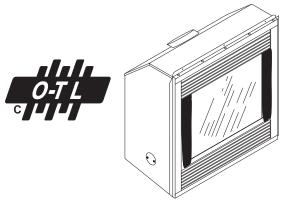


# DIRECT VENT FIREPLACE OWNER'S OPERATION AND INSTALLATION MANUAL





# MODELS WITH FAN CD32M-B, CD36M-B, CD42M-A

# MODELS WITH FAN & DOOR SWITCH CD36M-B2, CD42M-A2

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.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
  - · Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

INSTALLER: Leave this manual with the appliance. CONSUMER: Retain this manual for future reference.

# TABLE OF CONTENTS

Introduction	Gas Conversion	. 21
Selecting Location 3	Troubleshooting	. 23
Pre-Installation Preparation 4	Illustrated Parts Breakdown and Parts List	. 24
Installation7	Specifications	. 28
Burner Flame Adjustment	Wiring Diagram	. 28
Operating Fireplace	Accessories and Replacement Parts	. 29

## **SAVE THIS BOOK**

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

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

⚠ WARNING: This direct vent gas fireplace is intended for use with natural or propane/LP gas only. Do not attempt to burn any solid fuels in this appliance.

This fireplace is manufactured for Stylecrest Inc. under the Vexar brand name by DESA.

This fireplace may be installed as an OEM installation in a manufactured (mobile) home and must be installed in accordance with the manufacturers instructions and the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 in the United States or the Mobile Home Standard, CAN/CSA Z240 MH Series, in Canada. This fireplace is only for use with the type(s) of gas indicated on the rating plate. A conversion kit is supplied with the fireplace.

## INTRODUCTION

WARNING: This product contains and/or generates chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

Models CD32M-B, CD36M-B series and CD42M-A series are heat circulating gravity direct vent fireplaces with sealed combustion chamber. These fireplaces use millivolt gas control valve and millivolt ignition system.

These fireplaces are convertible with the standard setup as natural gas. Conversion may be performed by the OEM mobile home builder or by a qualified service person onsite. If you are uncertain as to what gas your unit is equipped for, please check the rating plate located inside of the appliance opening or consult your mobile home supplier or your local distributor of DESA/Vexar products.

NOTICE: Check local building codes for area requirements before installing this appliance.

### **BEFORE YOU BEGIN**

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

This DESA/Vexar fireplace and its components are safe when installed according to this installation manual and operated as recommended. Unless you use DESA/Vexar components designed and tested for this fireplace system, YOU MAY CAUSE A SAFETY HAZARD!

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

- A) Modification to the fireplace, components, doors, blower, fans or vent system.
- B) Use of any component part not manufactured or approved by DESA/Vexar in combination with a DESA/Vexar fireplace system.

Proper installation is the most important step in ensuring safe and continuous operation of the fireplace. Consult the local building codes as to the particular requirements concerned with the installation of all factory built fireplaces. This fireplace, when installed, must be electrically grounded in accordance with local

codes or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70 or the Canadian Electrical Code, CSA C22.1.

The installation must conform with local codes or, in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1* or the *Canadian Installation Code, CAN/CGA B149.* This appliance complies with ANSI Z21.88-1998 and CSA 2.33-M98 as a vented gas fireplace heater.

### **SELECTING LOCATION**

To determine the safest and most efficient location for your fireplace, consider the following guidelines:

- The location must allow for proper clearances (see Figure 1).
  - Flush installation is recommended where living space is limited.
  - Projected installation may be ideal for a new addition to an existing finished wall.
  - Corner installation makes use of a space that may not normally be used and provides a wider and more efficient range for radiant heat transfer.

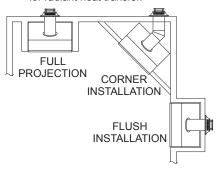


Figure 1 - Common Fireplace Locations

- Consider a location where the fireplace would not be affected by drafts, air conditioning ducts, windows or doors.
- A location that avoids the cutting of joists or roof rafters makes ventilation installation easier.

In selecting a location, the following precautions must be observed:

- Do not connect this appliance to a chimney system used for solid fuel burning fireplace.
- Due to high temperatures, do not locate this appliance in high traffic areas or near furniture and draperies.

# **SELECTING LOCATION**

### Continued

- Never obstruct the openings of the appliance or flow of ventilation air. Keep the control compartments accessible.
- Do not locate appliance close to where gasoline or other flammable liquids may be stored. The appliance must be kept clear and free from combustible materials.
- Do not use this appliance if any part has been under water. Immediately contact a local service technician to examine the appliance and to replace any part(s) of the control ignition system and other related components that have been submerged under water.

# PRE-INSTALLATION PREPARATION

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

#### **CLEARANCES TO COMBUSTIBLES**

Minimum clearances to combustibles for the fireplace are:

•	Back and Sides of Fireplace 0
•	Floor 0
•	Perpendicular Wall 6
•	Front
	Top of Standoffs 0

### **MANTEL CLEARANCES**

Woodwork, such as wood trims, mantles and other combustible materials should be placed within the required clearance specified in Figure 2.

Mantel Depth	Mantel From Top of Opening
(1) 14"	(A) 16"
(2) 12"	(B) 14"
(3) 10"	(C) 12"
(4) 8"	(D) 10"
(5) 6"	(E) 8"
(6) 4"	(F) 6"
(7) 2"	(G) 4"

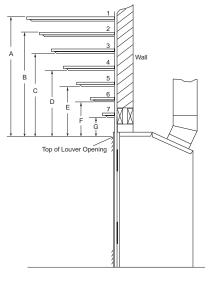


Figure 2 - Mantel Clearances

119212-01B

# PRE-INSTALLATION PREPARATION

Continued

### **VENT TERMINATION CLEARANCES**

The final position of your fireplace depends on the location of the vent termination in relation to the clearances that must be observed as shown in Figure 5 on page 6.

The vent system serves as the "chimney" as well as the combustion air supply (air intake). The horizontal run must have a rise of 1/4" (0.6 cm) for every 12" (30.48 cm) of horizontal run towards the termination. The maximum horizontal run depends on the vertical rise from the fireplace adapter collar to the vent termination (see table below).

VERTICAL		HORIZONTAL
0	to	1 ft (30.48 cm)
1 ft (30.48 cm)	to	4 ft (121.92 cm)
2 ft (60.96 cm)	to	8 ft (243.84 cm)
3 ft (91.44 cm)	to	12 ft (365.76 cm)
4 ft (121.92 cm)	to	16 ft (487.68 cm)
5 ft (152.40 cm)	to	15 ft (457.20 cm)
6 ft (182.88 cm)	to	14 ft (426.72 cm)
7 ft (213.36 cm)	to	13 ft (396.24 cm)
8 ft (243.84 cm)	to	12 ft (365.76 cm)

WARNING: Never allow the vent to run downward as this may cause excessive temperatures which could cause a fire.

