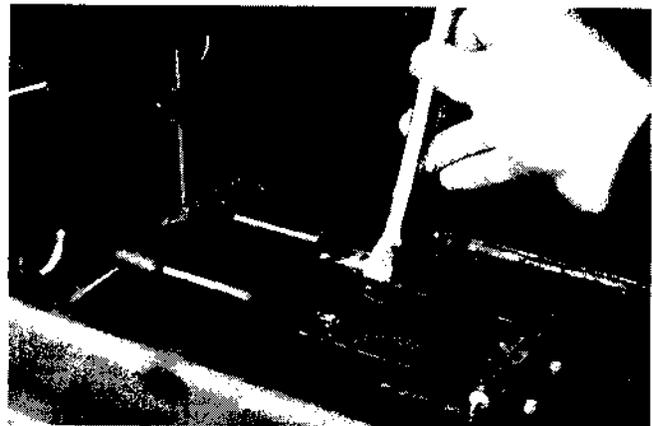
9. *Replacing the main burner injectors*

- Remove the rear burner by first removing the two slotted machine screws that secure the rear burner air guide. Remove the guide and set aside. Slide the rear burner to the right and lift up. Set the rear burner aside.
- Remove the log support plate by lifting up and pulling toward the front. It is heavy and should be handled with care. Set the log support plate aside.
- Remove the front burner by first sliding to the right and then lift it out. Set the front burner aside.



a) Slotted machine screws; b) Rear burner; c) Rear burner air guide; d) Log support plate

- Remove the old injectors using a 1/2" deep socket and ratchet. Once removed, set apart from the new injectors.



- Install the new injectors by first applying a very small amount of pipe sealant to the threads on the injectors. Do not put any sealant on the first thread. This will help avoid getting excess sealant into the

burner system. Using the 1/2" deep socket, tighten the new injectors firmly in place. Do not overtighten as you could strip threads or break the injector. The front and rear injectors are different. Be sure to use the proper injector.

10. Reinstall the burners, log support plate, log set, etc.

- Install the front burner by placing on the cradles and sliding to the left to engage the venturi tube into the air adjuster box.
- Install the log support plate.
- Install the rear burner. Make sure to slide it to the left to engage the venturi into the air adjuster box.
- Install the rear burner air guide and secure with two slotted machine screws.
- Reinstall the log set and brick panels following the instructions on pages 10 and 11.

11. Install the new valve

- Remove from the old valve any fittings which were not supplied with the new valve. Note the orientation of the fittings before you remove them.
- Using their positions on the old valve as a guide, install the fittings on the new valve using pipe sealant. Again, be sure not to apply sealant to the first one or two threads to help avoid getting sealant into the fuel system.
- Align the new valve into the mounting brackets and secure with the four fasteners.
- Connect the 3/8" main fuel line inlet and outlet and tighten firmly at both ends.
- Connect the 1/4" pilot fuel line and tighten firmly at both ends.
- Reinstall and tighten the piezo igniter electrode in the pilot assembly (care should be taken not to crack or break ceramic casing.)
- Reinstall and tighten the thermocouple at the rear of the valve.
- Reconnect the two fast-on connectors to the spade connectors located on the back side of the valve terminal strip making sure they are in the same position as on the old valve.
- Reconnect the thermopile wires, again making sure they are in the correct positions.

12. Leak testing

All fittings must be leak tested before use. Never exceed 1/2 psig during any leak testing while the unit is connected to the fuel supply system.

Tighten any fitting or fasteners as required and proceed with remaining component reinstallation.

13. Completing the conversion

- Install the control panel by tipping back up into place and securing with the four fasteners.
- Reinstall the front door and close the outer side sheets in accordance with instructions on pages 10 and 11.
- Fill out and install the fuel conversion label provided with the conversion kit.

