



# **CLAYTON**

## **60 GAS HEATING APPLIANCE**

### **Direct Vent**

## **STANDARD FEATURES**

TOP OF THE LINE UNIT WITH AN EXTRA LARGE 450 SQUARE INCH VIEWING AREA .

- 40,000 BTU input Natural Gas
- 36,000 BTU input Liquid Propane
- Direct vent with a sealed Combustion chamber
- Approved on the ANSI and CAN 2.1 heating standard
- Relief door standard
- Piezo spark ignition
- Bedroom approved
- Pan burner with transfer holes
- Ceramic fibre logs and radiant embers
- High temperature ceramic glass

## **OTHER FEATURES**

- Millivolt system
- Metallic black finish

## **OPTIONS**

- Remote control or wall thermostat
- Flexible venting
- Three door choices, 24 carate gold plated, black, or brass trim
- Variable speed high output fan

# Clay-60G DIRECT VENT

The Clay-60G is our top of the line gas zero clearance fireplace. This model, like the Clay-40G, authentically replicates the look of a true wood burning fireplace while providing all the advantages of gas.

The Clay-60G also offers a larger heating capacity and simplified installation. With the optional fan kit the fireplace can provide up to 30,400 BTUs per hour. Its direct vent design saves space and can eliminate the need to cut through ceiling or roof. The Clay-60G also features a sealed fire chamber, approved for bedroom use.

## STANDARD FEATURES

- Durable Construction
- Flame Safety Switch
- Safety Combustion Relief Door
- Five Fiber Logs and Radiant Embers
- Approved for Vertical or Horizontal Vent Termination

## OPTIONAL FEATURES

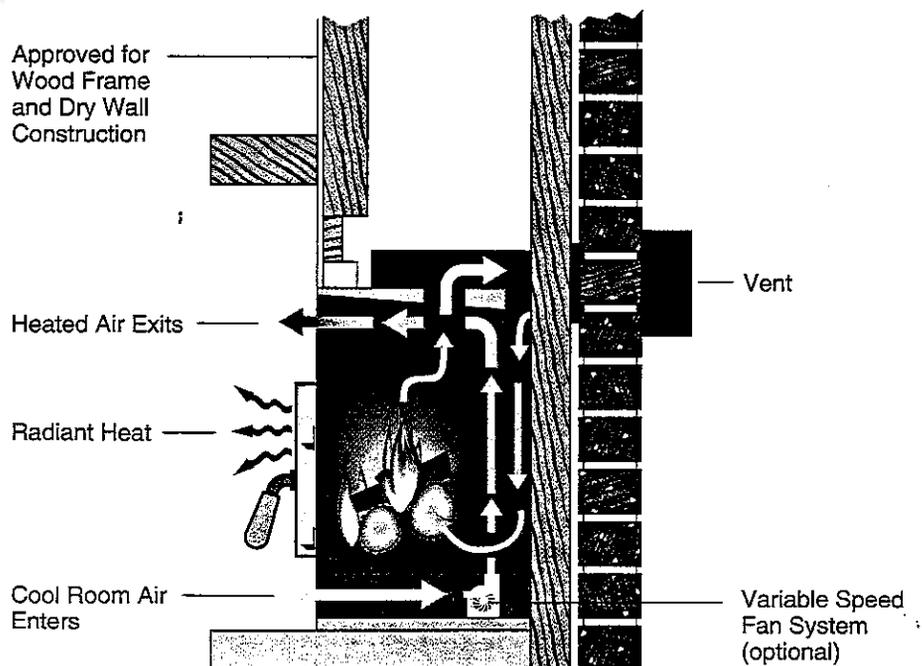
- Hand-held Cordless Remote Control Kit
- Wall Thermostat Control
- Wall Switch Control
- Variable Speed 120 CFM Blower System
- Horizontal Direct Vent Termination Kit
- Below Grade Flue Kit
- Cast Iron, Roman Arch Door with Gold Plated or Black Wrought Iron Finish -or- Contemporary, Horizontal Brass Trim

NATURAL GAS OR PROPANE



Clay-60G shown with customer installed brass surround.

## Direct Vent Balanced Flue System

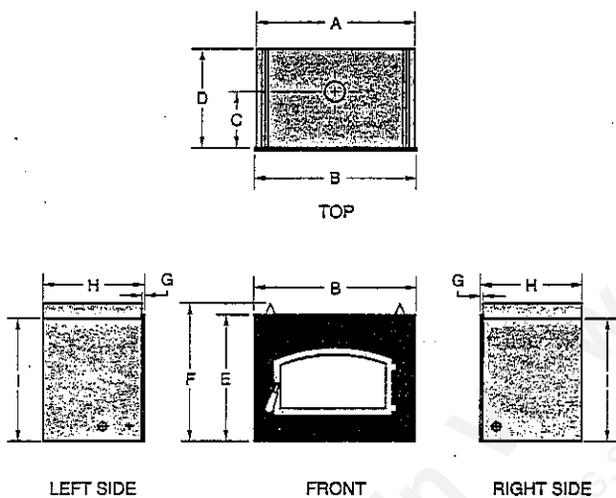


## CLAY-40G

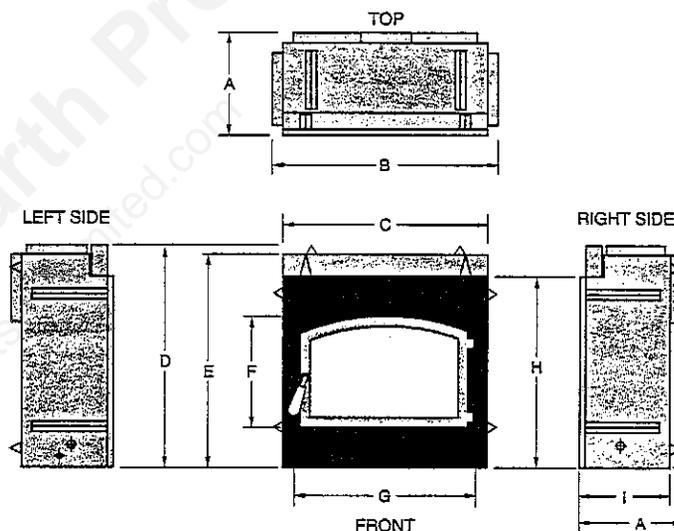
BURNER INPUT RATING	
NATURAL GAS	26,000 BTU
L.P.	23,500 BTU
STEADY STATE EFFICIENCY	79%
CLEARANCE TO COMBUSTIBLES	0"
WEIGHT	125 lbs.
FAN (Standard)	
Electrical Requirement	120 VAC
Air Displacement	120 CFM
FLUE	4" B-vent

## CLAY-60G

BURNER INPUT RATING	
NATURAL GAS	40,000 BTU
L.P.	33,000 BTU
STEADY STATE EFFICIENCY	76%
CLEARANCE TO COMBUSTIBLES	0"
WEIGHT	150 lbs.
FAN (Optional)	
Electrical Requirement	120 VAC
Air Displacement	120 CFM
FLUE	Direct Vent



A 28-3/8"	D 17-1/2"	G 1/2"
B 29-3/8"	E 23-3/8"	H 18"
C 11-1/4"	F 25-1/2"	I 22-5/8"



A 18-1/2"	D 38-3/4"	G 33"
B 39-1/2"	E 37"	H 34-3/8"
C 36-1/4"	F 22-1/2"	I 16-3/8"

**WARRANTY:** 5-year warranty on fire chamber and one year on electrical components.

**TESTING:** Clayton gas fireplaces have been safety tested by Warnock Hersey International Inc. to the following standards: 

**CLAY- 40G** — ANSI-Z21.11 and CAN/CGA 2.1-Vented Room Heater.

**CLAY- 60G** — ANSI21.11.1-1991, CAN1-2.1-1989 "Vented Room Heater," ANSI21.44a-1992 "Direct Vent Wall Furnaces," UL 307B-87 "Gas Burning Heating Appliances for Mobile Homes," I.R.#41 "Direct Vent Gas Fireplaces" and CAN/CGA-2.17-M91 "Gas-Fired Appliances For Use At High Altitudes."

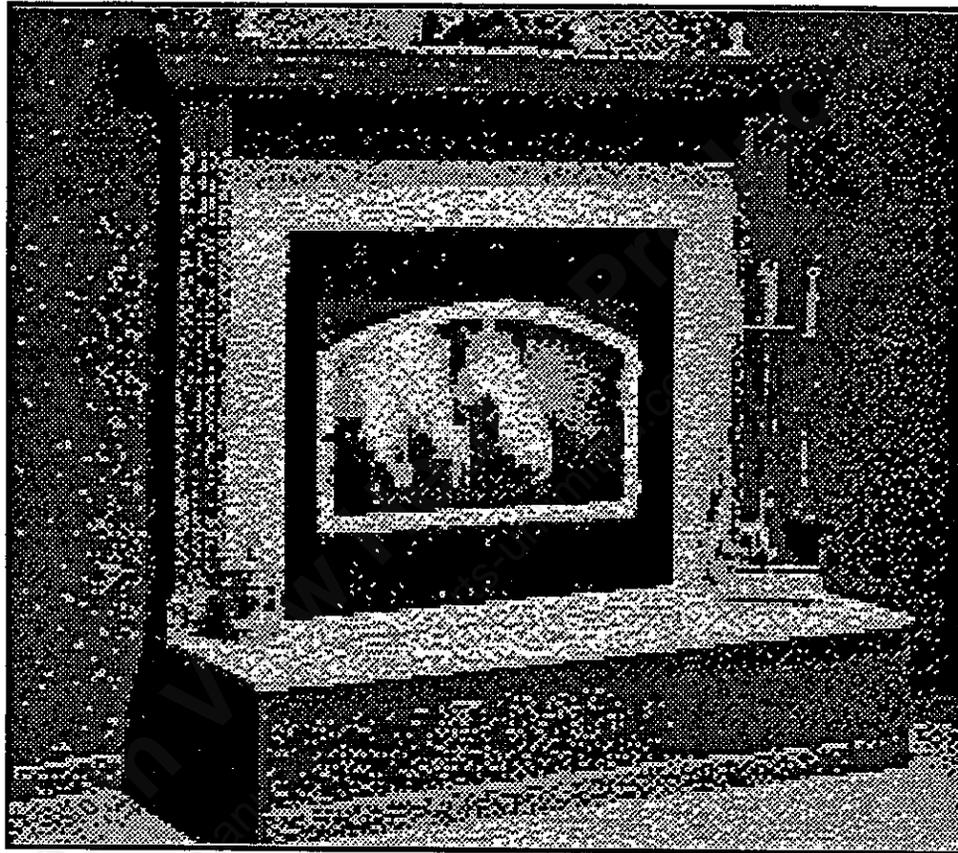
Before installing this unit, check local Building Codes and Gas Regulations to ensure that you comply with their directives.

Mfd. in U.S.A. by:

**UNITED STATES STOVE COMPANY**  
P.O. BOX 151 • SOUTH PITTSBURG, TN 37380 • (615) 837-2100

Building Quality Products for America Since 1869.

AVAILABLE AT:



## MODEL CLAY-60G DIRECT VENT GAS ZERO CLEARANCE FIREPLACE

*Installation / Operator's Manual #31500*

### **FOR YOUR SAFETY**

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

**If you smell gas:**

1. Open windows
2. Don't touch electrical switches
3. Extinguish any open flame
4. Immediately call your gas supplier

### **CAUTION:**

**Read Rules for  
Safe Operation  
& Instructions  
CAREFULLY**

### **IMPORTANT:**

Installation must be made in accordance with State and local ordinances which may differ from this installation manual.

# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1</b>
Important Information and Specifications .....	1
<b>PLANNING YOUR FIREPLACE INSTALLATION .....</b>	<b>1-4</b>
Removal and Replacement of Front Glass .....	1
Locating Your Fireplace .....	2
Hearth and Mantel Information .....	2
Framing and Finishing.....	2
Clearances .....	2
Remote Wall Switch .....	3
Gas Pipe and Burner Installation .....	4
Installation of Logs .....	4
<b>OPERATION AND MAINTENANCE.....</b>	<b>5</b>
Lighting.....	5
Shut-down.....	5
Maintenance.....	5
Glass Cleaning .....	5
<b>INSTALLATION INSTRUCTIONS FOR OPTIONAL EQUIPMENT.....</b>	<b>6</b>
<b>VENTING INSTRUCTIONS.....</b>	<b>6-8</b>
Sidewall Venting.....	6
Clearances.....	6-7
Routes and Components .....	8
<b>INSTALLATION INSTRUCTIONS.....</b>	<b>8-11</b>
Venting Components.....	10-11
<b>GAS PRESSURE REQUIREMENTS .....</b>	<b>12</b>
<b>MILLIVOLT SYSTEM CHECK .....</b>	<b>12</b>
<b>PARTS LISTS.....</b>	<b>16-19</b>
Clay-60 Gas Fireplace .....	16
Clay-60 Gas Burner .....	17
Termination Kit .....	18
Venting Components .....	18-19
<b>WARRANTY.....</b>	<b>20</b>

# INTRODUCTION

Thank you for your purchase of the Clay-60 Gas Zero Clearance Fireplace. By following the instructions in this manual you can be assured of an installation that will add both beauty and value to your home, as well as provide safe, efficient supplemental heat.