WARNING: Horizontal sections of this vent system require a minimum clearance of 2" from the top of the pipe and 1" minimum to the sides and bottom. Vertical sections of this system require a minimum of 1" clearance to combustible materials on all sides of the pipe.

#### **FRAMING**

Once the final location has been determined, observing height clearances for vent termination, you may construct framing using dimensions shown in Figures 3 and 4, depending on your installation.

If the appliance is to be installed directly on carpeting, tile (other than ceramic) or any combustible material other than wood flooring, the appliance must be installed on a metal or wood panel extending the full width and depth of the appliance.

	CD32M-B	CD36M-B	CD42M-A
Α	32 <sup>3</sup> /8"	36 <sup>1</sup> /8"	40 1/8"
В	34 <sup>5</sup> /8"	41 <sup>1</sup> / <sub>4</sub> "	48 1/4"
С	19"	23 1/2"	25 <sup>5</sup> /8"

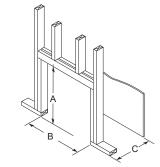
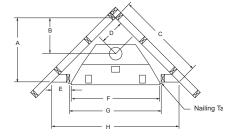


Figure 3 - Framing Dimension

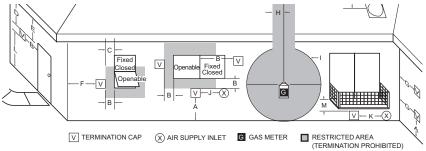


	CD32M-B	CD36M-B	CD42M-A
Α	28 1/2"	35 <sup>3</sup> / <sub>4</sub> "	41 <sup>5</sup> / <sub>8</sub> "
В	13 <sup>5</sup> /8"	15"	21 <sup>5</sup> /8"
С	39 <sup>3</sup> / <sub>8</sub> "	49 5/8"	58 <sup>1</sup> /2"
D	9 1/2"	10 <sup>3</sup> /8"	13 <sup>1</sup> /2"
Е	9 7/8"	13 <sup>3</sup> / <sub>4</sub> "	16 <sup>3</sup> /4"
F	34 <sup>3</sup> /8"	41"	48"
G	34 5/8"	41 1/4"	48 1/4"
Н	54 <sup>1</sup> /8"	68 <sup>1</sup> /2"	81 1/2"

Figure 4 - Corner Installation

## PRE-INSTALLATION PREPARATION

#### Continued



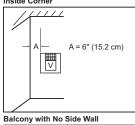
- A = clearance above grade, veranda, porch, deck, or balcony [\*12" (30.5 cm) minimum]
- B = clearance to window or door that may be opened [6" (15 cm) min. for 10,000 Btu or less; 9" (23 cm) in US if between 10,000 and 50,000, 12" (30 cm) in Canada if between 10,000 and 100,000; 12" (30 cm) in US if greater than 50,000, 36" (91 cm) in Canada if greater than 100,000]
- C = clearance to permanently closed window [minimum 12" (30.5 cm) recommended to prevent condensation on window]
- D = vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 24" (61 cm) from L = the center-line of the terminal [18" (45.7 cm) minimum]
- E = clearance to unventilated soffit [12" (30.5 cm) minimum] M =
- F = clearance to outside corner (see below)
- G = clearance to inside corner (see below)
- H = \*not to be installed above a meter/regulator assembly within 36" (91.4 cm) horizontally from the center line of the regulator

- I = clearance to service regulator vent outlet [\*72" (182.9 cm) minimum]
- J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other fireplace [6" (15 cm) min. for 10,000 Btu or less; 9" (23 cm) in US if between 10,000 and 50,000, 12" (30 cm) in Canada if between 10,000 and 100,000; 12" (30 cm) in US if greater than 50,000, 36" (91 cm) in Canada if greater than 50,000, 36" (91 cm) in Canada if greater than 50,000]
- K = clearance to a mechanical air supply inlet [\*In Canada, 6 ft. (1.83m) minimum; In US 3 ft. (91 cm) above if within 10 ft. (3 m) horizontally]
  - † clearance above paved side-walk or a paved driveway located on public property [\*84" (213.3 cm) minimum]
     clearance under veranda, porch, deck
  - [\*12" (30.5 cm) minimum ‡]
- N = clearance above a roof shall extend a minimum of 24" (61 cm) above the highest point when it passes through the roof surface and any other obstruction within a horizontal distance of 18" (45.7 cm)
- vent shall not terminate directly above a side-walk or paved driveway which is located between two single family dwellings and serves both dwellings\*
- tonly permitted if veranda, porch, deck or balconey is fully open on a minimum of 2 sides beneath the floor\*

  as specified in CAN/CSA B149 (.1 or .2) Installation Codes (1991) for Canada and U.S.A.

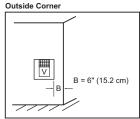
Note: Local codes or regulations may require different clearances

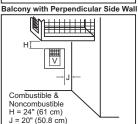
# Termination Clearances for Buildings with Combustible and Noncombustible Exteriors Inside Corner Outside Corner Recessed Location

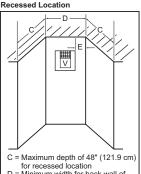


Balcony with No Side Wall

G = 12" (30.5 cm) minimum clearance







- D = Minimum width for back wall of recessed location -Combustible - 38" (965 mm) Noncombustible - 24" (61 cm)
- E = Clearance from corner in recessed location-Combustible - 6" (15.2 cm) Noncombustible - 2" (5.1 cm)

Figure 5 - Minimum Clearances for Vent Terminations

WARNING: Read all instructions completely and thoroughly before attempting installation. Failure to do so could result in serious injury, property damage or loss of life. Operation of improperly installed and maintained venting system could result in serious injury, property damage or loss of life.

NOTICE: Failure to follow these instructions will void the warranty.

# VENTING INSTALLATION PRECAUTIONS

Consult local building codes before beginning the installation. The installer must make sure to select the proper vent system for installation. Before installing vent kit, the installer must read this fireplace manual and vent kit instructions.

Only a qualified service person should install venting system. The installer must follow these safety rules:

- Wear gloves and safety glasses for protection
- Use extreme caution when using ladders or when on roof tops
- Be aware of electrical wiring locations in walls and ceilings

The following actions will void the warranty on your venting system:

- Installation of any damaged venting component
- Unauthorized modification of the venting system
- Installation of any component part not manufactured or approved by DESA
- Installation other than as instructed by these instructions

NOTICE: All Vexar direct vent fireplaces must use DESA 5/8" pipe components and terminations. WARNING: This gas fireplace and vent assembly must be vented directly to the outside. The venting system must NEVER be attached to a chimney serving a separate solid fuel burning appliance. Each gas appliance must use a separate vent system. Do not use common vent systems.