FUEL CONVERSION KIT 84DV-WGCK FOR BECKWELL 029DV DIRECT VENT	
Attach this label to the rear sheet.	
This appliance has been converted to NATURAL GAS fuel.	
Cet appareil a été converti au GAS NATUREL .	
Injector/Injecteur:	848 44 Press/D48 39 Rear
Input/débit calorifique (Btu/hr):	48,000
Manifold Pressure/Pression à la tubulure d'alimentation (in w.c./kPa):	1.5/0.07
Inlet Pressure/Pression D'Arrivée (in w.c./kPa):	Min. 0.7/0.34 Max. 7.0/3.24
Date appliance was converted: _____	
By: _____	

This label on the burner system module indicates that the unit is equipped to burn natural gas.

FUEL CONVERSION KIT 84DV-WGCK FOR BECKWELL 029DV DIRECT VENT	
Attach this label to the rear sheet.	
This appliance has been converted to PROPANE fuel.	
Cet appareil a été converti au PROPANE .	
Injector/Injecteur:	848 44 Press/D48 39 Rear
Input/débit calorifique (Btu/hr):	48,000
Manifold Pressure/Pression à la tubulure d'alimentation (in w.c./kPa):	10.0/0.49
Inlet Pressure/Pression D'Arrivée (in w.c./kPa):	Min. 11.5/0.74 Max. 13.0/3.34
Date appliance was converted: _____	
By: _____	

This label on the burner system module indicates that the unit is equipped to burn propane.

- Follow all instructions on pages 14-17 of this manual for connecting to the gas supply, electrical wiring, air adjustment and flame monitoring.
- Replace the control access panel and fastener.

CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

SEE WIRING DIAGRAM ON PAGE 15

Appendix B

De-rating for High Altitude

For U.S. installations, the Breckwell G29DV is approved for elevations up to 2000 feet using the factory-installed burner injectors. At elevations above 2000 feet, U.S. codes require a decrease in the input rating by changing the burner injectors to a smaller size. The chart below lists by part numbers the appropriate injectors for both LP and natural gas at various altitudes.

For Canadian installations, the G29DV is approved for elevations up to 1375 meters (4500 feet). When installing the G29DV at altitudes above 1375 meters (4500 feet), consult the local gas distributor or the authority having jurisdiction for proper rating methods.

NOTE: The difference in altitude aerating requirements for the U.S. and Canada is simply a result of differences in testing standards between the two countries.

If the installer must convert the unit to adjust for varying altitudes, an information sticker like the one to the right must be filled out and affixed to the appliance at the time of conversion.

NATURAL GAS

Altitude	Front Injector	Breckwell Part No.	Rear Injector	Breckwell Part No.	Nominal Btu Input Rate
0-2000'	46	CD-V-046	39	CD-V-039	40,000
2000-3000'	47	AD-V-047	41	AD-V-041	38,000
3000-4000'	48	AD-V-048	42	AD-V-042	36,100
4000-5000'	49	AD-V-049	43	AD-V-043	34,300
5000-6000'	50	AD-V-050	43	AD-V-043	32,600
6000-7000'	60	AD-V-060	43	AD-V-043	31,000
7000-8000'	61	AD-V-061	44	AD-V-044	29,400
8000-9000'	62	AD-V-062	45	AD-V-045	27,900

PROPANE

Altitude	Front Injector	Breckwell Part No.	Rear Injector	Breckwell Part No.	Nominal Btu Input Rate
0-2000'	55	CD-V-055	53	CD-V-053	40,000
2000-3000'	55	CD-V-055	54	AD-V-054	38,000
3000-4000'	55	CD-V-055	54	AD-V-054	36,100
4000-5000'	56	AD-V-056	54	AD-V-054	34,300
5000-6000'	56	AD-V-056	55	CD-V-055	32,600
6000-7000'	56	AD-V-056	55	CD-V-055	31,000
7000-8000'	57	AD-V-057	55	CD-V-055	29,400
8000-9000'	57	AD-V-057	55	CD-V-055	27,900

THE CONVERSION SHALL BE CARRIED OUT BY A MANUFACTURER'S AUTHORIZED REPRESENTATIVE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER, PROVINCIAL OR TERRITORIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CGA-B141.1 OR CAN/CGA-B141.2 INSTALLATION CODES.