Your Clayton dealer can be a valuable source of information in helping select the proper components for your installation as well as recommending professionals who can assist in installation and maintenance.

**Improper maintenance may void warranty and can cause injury for property damage. Refer to this manual.**

## IMPORTANT INFORMATION

For safe installation and operation of your fireplace, please note the following:

1. This appliance should only be installed by a qualified installer. Installation must conform with local codes, or in the absence of local codes, with the latest edition of the National Fuel Gas Code, ANSIZ 223.1-1992/NFPA 54-1992 OR CAN1-B149.
2. This appliance gives off high temperatures and should be located out of heavy traffic areas and away from furniture and draperies.
3. 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.
4. Children should be carefully supervised when they are in the same room as the fireplace appliance.
5. Under no circumstances should this appliance be modified. Do not operate this appliance if any parts have been removed for service.
6. 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 of your gas appliances checked annually.
7. 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.
8. The appliance's venting system should be inspected at least once a year and immediately cleaned if necessary.
9. Keep the area around the appliance clear of combustible materials, gasoline and other flammable vapors and liquids. Do not use this appliance as a drying rack for clothing, nor should Christmas stockings or decorations be hung in its immediate area.
10. Do not operate this appliance without glass in place. Replace damaged glass only with equivalent glass of equal thickness and size (available from your Clayton dealer).
11. Never burn solid fuel (wood, paper, cardboard, coal) in this appliance.
12. 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.

## GAS SPECIFICATIONS

MODEL	FUEL	GAS CONTROL	MAXIMUM INPUT
69060	Natural	Remote On/Off	40,000 BTU/HR.
69160	Propane	Remote On/Off	40,000 BTU/HR.

Manifold Pressure - Natural Gas 3.5" W.C.P.  
Propane Gas 10.5" W.C.P.

Gas Inlet - 1/2" NPT

Supply	Minimum Pressure	Maximum Pressure
Natural Gas	5.5" W.C.P.	10.5" W.C.P.
Propane Gas	11.0" W.C.P.	13.0" W.C.P.

### HIGH ALTITUDE STATEMENT:

This unit has been tested for installation at high altitude in accordance with Canadian test standard CAN/CGA-2-17. Higher altitudes affect atmospheric pressure and heat value of gaseous fuels. When installing this unit at high altitudes, the rated input will be lower than at sea level. Lowered oxygen content in the air and lowered gas density require installing a different orifice in order to achieve clean combustion of the unit. Consult the unit data plate for proper high altitude orifice size and fill out the information sticker attached to the unit when field converting.

## PLANNING YOUR FIREPLACE INSTALLATION

### REMOVAL OF DOOR AND GLASS

(In order to protect the glass, please remove before installing fireplace)

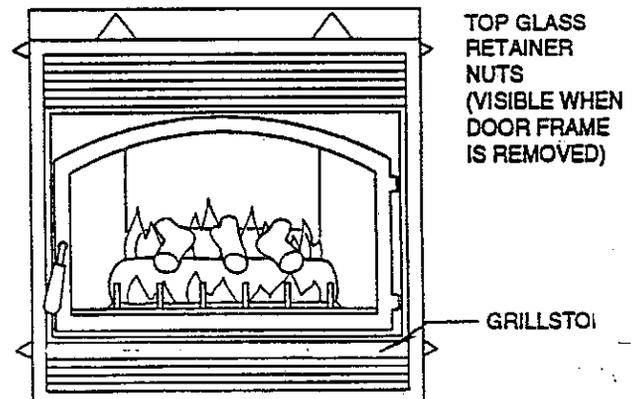
Your Clayton fireplace has been shipped without the door installed.

Remove the 12 #10 hex nut on the glass frame being very careful not to drop the glass.

**CAUTION:** Be careful to support the glass to prevent it from breaking.

After the unit is installed, replace the glass being very careful not to over tighten the hex nuts. Overtightening can cause glass breakage.

**CAUTION:** Except for servicing, never operate this appliance with the front glass removed or broken.



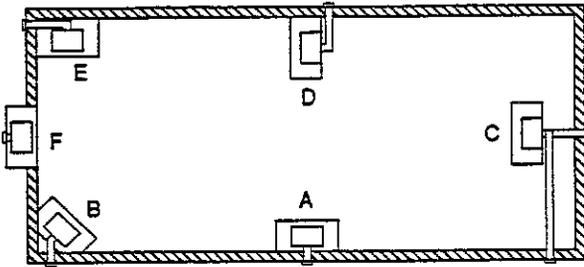
## LOCATING YOUR FIREPLACE

- |                  |                          |
|------------------|--------------------------|
| (A) Flat on wall | (D) *Room Divider        |
| (B) Cross corner | (E) *Flat on wall corner |
| (C) **Island     | (F) Cantilever           |

**NOTE:** \*\*Island installation is possible as long as the systems Venting Configuration conforms to the guidelines on 8.

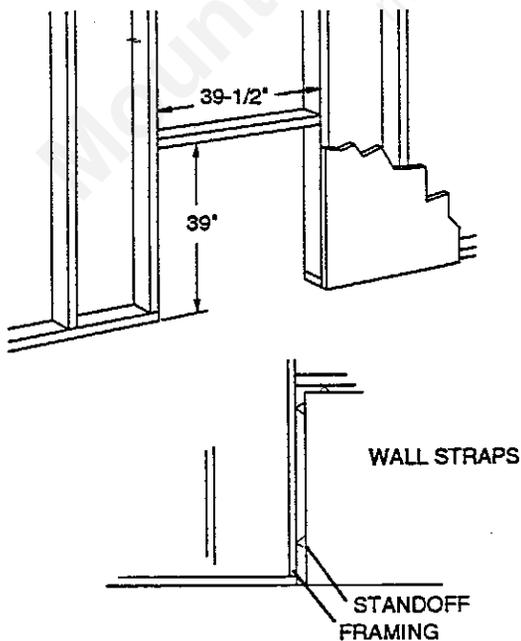
**NOTE:** \*When you install your fireplace as a (D) Room divider or in (E) Flat or wall corner positions, a minimum of 6 inches clearance must be maintained from the perpendicular wall and the front of the appliance.

The Clay-60G Zero Clearance Fireplace may be installed flat on a combustible-floor or raised up on a hearth to keep the flame at eye level. Do not install this unit directly on carpets or vinyl flooring.



## FRAMING AND FINISHING

1. Choose fireplace location and frame opening as illustrated below.
2. Place fireplace into position and secure to framing with wall straps.
3. Cold climate recommendation: When installing this fireplace against a non-insulated exterior wall or chase, it is recommended that the outer walls be insulated to conform to applicable insulation codes.



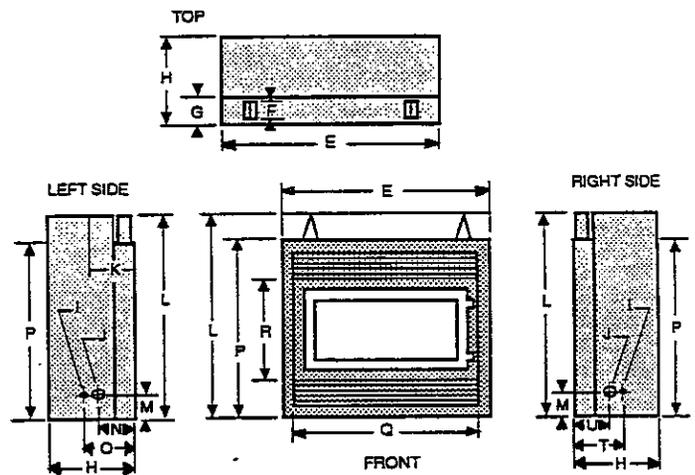
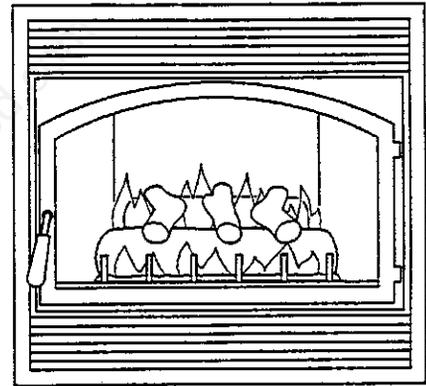
## HEARTH

A hearth is not required but it will improve the appearance and provide added safety. We recommend a noncombustible hearth which extends a minimum of 12 inches in front of the appliance.

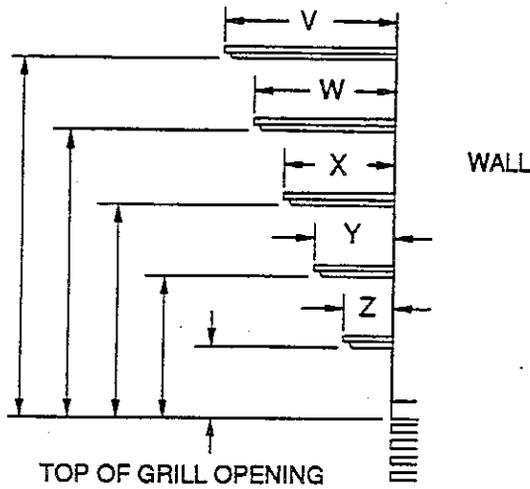
## MANTELS

The height at which a mantel must be placed above the fireplace opening depends on the depth of the mantel. See drawing and chart at right for proper installation height of a combustible mantel piece. Non-combustible mantels may be installed at any height above the fireplace opening.

**NOTE:** Use heat resistant paint or finish on the mantel to prevent discoloration.



E 36-1/4"	J 1-1/4" dia.	O 14-5/8"
F 2-1/4"	K 39-1/2"	P 34-3/8"
G 5"	L 37	Q 33
H 16-3/8"	M 4-1/2"	R 22-1/2"
I 7/8" dia.	N 5-1/4"	T 18-1/2"
		U 38-3/4"



### MANTEL CHART

MANTEL DEPTH	INCHES	HEIGHT FROM TOP GRILL				
		A	B	C	D	E
V	10"	18"				
W	8"		16"			
X	6"			14"		
Y	4"				12"	
Z	2"					10"

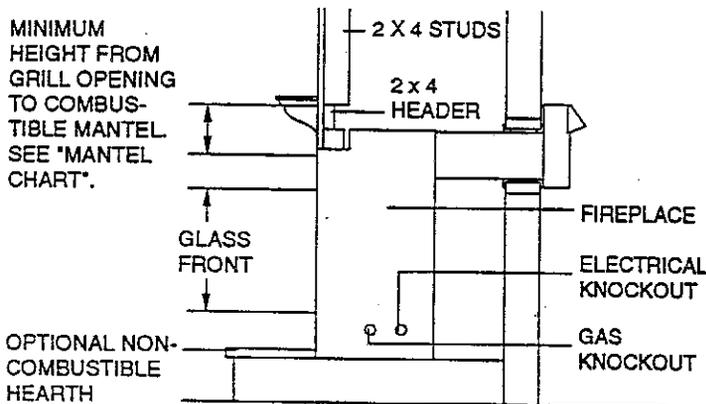
### CLEARANCE TO COMBUSTIBLES

BACK	0 inches	from standoffs
SIDE	0 inches	" "
FLOOR	0 inches	" "
TOP	0 inches	" "

Non-combustible materials such as brick, stone or tile must extend flush with or project in front of and/or on the face of the fireplace but must not block any of the grill openings or fire chamber opening.