WARNING: Horizontal sections of this vent system require a minimum clearance of 2" from the top of the pipe and 1" minimum to the sides and bottom. Vertical sections of this system require a minimum of 1" clearance to combustible materials on all sides of the pipe.

### **VENTING INSTALLATION**

- Install elbow to fireplace collar adapter located on back of the unit at a 45° angle. Slide elbow over collar and twist to lock. Check to insure proper connection (see Figure 6).
- Continue to install remainder of pipe for desired installation. Make sure each section is twist-locked securely.
- When installation of vent pipe is complete, in stall vent termination. Depending on the location of your fireplace, you will vent vertically or horizontally.

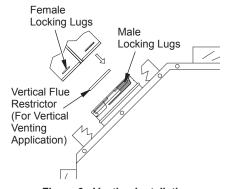


Figure 6 - Venting Installation

### Continued

- Allow 1" of pipe to protrude from internal wall, depending on wall thickness. See Figure 7, page 8.
- 5. For horizontal installation, an optional siding standoff may be installed between the vent cap and the exterior wall. Secure horizontal vent cap to standoff. Secure standoff/vent cap assembly to wall (see Figure 7). Do not seal termination to vent pipe. The vent termination must be removable for service pipe inspection.
- For vertical installation, a vertical termination is available. A vertical flue restrictor must be installed into inner collar of fireplace as shown in Figure 6, page 7.

When installing a length of pipe for vertical termination that is over 3 ft., support the pipe every 3 ft. using metal wall straps. Vertical to horizontal pipe must be kept at a 1 ft. to 4 ft. ratio with a maximum run of no more than 20 ft.

If an offset is necessary in the attic to avoid obstruction, it is important to support the vent pipe every 3 ft. to avoid excessive stress on the elbows and possible separation (see Figure 8).

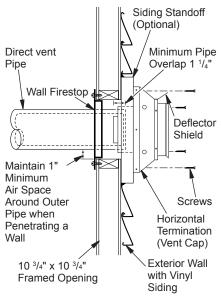


Figure 7 - Vent Termination (Horizontal)

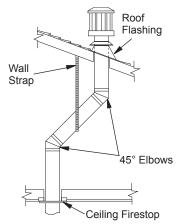


Figure 8 - Vertical Termination with Offset and Wall Strap

### **Horizontal Termination Configurations**

Figures 9 through 13 show different configurations and alternatives for venting with horizontal termination. Each figure includes a chart with critical minimum and maximum dimensions which MUST be met. *IMPORTANT*: Remember that a horizontal run of venting must have a 1/4" rise for every 12" of run toward the termination.

WARNING: Never run vent downward as this may cause excessive temperatures which could cause a fire. Operation of improperly installed and maintained venting system could result in serious injury, property damage or loss of life.

## **GROUND FLOOR INSTALLATION**

Recommended Applications:

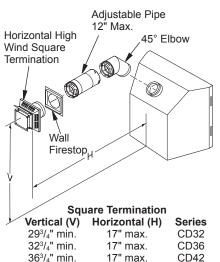
- Installation using cabinet surrounds
- Through the wall using round or square termination (up to 12" horizontal pipe)
- NOT FOR CORNER INSTALLATION

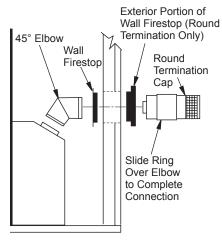
# TYPICAL CORNER INSTALLATION

Recommended Applications:

- · Corner ground floor installation
- Ground floor installation where pipe vents horizontally through wall (over 12" horizontal pipe)
- Basement installation where one foot clearance from ground to termination is possible

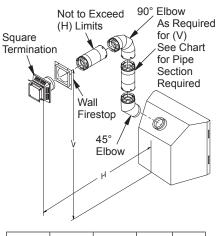
# Continued





**Round Termination** 

Figure 9 - Horizontal Termination Configuration for Square and Round Terminations



CD32 Series Vertical (V) Minimum	CD36 Series Vertical (V) Minimum	CD42 Series Vertical (V) Minimum	Required Vertical Pipe	Horizontal (H) Maximum
*401/2"	*431/2"	*461/4"	None	30"
51 <sup>1</sup> /2"	54 <sup>1</sup> / <sub>2</sub> "	571/4"	1 ft.	48"
63 <sup>1</sup> / <sub>2</sub> "	66 <sup>1</sup> /2"	69 <sup>1</sup> / <sub>4</sub> "	2 ft.	60"
75 <sup>1</sup> /2"	78 <sup>1</sup> /2"	811/4"	3 ft.	84"
871/2"	901/2"	931/4"	4 ft.	20'

\*Note: Ground Floor Corner Venting

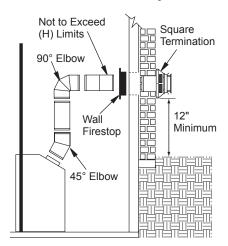


Figure 10 - Horizontal Termination Configuration for Corner Installation Using One 90° Elbow

### Continued

## HORIZONTAL SYSTEM INSTALLATION USING TWO 90° ELBOWS

The following configurations show the minimum vertical rise requirements for a horizontal system using two 90° elbows.

## Venting with Two 90° Elbows

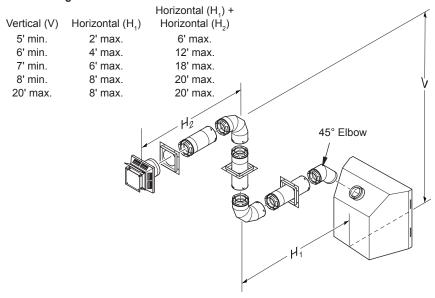


Figure 11 - Horizontal Termination Configuration for Venting Using Two 90° Elbows

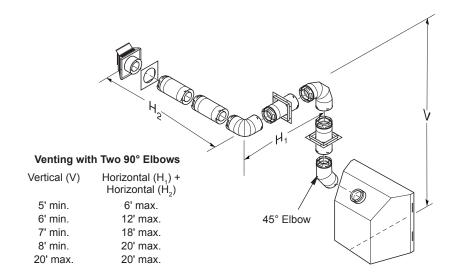


Figure 12 - Horizontal Termination Configuration for Venting Using Two 90° Elbows with Termination at 90° with Fireplace

Continued

# INSTALLATION FOR VERTICAL TERMINATION

Note: Vertical restrictor must be installed in all vertical installations.