This appliance has been converted for use at an altitude of _____		
Office sizes: Front _____	Center _____	Rear _____
Input (Btu/h) _____		
Mafold Pressure _____		
Fuel Type _____		
Converted by _____		
Date of conversion _____		

Appendix C

Instructions for Manufactured (Mobile) Home Installation

This appliance may be installed in manufactured (mobile) homes after the first sale.

The Breckwell G29DV Gas Heater is a listed gas-fired direct vent room heater tested by Intertek Testing Services/Warnock Hersey to UL307B-95, ANSI Z21. 11.1-1993, ANSI Z21.44-1993, CAN 1-2.1-M89, CGA I.R. 41-M91, CGA I.R. 55-M94 and CAN/CGA-2.17-M91.

This appliance must be installed in accordance with the manufacturer's installation instructions and with local codes, or in the absence of local codes, follow the current ANSI Z223.1 in the USA or the current CAN1-B149 in Canada.

For manufactured home installation: This direct vent system appliance must be installed in accordance with the manufacturer's instructions and the Manufactured Home Construction and Safety Standard Title 24 CFR, Part 3280, or the current Standard of Fire Safety Criteria for Manufactured Homes Installations, Sites, and Communities ANSI/NFPA 501A, and with CAN/GSA Z240 ~ Mobile Home Standard in Canada.

Read the owners manual carefully. In addition to the instructions in the owners manual, the instructions listed below must be followed for installation in a manufactured (mobile) home.

WARNING: During installation of this appliance, do not compromise the structural integrity of the manufactured home wall(s), floor or ceiling.

WIRING:

The Breckwell G29DV must be installed in accordance with local codes or in the absence of local codes, with the current ANSI/NFPA 70 National Electrical Code in the USA or CAN/CSA C22.1 Canadian National Electrical Code in Canada.

The Breckwell G29DV 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

VENTING COMPONENTS:

The Breckwell G29DV has been tested and is listed for installation with Simpson Duravent GS venting components. The Simpson Duravent GS warranty will be voided, and serious fire, health or other safety hazards may result from any of the following actions:

Installations of any damaged Simpson Duravent GS component.

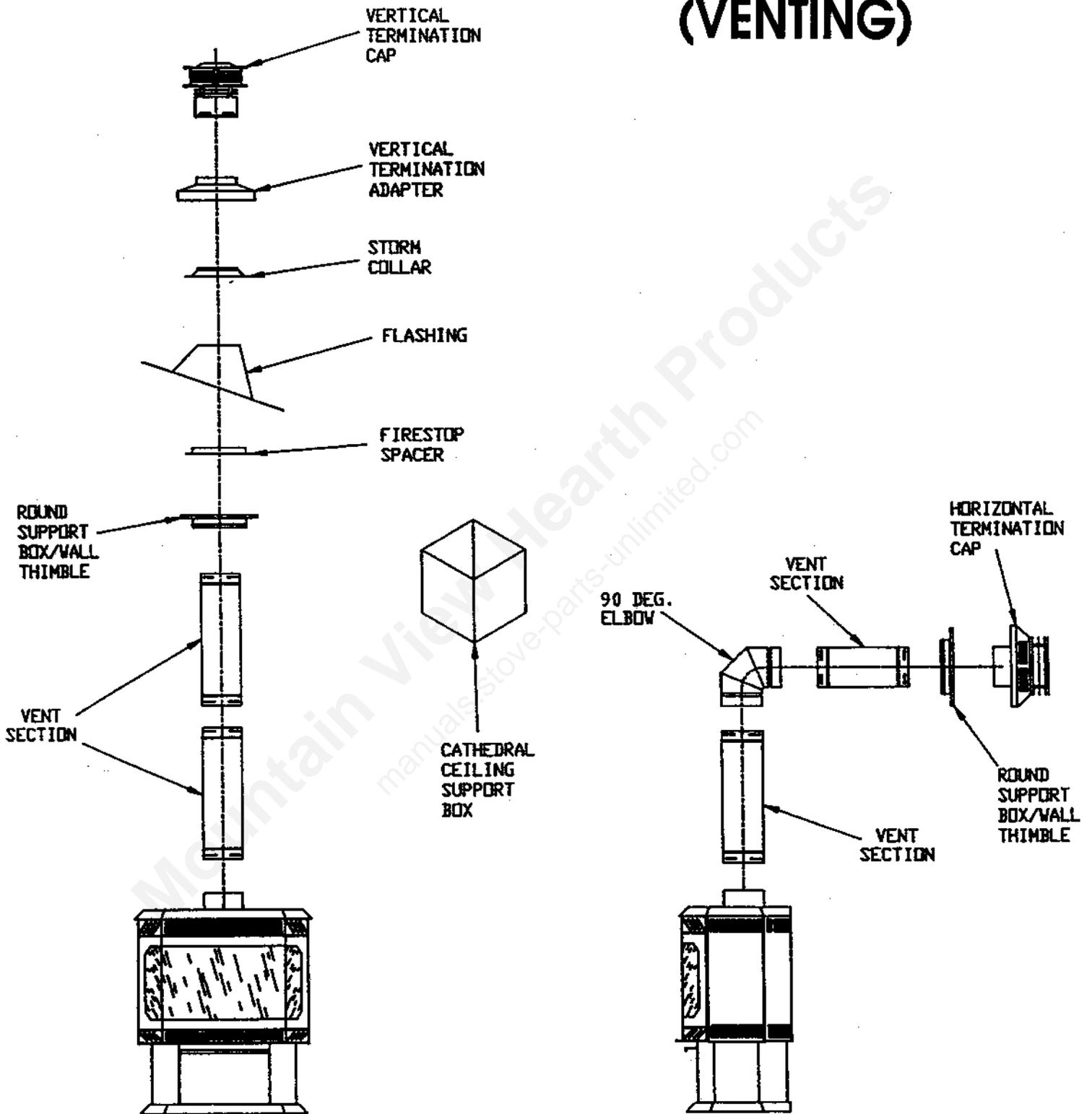
Unauthorized modification of the Simpson Duravent GS System.

