



# DOVRE®

Aladdin Hearth Products  
401 N. Wynne  
Colville, WA 99114

A Division of Hearth Technologies Inc.

## DV425S DIRECT VENT ROOM HEATER OWNER'S MANUAL

### AND INSTALLATION INSTRUCTIONS

MODELS: DV425S - NATURAL GAS

DV425SL - PROPANE

#### 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.

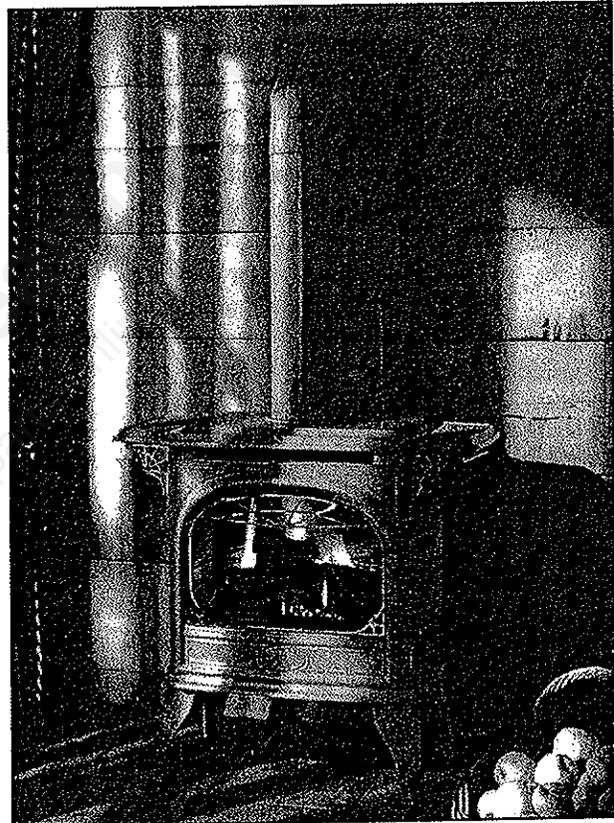
-Installation and service must be performed by a qualified installer, service agency or the gas supplier.

#### WARNING!

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

#### FOR YOUR SAFETY

The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.



This Heater may be installed with a Vertical or Horizontal Direct Vent Termination System.

This Manual must be used for installation of the DV425S Gas-Fired Room Heater and retained by the homeowner for operating and maintenance instructions.

This appliance may be installed in an aftermarket, permanently located, Manufactured (Mobile) Home, where not prohibited by Local Codes.

This appliance is only for use with the type of fuel indicated on the Rating Plate. This appliance is not convertible for use with other gases, unless a certified Conversion Kit is used.

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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## Safety Precautions

1. READ THESE INSTALLATION INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION PROCEDURES. FAILURE TO FOLLOW THEM COULD CAUSE AN APPLIANCE TO MALFUNCTION RESULTING IN SERIOUS INJURY AND/OR PROPERTY DAMAGE.
2. DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AREAS AND AWAY FROM FURNITURE AND DRAPERIES.
3. CHILDREN AND ADULTS SHOULD BE ALERTED OF THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BURNS AND/OR CLOTHING IGNITION.
4. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM WITH THE APPLIANCE.
5. CLOTHING OR OTHER FLAMMABLE MATERIAL SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.
6. ANY SAFETY SCREEN OR GUARD REMOVED FOR SERVICING AN APPLIANCE MUST BE REPLACED PRIOR TO OPERATED THE APPLIANCE.
7. **WARNING!** DO NOT OPERATE APPLIANCE WITH THE PANEL(S) REMOVED, CRACKED, OR BROKEN. REPLACEMENT OF THE PANEL(S) SHOULD BE DONE BY A LICENSED, OR QUALIFIED, SERVICE PERSON.
8. INSTALLATION AND REPAIR SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BE A QUALIFIED SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING, BEDDING MATERIAL, ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, BURNERS AND CIRCULATING AIR PASSAGEWAYS OF THE APPLIANCE BE KEPT CLEAN.
9. ENSURE THAT THE FLOW OF COMBUSTION AND VENTILATION AIR NOT BE OBSTRUCTED.
10. ENSURE THAT ADEQUATE COMBUSTION AND VENTILATION AIR IS PROVIDED.

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# I. LISTINGS AND CODE APPROVALS

### U.S. Certification.

The DV425S Series Room Heater has been tested in accordance with the ANSI standard Z21.88 1998 and UL307B and has been listed by UL for installation and operation as described in these Installation and Operating Instructions. All components are A.G.A. or UL safety certified.

### Canada Certification.

The DV425S Series Room Heater has been tested in accordance with CSA 2.33-M98 and has been listed by UL for installation and operation as described in these Installation and Operating Instructions. All components are C.G.A. or C.S.A. safety certified.

### Local Codes.

This installation must conform with local Codes or, in the absence of local Codes, with the National Fuel Gas Code, ANSI Z223.1-latest edition, in the U.S.A. and the CAN/CGA B149-latest edition, in Canada.

A Manufactured (Mobile) Home OEM installation must conform with the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280*, or, when such a standard is not applicable, the Standard for *Manufactured Home Installations, ANSI/NCSCBS*, or Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA 2240.4.

This Heater is approved for installation in bedrooms and mobile homes in the United States and Canada

### Efficiency.

The efficiency rating of the appliance is a product thermal efficiency rating determined under continuous operating conditions and was determined independently of any installed system.

If any assistance is required during installation please contact your local dealer or contact DOVRE Customer Relations Department, 401 N. Wynne, Colville, WA 99114.

**NOTE:** Illustrations throughout these instructions reflect typical installations and are for design purposes only. Actual installation may vary slightly due to individual design preferences. However, minimum and maximum clearances must be maintained at all times.

The illustrations and diagrams used throughout these installation instructions are not drawn to scale.

## RATING LABEL

<p>DOVRE ALADDIN HEARTH PRODUCTS 401 N. WYNNE COLVILLE, WA 99114 ANSI Z21.88 - 1998 CGA 2.33 - M98 VENTED GAS FIREPLACE HEATERS FOR USE AT HIGH ALTITUDES. UL 307B APPROVED FOR MOBILE HOME USE.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">MODEL</td> <td style="width: 50%;">MFG. DATE</td> </tr> <tr> <td>MODELE *</td> <td>DATE DE FAB.</td> </tr> <tr> <td>GAS TYPE</td> <td>NATURAL</td> </tr> <tr> <td>ALTITUDE</td> <td>0 - 4500 FT/PI</td> </tr> <tr> <td>MAX. INPUT/DEBIT</td> <td>30,000 BTUH</td> </tr> <tr> <td>MIN. INPUT/DEBIT</td> <td>21,000 BTUH</td> </tr> <tr> <td>OUTPUT</td> <td>22,800 BTUH</td> </tr> <tr> <td>STEADY STATE THERMAL EFFICIENCY</td> <td>76%</td> </tr> <tr> <td>MANIFOLD PRESSURE</td> <td>3.5 IN. W.C.</td> </tr> <tr> <td>PRESSION TUBULURE</td> <td>C. D'EAU</td> </tr> <tr> <td>MIN. INLET PRESSURE</td> <td>4.5 IN. W.C.</td> </tr> <tr> <td>FOR THE PURPOSE OF ADJUSTMENT</td> <td>C. D'EAU</td> </tr> <tr> <td>PRESS. MIN. D'ALIMENTATION</td> <td></td> </tr> <tr> <td>ORIFICE SIZE</td> <td>.106/2.69 DIA.</td> </tr> <tr> <td>DIAM. INJECTEUR</td> <td>.063/1.60 DIA IN./mm.</td> </tr> </table> <p>BK94A FAN OR BLOWER ASSEMBLY MAY BE USED LESS THAN/MOINS DE 3 AMPERES., 115V., 60Hz. THIS VENTED GAS FIREPLACE HEATER IS NOT FOR USE WITH AIR FILTERS.</p>	MODEL	MFG. DATE	MODELE *	DATE DE FAB.	GAS TYPE	NATURAL	ALTITUDE	0 - 4500 FT/PI	MAX. INPUT/DEBIT	30,000 BTUH	MIN. INPUT/DEBIT	21,000 BTUH	OUTPUT	22,800 BTUH	STEADY STATE THERMAL EFFICIENCY	76%	MANIFOLD PRESSURE	3.5 IN. W.C.	PRESSION TUBULURE	C. D'EAU	MIN. INLET PRESSURE	4.5 IN. W.C.	FOR THE PURPOSE OF ADJUSTMENT	C. D'EAU	PRESS. MIN. D'ALIMENTATION		ORIFICE SIZE	.106/2.69 DIA.	DIAM. INJECTEUR	.063/1.60 DIA IN./mm.	<p>SERIAL NO. DE SERIE</p>  <p>CERTIFIED FOR CANADA CERTIFIE POUR LE CANADA</p>
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**DO NOT REMOVE OR COVER THIS LABEL**

VENTED GAS FIREPLACE HEATER - NOT FOR USE WITH SOLID FUEL.  
RADIATEUR MURAL A EVACUATION DIRECT PAR GRAVITE - NE DOIT PAS ATRE UTILISE  
AVEC UN COMBUSTIBLE SOLID.

## II. DESCRIPTION OF THE HEATER SYSTEM

The DV425S is a Direct Vent Room Heater. Combustion air is supplied from outside, not from inside the house as with other types of heaters.