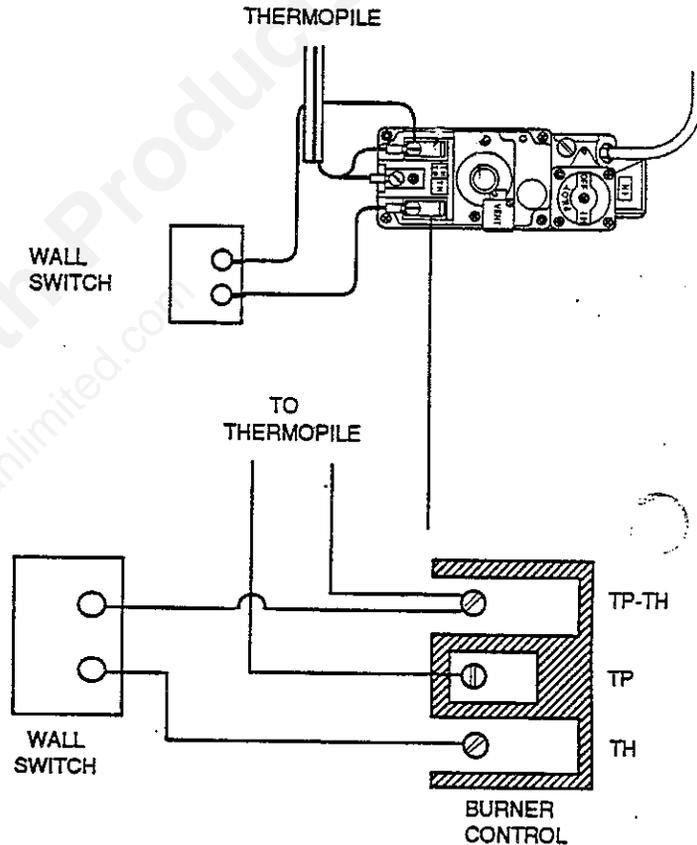
When this appliance is being installed in a non-insulated wall or in a chase, fiberglass insulation should be installed around body of fireplace.

MINIMUM HEIGHT FROM GRILL OPENING TO COMBUSTIBLE MANTEL. SEE "MANTEL CHART".



### INSTALLING MILLIVOLT REMOTE WALL SWITCH FOR AUTOMATIC GAS VALVE

1. Thread wire through gas inlet opening. Be sure not to wire. Run wire to a conveniently located wall switch. For best long term results, switch must not be more than 10 feet from fireplace.
2. Attach wire to switch and mount in switch box.
3. Connect wires to gas valve. One wire to the top terminal and one wire to the bottom terminal. CAUTION: do not wire millivolt remote wall switch or gas valve to a 110 volt power supply.



THIS APPLIANCE IS FOR USE WITH NATURAL OR PROPANE GAS ONLY AS INDICATED ON RATING PLATE.

NOTE: BTU ratings shown on the rating plate area for elevations up to 2,000 feet. For elevations above 2,000 feet, rating should be reduced at the rate of four (4) percent for each 1,000 feet above sea level.

L.P. AND NATURAL ORIFICE	
0 - 2,000 feet	- Natural #31 - L.P. #50
2,000 - 4,500 feet	- Natural #32 - L.P. #51
4,500 - 6,000 feet	- Natural #33 - L.P. #52

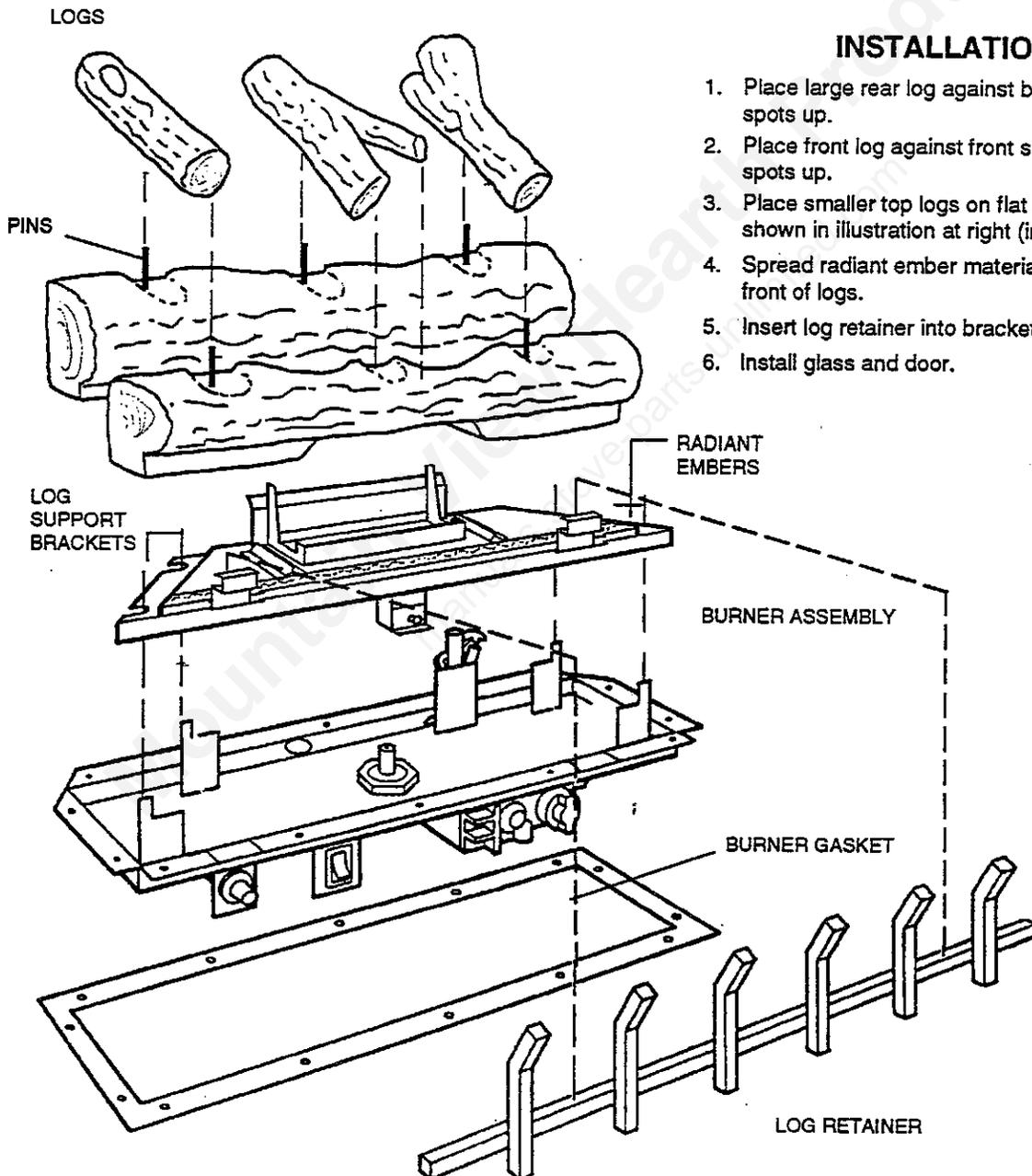
## GAS PIPE AND BURNER INSTALLATION

The gas line is piped to the outside of the unit at the factory on the right side. Installation must conform to local codes, or in the absence of local codes, to the latest edition of the National Fuel Gas Code, ANSI Z 223.1-1992.

- A. An accessible manual shut-off valve is required in the gas supply line. A ground joint union is required in the gas supply line to provide for burner removal or servicing.
- B. When a vertical section of piping is required for installation, a condensation trap (drip leg) is required.
- C. For natural gas, a minimum of 3/8" iron pipe with gas pressure of 4.5 WC must be used for supply from the meter. Consult with the local gas utility for any questions concerning pipe size.

- D. A 1/8" NPT plugged tapping, accessible for test gauges connection, must be installed immediately up stream of the gas supply connection to the appliance.
- E. Make gas connection to burner assembly with pipe or listed flexible connection. Seal space between pipe and knockout on firebox with high temp caulk. See illustration below.
- F. Turn gas supply on and check for leaks using a soap and water solution. (DO NOT USE AN OPEN FLAME).

**NOTE:** The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing where the test pressure is in excess of 1/2 psig. The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig.



## INSTALLATION OF LOGS

1. Place large rear log against back support bracket, flat spots up.
2. Place front log against front support bracket, flat spots up.
3. Place smaller top logs on flat spots of bottom logs as shown in illustration at right (install 4 pins).
4. Spread radiant ember material along screen area in front of logs.
5. Insert log retainer into brackets.
6. Install glass and door.

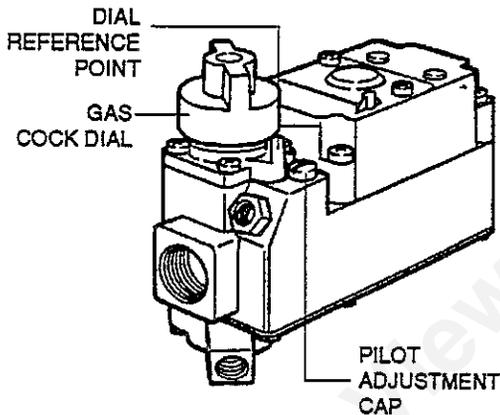
# OPERATION AND MAINTENANCE

**WARNING: WHEN PURGING THE GAS LINE, THE GLASS FRONT MUST BE REMOVED.**

## LIGHTING PROCEDURE

1. Depress and turn gas valve knob to "off". Wait sufficient time to allow gas which may have accumulated in the burner compartment to escape. (At least 5 minutes.)
2. Depress valve knob and turn to "pilot".
3. Depress and hold valve knob while pushing Piezoelectric spark lighter (red button). Hold valve knob depressed until pilot remains lit when knob is released (approximately one minute).
4. Turn valve knob to "on".
5. If unit fails to start, repeat steps one through four.

**NOTE:** If unit is equipped with remote "on-off" wall switch, switch must be in "on" position for burner to light.



**NOTE:** The gas control is designed to be either fully on or off. Never use control to vary flame height.

**NOTE:** It is normal for the new 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.

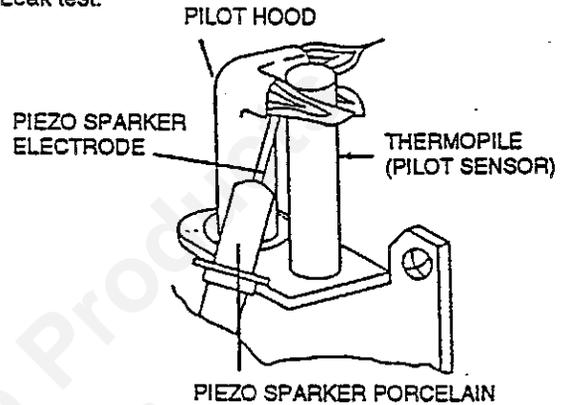
It is recommended that you burn your new fireplace for at least two (2) hours the first time you use it. If optional fan kit is installed, leave it turned off during this break-in period.

## SHUT-DOWN PROCEDURE

1. To turn off the Main Burner only, turn Valve Knob to "PILOT" position.
2. For complete shut down, slightly depress Valve Knob, turn to "OFF" position.
3. The Burner Assembly has been pre-adjusted for proper flame control. **DO NOT ALTER GAS ORIFICE.**
4. Periodic visual checks of the Pilot Flame should be conducted to ensure that the flame is continuously present except when the valve knob is in the "OFF" position.

## PILOT BURNER ADJUSTMENT

1. Remove pilot adjustment cap on gas valve.
2. Adjust pilot key to provide properly sized flame. The flame should cover the upper 3/8" of the tip.
3. Replace pilot adjustment cap.
4. Leak test.



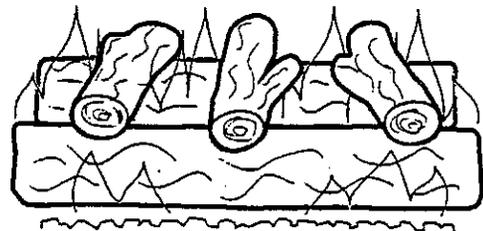
## MAINTENANCE

It is important to keep burner and the burner compartment clean. This must be done periodically, at least once per season.

### Steps for Cleaning Procedure

1. Turn off pilot.
2. Remove glass door frame assembly.
3. Remove logs.
4. Vacuum burner compartment, especially around the orifice opening.
5. Re-install logs.
6. Re-install glass front.
7. Ignite pilot - see Lighting Procedure Section.
8. Operate the burner and visually check to make sure the flame pattern appears similar to the illustration shown below.

**NOTE:** It is important to periodically perform a visual check of the pilot and the burner flame and to compare them with this illustration.



## GLASS CLEANING

It will be necessary to clean the glass periodically. During start-up, condensation forms on the inside of the glass and cause dust, lint, etc. to cling to the glass surface. This is normal. Also, initial paint curing can deposit a slight film on the glass.