Installation of any component part not manufactured or approved by Simpson Duravent.

Installation other than as instructed by Simpson Duravent and the appliance manufacturer.

Consult your local building codes before beginning the installation, and follow the manufacturer's instructions exactly. The following Simpson Duravent GS 4" x 6 5/8" venting components are approved for use with the Breckwell G29DV.

TYPICAL ASSEMBLY (VENTING)



SIMPSON DURAVENT COMPONENT NO.

Basic Termination Kit	970
Horizontal Termination Kit A	971
Vertical Termination Kit A	973
Horizontal Square Termination Cap	985
Vertical Termination Cap	983
Vinyl Siding Standoff	950
Wall Thimble	942
Round Ceiling Support/Wall Thimble Cover	940
Cathedral Ceiling Support Box	941
Storm Collar	953
Firestop Spacer	963
Adjustable Roof Flashing, 0/12-06/12 pitch	943
Steep Roof Flashing, 7/12-12/12 pitch	943S
Wall Strap	988
Designer Series Trim Kits	3951, 3952 3953, 3960 3961, 3962
High Wind Vertical Termination Cap	991
Low-Profile Termination Cap	980
Restrictor Plate	929

Direct Vent Pipe Lengths and Duravent Component Numbers

	Galvanized	Black
6" Length	NA	908B
9" Length	NA	907B
12" Length	906	906B
24" Length	904	904B
36" Length	903	903B
48" Length	902	902B
11-14 5/8" Adjustable	NA	911B
45° Elbow	945	945B
45° Elbow	990	990B

SECURING THE G29DV:

The G29DV must be securely fastened to the floor of manufactured home using the mounting bolt holes located in the pedestal of the G29DV (use 5/16" bolts or lag screws). To access the mounting bolt holes in the pedestal, remove the back panel of the pedestal (see figure 1). Use only the mounting bolt holes provided.