The installation of this DOVRE DV425S system consists of the following:

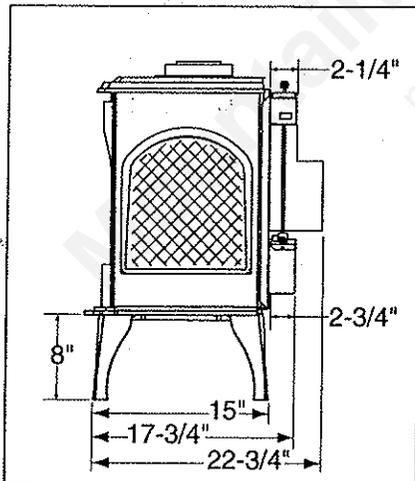
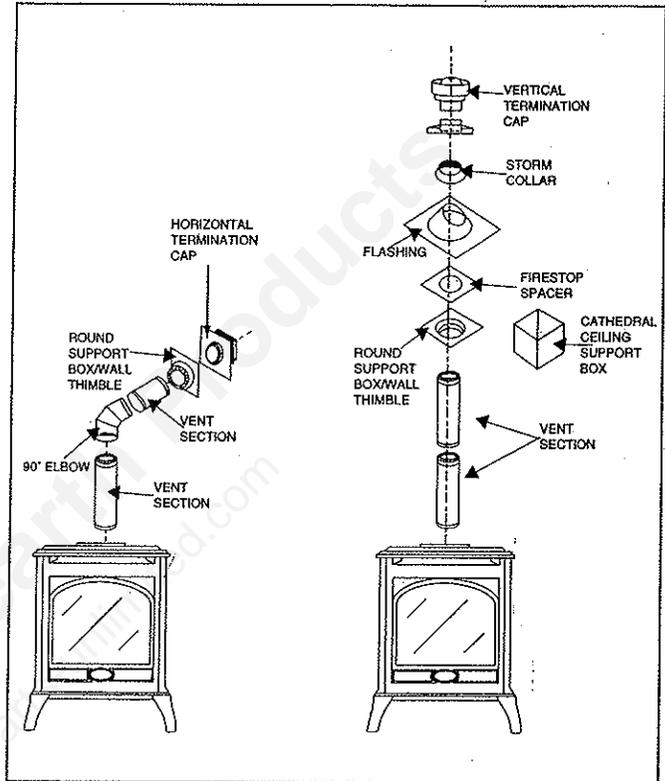
1. Appliance
2. Venting System
3. Termination

Optional components include:

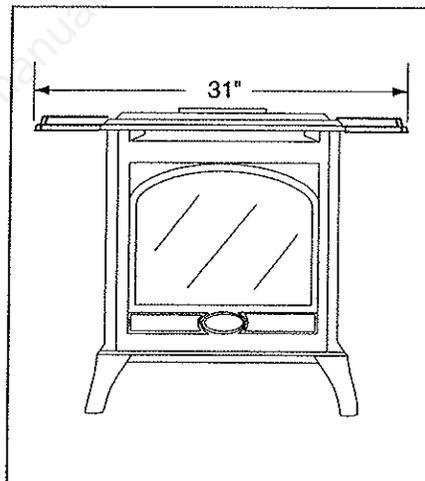
1. Blower Kit
2. Decorative Glass Accent
3. Warming Shelf
4. Remote Control

**NOTE: Operation of a Direct Vent Heater may be sporadic in high wind situations.**

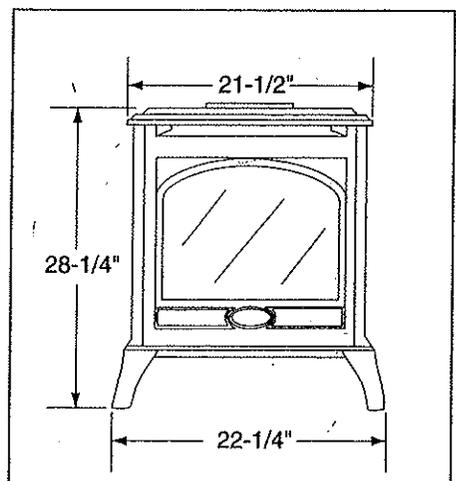
### TYPICAL ASSEMBLY



DV425S - With Optional BK94A



DV425S Front View - With and Without Optional Warming Shelves



### III. HEATER SYSTEM COMPONENTS

The table below is a list of only those components which may be safely used with this appliance.

Catalog #	DESCRIPTION
DV425S*	Direct Vent Room Heater - black - natural gas; standing pilot
DV425SPBK	Direct Vent Room Heater - porcelain black - natural gas; standing pilot
DV425SPCR	Direct Vent Room Heater - porcelain creme - natural gas; standing pilot
DV425SPGR	Direct Vent Room Heater - porcelain green - natural gas; standing pilot
DV425SPBL	Direct Vent Room Heater - porcelain blue - natural gas; standing pilot
BK94A	Fan Kit, variable speed, Thermostat "ON/OFF"
LCD1	Remote Control (battery/110v)
DT9G	Decorative Glass Accent - gold
WS1	Warming Shelf - painted black
WS1PBK	Warming Shelf - porcelain black
WS1PCR	Warming Shelf - porcelain creme
WS1PGR	Warming Shelf - porcelain green
WS1PBL	Warming Shelf - porcelain blue
WSB1	Warming Shelf Bracket - black
WSB1G	Warming Shelf Bracket - gold
SPCK400S	Sit Valve Propane Conversion Kit
SNCK400S	Sit Valve Natural Gas Conversion Kit

\*The nomenclature DV425S represents the Model Number of the Room Heater that burns Natural Gas. If the Model Number is followed by an "L" (DV425SL), the unit burns Propane.

DURA-VENT GS Catalog #	Venting System Components Description
908B	6" Black Vent (4"/6")
907B	9" Black Vent (4"/6")
906B	12" Black Vent (4"/6")
906	12" Galvanized Vent (4"/6")
904B	24" Black Vent (4"/6")
904	24" Galvanized Vent (4"/6")
903B	36" Black Vent (4"/6")
903	36" Galvanized Vent (4"/6")
902B	48" Black Vent (4"/6")
902	48" Galvanized Vent (4"/6")
911B	12" (11"-14 5/8") Adjustable Vent Black
945B	45° Elbow Black
945	45° Elbow Galvanized
990B	90° Elbow Black
990	90° Elbow Galvanized
940	Round Ceiling Support/Wall Thimble
941	Cathedral Ceiling Support Box
943	Flashing 0/12 - 6/12
943S	Flashing 7/12 - 12/12

DURA-VENT GS Catalog #	Venting System Components Description
953	Storm Collar
963	Firestop Spacer
988	Wall Strap
981	Snorkel Termination (36")
982	Snorkel Termination (14")
971	Horizontal Kit (Horizontal Termination Cap, One 90° Black Elbow, Wall Thimble, 24" Black Pipe, 11" - 14-5/8" Adjustable Vent
980	Vertical Termination Cap with Wind Halo
984	Horizontal Termination Cap
909B	Retrofit Adjustable Chimney Connector Retrofit Chimney Connector Plate
950	VSS - Vinyl Siding Standoff/Shield
3951	Round Ceiling Support/Wall Thimble Trim Kit, Polished Brass
3960	Cathedral Ceiling Support Trim Kit, Polished Brass
HHW2	Horizontal High Wind Cap (recommended for optimal performance)
HHW2K	Horizontal Kit (One 90° Black Elbow, Wall Thimble, 24" Black Pipe, 11" - 14-5/8" Adjustable Vent, HHW2 Termination Cap)

The VTA1, Vertical Termination Adapter Kit, may also be safely used with this Heater. It is composed of a Vertical Termination Cap and Cover Plate for existing vertical chimney.

## IV. CLEARANCES

The following clearances to combustibles must be maintained:  
 Minimum clearances to the floor - 0", back of unit to wall - 6",  
 sides of unit to wall - 6", base of the unit to ceiling - 72".

Minimum clearances to Venting are as follows:

Horizontal runs require a 1-1/2" minimum Air Space on the top and an 1/2" minimum Air Space on the sides and bottom of the outer Vent Section. If an Elbow is being used, in an enclosed wall, floor or ceiling, a top Air Space clearance of 3" must be maintained. Vertical rise sections require a 1" minimum Air Space completely around the Vent section. These clearances must be maintained at all times.

This appliance is certified for installation in a bed/sitting room in the U.S. and Canada.

**Mobile Home Installations.** Appliances installed in Mobile Homes must be secured to the floor in a minimum of two locations.

### STEP 1 - Positioning the Appliance.

This appliance may be placed on a combustible or non-combustible continuous, flat surface. When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance. Slide the Heater into position and level the Heater from side-to-side and front-to-back. Shim as necessary.

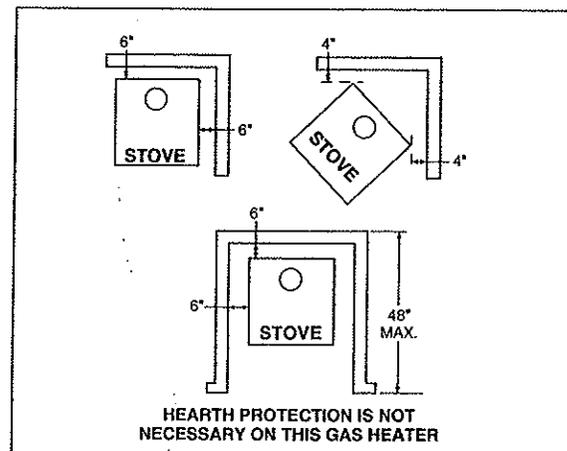


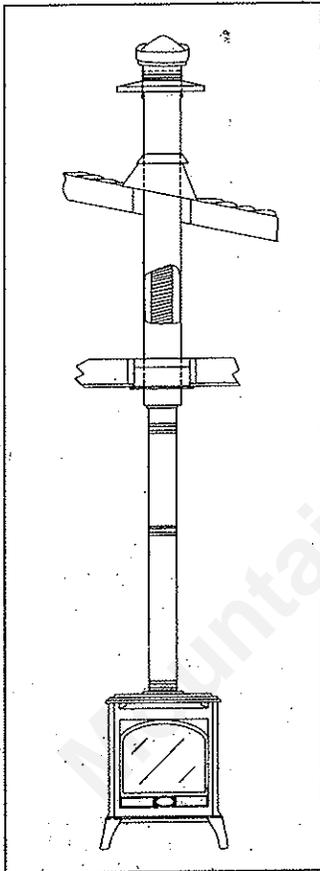
Figure 1  
Minimum Clearances To Combustibles

## V. TERMINATION

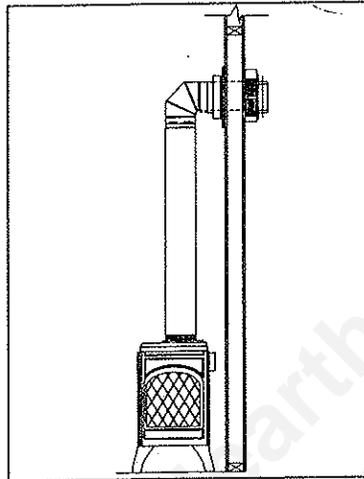
Four types of Termination are possible for this Heater:

- Horizontal
- Vertical
- Existing Masonry
- Existing Class A

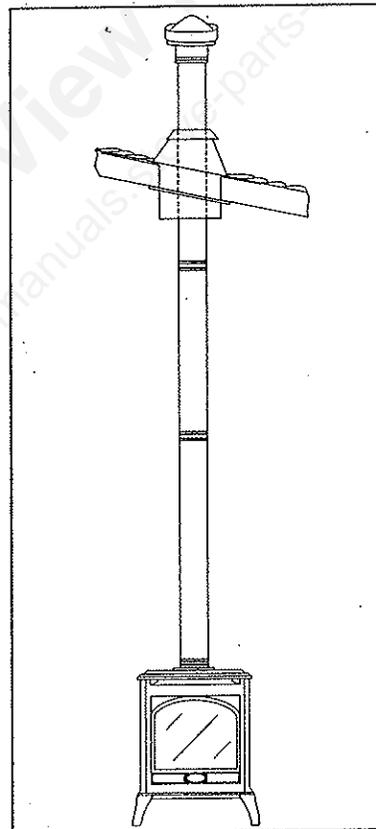
## COMMON INSTALLATIONS



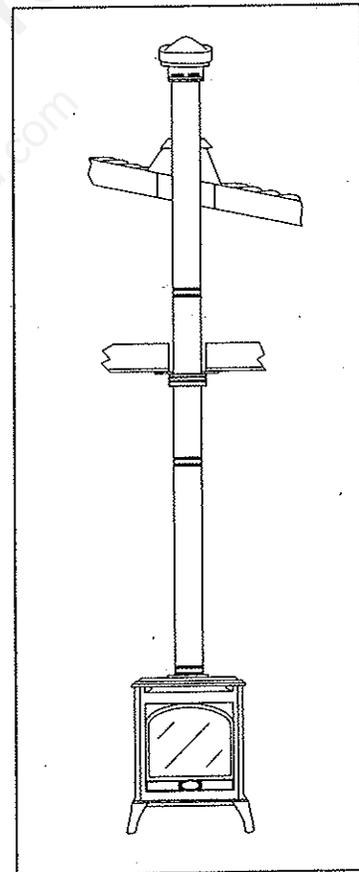
Retro - Fit  
Installation



Horizontal Termination



Cathedral Ceiling



Vertical Flat Ceiling

### A. Horizontal Termination.

Refer to Figure 2 for horizontal venting recommendations. The minimum vertical rise allowed for horizontal termination is 2' from the top of the Heater. The maximum horizontal run allowed for venting is 15' with a minimum 4' rise.