**Do not clean glass when it is hot.**

**Do not use abrasive cleaners on glass or door.**

## INSTALLATION INSTRUCTIONS FOR OPTIONAL FAN KIT

**Kit includes:** 1-Fan Assembly  
1-Speed Control Switch  
1-Hardware Pack

The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the latest edition of the National Electrical Code, ANSI/NFPA 70 or current CSA.C22.1.

### INSTALLATION

1. Open bottom louver door, remove grill stop.
2. Slide fan assembly into opening, line up the mounting holes with the screw studs protruding from the floor panel and secure with the (2) nuts provided.
3. Install electrical wiring.

Detailed wiring instructions come with the 60G blower kit #69050.

**NOTE:** Electrical wiring and installation must conform to all applicable codes and ordinances and must be done by a qualified electrician.

**CAUTION:** Electrical power supply must be disconnected prior to servicing the fan.

## VENTING INSTRUCTIONS

The Model Clay-60G fireplace is designed for direct venting through a side wall or roof.

Only venting components specifically approved and labeled for this fireplace may be used.

The flow of combustion and ventilation air must not be obstructed.

Minimum clearance between vent pipes and combustible materials is one (1) inch.

**CAUTION: ALL JOINTS BE AIRTIGHT.**

THE INSTALLATION OF THIS APPLIANCE MUST CONFORM WITH LOCAL CODES, OR, IN THE ABSENCE OF LOCAL CODES, WITH THE LATEST EDITION OF THE NATIONAL FUEL GAS CODE, ANSI 223.1-1992.

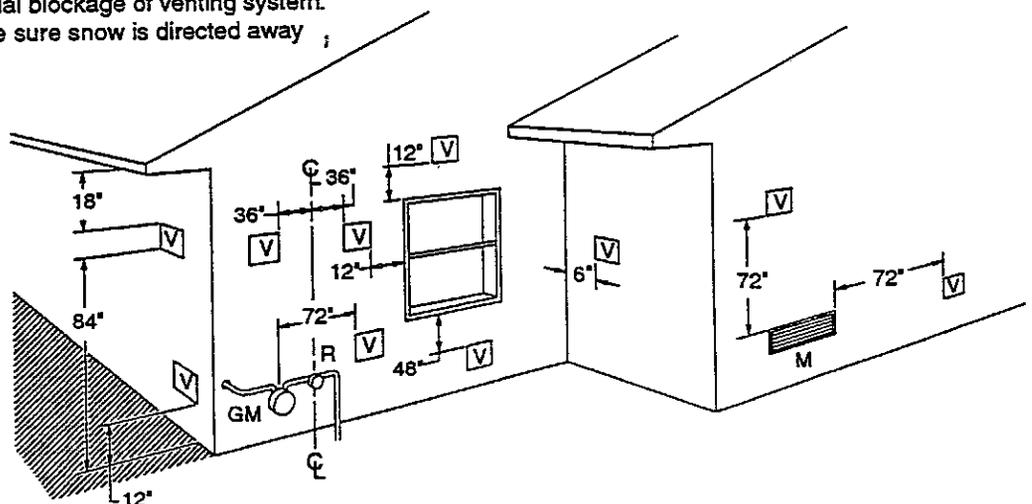
### SIDE WALL VENTING

#### Location of Vent Termination

**IMPORTANT:** The minimum clearances given for the vent termination must be strictly adhered to. There must not be any obstruction such as bushes, fences, garden sheds, decks or utility buildings within 24" from the front of the termination hood.

Do not locate termination hood where excessive snow or ice buildup may occur. Check vent termination area after snowfalls, and clear to prevent potential blockage of venting system. When using snow blowers, make sure snow is directed away from the vent termination area.

V - Vent Termination  
M - Mechanical Air  
I - Intake  
GM - Gas Meter  
R - Regulator



The vent termination must not be located:

1. Less than 7 feet above a paved sidewalk or a paved driveway located on public property.
2. Within 6 feet of a mechanical air supply inlet to any building.
3. Above a meter/regulator assembly within 3 feet horizontally of the vertical center-line of the regulator.
4. Within 6 feet of any gas service regulator vent outlet.
5. Less than 1 foot above grade level; (see section on below ground installation for special venting.)
6. Within the following distances of a window or a door which can be opened, any non-mechanical air supply inlet or the combustion air inlet of another appliance;
  - a. 12 inches top and sides.
  - b. 4 feet below.
7. Underneath a veranda, porch or deck where,
  - a. the veranda, porch or deck is not fully open on a minimum two sides beneath the floor
  - b. the distance between the top of the vent termination and the underside of the veranda, porch or deck is less than 4 feet.

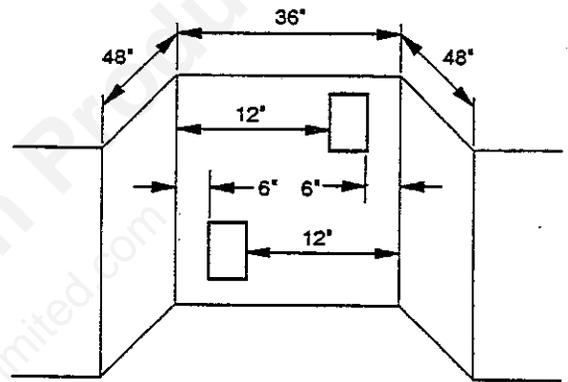
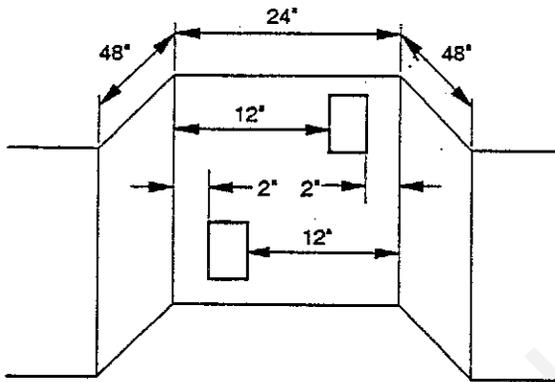
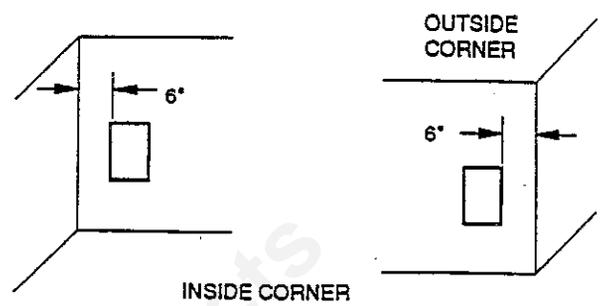
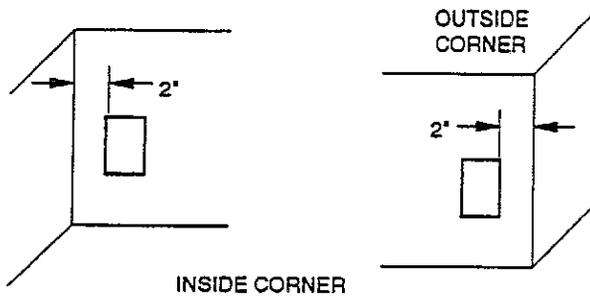
### MINIMUM VENT TERMINATION CLEARANCES

From combustible's exterior surfaces, gas meter, air intakes, etc.

# VENTING INSTRUCTIONS

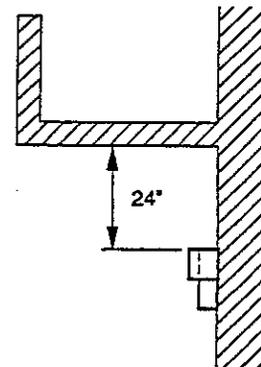
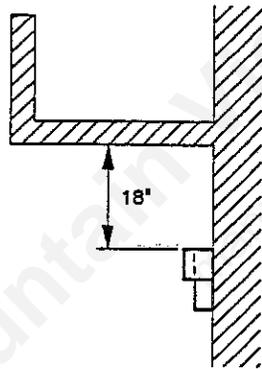
If the exterior of the building is non-combustible the following minimum clearances are applicable:

If exterior of the building is combustible the following minimum clearances are applicable.



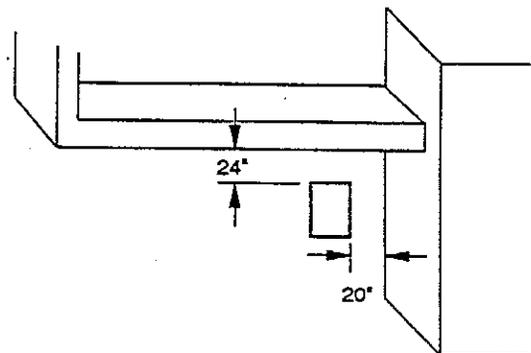
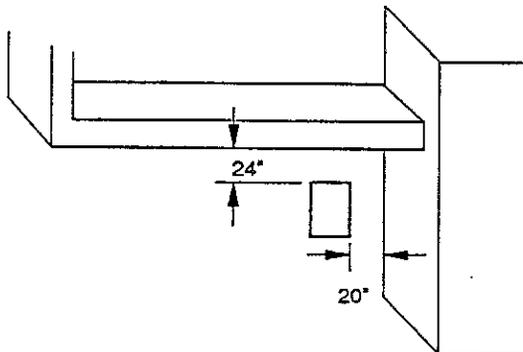
RECESSED LOCATION

RECESSED LOCATION



BALCONY - NO SIDE WALL

BALCONY - NO SIDE WALL



BALCONY WITH PERPENDICULAR SIDE WALL

BALCONY WITH PERPENDICULAR SIDE WALL

## INFORMATION ON VENTING ROUTES AND COMPONENTS

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.

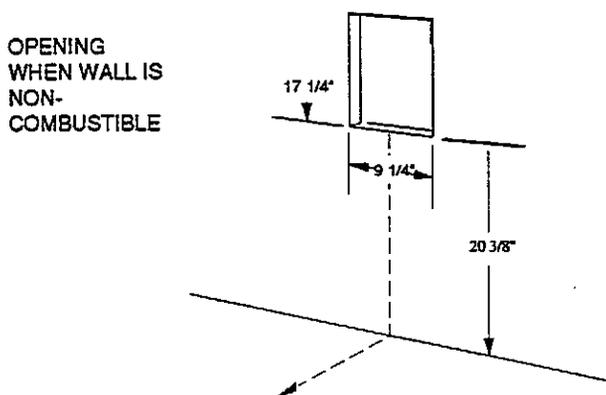
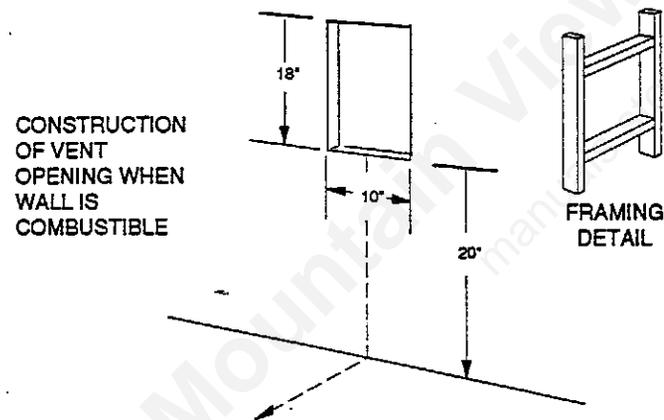
- Max. horizontal vent run **32** ft. (670 cm).
- Max. vertical vent run is **25** ft. for U.S. - 15 ft. for Canada.
- The maximum number of elbows in any one configuration is 1 (one) horizontal elbow and 2 (two) vertical elbows.
- A 1/4" rise per foot of horizontal run must be maintained on all horizontal runs.
- It is possible to configure a venting system with 32 feet of horizontal vent run and 25 feet of vertical vent run and include up to (3) three elbows.

**IMPORTANT:** It is always best to locate the fireplace in such a way that a minimum of offsets and /or horizontal run is required.

## INSTALLATION

The final location of the fireplace must be such that the horizontal vent dimensions fall within those stated. A manufactured home (mobile home) installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 and requires a mobile home kit #69080 to permanently secure unit to floor or structure. The unit must also be electrically grounded to metal frame of the mobile home.

**IMPORTANT: MINIMUM CLEARANCE BETWEEN VENT PIPES AND COMBUSTIBLE MATERIALS IS ONE (1) INCH.**



### STEP 1

Locate and mark the vent opening location on the wall.