- Determine the route your vertical venting will take. If ceiling joists, roof rafters, or other framing will obstruct the venting system, consider an offset (see Figure 19) to avoid cutting load bearing members. Note: Pay special attention to these installation instructions for required clearances (air space) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters, etc. Do not pack air spaces with insulation. Also note maximum vertical rise of the venting system and any maximum horizontal offset limitations.
- Set the fireplace in desired location. Drop a plumb line down from the ceiling to the position of the fireplace exit flue. Mark the center point where the vent will penetrate the ceiling. Drill a small locating hole at this point.

Drop a plumb line from the inside of the roof to the locating hole in the ceiling. Mark the center point where the vent will penetrate the roof. Drill a small locating hole at this point.

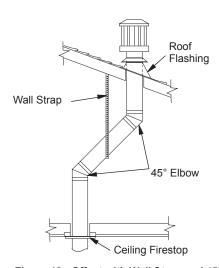


Figure 13 - Offset with Wall Strap and 45° Elbows

# **Vertical Termination Configurations**

Figures 14 through 17 show four different configurations for vertical termination.

### Venting with Two 90° Elbows

	Horizontal (H₁) +
Vertical (V)	Horizontal (H <sub>2</sub> )
5' min.	2' max.
6' min.	4' max.
7' min.	6' max.
8' min.	8' max.
20' max	8' max

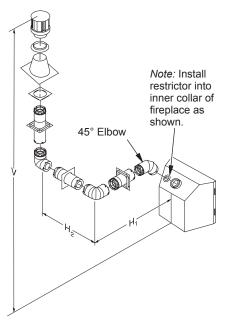


Figure 14 - Vertical Venting Configuration Using Two 90° Elbows with Two Horizontal Runs (Vertical Round High Wind Termination Shown)

### Continued

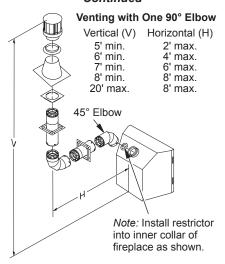


Figure 15 - Vertical Venting Configuration Using One 90° Elbow (Vertical Round High Wind Termination Shown)

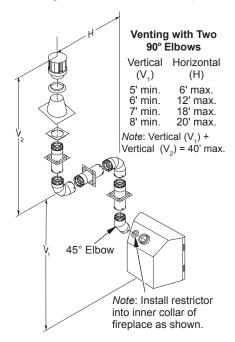


Figure 16 - Vertical Venting Configuration Using Two 90° Elbows (Vertical Round High Wind Termination Shown)

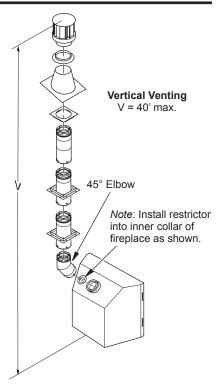


Figure 17 - Vertical Venting Configuration With No Horizontal Run (Vertical Round High Wind Termination Shown)

# ELECTRICAL HOOKUP AND REMOTE RECEIVER DIAGRAM

An outlet box with two receptacles (see Figure 18) has been supplied for your convenience and is located inside on the lower right side of the fireplace.

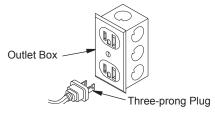


Figure 18 - Duplex Outlet

#### Continued

The remote control receiver is factory wired and connected to the convertible gas valve as shown in Figure 19.

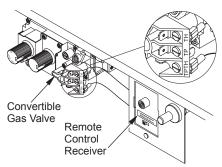


Figure 19 - Remote Control Receiver

### **GAS SUPPLY TESTING**

NOTICE: This section is intended as a guide for qualified technicians installing gas to the appliance.

WARNING: Do not connect appliance before pressure testing gas piping. Damage to gas valve may result and an unsafe condition may be created.

The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

The gas control valve is secured underneath the firebox. Two 1/8" ports are provided on the gas control valve for pressure test gauge connections (see Figure 20).

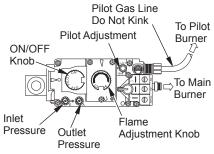


Figure 20 - Gas Control Valve

#### **GAS LINE HOOK-UP**

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

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

An equipment shutoff valve has been included in the fireplace's gas supply system. Consider installing an extra shutoff valve outside the appliance's enclosure (check local codes), where it can be accessed more conveniently with a key through a wall as shown in Figure 21. In conformance with local codes, route a 1/2" NPT gas line towards the appliance coming in from either the bottom, left or right side of the

fireplace (see Figure 22, page 14).

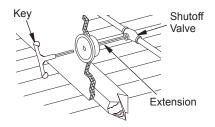


Figure 21- Typical Exterior Wall Gas Shutoff Installation

### Continued

Install a sediment trap between incoming gas line and gas control box (see Figure 23). The sediment trap should extend down a minimum of 3" (7.62 cm) beyond center of pipe.

When routing gas line through conduit sleeve, make sure to repack insulation to fill gaps between gas line and conduit sleeve. Compounds used on threaded joints of gas piping shall be resistant to the action of propane or natural gas. Compounds should be applied lightly to ensure excess sealant does not enter gas line.

Complete your gas line installation by connecting incoming gas line to flexible gas line. Secure tightly with a wrench but do not over-tighten.

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

Never use an open flame to check for a leak. After ensuring that the gas valve is open apply commercial leak detection fluid to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

Do not operate any appliance if a leak is detected.

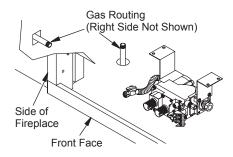


Figure 22 - Gas Line Routing

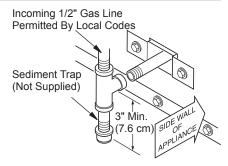


Figure 23 - Sediment Trap

### PILOT ADJUSTMENT

The pilot or electrode assembly is factory preset for proper flame height. Alterations to these settings may have occurred during shipping and handling. If this is the case, some minor readjustments may be necessary and should be done by a qualified service technician. The proper settings for the thermopile height should be at a distance of 3/8" (0.95 cm) to 1/2" (1.27 cm) from the pilot flame as shown in Figure 24.

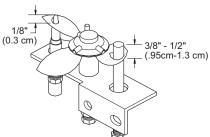


Figure 24 - Pilot Assembly

### **REMOVING GLASS PANEL**

A CAUTION: Before you proceed, make sure your gas control valve is in the OFF position.

- To remove louvers, pull both spring latches (located in each end of louver) toward center of appliance at the same time until disengaged from locating holes. Repeat for bottom end spring latches (see Figure 25, page 15).
- Remove screen rod by removing rod loop from glass door center bracket. Slide screen rod either to the left or right of fireplace until one end is free to completely remove screen from fireplace.

### Continued

 Undo latches located on top and bottom of firebox (see Figure 26). Carefully swing door to the left. The glass door is securely mounted to the firebox with 5 screws.