A single vertical to horizontal 90 degree elbow is already calculated into the allowable 15' run. Each additional 90 degree elbow reduces the maximum horizontal distance by 3'.

Example: The use of [3] elbows would reduce the allowable horizontal run to 9' (3 - 1 = 2 elbows x 3' = 6'; 15' maximum - 6' = 9' maximum).

VERTICAL RISE	15' MAX. HORIZONTAL RUN													
	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'
16'	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thru	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4'	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3'	X	X	X	X	X	X	X	X	X					
2'	X	X	X	X	X	X	X	X	X					

Chart A - Venting Combinations

Horizontal Venting must terminate within the shaded area shown in Figure 2. Chart A illustrates the figures included in the shaded area. For example, if the Vertical rise is the minimum two feet, Venting can terminate anywhere between 21-1/2" (includes the thickness of 4" and Venting required to the Termination Cap) and 10'.

Figure 3 illustrates Terminate Cap locations and minimum Dimensions for each Termination application. Vent termination must not be recessed into the wall or siding.

**NOTE: Horizontal runs will require the use of one Vent Support for every 3' of Vent.**

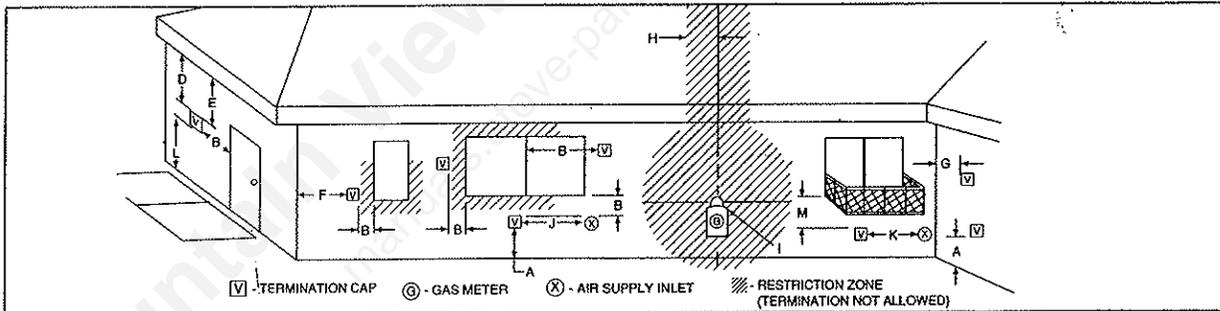


Figure 3 - Termination Cap Locations

- A = Clearance above the ground, a veranda, porch, deck, or balcony - **12 inches (30 cm) minimum.**
- B = Clearance to window or door that may be opened - **9 inches (23 cm) minimum.**
- D\* = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal - **18 inches (46 cm) minimum.**
- E\* = Clearance to unventilated soffit - **12 inches (30 cm) minimum.**
- F = Clearance to outside corner - **9 inches (23 cm) as tested.**
- G = Clearance to inside corner - **9 inches (23 cm) as tested.**
- H\* = Not to be installed above a meter/regulator assembly **within 3 feet (90 cm) horizontally** from the center-line of the regulator.
- I = Clearance to service regulator vent outlet - **3 feet (90 cm) minimum-United States; 6 feet (1.8 m) min.-Canada.**

In this example, the 2 elbows are equivalent to 6' of horizontal run, therefore a minimum of 4' of vertical rise is required.

**NOTE: A horizontal run of vent must have a 1/4" rise for every 1 ft. of run towards the termination. Never allow the vent to run downward. This could cause high temperatures and the possibility of a fire.**

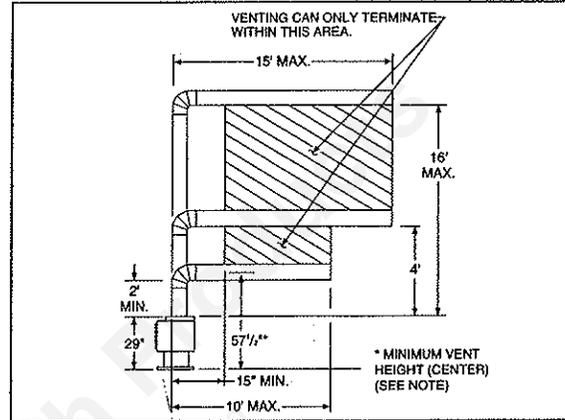


Figure 2 - Horizontal Length

- J = Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance - **12 inches (30 cm) minimum.**
- K\* = Clearance to mechanical air supply inlet - **6 feet (1.8 m) minimum.**
- L+ = Clearance above a paved sidewalk or paved driveway located on public property - **7 feet (2.1 m) minimum. Use of a DCS200 will reduce this dimension to as low as 12 inches (30 cm).**
- M# = Clearance under veranda, porch deck, or balcony - **12 inches (30cm) minimum.**
- + = A vent must not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.
- # = Only permitted if veranda, porch deck, or balcony is fully open on a minimum of 2 sides beneath the floor.
- = As specified in Installation Codes. **Note: Local codes or regulations may require different clearances.**
- \* = **30 inches(76cm) minimum** distance required for vinyl soffit materials.

**1. Preparing the Wall for Horizontal Termination.** A hole measuring 10" wide and 10" high must be cut and framed in the exterior wall where venting will be terminated.

The height of the hole must be located to meet all local and national codes and not be easily blocked or obstructed. The minimum height to the center of the horizontal vent is 57 1/2" from the base of the unit. This figure will increase by the length of each vertically positioned vent section added to the venting system. See Figure 4.

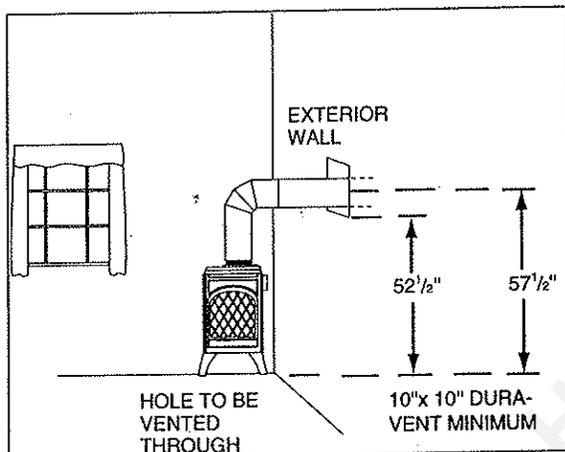


Figure 4 - Exterior Wall Hole

If the wall being penetrated is constructed of non-combustible material (i.e.: masonry block or concrete) a 7 inch diameter hole is acceptable.

**2. Assembling Venting Sections.** Use only vent supplied or listed for use with this Heater. To attach a straight section to the top of the Heater, female end down, slide the pipe over the outer Collar on the Heater while the inner flue will slip over the Vent Inner.

**MAINTAIN MINIMUM CLEARANCES OR GREATER AROUND THE VENT SYSTEM.** Do not pack air spaces with insulation or other material.

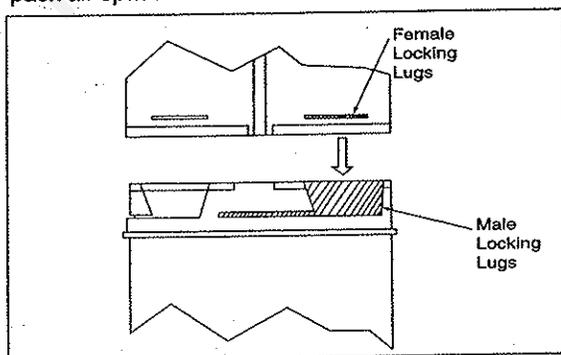


Figure 5 - Twist-lock procedure

The Dura-Vent GS is unitized and twist-locks together. For the twist-lock procedure, consult Figure 5 and do the following:

- (1) Four indentations, located on the female ends of pipes and fittings, are designed to slide straight onto the male ends of adjacent pipes and fittings, by orienting the four pipe indentations so they match and slide into the four entry slots on the male ends. See Figure 5. Push the pipe sections completely together, then twist-lock one section clockwise approximately one-quarter turn, until the two sections are fully locked. The female locking lugs will not be visible from the outside, on the Black Pipe or fittings. They may be located by examining the inside of the female ends.
- (2) Horizontal runs of vent must be supported every three feet. Wall Straps are available for this purpose.

Before connecting the horizontal run of vent pipe to the vent termination, slide the black decorative wall thimble cover over the vent pipe.

When using the adjustable section, maintain a 1" overlap on pipe sections and secure. It is also important that the vent pipe extends a minimum of into vent cap.

**3. Termination Cap.** Position the horizontal vent termination so that 1- 1/2" clearance is maintained on top of the vent sections and 1 1/2" on sides.

Before attaching the Vent Termination to the exterior wall, run a bead of non-hardening mastic around the outside edges to make a seal between the Cap and the wall.

Attach Cap to exterior wall with four (4) wood screws, making sure that arrow on Cap is pointing up. After Cap is attached, make sure that a 1 1/2" is maintained from top of vent to combustibles.

Slide the Decorative Wall Thimble up the wall surface and attach with the screws provided. Apply Decorative Brass or Chrome Trim if desired.

**4. Vertical Rise on the Exterior.** For installations requiring a vertical rise on the exterior of a building, 14" and 36" tall Snorkel Terminations are available. Follow the same installation procedures that are used for the standard horizontal termination found in Step 3.

**NOTE: For buildings with vinyl siding, a Vinyl Siding Standoff should be installed between the vent cap and the exterior wall. Attach the Vinyl Siding Standoff to the Horizontal Vent Termination. The Vinyl Siding Standoff prevents excessive heat from possible melting the vinyl siding material.**

### B. Vertical Termination.

The following figures are the maximum distances from the top of the unit, as well as the minimum air space clearances that must be maintained: Maximum straight unsupported rise - 25 feet; Maximum height - 40 feet from the top of the unit. Maximum horizontal unsupported run - 3 feet; air space clearances around vertical venting - 1" on all sides; air space clearances around horizontal venting - 1½" on top and ½" on sides and bottom. If an elbow is being used in an enclosed wall, floor or ceiling, a top air space clearance of 3" must be maintained. These clearances must be maintained at all times.