### STEP 2

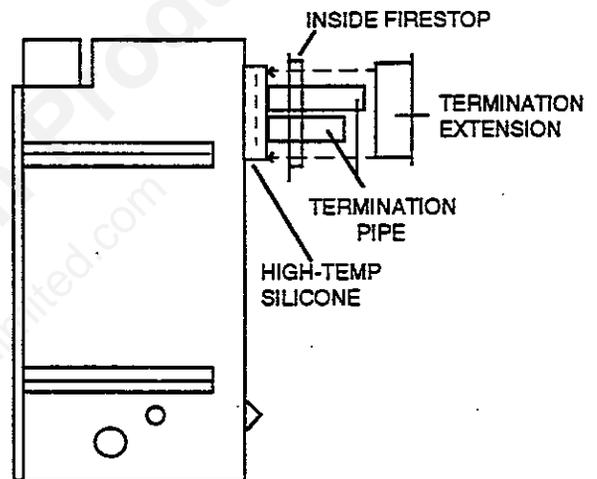
**COMBUSTIBLE WALLS:** Cut a 10" x 18" hole through the exterior wall and frame as shown.

**NON-COMBUSTIBLE WALLS:** Cut a 9-1/4 x 17-1/4 hole through the exterior wall and frame as shown.

### STEP 3

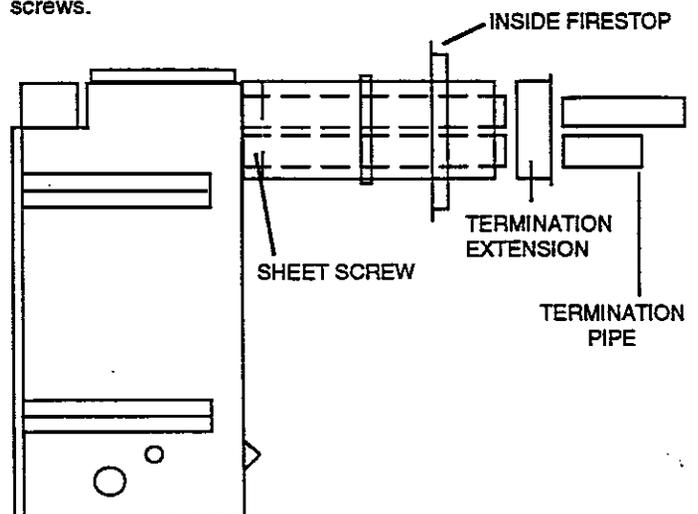
For application against wall:

Silicone takeoffs in the back of the unit using high temp silicone. Slide on the termination pipe (5" aluminized on top & 7" galvanized on bottom). Secure with sheet metal screws. Slide on inside firestop so that it can be secured to inside wall once the termination extension is in place. Be sure mineral wool insulation sleeve is in place where the assembly passes through the wall. Slide termination extension over pipes and flange. Secure with sheet metal screws.

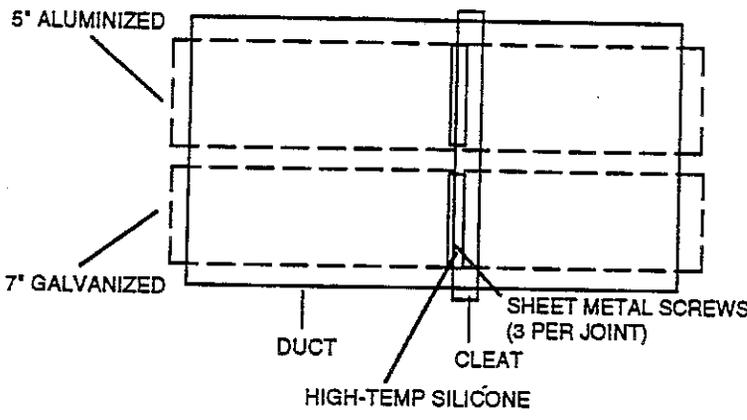


For horizontal or vertical run:

Silicone takeoffs in the back of unit using high temp silicone. Attach pipe and secure with sheet metal screws. After the pipe has been assembled, place duct around pipes. Secure the first duct to unit with sheet metal screws. Secure rest of duct with cleats provided. Next, place termination pipes on the run. Secure with sheet metal screws. Slide on inside firestop so that it can be secured to inside wall once the termination extension is in place. Slide termination extension over pipes and inside duct work. Secure with sheet metal screws.

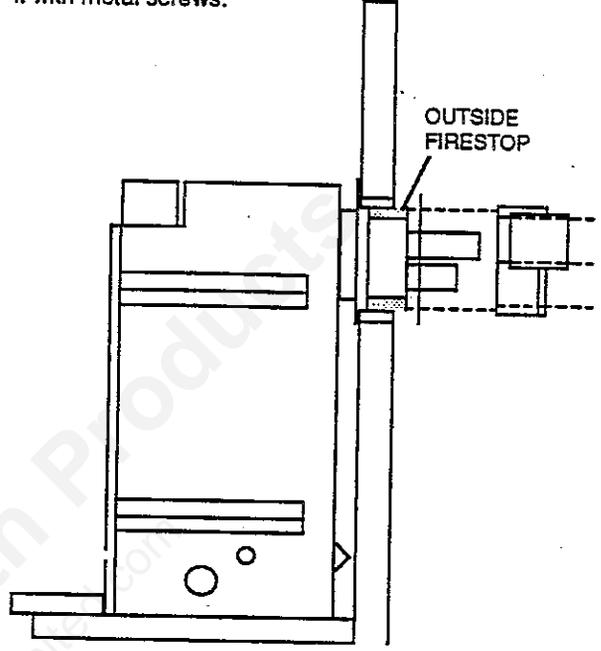


# INSTALLATION (continued)



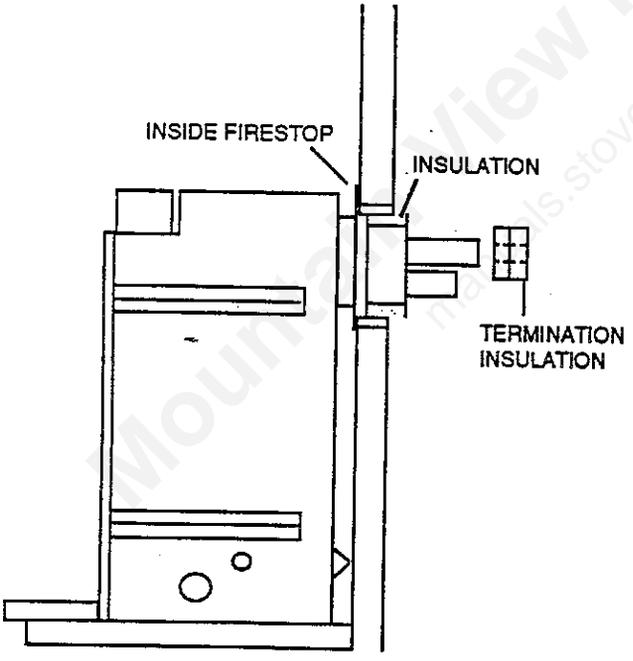
## STEP 5

Place outside firestop on according to the pipe pattern and secure with sheet metal screws (provided) using the top and bottom set of holes. Next, silicone the outside of the firestop seal up area. Place the termination cap onto firestop securely and secure it with metal screws.

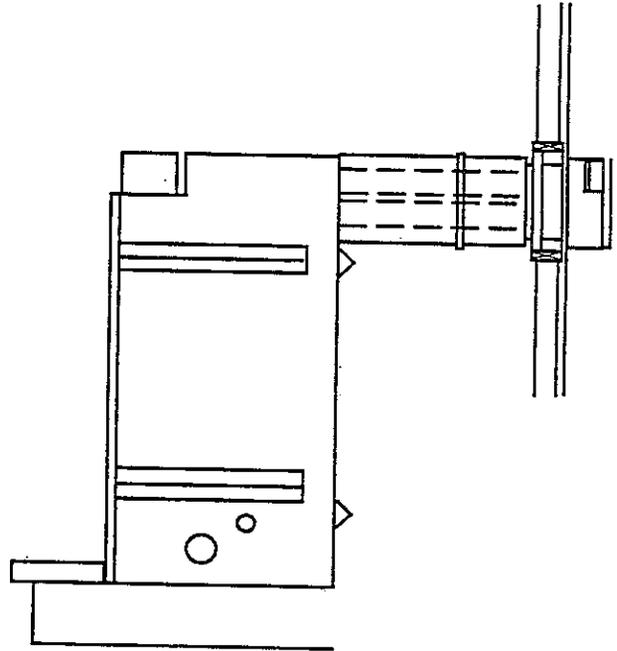


## STEP 4

Place unit into position. If unit is flush with wall, secure the inside firestop at this time. Place termination insulation provided over the 5-inch aluminum pipe, thus insulating the termination extension only. Insulate on the top and bottom of the termination extension to seal up hole with fiberglass insulation.



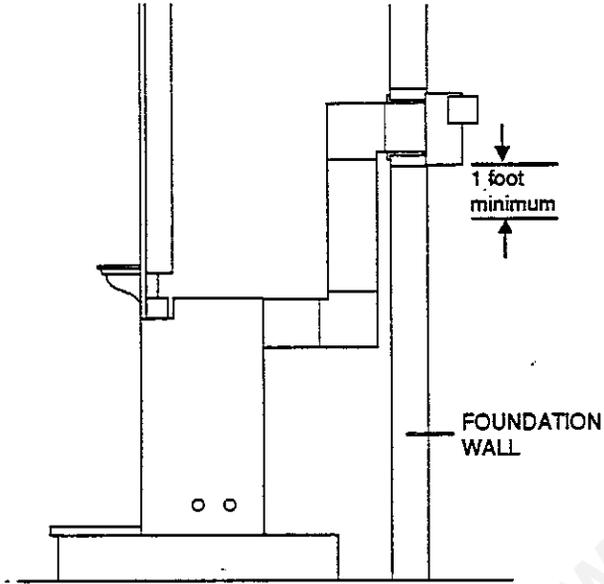
OR:



## INSTALLATION

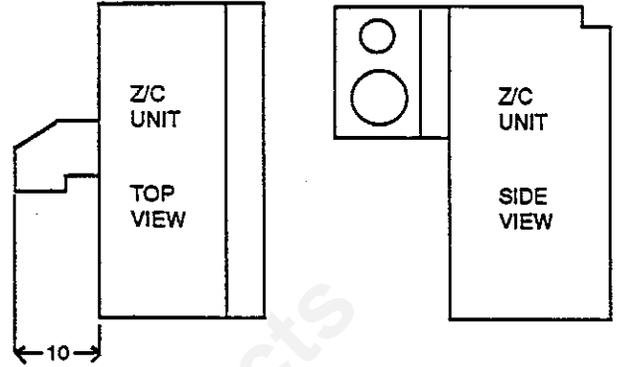
Make sure all sidewall venting clearances are observed, as shown on page 6.

1. Establish vent hole through the wall. See page 8.
2. Remove soil at a minimum of approximately 12 inches below termination cap area as shown below.
3. Install vent system. See pages 8 and 9.
4. Install firestops and caulk to provide a watertight seal.
5. Apply high silicone caulking around the 5" and 7" pipe.
6. Slide termination on and secure to the firestop.