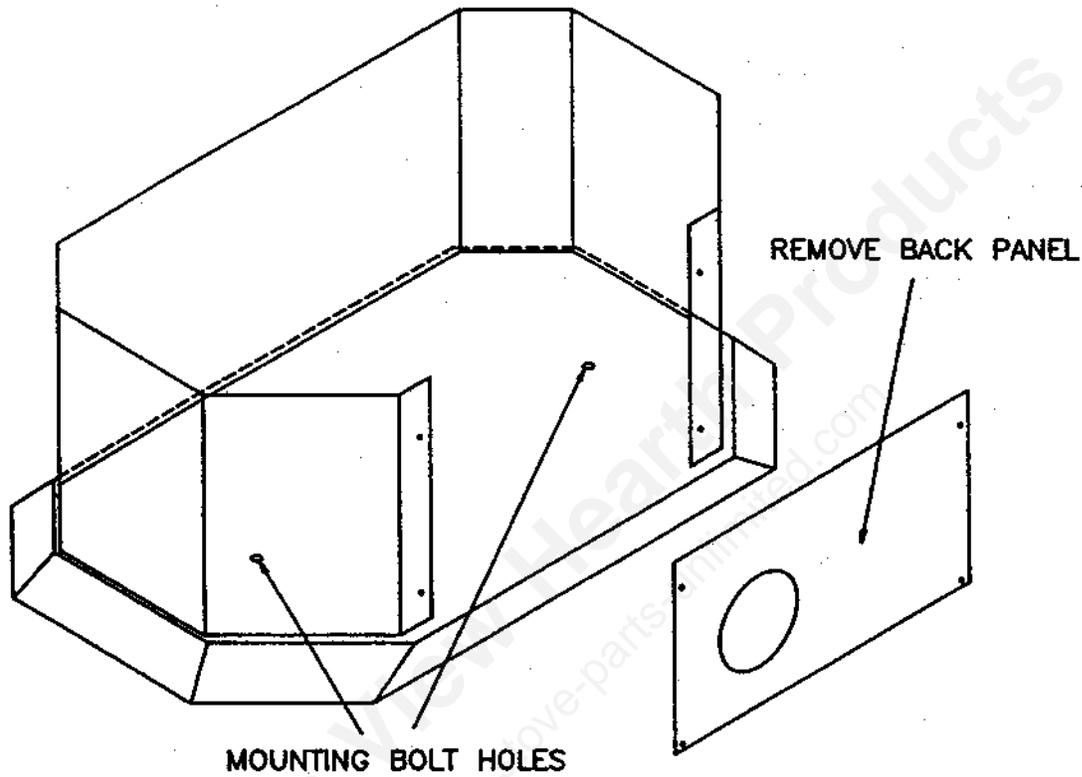


FIGURE 1

Breckwell G29DV

Gas Heater Specifications

Tested to ANSI Z21.11.1-1993, ANSI Z21.44-1993, CAN 1-2.1-M89, CGA I.R. 41-M91, CAN/CGA 2.17-M91.

	NATURAL GAS	PROPANE
Input Rating (Btu/hr) 0-1375 m	40,000	40,000
Min. Input Rating (Btu/hr) 0-1375 m	28,000	30,000
Injector (DMS) 0-1375 m	46 Front/39 Rear	55 Front/53 Rear
Manifold Pressure (in w.c./kPa)	3.5/0.87	10.0/2.49
Minimum Inlet Pressure (in w.c./kPa)	5.0/1.24	7.0/1.74
Maximum Output (Btu/hr) 0-1375 m	32,100	31,500
AFUE (seasonal efficiency; minimum venting)	72.2%	69.3%
Steady State Efficiency (max. input, blower on High)	80.3%	78.8%

MINIMUM CLEARANCES FROM COMBUSTIBLE CONSTRUCTION

Unit to left sidewall	9 in. (230 mm)
Unit to right sidewall	9 in. (230 mm)
Unit to backwall (measured from rear of stove to wall)	3 in. (150 mm)
Unit corner to walls	3 in. (150 mm)
Unit to alcove ceiling (minimum)	17 in. (430 mm)
Maximum alcove depth.....	21 in. (530 mm)
Minimum alcove width	48 in. (1220 mm)
From mantel to stove top	22 in. (560 mm)

Electrical Rating: 120 Volts 60 Hz 1.5 Ampere

Stove weight: 325 lbs.