#### 1. Preparing the Ceiling.

Drop a Plumb Bob down from the ceiling to the position of the Heater Flue exit, and mark the location where the Vent penetrate the roof.

Determine if the ceiling joists, roof rafters, or other framing will obstruct the Venting system. You may wish to relocate the appliance or, to offset, to avoid cutting load-bearing members.

#### 2. Assembling Vent Sections. Only use vent supplied and listed for use with this Heater.

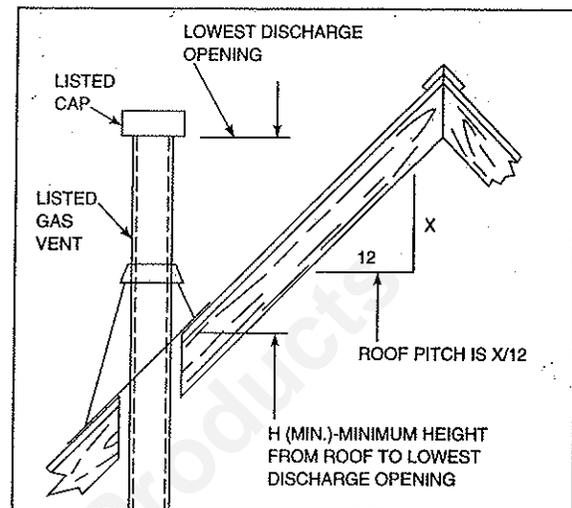
To attach a straight section to the top of the Heater, with the female end down, slide that pipe over the outer Collar on the Heater while the Vent Inner slips into the Flue of the Heater. **MAINTAIN MINIMUM CLEARANCES OR GREATER AROUND THE VENT SYSTEM.** Do not pack air spaces with insulation or other material.

The Dura-Vent GS is unitized and twist-locks together. For the twist-lock procedure, consult Figure 5 and do the following:

(1) Four indentations, located on the female ends of pipes and fittings, are designed to slide straight onto the male ends of adjacent pipes and fittings, by orienting the four pipe indentations so they match and slide into the four entry slots on the male ends. (Figure 5.) Push the pipe sections completely together, then twist-lock one section clockwise approximately one-quarter turn, until the two sections are fully locked. The female locking lugs will not be visible from the outside, on the Black Pipe or fittings. They may be located by examining the inside of the female ends.

(2) Horizontal runs of vent must be supported every three feet. Wall Straps are available for this purpose.

Assemble the desired lengths of black pipe and elbows. It is necessary to reach from the Heater up through the round support box. Ensure that all pipe and elbow connections are in their fully twist lock position.



**Figure 6**  
Vent (Chimney) Height

Roof Pitch	H (Min.) Ft.
Flat to 6/12 .....	1.0
6/12 to 7/12 .....	1.25
Over 7/12 to 8/12.....	1.5
Over 8/12 to 9/12.....	2.0
Over 9/12 to 10/12.....	2.5
Over 10/12 to 11/12.....	3.25
Over 11/12 to 12/12.....	4.0
Over 12/12 to 14/12.....	5.0
Over 14/12 to 16/12.....	6.0
Over 16/12 to 18/12.....	7.0
Over 18/12 to 20/12.....	7.5
Over 20/12 to 21/12.....	8.0

**Figure 7**  
Vent (Chimney) Height

Using the mark from Step 2, drive a nail up through the roof to mark the center. Measure to either side of the nail and mark the opening required. This is measured on the horizontal; actual length may be larger depending on the pitch of the roof. Cut out and frame the opening. See chapter 25 of the Uniform Building Code for Roof Framing details. A one inch minimum air space clearance must be maintained between the vent system and the roof.

Assemble lengths of pipe and elbows necessary to reach from the ceiling support box up through the roof line. Galvanized pipe and elbows may be utilized in the attic, as well as above the roof line. The galvanized finish is desirable above the roof line due to its higher corrosion resistance.

**3. Installing the Roof Flashing or Site Produced Chase Top.** Position a Roof Flashing (or construct a Chase and Chase Top) and secure in place with nails.

Continue to add Vent sections through the Roof Opening, maintaining at least 1" Air Space clearance. Major Building Codes specify a minimum Vent (Chimney) height above the Roof top depending on Roof Pitch. See Figures 6 and 7. Add Pipe sections until the height of the Vent Cap meets the minimum Building Code requirements described in Figure 7. Note that for steep Roof Pitches, the Vent height must be increased.

These Vent System heights are necessary in the interest of safety, however, they do not ensure draft-free operation. Trees, buildings, adjoining Roof lines, adverse wind conditions, etc., may create a need for a taller Vent System should down drafting occur.

**4. Termination Cap.** Twist lock the Vent Cap.

To bypass any overhead obstructions, the vent system may be offset using a 45° elbow or a 90° elbow. Vent stabilizers have straps for securing these parts to joists or rafters. Plumbers tape may be purchased locally and used in conjunction with vent stabilizers.

Major Building Codes specify a minimum Vent (Chimney) height above the Roof top depending on Roof Pitch. See Figures 6 and 7, page 10.

Add pipe sections until the height of the Vent Cap meets the minimum Building Code requirements described in Figure 7, page 10.

Note that for steep Roof Pitches, the Vent height must be increased.

These Vent system heights are necessary in the interest of safety and do not ensure draft-free operation. Trees, buildings, adjoining Roof Lines, adverse wind conditions, etc., may create a need for a taller Vent system should down drafting occur.

**WARNING!**

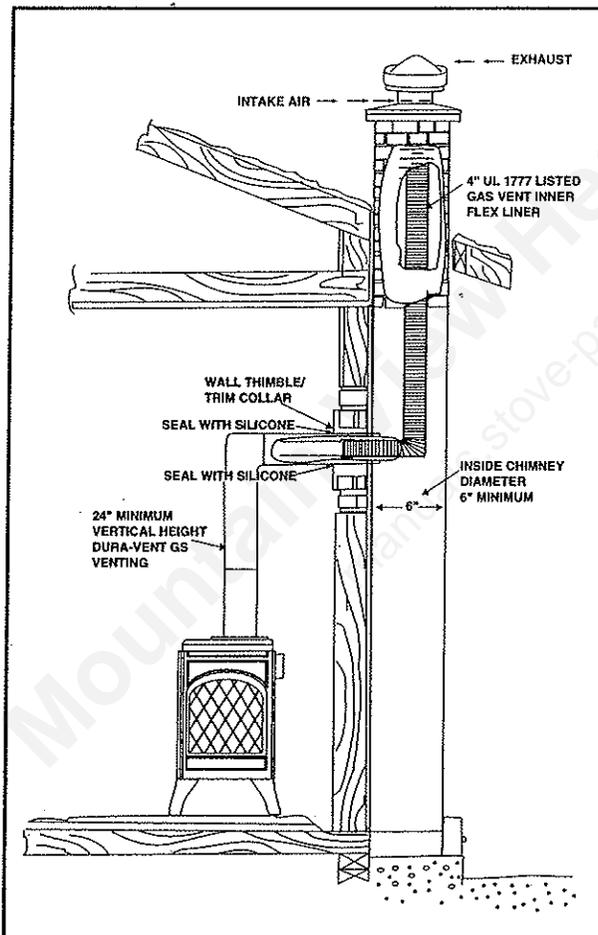
THIS APPLIANCE MAY ONLY USE THE APPROVED VENTING SYSTEMS SHOWN IN THESE INSTALLATION INSTRUCTIONS. IT MUST NOT BE CONNECTED TO CHIMNEY FLUE SERVICING A SEPARATE SOLID FUEL OR GAS FUEL BURNING APPLIANCE.

### C. Existing Masonry Chimney Installation.

This installation is subject to local jurisdiction. Some codes may require the use of another liner for intake air. If so, the 4" aluminum liner should be inside a 6" UL 181 listed liner.

This Heater can be vented through an existing Masonry Chimney but the chimney must be lined with one UL 1777 listed 4" aluminum flexible gas vent liner for exhaust. The existing Flue will be used to supply the air intake to the galvanized steel Flue system.

See Figure 8. Before installing the liner system, the chimney passageway should be cleaned and examined to verify it is unobstructed and in good structural condition.



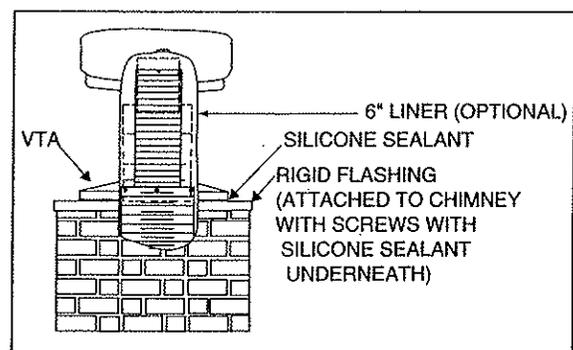
**Figure 8**  
Adaptation to Masonry Chimney

Measure and record the chimney dimensions to determine total flexible liner requirements.

Follow the liner manufacturer's instructions for installing the liner in the chimney. Attach a flexible liner puller to the liner and secure a rope to the puller. One person should feed the liner through the chimney, and another person should pull the liner from the bottom, with the rope, guiding the liner down the chimney. After feeding the liner down the chimney, form a 90° angle and bring the liner through the hole in the chimney wall. (If running two liners, run the 6" liner first and then the 4" inside of it.) Extend the liner through the wall of the chimney and attach it to the venting system extending from the top of the Heater.

Construct a metal flashing large enough and strong enough to cover the chimney opening and support the Heater Vertical Termination Cap. The flashing needs to fold down over and around the outside of the masonry chimney so that it can be secured to the chimney by 4 screws. See Figure 9. The flashing will require a hole at least 6 1/2" in diameter. (If using a 6" liner, extend the 6" flexible liner through the flashing and attach it to the VTA (Vertical Termination Adapter) with screws provided.) Secure the VTA to the flashing with the screws provided and seal the VTA/Flashing joint with a silicone sealant to prevent moisture from running down the liner into the chimney.

Attach the 4" gas vent liner to the Vertical Termination Cap with screws provided, then attach the Termination Cap to the VTA with screws provided. See Figure 9.



**Figure 9**  
Masonry Termination

#### D. Retro-fit Class A Metal Chimney Installation.

In many cases where a DOVRE DV425S is replacing a woodstove, much of the existing Class A Metal Chimney can be incorporated into the direct vent system.

The existing chimney must comply with NFPA-211 codes and any local code requirements.

**The chimney should be cleaned and examined to verify it is unobstructed and in good structural condition. Any structural weaknesses such as cracks, leaky joints, corroded or warped surfaces can have an adverse effect on the performance of this Heater and should be replaced or repaired.**

Whenever an existing Class A Metal Chimney is on an outside wall, removal of the chimney and the use of the minimum horizontal direct vent termination kit may be less expensive.