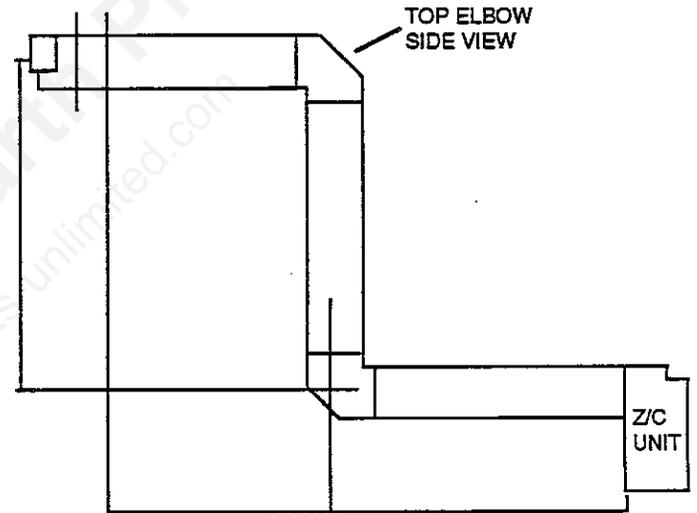


**60 GZC VENTING ELBOWS AVAILABLE**

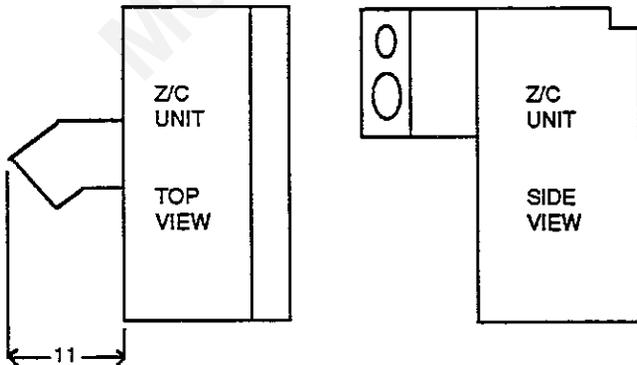
### 90° ELBOW PARALLEL #69184



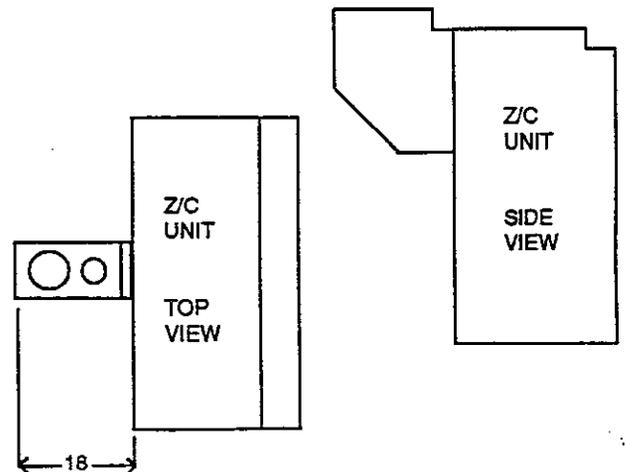
### 90° ELBOW - TOP #69182



### 45° ELBOW #69190

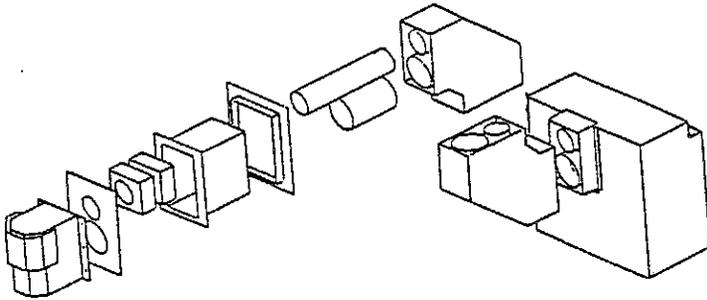


### 90° ELBOW - BOTTOM #69180



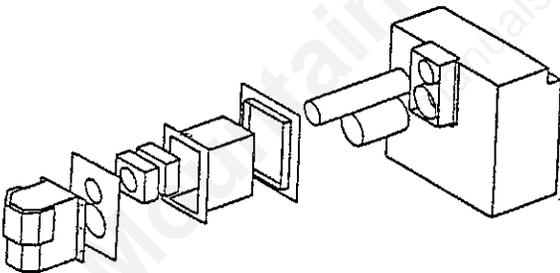
# 60 GZC SAMPLE VENTING CONFIGURATION

## HORIZONTAL TERMINATION



- A) Two 90° elbows off back of unit with a max. 32', plus termination kit.
- B) 45° or 90° elbow off back of unit with a max. 32' horizontal plus termination kit (RH or LH).

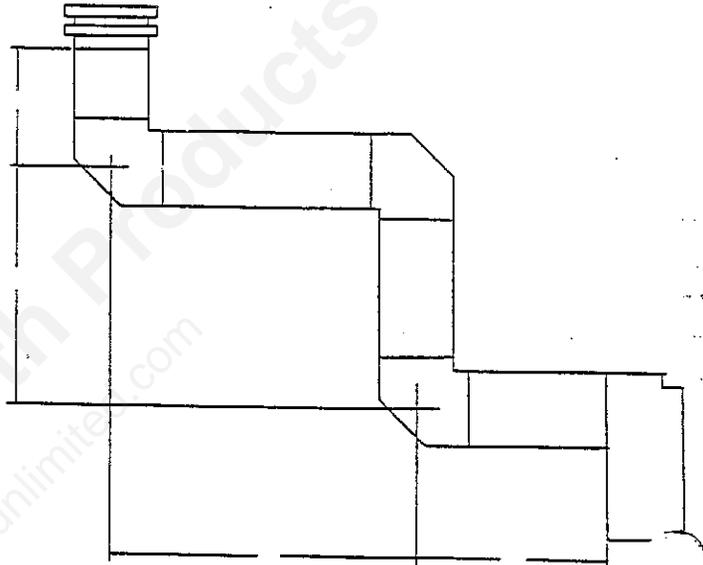
## HORIZONTAL TERMINATION



- A) Straight off back of unit with a max. 32' horizontal plus termination kit.
- B) 45° or 90° elbow off back of unit with a max. 32' horizontal plus termination kit (RH or LH).

## VERTICAL TERMINATION - SIDE VIEW WITH 3 ELBOWS

Straight off back of unit with a 90° bottom elbow going vertical then a 90° top elbow turning horizontal and ending up with another 90° bottom elbow so the termination can be a vertical termination.



# GAS PRESSURE REQUIREMENTS

The number one cause of all operating problems with gas appliances is improper gas pressure!

Such problems as changes in flame color or configuration, gas pilot or burner outages, intermittent operation, changes in heat output, excessive burner noise, etc., are nearly always the result of changes in gas pressure or improper gas pressure at the time of the installation.

The most important item to check during the initial installation and the first thing to check when operating problems occur is gas pressure!

Gas Supplies normally enter a typical resi-dence at 1/2 PSI (13"-15" W.C.) (3.KPA). A regulator is then placed inside the residence which drops this pressure to 7" W.C. (1.8KPS) (Nat. Gas).

This "inches to inches" regulator is of adequate capacity to service the gas appliances such as water heater, dryer, furnace, etc. If this regulator's capacity is not sufficient to add the Gas Clay 60, an additional "inches to inches: regulator must be installed specifically for the fireplace. EXCEPTION: some codes allow 2 PSI (1.4KPA) supplies to enter the residence, in which case "pounds to inches" regulators are used.

The following table provides information on correct gas pressure requirements. **Be sure your gas supplier or plumber carefully follows this table when installing your Gas Appliance.**

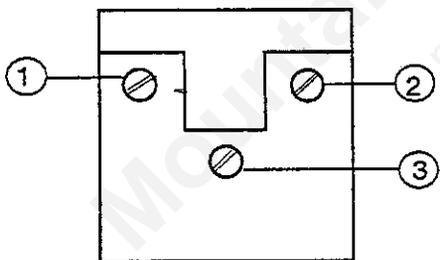
	DESIRED PRESSURE	MINIMUM PRESSURE	MAXIMUM PRESSURE	MANIFOLD PRESSURE*	AIR SHUTTER POSITION
<b>NATURAL GAS</b>	7.0" W.C	4.5" W.C.	10.5" W.C.	3.5" WC	1/8" OPEN
<b>L.P. GAS</b>	11.0" W.C.	10.0" W.C.	14.0" W.C.	10.5" W.C.	FULL OPEN

\*1/8" N.P.T. Pressure tap is located on Robertshaw Control - manifold pressure must be taken with burner operating.

## MILLIVOLT SYSTEM CHECK

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 MV range. Before checking the system, be certain wall thermostat lead wire does not exceed length recommended in the Wiring Section Table, and all connections are clean and tight.

Conduct each check shown in the chart below by connecting meter test leads to terminals as indicated. All readings are closed circuit.



Component Check	Connect Meter Test Leads To Terminals	Wall Thermostat Contacts Should Be	Meter Reading Should Be	See Check Result Below
Valve Operator System	2 & 3	Closed	Greater Than 100 MV	A
Wall Thermostat	1 & 3	Closed	Less Than 80 MV	C
Thermopile and Magnet	1 & 2	Open	Greater Than 325 MV	B

### A. TEST RESULTS

If the reading is more than 100 millivolts and the automatic valve does not come on, replace the valve operator. If the closed circuit reading is less than 100 millivolts, determine the cause by preceding with steps "B" and "C".

### B. TEST RESULTS

If "B" reading is less than 325 MV, clean and tighten all electrical connections and adjust pilot if necessary to increase millivolt output. If unable to adjust to at least the specified minimum, change the thermopile.

When proper thermopile output is obtained, the magnet may then be checked. With pilot in operation, allow meter reading to stabilize. Extinguish pilot burner and note meter reading at dropout point of magnet. If magnet remains locked up to a reading of 120 MV or less, the magnet is good.

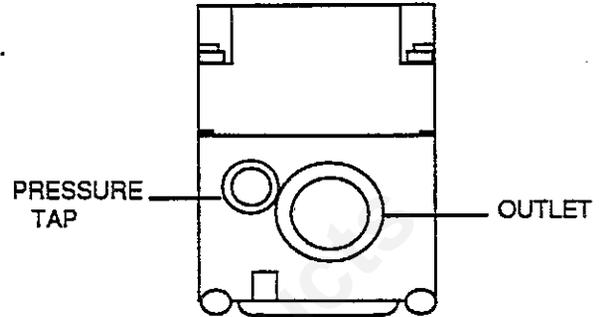
### C. TEST RESULTS

If "C" reading is more than that specified for the system being checked, clean and tighten thermostat leads and connection, shorten lead wires if possible or use heavier gauge wire. Rapidly cycle thermostat to clean contacts, or change the thermostat.

# PRESSURE REGULATOR ADJUSTMENTS

Adjustment of the pressure regulator is not normally necessary since it is preset at the factory. However, field adjustment may be accomplished as follows:

**NOTE:** Manometer attachment may be accomplished at pressure tap plug, below control outlet, as shown in figure below.



## MANUAL AND ELECTRIC MODELS

1. Manometer or gauge attachment may be accomplished at pressure tap plug.
2. Remove regulator adjustment screw cap (top of regulator).
3. With small screwdriver, rotate adjustment screw "clockwise" to increase, or "counterclockwise" to decrease pressure.
4. Replace regulator adjustment screw cap.

The Claytons have been safety tested by Warnock Hersey Inc. to the following standards:  
ANSI Z21.11.1b and Can 1-2.1-Vented Room Heater.  
Safety Controls - AGA Certified  
Switches and Rheostats - UL Listed

## AGA/ANSI APPROVAL

Gas appliances must be tested and certified by a nationally recognized testing and certification laboratory to ANSI (American National Standards Institute) gas appliance safety standards.

There are a number of nationally recognized testing and certification agencies around the United States and Canada. Among them are Warnock Hersey, AGA Laboratories, UL Laboratories, etc.

The Clayton Clay-60G has been tested and certified by Warnock Hersey Inc., 8431 Murphy Drive, Middleton, Wisconsin 53562 to ANSI #Z21.111b vented room heater and CAN 1-2.1.

The Clayton Clay-60G has met all necessary AGA/ANSI Standards and are fully certified for installation in any community. If there are any questions or if you need further substantiation either write to or call Warnock Hersey, Inc. in Middleton at (608) 836-4400, Wisconsin

# TROUBLESHOOTING

**PROBLEM:** Piezo sparker won't light pilot.

**POSSIBLE CAUSES:**

1. Misaligned electrode.
2. Incorrect wire connections.
3. Defective electrode, (too cracked, dirty, or out of alignment)
4. Defective push button.
5. No gas present.

**REMEDIES:**

1. Realign electrode so it produces spark into pilot hood (approximately 1/8" from pilot hood).
2. Make sure connections are proper.
3. Replace electrode if shorted out or if it has cracked porcelain.
4. Replace push button.
5. Turn gas on.

**PROBLEM:** Pilot will not stay lit.

**POSSIBLE CAUSES:**

1. Incorrect lighting procedure.
2. Pilot flame not making proper contact with thermopile.
3. Bad connection between thermopile and screw terminals on gas valve.
4. Wires on wrong terminals.
5. Thermopile is defective, dirty, or weak.
6. Thermopile is shorting out where it passes through cabinet.
7. Gas valve will not prove pilot.
8. Air in line.
9. Wire from valve to wall switch or remote switch is nicked or shorting out.
10. Switch defective or short in circuit.