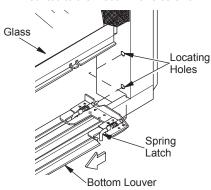


Figure 25 - Removing Louvers

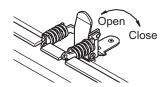


Figure 26 - Spring Latches

# INSTALLING OPTIONAL WIRELESS HAND-HELD REMOTE CONTROL HRC100 SERIES

# NOTICE: Use only alkaline batteries (not included).

Some fireplaces have the remote control already installed. If a remote control is not installed in your fireplace see *Accessories* and *Replacement Parts*, page 29.

### **Installing Remote Receiver**

- 1. Open bottom louver and locate the switch bracket on the right.
- Unscrew switch bracket. Lean bracket forward so you are able to access back of remote receiver.
- Locate battery clip mounted on back of receiver. Slide a 9-volt alkaline battery (not included) through clip (see Figure 27).
- 4. Attach terminal wires to battery.

- 5. Connect wires from receiver to TH and TPTH on control valve (see Figure 28).
- 6. Replace the switch bracket.

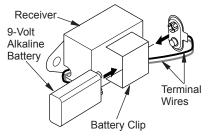


Figure 27 - Attaching Alkaline Battery to Receiver

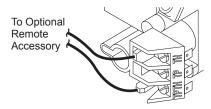


Figure 28 - Control Valve Terminals

### Installing 9-Volt Alkaline Battery in Hand-Held Remote Control Unit

- Remove battery cover on back of remote control unit.
- Attach terminal wires to a 9-volt alkaline battery (not included). Place battery into battery housing.
- 3. Replace battery cover onto remote control unit.

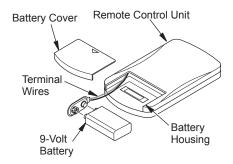


Figure 29 - Installing Battery in Hand-Held Remote Control Unit

#### Continued

## **INSTALLING LOG SET**

Each log is marked with a number in the following illustrations. These numbers will help to identify logs when installed. It is very important to install these logs exactly as instructed. Do not modify logs. Only use logs supplied with fireplace.

### Models CD32M-B and CD36M-B Series

- Place log #1 (back log) on top of grate as shown in Figure 30 for the CD36M-B Series. Log #1 will go in front of the metal partition on grate (see Figure 30). Make sure notches in bottom of log fit over grate.
- 2. Place log #2 (large front log) over pins on grate (see Figure 31).

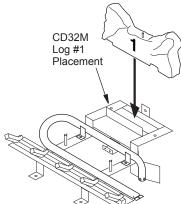


Figure 30 - Installing Log #1 (CD36M-B Series Shown)

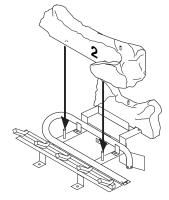


Figure 31 - Installing Log #2 (CD36M-B Series Shown)

- Place log #3 (c-shaped crossover log) onto rear and front logs as shown in Figure 32. Make sure it is seated properly on the smooth surface on front log and on the pin on back log.
- 4. Place log #4 (small round log) on pin on right side of front log (see Figure 33).
- Place log #5 (small front log) onto the front left part of grate making sure notches fit over prongs of grate (see Figure 34).

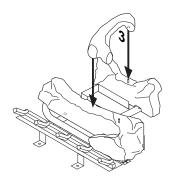


Figure 32 - Installing Log #3 (CD36M-B Series Shown)

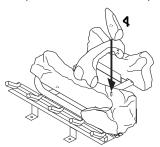


Figure 33 - Installing Log #4 (CD36M-B Series Shown)

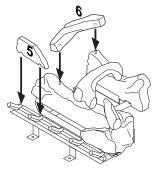


Figure 34 - Installing Logs #5 and #6 (CD36M-B Series Shown)

### Continued

 Place log #6 onto two pins on left side of back and front logs (see Figure 34, page 16).

### Model CD42M-A Series

- Place log #1 (small base log) onto pin on left side of grate extension (see Figure 35).
- Rest left side of log #2 (front log) on top of log #1 and right side onto pin located on right side of grate extension (see Figure 36).
- 3. Place log #3 (rear log) onto pins on rear of grate (see Figure 37).
- 4. Place log #4 (crossover log) onto pins from both logs #2 and #3 (see Figure 38).
- Place log #5 (top log) onto right pin of front log (#2) and smooth surface of rear log (#3). Make sure it is seated properly (see Figure 39).
- Place log #6 (left log) on left pin of front log (#2) and smooth surface of rear log (#3). Make sure it is seated properly (see Figure 40).
- Place log #7 (right log) on right pin of top log (#5). Make sure it is seated properly (see Figure 40).

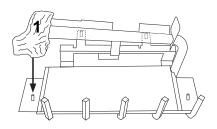


Figure 35 - Installing Log #1, Model CD42M-A

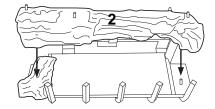


Figure 36 - Installing Log #2, Model CD42M-A

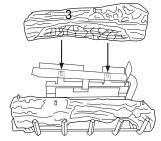


Figure 37 - Installing Log #3, Model CD42M-A

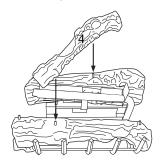


Figure 38 - Installing Log #4, Model CD42M-A

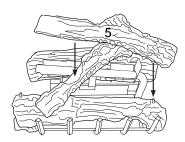


Figure 39 - Installing Log #5, Model CD42M-A

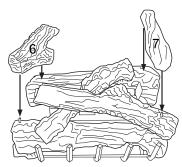


Figure 40 - Installing Logs #6 and #7, Model CD42M-A

Continued

# Lava Rock and Ember Material

 For all models, place lava rock along sides and front of firebox bottom in areas that are visible. It is not necessary to use all lava rock provided.

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

- Pull ember material apart into pieces no larger than a dime. Place loosely and directly onto exposed section of front burner and along space between burner and grate prongs. These will create glowing ember appearance as flame touches ember material. Do not block air slots by using too much ember material in one area. It is not necessary to use all ember material provided.
- When lava rock and ember material are in place, close and latch glass door and secure louvers in place.

WARNING: The glass door must be securely in place before operating fireplace. Do not operate fireplace if glass is missing or broken.

### **DECORATIVE FACING**

Any noncombustible material may be used as facing (glass, tile, brick, etc.) as long as the proper clearances are observed (see *Clearances to Combustibles*, page 4). Louvered openings must not be obstructed and upper and lower panels must remain accessible for service. Use only heat-resistant, noncombustible mortar or adhesive when securing decorative facing materials.

# FACE EXTENSION FOR MODEL CD32M-B ONLY

Model CD32M-B comes equipped with a front face extension. The front face extension would add 3 ½" to the width and 3/4" to the height of the fireplace face.