When using an existing Class A Metal Chimney the following requirements are necessary:

Minimum size diameter is 6 inches.

Minimum height from the base of the stove to the top of termination cap is 9 feet.

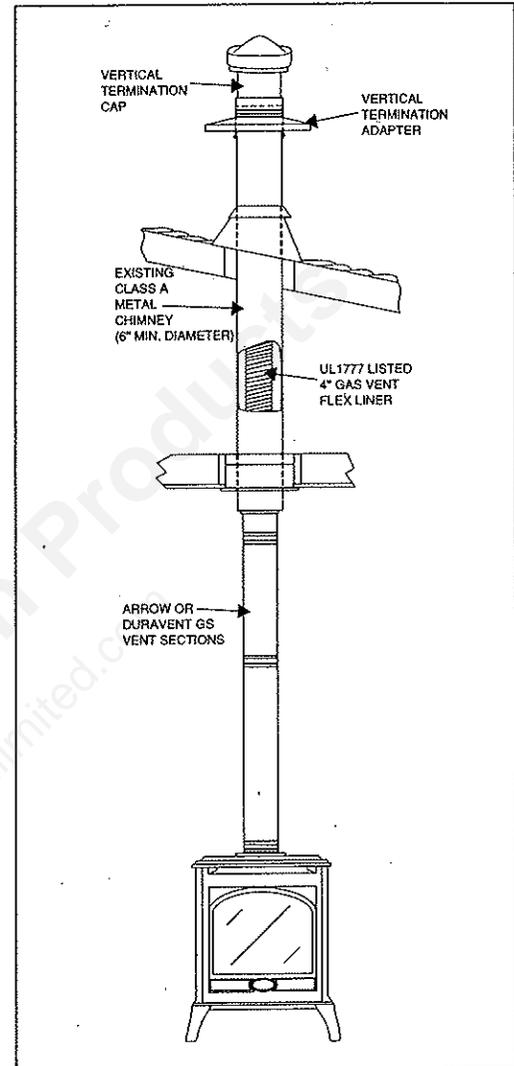
The vent from the top of the Heater to the Chimney must be rigid vent sections. A 4" UL 1777 listed gas vent aluminum flexible liner can be used inside the chimney. The flexible liner must be secured to the last rigid section with three (3) sheet metal screws. A minimum 3 inch overlap is required. Remove and discard the existing chimney termination cap.

Determine the length of the 4" UL 1777 listed gas vent flex liner required to meet the vent sections at the top of the Heater.

Follow the liner manufacturer's instructions for installing the liner in the chimney. Attach a flexible liner puller to the liner and secure a rope to the puller. One person should feed the liner through the chimney, and another person should pull the liner from the bottom, with the rope, guiding the liner down the chimney. Extend and run the 4" gas vent liner down the chimney leaving 10" extending from the top of the chimney stack.

Install and secure the VTA (Vertical Termination Adapter) onto the chimney with the brackets provided.

Place and secure the Termination Cap on the VTA with the screws provided. See Figure 10.



**Figure 10**  
**Retro-Fit to Metal Chimney**

# PRE-INSTALLATION PREPARATION



## VI. GAS LINE INSTALLATION

The Valve is located near the lower Right Rear Corner of the appliance. Install the Gas Supply Line to the backside of the unit to ease installation of the unit to the Supply Line, a flexible connector and Manual Shut - Off Valve are supplied. The Manual Shut - Off Valve should be installed onto the Supply Line, ahead of the flex. All connections must be checked for leaks with a soap and water solution or Gas Sniffer.

## VII. GAS PRESSURE

For natural gas, the minimum inlet gas supply pressure is 4.5 inches water column, and the maximum inlet gas pressure is 7.0 inches water column, for the purpose of input adjustment. Input rate is 30,000 Btu/hr. For propane gas, the inlet gas supply pressure must be at least 11.0 inches water column and a maximum 14.0 inches water column. Input rate is 28,000 Btu/hr.

Manifold pressure for this Heater is 1.6 - 3.5 inches water column for natural gas and 6.3 - 10.0 inches water column for propane gas. This Heater has a variable adjust manifold.

Pressure taps are located on the front of the Valve for both inlet and outlet pressure.

## VIII. FIELD FUEL CONVERSION (CONVERSION KITS)

### A. Gas and Power Supply.

1. Shut off the Gas Supply to the unit.
2. Unplug the Blower Cord from the Power Supply.
3. Carefully remove the Logs and Burner from the Firebox. See page 18, "Firebox Entry".

For conversion of the DV425S unit, use the SPCK400S to convert from Natural Gas to L.P. or the SNCK400S to convert from L.P. to Natural Gas.

### B. Burner Orifice.

Adjust Air Shutter Adjustment Screw as necessary to slide the Air Shutter off the Burner Orifice.

1. Loosen and remove the Retaining Nut on the Burner Orifice with a 5/8" wrench. See Figure A.
2. Replace the Burner Orifice with the proper Orifice required for the conversion. Reposition the Air Shutter onto the Burner Orifice. Refer to Section IX., on the following page, for High Altitude Installation.

### C. Pilot Orifice.

1. Secure the Bracket of the Pilot Assembly and loosen the base of the Pilot Hood with a 7/16" wrench, unscrew and remove. See Figure B.
2. The Pilot Orifice is inside the base of the Pilot and may need to be pried out with a small flat head screwdriver or needle nose pliers.
3. Replace the Orifice with the proper one.
4. Replace the Pilot Hood and tighten until it is tight and properly aligned. See Figure C for proper alignment.

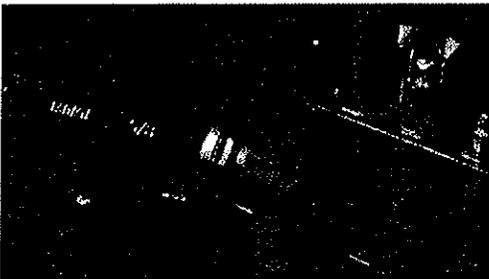


Figure A

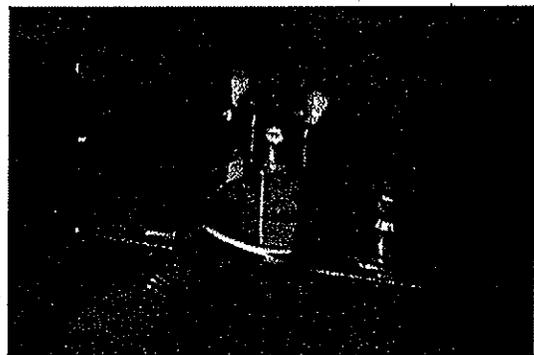


Figure B

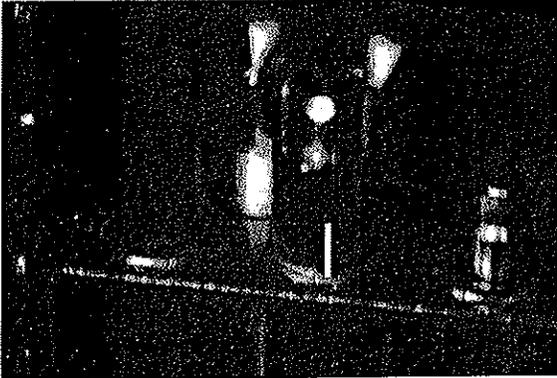


Figure C - Pilot Hood Aligned Correctly

#### E. Leak Check.

1. Turn on the Gas Supply to the unit to check for gas leaks with soap and water.
2. Turn the Gas Control Knob to the "Pilot" position. Push the Knob in all the way and hold. At the same time, push in the Red Ignitor button repeatedly until the Pilot lights. Never hold the Gas Control Knob for more than [10] seconds if the Pilot does not light. Once the Pilot lights, continue to hold the Control Knob in for 15 seconds. Release the Gas Control Knob and it will pop back out. Test for leaks at the Pilot Assembly using a soap and water solution or a Gas Sniffer. Turn the Gas Control Knob to the "ON" position and turn the Switch "ON". Check for leaks around the Valve and the Burner Orifice.

#### D. Valve - Adjustable Regulator.

1. Gain access to the Valve Regulator Head by lifting up on the Valve Cover and removing the Tabs from the Slots on the Back Shield.
2. Follow Steps 1 - 3 in the Instructions included with the Regulator. Save the Label included in the Kit for later attachment to the unit.
3. Replace the Valve Cover after the Valve has been checked for leaks.

## IX. HIGH ALTITUDE INSTALLATION

For U.S. installation, units are tested and approved for elevations from 0-2000 feet.

When installing this unit at an elevation above 2000 feet, it may be necessary to decrease the input rating by changing the existing Burner Orifice to a smaller size. Input should be reduced 4 percent for each 1000 feet above sea level. Check with the local gas utility for proper Orifice size identification. This unit is shipped with a .106 in./2.67mm. Orifice size on Natural Gas versions and an .063 in./1.60 mm. Orifice size on Propane Gas versions.

For Canadian installation, units are certified for elevations from 0-4500 feet. When installing this unit at an elevation between 0-4500 feet in Canada, the input rating does not need to be reduced.

When installing this unit at an elevation above 4500 feet in Canada, check with local authorities.

Consult your local gas company for assistance in determining the proper Orifice for your location or refer to ANSI Z223.1-latest edition, Appendix F.

**NOTE: This Heater DOES NOT require a 110VAC supply for operation.**



**NOTE: This Heater must be electrically wired and grounded in accordance with Local Codes or, in the absence of Local Codes, with the National Electric Code ANSI/NFPA 70-latest edition, or the Canadian Electrical Code, CSA C22.1.**

**NOTE: This appliance and its individual Shut - Off 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 psi (3.5kPa). The appliance must be isolated from the Gas Supply Piping System by closing its individual Manual Shut - Off Valve during any Pressure testing of the Gas Supply Piping System at test levels equal or less than 1/2 psi (3.5 kPa).**

## X. OPTIONAL ACCESSORIES

Optional accessories may be added now or at a later date.

### A. BK94A Optional Fan

The Optional Fan Kit (BK94A) requires a 110VAC supply.

#### Optional Blower Kit

The DV425 has been tested and listed with the use of an optional blower kit (BK94A). The fan motor does not require lubrication; however, the blades and housing should be vacuumed and cleaned as needed.

#### BK94A Installation

1. Remove both of the Cover Plates from the Backshield of the DV425 by removing the four (4) screws that hold each in place. See Figure 1BK.
2. Remove the Control Knob from the Control Rod by holding the Rod and pulling upward on the Knob.
3. Unplug the two Lead Wires from the Burner Switch.
4. Remove the Switch Bracket by removing the [2] screws. This Bracket will not be used later but the screws will.
5. Slide the Control Rod through the holes in the Blower Shroud and attach the Shroud onto the back of the unit with the screws provided. See Figure 2BK. If there aren't holes in the Backshield, it will be necessary to drill holes for the screws.
6. Attach the Blower Housing to the Blower Shroud with the screws provided and then to the Backshield. It will be necessary to drill holes for the screws. See Figure 3BK.
7. Attach the Switch Control Box onto the Blower Shroud with the screws provided. See Figure 4BK.
8. Plug the Connector on the Wiring Assembly into the Receptacle on the top of the Blower Housing. See Figure 5BK.
9. Plug the Lead Wires onto the Switch. See Figure 5BK.
10. Attach the Switch Bracket/Switch to the Blower Shroud with the screws from the original Bracket. See Figure 5BK.
11. Push the Control Knob back onto the Control Rod.