**REMEDIES:**

1. Checking lighting instructions found on label in gas fireplace or in owners manual.
2. Adjust pilot (see page 5).
3. Make sure screws are snug holding thermopile. (Do not overtighten or the screws will become stripped.)
4. White lead from thermopile must go to top screw TH TP terminal and red wire must go to spill switch wire.
5. Test with millivolt meter and replace if necessary.
6. Replace thermopile.
7. Replace valve.
8. Purge air from gas line.
9. Remove wall switch wires from top and bottom screw of millivolt valve. If unit is OK and you reconnect the wall switch and it cuts out again, then replace wires to wall switch.
10. Replace switch.

**PROBLEM:** Pilot stays on but main burner won't come on.

**POSSIBLE CAUSES:**

1. Wired incorrectly.
2. Wall switch, on/off switch, or remote hand switch defective.
3. Not enough voltage being generated by pilot.
4. Defective g control valve.

**REMEDIES:**

1. See page 3 for correct wiring.
2. Replace wall switch, on/off switch, or remote hand switch.
3. Adjust pilot light up to create more voltage or replace thermopile.
4. Replace gas control valve.

**PROBLEM:** Wall switch must be pushed multiple times to make flame come on.

**POSSIBLE CAUSES:**

Defective wall switch.

**REMEDIES:**

Replace wall switch.

Note: Can use standard single pole electrical switch.

# TROUBLESHOOTING (CONT.)

**PROBLEM:** Window keeps getting sooty.

**POSSIBLE CAUSES:**

Unit needs more primary air.

1. Blocked primary air port.
2. Flame impingement on logs or elsewhere.
3. Logs too close to or touching glass.
4. Valve and burner over-fired.

**REMEDIES:**

1. Check primary air assembly. Over a period of time dust, lint, pet hair, etc. can plug primary air hole. Clean out.
2. Reposition logs or adjust flame.
3. Move logs to allow at least 3/8" clearance from logs to glass.
4. Check the amount of flow with monometer, and adjust regulator if necessary.

**PROBLEM:** Dirty window. (White on window).

**POSSIBLE CAUSES:** Initial burn off of paint and sealants used to produce unit.

**REMEDIES:**

1. Clean window using AJAX or COMET, and paper towel.
2. Dissolve powder AJAX or powder COMET in water on window. Clean in small circular motions. Rinse thoroughly and reinstall in unit. DO NOT USE ANY LIQUID CLEANERS ON WINDOW. It will burn black on window when reinstalled.

**NOTE:** Windows are made of neo (pyro) ceramic, NOT glass. Because of this, they will handle temperatures in excess of 1,200 degrees Fahrenheit constant temperature. The window only reaches between 500-600 degrees Fahrenheit. Because of this it is almost impossible to bake something into the window. Most things will, with a little effort, come off if you follow these directions.

**PROBLEM:** Circulating fan speed does not vary.

**POSSIBLE CAUSES:** Variable speed rheostat defective.

**REMEDIES:**

Replace rheostat.

**NOTE:** Only replace rheostat with a rheostat supplied by Clayton Light dimmer switches or incorrect rheostats will burn out the fan motor. This will void the warranty of the fan.

**PROBLEM:** Fan makes humming sound, but won't come on.

**POSSIBLE CAUSES:**

1. Rheostat needs adjustment.
2. Fan impellers dirty.
3. Fan defective.

**REMEDIES:**

1. Adjust variable speed control.
2. Clean fan.
3. Replace fan.

**Note:** Make sure the fan plug-in cord is not nicked by decorative trim kits. This could cause the fan to short out and also damage the gas valve.

**PROBLEM:** Fireplace not venting

**POSSIBLE CAUSES:**

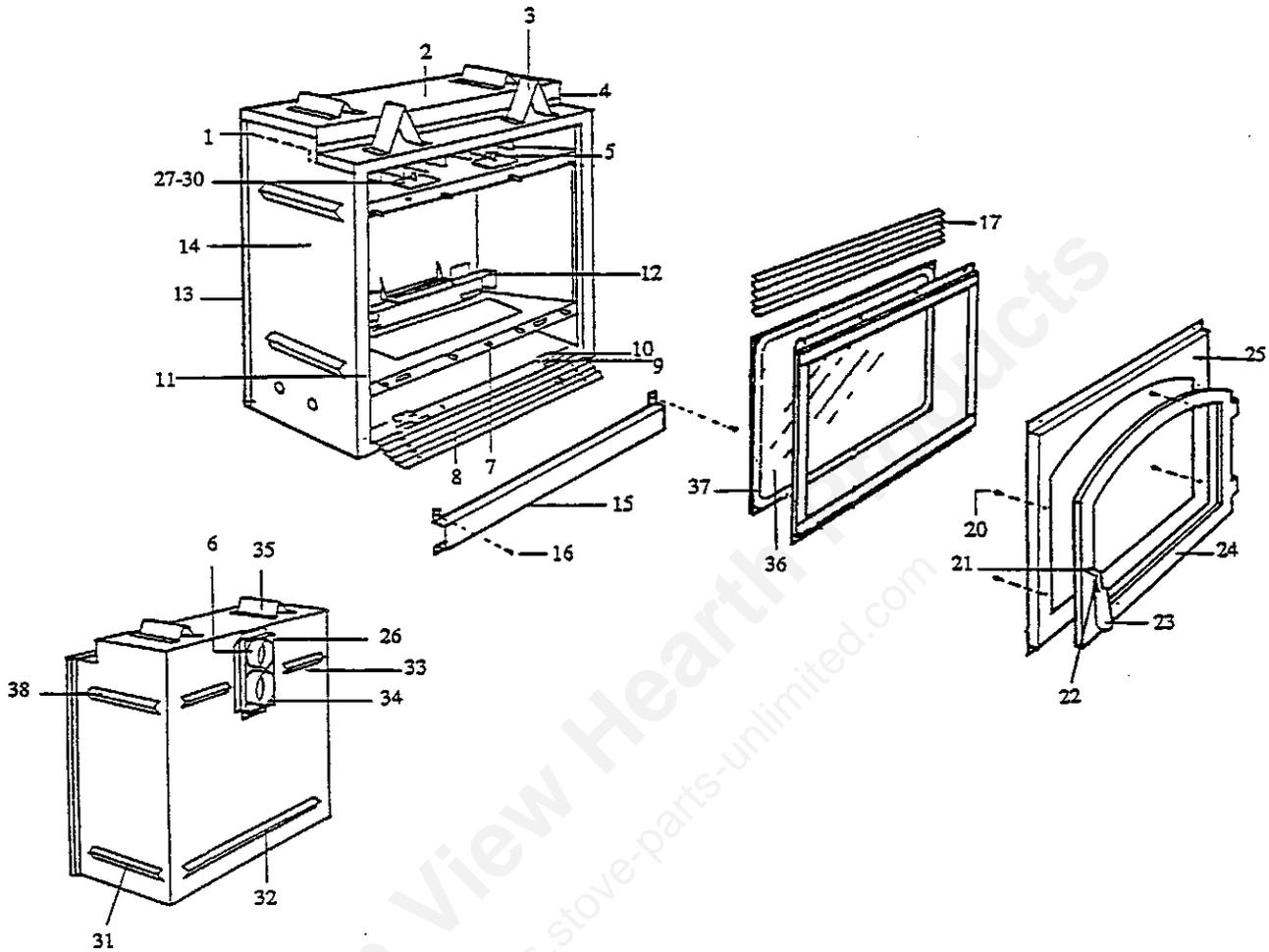
1. Venting blocked.
2. Improper venting installation.

**REMEDIES:**

1. Remove blockage
2. Check all venting connections for proper fit.

## CLAY-60 ZERO CLEARANCE FIREPLACE PARTS LIST

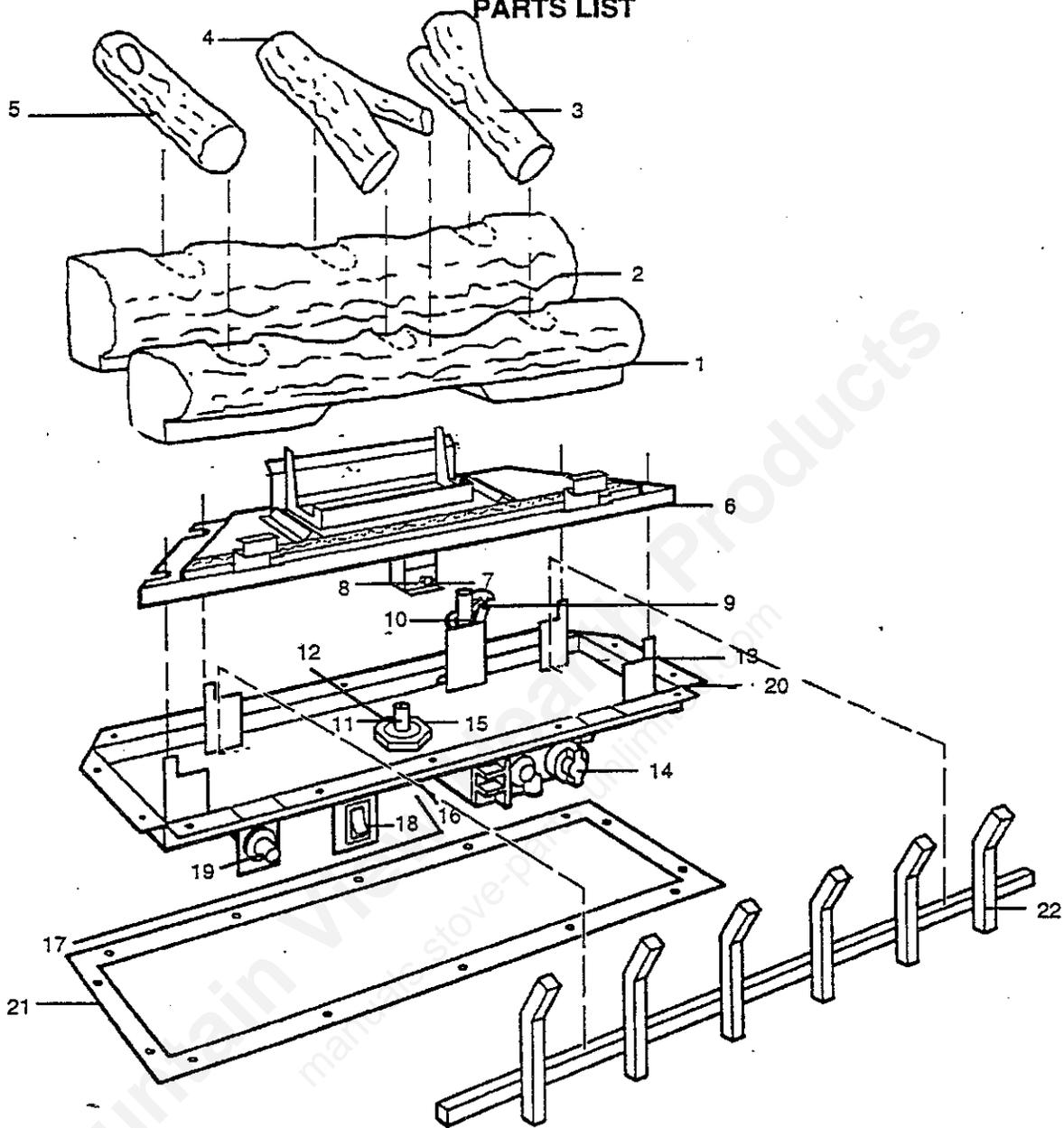
All repair parts will be available from your local dealer. When ordering, always give the following information: (a) part number, (b) part description and (c) model number.