To install face extension:

- 1. Remove existing screws from front face assembly as shown in Figure 41.
- Align holes on top face extension with holes on top side of front face assembly and secure with screws previously removed (see Figure 41).
- Align holes on right face extension with holes on right side of front face assembly and secure with screws previously removed (see Figure 41). Do the same for left side.
- Secure top face extension with left and right face extensions with two sheet metal screws (see Figure 41).

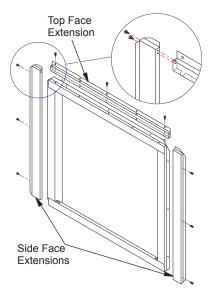


Figure 41 - Front Face Extension, Model CD32M-B Only

# BURNER FLAME ADJUSTMENT

The burner flame adjustment (shutter opening) has been factory preset (for natural gas) to the proper air-to-gas ratio. This ratio results in an even, clean burning flame across the burner (see Figure 42).

If adjustment is necessary, you can restore the proper flame setting by loosening the air shutter screw and rotating the air shutter until proper setting is achieved (see Figure 43). The correct shutter openings are as follows:

	Tube Burner		Pan E	Burner
Model	NG	LP	NG	LP
CD32M-B	0.188"	Max.	_	_
CD36M-B	0.188"	Max	_	_
CD42M-A	0.188"	0.313"	0.188"	0.500"

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for assistance. Consult a qualified installer for additional information.

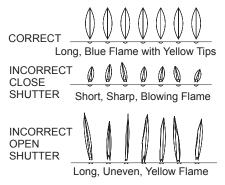


Figure 42 - Burner Flame Patterns

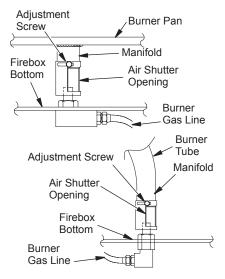


Figure 43 - Air Shutter Adjustments

# **OPERATING FIREPLACE**

### **OPERATION GUIDELINES**

- When used for the first time, the fireplace may emit a slight odor for about 16 to 24 hours. This is normal and is due to the "curing" of the logs and the "burn-in" of internal paint and lubricant used in the manufacturing process.
- Keep compartments, logs, burners and area surrounding logs clean by vacuuming and brushing at least twice a year or as necessary.
- Turn off gas and remote switch before servicing appliance. Any safety screen or guard removed for servicing the fireplace must be replaced prior to operation.
- Have a qualified agency periodically inspect vent system at the start of each heating season for any obstruction which will hinder its normal operation. Never obstruct the flow of combustion and ventilation air. Keep the front of the fireplace clear of all obstacles and materials.



# FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

#### WHAT TO DO IF YOU SMELL GAS

- · Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in control knob. Never use tools. If the knob will not push in or slide 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 which has been under water.

# LIGHTING INSTRUCTIONS

- STOP! Read safety information in column 1 before proceeding.
- 2. Set HI-LO knob to lowest setting.
- Turn off all electrical power to appliance.
- 4. Open control access panel.
- 5. Push in gas control knob slightly and turn clockwise to OFF.
- Wait five (5) minutes to clear out any gas. Then smell for gas, including near floor. If you smell gas, STOP! Follow B in safety information in column 1. If you don't smell gas, go to next step.
- 7. Pilot is located by main burner.
- 8. Turn knob on gas control counterclockwise to PILOT.
- Push control knob all the way in and hold. Immediately light pilot by pressing red ignitor button until flame appears. Continue to hold control knob in for about one (1) minute after pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 9.
  - If knob does not pop out when released, stop and call service technician or gas supplier.
  - If pilot will not stay lit after several tries, turn gas control knob to OFF and call your service technician or gas supplier.
- Turn gas control knob counterclockwise to ON. Knob can be turned to ON only if control knob is popped out.
- 11. Set HI-LO knob to desired setting.
- 12. Turn on all electric power to appliance.

Note: It is recommended that you maintain gas control knob in the full OFF position during lengthy periods of seasonal nonuse.

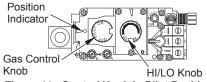


Figure 44 - Control Knob in Pilot Position

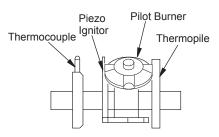


Figure 45 - Pilot



# TO TURN OFF GAS TO APPLIANCE

- 1. Turn off wall switch, if installed.
- 2. Turn off all electric power to appliance if service is to be performed.
- 3. Remove control access panel.
- Push in gas control knob slightly and turn clockwise to OFF. Do not force.
- 5. Replace control access panel.

## GAS CONVERSION

The conversion kit is packaged with the unit. Please check the contents before beginning this conversion.

WARNING: Before proceeding, make sure the gas control valve is in the OFF position and all electrical power to the appliance is turned off.

### **CONVERTING PILOT**

- Wait five (5) minutes to clear out any gas. Smell for any gas odor, especially near the floor. If any gas odor is present, STOP! See For Your Safety Read Before Lighting on page 20.
- Locate latch on louver assembly. Remove top and bottom louvers by pulling spring latches toward center of fireplace simultaneously until they are disengaged from locating holes.

- Undo latches located on top and bottom of firebox and swing door to fully open position.
- 4. Carefully remove log set and ember material from burner and place them aside in a safe place.
- Replace main burner orifice with burner orifice included in conversion kit (Model CD42M series contains two burner orifices).
- Locate air shutter at end of burner manifold (end of tube burner for CD42M series). Loosen screw and adjust air shutter to proper setting (see *Burner Flame Adjustment*, page 19). Retighten screw.
- Remove pilot hood by pulling up until it disengages from barrel. Do not remove the retainer clip (see Figure 46).
- Remove pilot orifice from inside barrel using a 5/32" allen wrench to unscrew orifice.
- Replace pilot orifice with LP orifice supplied with this kit. The number 30 is stamped on the sleeve for identification. Insert small end of new pilot orifice into barrel and thread until tight with the allen wrench.
- Line up notch on pilot hood to the positioning tab on barrel receiver and snap back into position.

*IMPORTANT:* Be careful not to bend or kink aluminum tubing during conversion. Make sure pilot hood and orifice are properly mated and aligned after finishing this conversion.

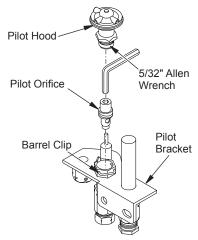


Figure 46 - Converting Pilot

## **GAS CONVERSION**

Continued

### **CONVERTING CONTROL VALVE**

Convert gas control valve by swapping out valve regulator portion of gas valve.