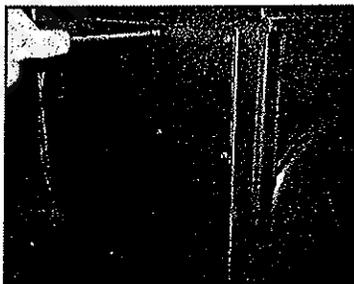


Figure 1BK - Removal of Fan Cover Plates

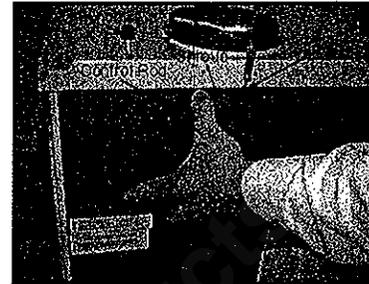


Figure 2BK - Fan Installation on Backshield

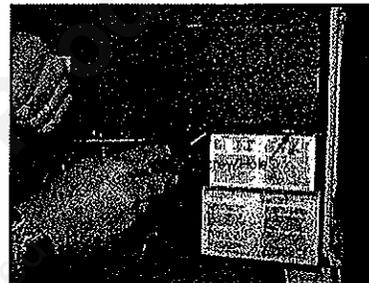


Figure 3BK - Attaching Blower Housing

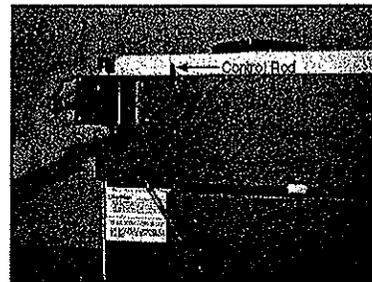


Figure 4BK - Attaching Switch Control Box



Figure 5BK - Steps 8, 9, & 10.

### WARNING!

#### Electrical Grounding Instructions

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

**WARNING!**

**Electrical Grounding Instructions**

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

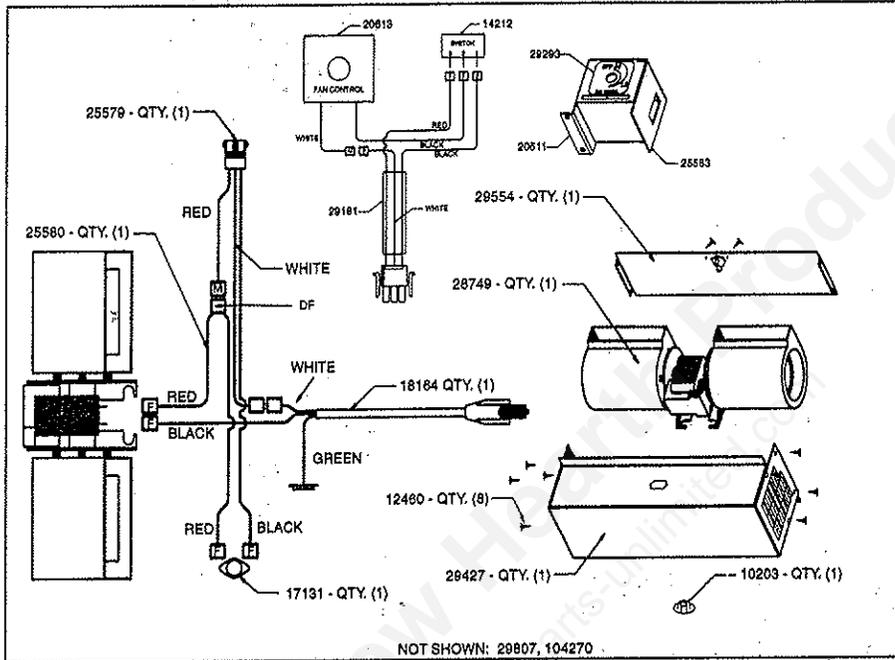


Figure 11 - BK94A Wiring Diagram

**B. Optional Wall Thermostat**

The use of a millivolt Thermostat is allowed. It must be located within 20 feet of the appliance. In order for the Thermostat to work, the "ON/OFF" Switch must be in the "ON" position.

Figure 12 shows how to connect a millivolt Thermostat without the "ON/OFF" Switch in the Circuit. Disconnect the "ON/OFF" Switch from the Valve and wire the millivolt Thermostat as indicated.

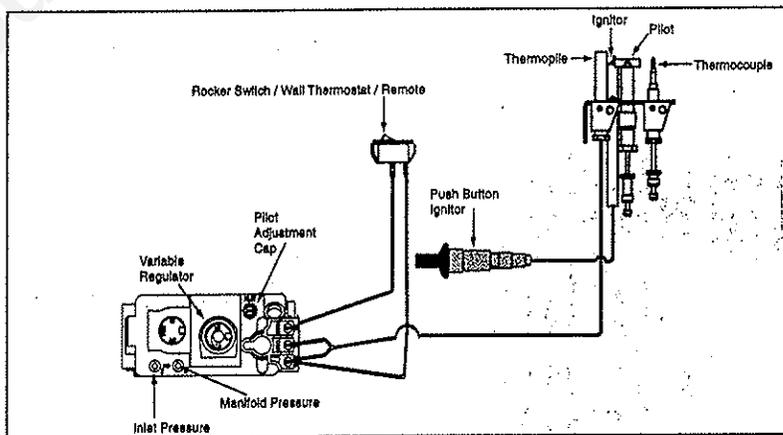


Figure 12 - Wiring Diagram

## XI. FIREBOX PREPARATION

### A. Firebox Entry.

1. Remove the Bolt from the bottom of the unit that holds the Front Face in position. See Figure 13.
2. Carefully lift the Front Face up and pull the bottom forward. Place the Front Face in a safe place.
3. Remove the Glass Frame Assembly by pulling the Latch Releases forward and upward. See Figure 14. Lift the Glass Frame Assembly up, sliding the [3] tabs at the bottom out of the slots. See Figure 15.

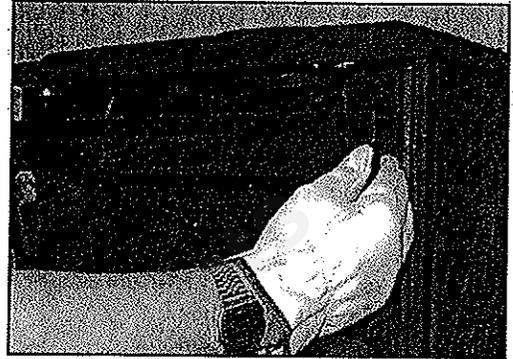


Figure 15

### B. Creating the Coal Bed Look.

- 1) Distribute the Lava Rock over the surface of the Hearth Pan to create the look of a bed of coals. Do not put the Lava Rock onto the surface of the Burner. See Figure 16.
- 2) The Chunks can be placed on the Burner Pan to create the look of burnt coals. See Figure 17. Do not place the Chunks in a pile over the Ports as they may restrict the gas flow, thus causing a less than satisfactory performance (it is recommended that 2 Chunks be used for L.P. and 3 Chunks for Natural Gas).

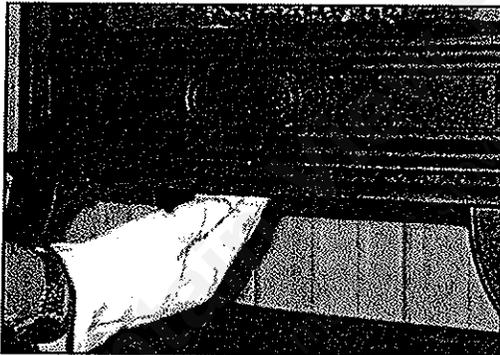


Figure 13



Figure 16

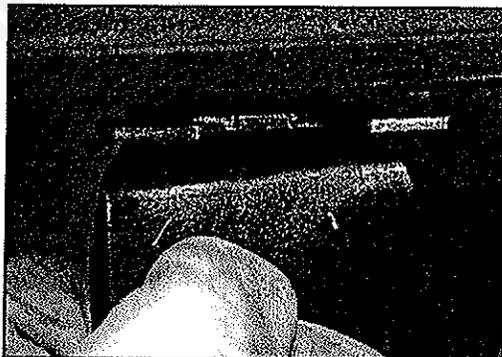


Figure 14



Figure 17

**C. Placing the Rock Wool.**

Tear the Rock Wool into pieces no larger than 1/2" diameter and place it over the Front Gas Ports so that the flame can touch the Wool to create the look of glowing embers. Be sure not to pack the Rock Wool tightly against, and do not cover, the Air Ports under the Front Logs.

The Rock Wool can easily affect the appearance of the flame. Some experimenting may be necessary to create an acceptable flame. Too much Rock Wool on the Gas Ports can cause improper combustion and also cause sooting (especially with an appliance burning L.P.).



Figure 18

**D. Adjustable Flue Restrictor.**

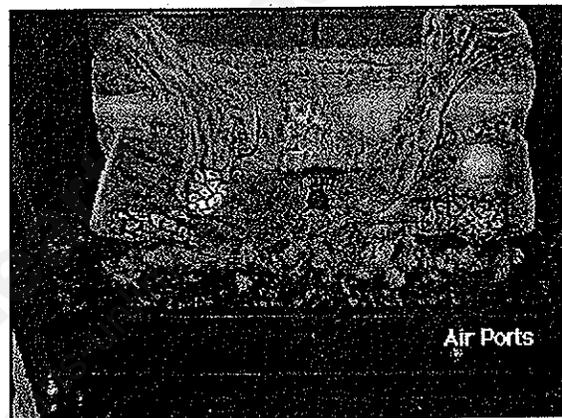
The DV425S has an adjustable flue Restrictor for maximum performance for vertical installations. The unit is shipped with the Restrictor in the "OPEN" position and should be left open with any horizontal installations.

By loosening the screw in the Firebox and sliding towards the rear of the Firebox, the Restrictor will close down. See Figure 19.

The amount to close the Restrictor will depend on the flue height.

If the vertical height is 20 feet or more, the Restrictor can be closed all the way. Anything less will require some setting less than closed. That setting will vary depending on the installation.

Any Offsets in a vertical installation will restrict the system and the flue Restrictor will not need to be closed as much.