ITEM	QTY	PART #	DESCRIPTION
1	1	16515	Insulation Support
2	1	16504	Top
3	2	16518	Standoff
4	1	16512	Side RH
5	2	16524	Relief Door
6	1	92835	5" x 7" Aluminized Flue
7	1	29850	1/2 Plug
8	1	65-108	Bottom Grill
9	2	29800	Hinge
10	2	16560	Hinge Bracket
11	1	165100	Front Frame
12	1	165106	Air Shield w/Log Holder
13	1	16513	Back
14	1	16512	Side LH
15	1	16514	Grill Stop
16	2	23400	10-24 x 1/2 Black Tek
17	1	65-18	Top Grill
18	12	16520	Glass Holder
19	12	22560	Hex Lock Nut

ITEM	QTY	PART #	DESCRIPTION
20	4	23590	S.H.C.S. 1/4 x 20 x 1/4
21	1	20910	10-24 x 1/2 Set screw
22	1	18500	Gas Handle
23	1	95660	Wood Door Handle
24	1	10292	Gold Door
25	1	16523	Door Frame
26	2	16516	Flue Bracket
27	2	16705	Relief Door Gasket
28	2	92344	7/16" x 1-7/8" Spring
29	2	20100	1/4 x 20 Bolt
30	4	20299	1/4 x 20 Nut
31	2	16536	12" Side Standoff
32	1	16559	35" Rear Standoff
33	2	16530	10" Rear Standoff
34	1	92828	7" x 2" Aluminized Intake
35	2	16519	10" Top Standoff
36	1	93966	Ceramic Glass
37	4	98296	Glass Gasket
38	2	16530	10" Side Standoff

## CLAY-60 ZERO CLEARANCE FIREPLACE PARTS LIST



ITEM	QTY	PART #	DESCRIPTION
1	1	94180	Front Log
2	1	94182	Rear Log
3	1	94167	Right Twig
4	1	94165	Left Twig
5	1	94145	Middle Twig
6	1	165101	Burner
7	1	23402	Shutter Screw
8	1	92345	Shutter Spring
9	1	43805	Pilot ASM (N.G.)
	1	43806	Pilot ASM (L.P.)
10	1	43815	Thermopile
11	1	43831	#31 Orifice (N.G.)
	1	43826	#50 Orifice (L.P.)

ITEM	QTY	PART #	DESCRIPTION
12	1	26801	1/2" Pipe Nut
13	4	16541	Burner Support
14	1	43801	Gas Valve (N.G.)
	1	43830	Gas Valve (L.P.)
15	1	26804	1/2" x 3/8" Bushing
16	1	26803	1/2" x 4" Nipple
17	1	26802	1/2" 90 Degree Elbow
18	1	42373	Rocker Switch
19	1	43810	Piezo Ignitor
20	1	165107	Burner Base
21	1	16703	Burner Gasket
22	1	165102	Log Stop

## CLAY-60 ZERO CLEARANCE VENTING COMPONENTS

### Starter Kit - Model Clay-60

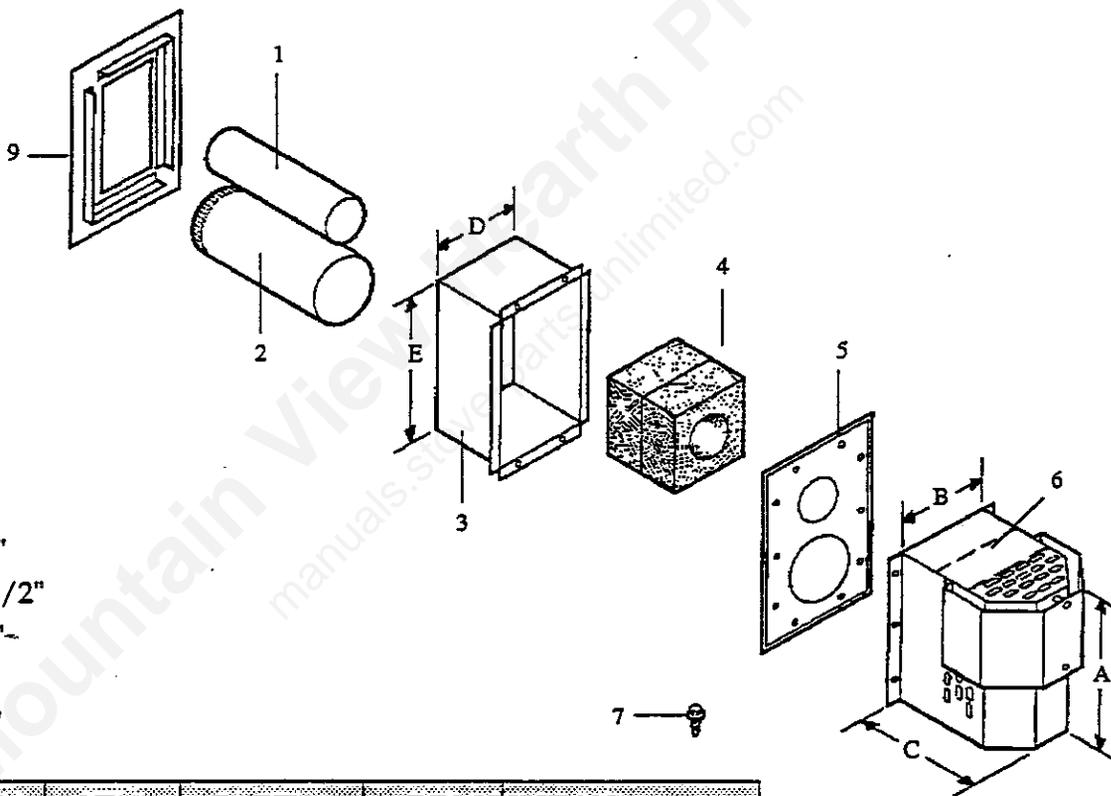
- Includes: ✓ 5" diameter pipe  
 ✓ 7" diameter pipe  
 ✓ Inside wall spacer  
 ✓ Vent termination cap  
 ✓ Tube high temp silicone  
 ✓ Pack sheet metal screws

90 degree elbow kit - Horizontal  
 45 degree elbow kit - Horizontal  
 90 degree elbow kit - Vertical

### Vent sections:

- length -  
 • - 24"  
 • - 36"  
 • - 48"

## CLAY-60 CLEARANCE FIREPLACE PARTS LIST



A - 16"  
 B - 9-1/2"  
 C - 10"-  
 D - 8"  
 E - 16"

ITEM #	QTY.	PART #	DESCRIPTION
1	1	92830	5" Termination Pipe
2	1	92827	7" Termination Pipe
3	1	16555	Termination Extension
4	2	90518	Termination Insulation
5	1	16554	Outside Fire Stop
6	1	165109	Termination Cap
7	18	20499	#8 x 1/2 Teks
8	1	95899	High Temp. Silicone
9	1	165111	Inside Fire Stop

# MODEL 60 GZC - GAS ZERO CLEARANCE

## FLUE PARTS LIST

PART#	DESCRIPTION
	<b>45° Degree Elbow #69190</b>
10600	5" Elbow
10608	7" Elbow
10607	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
	<b>90° Elbow Par. #69184</b>
10598	5" Elbow
10606	7" Elbow
10601	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
	<b>90° Elbow Top #69180</b>
10594	5" Elbow
10602	7" elbow
10593	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
	<b>90° Elbow Top #69182</b>
10594	5" Elbow
10604	7" Elbow
10593	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"

PART#	DESCRIPTION
	<b>24" Pipe DV #69205</b>
10578	5" Pipe
10579	7" Pipe
10580	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
16569	Spacer
	<b>36" Pipe DV #69210</b>
10584	5" Pipe
10585	7" Pipe
10586	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
16569	Spacer
	<b>48" Pipe DV #69215</b>
10590	5" Pipe
10591	7" Pipe
10592	Duct
10612	Snap Tab 16"
10610	Duct Tab 8"
16569	Spacer

# Limited Warranty VENTED GAS HEATER

## Warranty

United States Stove Company warrants to the original purchaser its Circulating Heaters against premature failure of any component due to workmanship, quality, or materials as follows:

### TIME PERIOD:

Burner.....	Ten Years
Combustion Chamber .....	Five Years
Heat Exchangers .....	Five Years
Controls/Valves/Sensors .....	One Year
All Electrical Components (Including Blower) .....	One Year
Radiants and Glass .....	One Year
Cabinet and Trim.....	Three Year

### CLAIM PROCEDURE

Any defects should be reported to United States Stove Company or its dealer and/or distributor giving descriptions and pertinent data, including proof of purchase which will be returned upon request.

Providing the heater has been installed and used in accordance with the Owners Manual supplied with the heater, United States Stove Company will either:

- 1) Replace the defective part free of charge
- 2) Replace the heater free of charge
- 3) Where the defect is of a cosmetic (non-functional) nature, United States Stove Company will bear reasonable expense to refurbish the heater, including such items as welding, painting, and incidental labor. "Reasonable" is defined by terms of this warranty as \$25.00/hour with full refund for any purchase of parts.

### NOT COVERED

Specifically not covered under terms of this limited warranty or any other warranty are problems relating to smoking or creosote. Smoking is attributable to inadequate draft due to the design or installation of the flue system or installation of the heater itself. Creosote formation is largely attributable to improper operation of the unit and/or draft as mentioned above. Also, not covered are:

- 1) Removal and re-installation cost
- 2) Service calls to diagnose trouble (unless authorized in writing by the manufacturer, distributor, or dealer).
- 3) Painted surfaces, brass or brass-colored surfaces.
- 4) Damage or defect caused by improper installation, accidents, misuse, abuse or alteration.
- 5) Transportation or shipping costs.

### LIMITATIONS AND EXCLUSIONS

- 1) United States Stove Company shall not be liable for incidental, consequential, special, or contingent damages anyone might suffer as a result of their breach of this written warranty or any implied warranty.
- 2) Should the heater be replaced by United States Stove Company "free of charge", all warranty obligations are thereby met.
- 3) Parts and/or service replacements made under the terms of this warranty are warranted only for the remaining period of the original heater warranty.
- 4) Without specific written exclusionary waivers, no one has authority to add to or vary this limited warranty, or to create for United States Stove Company any further obligation or liability in connection with this heater or any other applicable accessory. Any further warranty implication applicable to this heater or any applicable accessory is limited in duration to the same time period as the original statement in the above schedule.

### YOUR DUTIES

- 1) This heater, including all applicable accessories, must be installed and operated in accordance with local authorities having jurisdiction and the instructions furnished with the Owners Manual.
- 2) You should keep as permanent record your proof of purchase (or canceled check or invoice).

### PROBLEM/RESOLUTION

- 1) As purchaser, you must first contact the dealer and/or distributor from whom you purchased your heater.
- 2) If within a reasonable period of time you do not receive satisfactory service from the distributor and/or dealer, write United States Stove Company, Customer Service Department, including complete details of the problem and/or problems you are experiencing, details of your installation, your proof of purchase, and the heater serial number or test agency code number.

### WARRANTOR

The warrantor of record is United States Stove Company, P.O. Box 151, 111 Industrial Drive, South Pittsburg, Tennessee 37380. Phone number 615-837-2100.

### NOTE

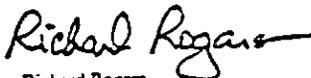
This warranty gives you specific legal rights; and, you may also have other rights which vary from state to state.

### IMPORTANT

Keep this warranty card for future reference.

We congratulate you on your selection of United States Stove Company and its products. As the oldest solid fuel manufacturer in the United States (since 1869), the United States Stove Company is very proud of its products, service, employees, and satisfied customers. As president of United States Stove Company, I would like to hear from you if you are not satisfied with the manner in which you have been handled by our distributor, dealer, representative, customer service department, parts department, or sales department. Please write me at the above address.

Sincerely,



Richard Rogers  
President

## OWNERSHIP RECORD

DEALER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

CLAYTON MODEL NO. \_\_\_\_\_

WARNOCK HERSEY / SERIAL NO. \_\_\_\_\_

NOTES \_\_\_\_\_

\_\_\_\_\_

The Claytons have been safety tested by Warnock Hersey Inc. to the following standard: ANSI 21.11.1-1991, CAN-2.1-1989 "Vented Room Heater", ANSI 21.44a-1992 "Direct Vent Wall Furnaces", UL 307B-87 "Gas Burning Heating Appliances for Mobile Homes", I.R. #41 "Direct Vent Gas Fireplaces" and CAN/CGA-2.17-M91 "Gas-Fired Appliances for Use at High Altitudes".

**Registration Card must be completed and mailed within 10 days of purchase to validate warranty.**

### UNITED STATES STOVE COMPANY WARRANTY REGISTRATION CARD

PLEASE PRINT CLEARLY

1) Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Phone ( \_\_\_\_\_ ) \_\_\_\_\_

2) Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Date of Purchase \_\_\_\_\_

3) Clayton Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

4) First learned of Clayton through: \_\_\_\_\_

5) Purchased this Clayton because: \_\_\_\_\_

6) Additional Comments: \_\_\_\_\_

Please complete and mail within 10 days of purchase to validate warranty.

# WOOD HEATER CERTIFICATION

This certificate is issued in recognition that the following wood heater model line:

Clayton Zero Clearance

**Model Name**

Clay - 60 and 70

**Model Number**

Clayton Manufacturing, Inc.

**Manufacturer Name**

has completed all requirements necessary for certification and is a certified model line pursuant to Environmental Protection Agency regulations.



*Richard B. Blonk*  
Director

4-30-91

Stationary Source Compliance Division

Date

APR 30 1996

313

Certificate Number

Expiration Date