- Using a TORX T20 or a slotted screwdriver, remove and discard three mounting screws, pressure regulator tower and diaphragm/spring components (see Figure 47).
- Insure that rubber gasket is properly positioned on new pressure regulator assembly. Install new pressure regulator assembly to valve using new mounting screws supplied with kit. Tighten screws securely (approximately 25 in/lb). See Figure 48.
- Install identification label enclosed with gas valve regulator to valve body where it can easily be seen (see Figure 48).

**WARNING:** The conversion kit must be installed by a qualified service technician in accordance with the manufacturers instructions and all applicable codes and requirements of the authority having jurisdiction. If any information is these instructions is not followed correctly. a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service technician is responsible for the proper installation of this conversion kit.

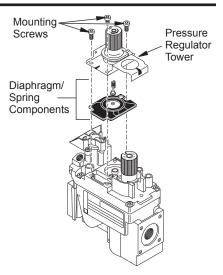


Figure 47- Removing Parts for Gas Control Valve Conversion

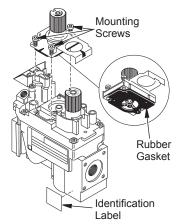


Figure 48- Installing New Parts for Gas Control Valve Conversion

# **TROUBLESHOOTING**

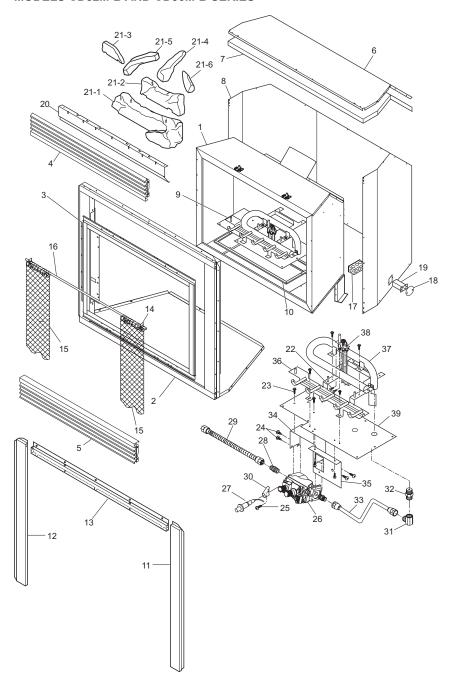
**MARNING:** Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

A WARNING: Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Pilot will not stay lit	Defective thermocouple	1. Check pilot flame. It must impinge on thermocouple 2. Clean or adjust pilot for maximum flame impingement on thermocouple 3. Ensure connection between valve and thermocouple are tight and secure 4. Check thermocouple with millivolt meter. Take reading at thermocouple terminals of gas valve with remote control off. It should read 18 millivolts minimum. Replace faulty thermocouple if reading is below specified minimum
Pilot lit but no flame on burner	1. Remote or wires defective	Check remote wires for proper connections. Place jumper wire across terminals at remote control. If burner comes on, replace remote. If okay, place jumper wire across remote control at valve. If burner comes on, wires are faulty or connections are bad
	Thermopile not generating sufficient milivoltage	2. Check thermopile with millivolt meter. Take reading at thermopile terminals of gas valve with remote control off. It should read 325 millivolts minimum. Replace thermopile if reading is below specified minimum
	3. Plugged burner orifice	Check burner orifice for stoppage and remove
Frequent pilot outage	Pilot flame may be too low or blowing (high) causing safety pilot to "drop out"	Clean and/or adjust pilot flame for maximum flame impingement on thermo- couple

# **ILLUSTRATED PARTS BREAKDOWN**

# MODELS CD32M-B AND CD36M-B SERIES



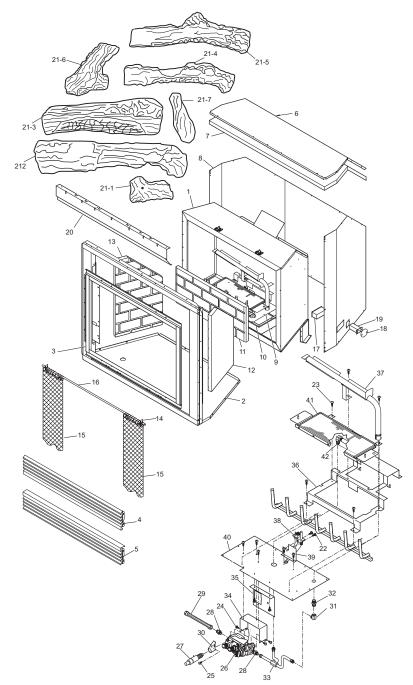
# **PARTS LIST**

# MODELS CD32M-B AND CD36M-B SERIES

KEY	PARIN	IUMBER		
NO.	CD32M-B	CD36M-B	DESCRIPTION	QTY.
1	**	**	Firebox Assembly	1
2	**	**	Face Weldment	1
3	108892-01	108010-01	Door Assembly	1
4	108903-01	108011-01	Top Panel Assembly Louver	1
5	108903-02	108011-02	Bottom Panel Assembly Louver	1
6	**	**	Fireplace Top	1
7	**	****	Fireplace Top Insulation	1
8	**	**	Fireplace Surround	1
9	108885-01	108074-01	Burner Assembly	1
10	108890-01	108076-01	Burner Base Gasket	1
11	109699-01	_	Right Face Extension	1
12	109699-02		Left Face Extension	1
13	109700-01	_	Top Face Extension	1
14	11418	11418	Push-On Nut	2
15	108440-01	12105	Screen	2
16	108455-02	13113	Screen Rod	1
17	**	**	Electrical Duct Assembly	1
18	**	**	Gas Knock-Out Cover	2
19	**	**	Gas Conduit Assembly	1
20	109082-03	109082-01	Heat Shield	1
21	109022-01	109006-01	Log Set	1
21-1	109403-01	110182-01	Front Log (Log 1)	1
21-2	109404-01	109007-01	Rear Log (Log 2)	1
21-3	109407-01	109009-01	Base Log (Log 3)	1
21-4	109406-01	109008-01	Crossover Log (Log 4)	1
21-5	109405-01	107348-01	Left Top Log (Log 5)	1
21-6	109408-01	107347-01	Right Top Log (Log 6)	1
22	11102	11102	Screw #8-32 x 3/8 PPH Zinc	2
23	11105	11105	Screw #10 x 1/2 Zinc	9
24	11179	11179	Screw #10-24 x 1/4 Zinc	4
25	11237	11237	Screw Trilab M4 x 8 mm	1
26	14389	14389	HI-LO Sit Valve (Natural Gas)	1
27	14492	14492	Piezo Ignitor	1
28	14500	14500	Brass Fitting	2
29	14253	14253	Flexible Connector	1
30	14511	14511	Ignitor Bracket	1
31	14528	14528	Brass Elbow Fitting	1
32	104506-25	14496	Orifice	1
33	104509-02	14576	Aluminum Tubing Assembly	1
34	26808	26808	Valve Bracket	1
35	26827	26827	Switch Bracket	1
36	108886-01	108077-01	Grate Base	1
37	108891-01	104504-03	Burner Tube	1
38	108084-02	108084-02	Pilot Assembly (Natural Gas)	1
39			Burner Base Assembly	1
		2	ABLE NOT SHOWN	
	25487	25487	Lava Rock	1
	110251-01	110251-01	Micro Switch Assembly	1 1
	27253 109896-01	27253 112033-01	Notice Label Gas Conversion Kit	1