Completed Firebox View

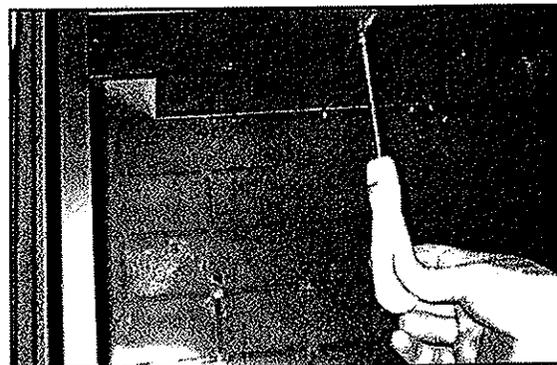


Figure 19  
Adjustable Flue Restrictor

**E. Cleaning the Glass.**

To clean the Glass, use a non-abrasive, mild cleaning solution. For example, a Glass cleaner or for stubborn film, an oven cleaner. Apply an adequate amount to the Glass and wipe off with a damp cloth. Be sure all cleaner is thoroughly rinsed from the Glass.

**F. Install the Glass.**

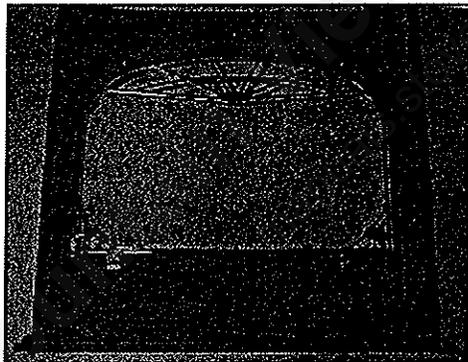
After cleaning the Glass, carefully place the Glass Frame Assembly onto the unit by positioning the Tabs at the bottom of the Frame into the Slots. Pull the Latch Releases forward and hook them over the Glass Frame.

**G. Optional DT9 Installation.**

The Decorative Trim can be installed at this time.

1. Lay the Front Face on a flat surface being careful not to damage it.
2. Lay the DT9 onto the Front Face and attach with the screws provided.

See Figure 20.



**Figure 20**  
**DT9 Installation**

**H. Replacing the Front Face.**

Carefully lift the Front Face into position and replace the screw to hold it in position.

**WARNING!**

**NEVER OPERATE THIS APPLIANCE WITH THE DOOR AND/OR GLASS REMOVED OR NOT SEALED.**

**WARNING!**

**DO NOT OPERATE APPLIANCE WITH THE PANEL(S) REMOVED, CRACKED OR BROKEN. REPLACEMENT OF THE PANEL(S) SHOULD BE DONE BY A LICENSED OR QUALIFIED SERVICE PERSON.**

**✓ Pre - Use Check List**

Before operating this heater, please review the safety precautions given on page 2 as well as the items listed below:

1. Check to make sure the logs are securely in place and the rock wool has all been placed correctly. Refer to Steps B and C.
2. Check to see that all wiring is correct and enclosed to prevent possible shock.
3. Check to ensure there are no gas leaks. This may be done with a soap and water solution.
4. Make sure the Glass is sealed and in its proper position. Never operate this heater with the door opened or glass removed or not sealed.
5. Verify that all venting and caps are unobstructed. Exhaust gases are extremely hot. Check for obstructions from trees, bushes, snow drifts, etc. A DCS200 cap shield can be purchased to help prevent possible contact with the horizontal termination cap.
6. Read and understand these Instructions thoroughly before attempting to operate this heater.

## XII. OPERATING INSTRUCTIONS

### 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 gas appliance has a manual ignition device that lights the pilot. When lighting the pilot, follow these instructions exactly.

B. **STOP! BEFORE READING FURTHER**, smell around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle to the floor.

WHAT TO DO IF YOU SMELL GAS:

- \*Do not try to light the appliance.
- \*Do not touch any electric switch; do not use any telephone in your building.
- \*Immediately call your gas supplier from a neighbor's telephone. Follow the instructions of your utility.
- \*If you cannot reach your utility, call the fire department.

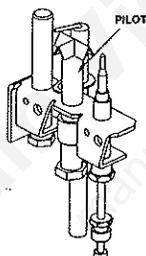
C. IF THE PILOT LIGHT AND BURNER WENT OUT DURING USE, YOU MUST TAKE THE GLASS OFF THE APPLIANCE AND WAIT TO CLEAR OUT ANY GAS. FOLLOW THE LIGHTING INSTRUCTIONS BELOW.

D. Use only your hand to push in or turn the gas control knob to light the pilot. Never use tools. If the knob will not push in or turn by hand, do not try to repair it; call a qualified service technician. Using a tool or attempting repairs may result in a fire or explosion.

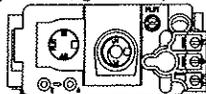
E. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

### LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information above.
2. Turn off all electric power to the appliance. If your appliance has a thermostat, set to lowest setting.
3. Open control access panel.
4. Find the pilot. The pilot is inside the combustion chamber next to the main burner.



5. If the gas control knob is at the "OFF" position, go to step 7. If the gas control knob is at the "ON" position, go to step 6.



6. If the pilot light went out during normal use with the gas control knob at the "ON" position, turn the gas control knob to the "OFF" position. **REMOVE THE FIXED GLASS PANEL.** Wait ten (10) minutes to clear out any gas.

7. Smell for gas, including near the floor. If you don't smell gas, go to the next step. If you smell gas, wait another five (5) minutes or until the gas odor is no longer present before continuing. If the odor of gas does not disappear after fifteen (15) minutes, **STOP!** Follow "B" in the safety information above.

8. Replace glass panel if it has been removed.
9. Turn gas control knob counterclockwise to the "PILOT" position.
10. Push the gas control knob in all the way and hold. At the same time, push in red ignition button repeatedly until the pilot lights. Never hold the gas control knob in for more than ten (10) seconds if the pilot does not light. Once the pilot lights, continue to hold the gas control knob in for 15 seconds. Release the gas control knob and it will pop back up. If pilot does not remain lit, repeat steps 6 through 9.

\*If gas control knob does not pop back up when released, turn the knob to "OFF" and call your service technician or gas supplier.

\*If the pilot will not stay on after two attempts, turn the gas control knob to "OFF" and call your service technician or gas supplier.

11. Turn gas control knob counterclockwise to the "ON" position. The knob can be turned to the "ON" position only if it is popped up.
12. Close the access panel.
13. Turn on electrical power to the appliance. If equipped with a thermostat, set to the desired setting.

### TO TURN OFF GAS TO APPLIANCE

1. Turn rocker switch to OFF or the wall thermostat to lowest setting if your unit is so equipped.
2. Turn off all electric power to the appliance if service is to be performed.
3. Open control access panel.
4. Turn gas control clockwise to "OFF".
5. Close control access panel.

Upon completing the gas line connection, a small amount of air will be in the lines. When first lighting the pilot light, it will take a few minutes for the lines to purge themselves of this air. Once the purging is complete, the pilot and burner will light and operate.

Subsequent lightings of the appliance will not require such purging.

**CAUTION:**

During the initial purging and subsequent lightings, NEVER allow the gas valve control knob to remain depressed in the "pilot" position without pushing the red ignitor button at least once every second.

When lit for the first time, the appliance will emit a slight odor for an hour or two. This is due to paint and lubricants used in the manufacturing process. Additionally, for the first few minutes after each lighting, vapor may condense and fog the glass and the flames may be blue. After a few minutes, this moisture will disappear and within 15-30 minutes the flames should become yellow.

**"ON/OFF" SWITCH FOR THE BURNER.**

The "ON/OFF" Switch for the Burner is located at the rear of the unit.

The knob beside the Switch controls the flame setting. Turning counterclockwise increases the flame and turning clockwise turns the flame to low. See Figure 21.

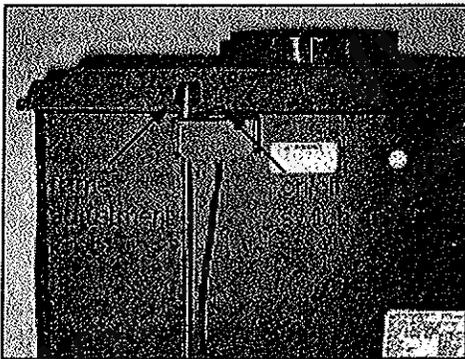


Figure 21  
Flame Adjustment

**AIR SHUTTER ADJUSTMENT.**

The air shutter adjusts the amount of air that mixes with the gas as it enters the burner pan. It is used to fine tune the flame as necessary for differences in altitude and vent configuration. The shutter is shipped in the open position. It can be adjusted by removing the front face and turning the adjustment screw. See Figure 22. Turning the screw in will close the shutter; turning the screw out will open the shutter. The shutter can be adjusted while the unit is in operation. However, the unit should be shutoff and allowed to cool before removing the front face.

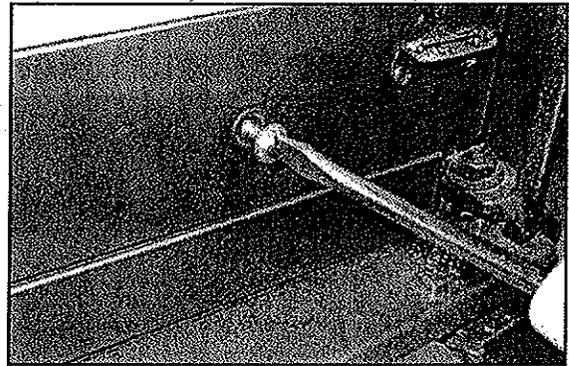


Figure 22  
Air Shutter Adjustment

**Note:** Allow the unit to cool before replacing the front face.

Allow the unit to operate about 15-20 minutes. This will give the flame time to reach its height and color before making adjustments to the air shutter. As the shutter is closed, the flame should get taller and darker.

The appliance may produce a noise, caused from metal expansion and contraction as it heats up and cools down. This noise is similar to one that a furnace or heat duct may produce and does not affect the operation or longevity of the unit.

Keep the control compartment, logs, and burner area surrounding the logs clean by vacuuming or brushing at least twice a year.

**CAUTION:**

THE LOGS CAN GET VERY HOT - HANDLE ONLY WHEN COOL

**SEASONAL SHUTDOWN**

When the burning season comes to an end, the entire system should be shut down to prevent gas running to the appliance while it is not in use.

**OPERATION PROCEDURE DURING REGULAR USE**

Simply turn the Switch/Thermostat to the "ON" position. This will ignite the main Burner.

**SHUTDOWN DURING REGULAR USE**

Simply turn the Switch/Thermostat to "OFF". This will disengage the Burner and the flames will extinguish.

### XIII. MAINTENANCE INSTRUCTIONS

**Cleaning the Burner and Control Compartment.**

Keep the Burner compartment clean. Brush this area with a clean, dry paint brush and vacuum at least once a year. Always turn off the gas valve and "ON/OFF" switch before cleaning.

**Checking the Flame Patterns.**

Visually check the flame of the burner periodically, making sure the flames are steady; not lifting or floating. The flame color should be blue with yellow tips. The Thermopile Tip should be covered with flame.

See Figure 22.