# **ILLUSTRATED PARTS BREAKDOWN**

# **MODEL CD42M-A**



# **PARTS LIST**

# **MODEL CD42M-A**

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	**	Firebox Assembly	1
2	**	Face Weldment	1
3	108328-01	Door Assembly	1
4	108326-01	Top Panel Assembly Louver	1
5	108331-01	Bottom Panel Assembly Louver	1
6	**		1
7	**	Fireplace Top	1
8	**	Fireplace Top Insulation	1
-	400000 05	Fireplace Surround	1
9	108329-05	Burner Assembly	
10	108374-01	Burner Base Gasket	1
11	111297-01	Rear Refractory	1
12	111298-01	Right Refractory	1
13	111299-01	Left Refractory	1
14	11418	Push-On Nut	2
15	107840-01	Screen	2
16	108455-01	Screen Rod	1
17	110037-01	Electrical Duct Assembly	1
18	**	Gas Knock-Out Cover	2
19	**	Gas Conduit Assembly	1
20	**	Heat Shield	1
21	108778-01	Log Set	1
21-1	109402-01	Small Base Log (Log 1)	1
21-2	109396-01	Front Log (Log 2)	1
21-3	109397-01	Rear Log (Log 3)	1
21-4	109398-01	Crossover Log (Log 4)	1
21-5	109399-01	Top Center Log (Log 5)	1
21-6	109400-01	Top Left Log (Log 6)	1
21-7	109401-01	Top Right Log (Log 7)	1
22	11102	Screw #8-32 x 3/8 PPH Zinc	2
23	11105	Screw #10 x 1/2 Zinc	9
24	11179	Screw #10-24 x 1/4 Zinc	4
25	11237	Screw Trilab M4 x 8 mm	1
26	14389	HI-LO Sit Valve (Natural Gas)	1
27	14492	Piezo Ignitor	1
28	14500	Brass Fitting	2
29	14253	Flexible Connector	1
30	14511	Ignitor Bracket	1
31	14528	Brass Elbow Fitting	1
32	104506-25	Orifice	1
33	14544	Aluminum Tubing Assembly	1
34	26808	Valve Bracket	1
35	26827	Switch Bracket	1
~ ~	108346-01	Grate Base	1
36			
37	108376-01	Burner Tube	1
38	108084-02	Pilot Assembly (Natural Gas)	1
39	108755-01	Pilot Bracket	1
40	108373-01	Burner Base Assembly	1
41	108330-01	Burner Pan Assembly	1
42	104506-24	Orifice	1
		S AVAILABLE NOT SHOWN	
	25487	Lava Rock	1
	110251-01	Micro Switch Assembly	1
	27253	Notice Label	1
	111007-01	Gas Conversion Kit	1
** Not	a field replace	1	

# **SPECIFICATIONS**

#### CD32M-B

- Gas Rate (Natural): 12,000/18,000 Btu/hr
- Gas Rate (Propane/LP): 11,000/17,000 Btu/hr

#### CD36M-B

- Gas Rate (Natural): 15,000/22,000 Btu/hr
- · Gas Rate (Propane/LP): 14,000/20,000 Btu/hr

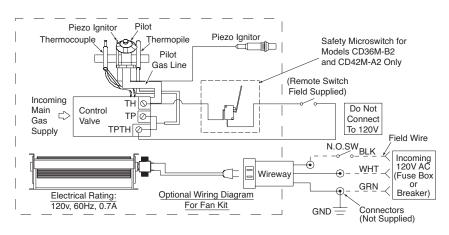
#### CD42M-A

- Gas Rate (Natural): 25,000/35,000 Btu/hr
- Gas Rate (Propane/LP): 23,000/33,000 Btu/hr

#### All Models

- · Ignition: Piezo
- Manifold Pressure: Natural Gas 3.5" w.c., Propane/LP 10" w.c.
- Minimum Inlet Supply Pressure: 4.5" w.c.

# **WIRING DIAGRAM**



# **ACCESSORIES AND REPLACEMENT PARTS**

**MILLIVOLT HI-LO VALVE - 14389** 

**BLOWER KIT - BK** 

MICRO SWITCH ASSEMBLY 110251-01

**PIEZO IGNITOR - 14492** 

PILOT ASSEMBLY - 108084-02(NG)

**PILOT ORIFICE** 

108085-01 - #51 (Natural Gas) 108085-02 - #30 (Propane/LP Gas)

STANDARD TOP LOUVER

108903-01 - CD32M-B

108011-01 - CD36M-B Series

108331-01 - CD42M-A Series

STANDARD BOTTOM LOUVER

108903-03 - CD32M-B

108011-03 - CD36M-B Series

108331-03 - CD42M-A Series

**SCREEN** 

108903-03 - CD32M-B 12105 - CD36M-B Series 107840-01 - CD42M-A Series

**SCREEN ROD** 

109479-01 - CD32M-B

108719-01 - CD36M-B Series

108455-01 - CD42M-A Series

**GLASS DOOR ASSEMBLY** 

108892-01 - CD32M-B

110994-01 - CD36M-B Series

108328-01- CD42M-A Series

**BURNER ORIFICES** 

CD32M-B: NG Orifice #47, 104506-25

LP Orifice #55, 14514

CD36M-B Series: NG Orifice #43, 14496

LP Orifice #55, 14514

CD42M-A Series:

Tube Burner NG Orifice #47, 104506-25 Tube Burner LP Orifice #56, 104506-20 Pan Burner NG Orifice #46, 104506-24 Pan Burner LP Orifice #56, 104506-20

RECEIVER AND HAND-HELD ON/OFF REMOTE CONTROL KIT

**HRC100 SERIES** 

**BRICK LINER KITS** 

BL32DS - 32" Smooth White Brick BL36D - 36" Warm Red Traditional

Stacked Brick

BL36DH - 36" Warm Red Herringbone

**Brick** 

BL42D - 42" Warm Red Traditional Stacked Brick (Included with 42" models)

BL42DH - 42" Warm Red Herringbone

Brick

NOTES

119212-01B

30

NOTES



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



119212 01 NOT A UPC

119212-01 Rev.B 02/07