**NOTE: If the Air Shutter is open all the way and the flames remain sooty, shut off the gas to the appliance and contact a qualified gas service technician.**

**If the vent configuration is installed incorrectly, the vent may cause the flames inside the appliance to lift or "ghost" - a dangerous situation. Inspect the flames after installation to ensure proper performance. If the vent configuration is correct, yet the flames are lifting or ghosting, shut off the gas to the appliance and contact the dealer for information on remedying the problem.**

**Venting System Inspection.**

The heater and venting system should be inspected before use each season, and at least annually, by a qualified field service person, to ensure that the flow of combustion and ventilation air is not obstructed.

**Cleaning the Glass.**

It is recommended to wear gloves while handling or removing the Glass. **DO NOT REMOVE THE GLASS WHEN HOT.**

**NOTE: When cleaning the Glass, NEVER use abrasive materials. NEVER clean the Glass when it is hot.**

To clean the Glass, use a non-abrasive, mild cleaning solution. (For example, a glass cleaner for stubborn film, or an oven cleaner.) Apply an adequate amount to the Glass and wipe off with a damp cloth. Be sure all cleaner is thoroughly rinsed from the Glass.

Never operate this heater without the Glass properly secured in place nor if the Glass is broken.

In the event of Glass breakage, follow the door removal instructions. This will allow the removal of all Glass fragments and sheet metal edge protection strips. Vacuum all remaining Glass pieces with a shop vac. (DO NOT VACUUM IF PIECES ARE HOT.) Replace Glass ordered direct or through your local distributor. Never use substitute material. Only Ceramic Glass may be used on this heater.

**Log Cleaning.**

The Logs can be easily lifted out of position. Carbon build-up can be removed with a vacuum cleaner.

**WARNING!**  
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.

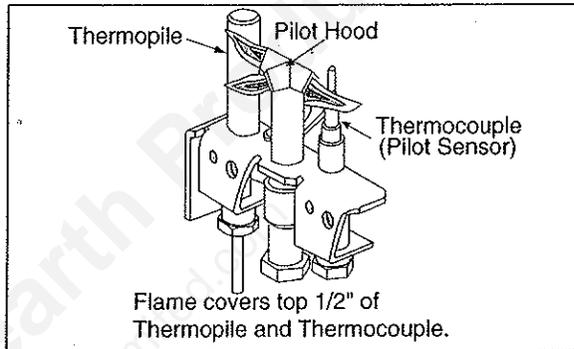


Figure 22 - Standing Pilot

**NOTE: Operation of a Direct Vent Heater may be sporadic in high wind situations.**

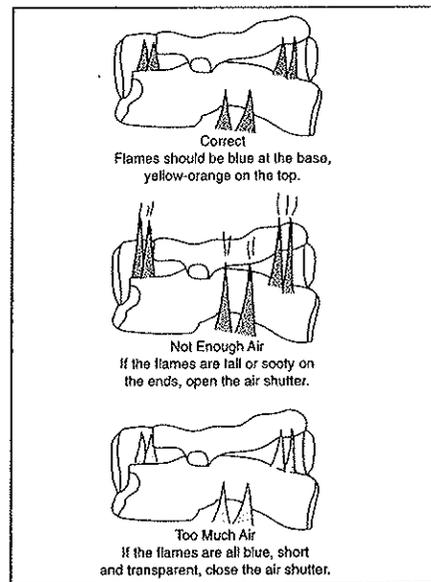


Figure 23 - Flame Patterns

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

## XIV. TROUBLE SHOOTING

Problem:	Possible Cause:	Solutions:
<b>Pilot will not light.</b>	Air in Gas Lines.	Bleed air from Gas Line.
	Wrong Inlet Pressure.	Check Gas Line pressure (7" Nat., 11" L.P.).
	Defective Spark Electrode.	Replace Electrode if the Insulator is cracked or the Tip is corroded. Verify that the Spark Gap between the Pilot and the Electrodes correct.
	Defective Piezo Wire.	Replace Piezo Wire if Insulation is damaged, broken, or corroded.
	Safety Interlock Function engaged.	Allow Thermocouple to cool until the mV drops below the hold - in requirements of the Safety Magnet (30 seconds or less). Relight Pilot.
<b>Pilot will not hold.</b>	Wrong Inlet Pressure.	Check Gas Line pressure (7" Nat., 11" L.P.).
	Pilot Adjustment Screw not adjusted properly.	After the Pilot has been lit for approximately [3] min., and only the Thermo-generator wires connected to the Main Operator Head, measure the voltage across TPTH and TP. This Open Circuit voltage should be between 500mV and 750mV. Tune the Pilot Adjustment Screw until the mV reading falls within these parameters. Counter-clockwise increases the mV reading, Clockwise decreases it. Turn with a Wrench.
	Thermocouple or Thermo-generator has Film build-up on Tip.	With the Thermocouple and Thermo-generator Tips cool, clean the upper 3/8" with a very fine Emery cloth.
	Electrical Resistance too high.	Using a very fine Emery cloth, clean the Thermo-generator and Thermocouple connections at the Valve. Tighten Thermocouple into Valve, hand tight, adding a 1/4 turn with a wrench.
	Defective Thermocouple. (mV Plus System)	Verify that the Thermocouple is not kinked or damaged. Check Open-Circuit voltage of Thermocouple. Voltage should be between 18mv and 28mv. If voltage is less than 14mv, replace the Thermocouple.
	Defective Thermo-generator. (millivolt System)	After the Pilot has been lit for approximately [3] min., and only the Thermo-generator wires connected to the Main Operator H Head, measure the voltage across TPTH and TP. This Open Circuit voltage should be between 500mV and 750mV. Tune the Pilot Adjustment Screw until the mV reading falls within these parameters. Counter-Clockwise increases mV reading, Clockwise decreases it.
	Defective Safety Magnet (mV Plus Systems).	Verify operation of Safety Magnet in the following manner: (A) Depress and hold the Pilot Button. (B) Verify Open-Circuit Thermocouple voltage as described in previous Step. (C) Reconnect Thermocouple to the Valve. (D) Measure the milli-voltage between the Solder Button on the base of the Safety Magnet and the Valve body.

## XIV. TROUBLE SHOOTING (continued)

Problem:	Possible Cause:	Solutions:
Pilot will not Hold (Cont.).	Defective Magnet (mV Plus systems).	If the mV reading is above 6mV and the Safety Magnet does not hold, replace the Valve. (E) If Closed-Circuit mV reading is the same as the Open-Circuit reading, the Coil is electrically "Open". Replace the Valve.
	Defective Safety Magnet (milliVolt System)	Verify operation of Safety Magnet in the following manner: (A) Remove all Wires from the Terminals of the Main Operator. (B) Measure the electrical voltage between the Terminals TPTH and TP. If the voltage is above 110mV and the Safety Magnet does not hold, replace the Valve.
Pilot Drops Out.	Pilot Orifice blocked.	Replace Orifice with a new Orifice of the exact size and type.
	Wrong Pilot Orifice.	Replace the Orifice with a new Orifice supplied specifically for the appliance and gas in question.
No gas to Main Burner.	Low gas pressure to appliance.	Check Gas Pressure (7" N.G./11" L.P.)
	Pilot not lit.	Light Pilot and wait for Thermo-generator to heat up sufficiently to power the Main Operator. If Pilot fails to light, hold, refer to the above sections.
	Control Knob in the "ON" position.	Rotate "OFF/PILOT/ON" Control Knob to the "ON" position.
Thermostat/ Wall Switch will not cycle the Main Burner.	Thermostat not in the "ON" position.	Turn Thermostat "ON" and then adjust Temperature Control to call for heat.
	Thermo-generator output voltage not within design parameters. Defective Thermostat or Thermostat Wiring.	If unable to meet minimum requirements, replace the Thermo-generator. (A) With the Pilot adjusted properly, place a Jumper Wire between TPTH and TH. Take a mV reading across the TPTH and TH Terminals of the Valve. This Closed Circuit voltage should not fall below 300mV. Record reading. (B) Remove Jumper Wire from the TPTH and TH connections and connect the Thermostat Wires to the same Terminals. Closed Circuit voltage as described in the previous Step. If the mV reading drops below 150mV, excessive resistance exists in the Thermostat Circuit and must be isolated and eliminated.
	Defective Wall Switch.	Repeat the above troubleshooting items covered under "Defective Thermostat or Thermostat Wiring" except, substitute the words "Wall Switch" where the word Thermostat appears in the instructions.

**XIV. TROUBLE SHOOTING (continued)**

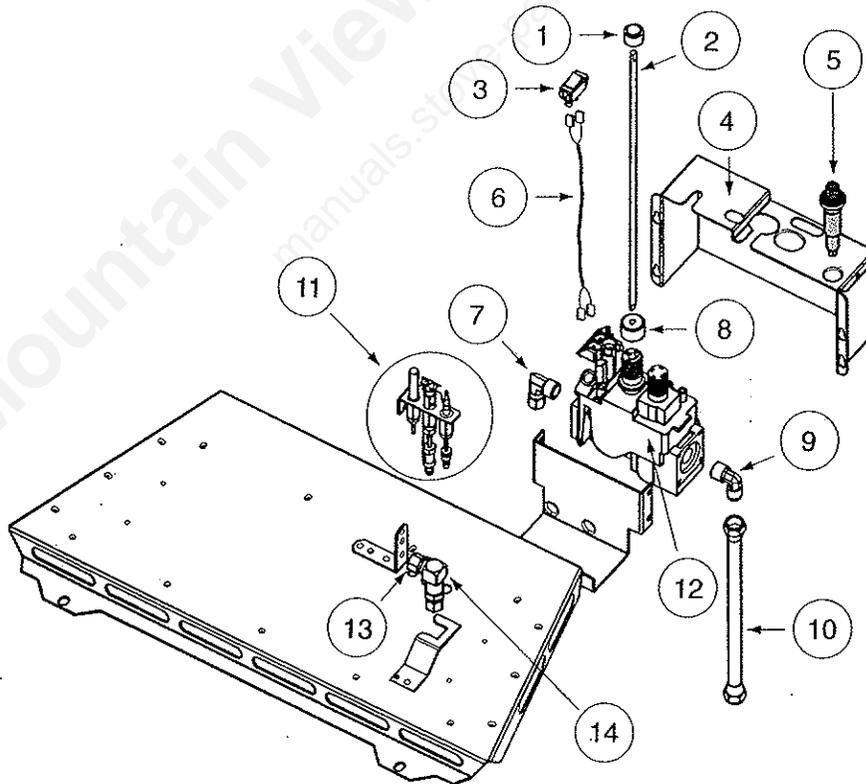
<b>Problem:</b>	<b>Possible Cause:</b>	<b>Solutions:</b>
Thermostat/ Wall Switch will not cycle the Main Burner (Cont.)	Excessive Wire Resistance.	Make sure that all mV connections are made using wire of the proper size.
	Valve Wired Incorrectly.	The Thermo-generator leads must be connected to the TPTH and TP connections of the Main Operator. Thermostat Wires must be connected to the TPTH and TP Terminals of the Valve.
Main Burner lights while in the Pilot position.	Main Operator Coil is defective.	Verify electrical resistance of the Main Operator the following manner: (A) Remove <b>ALL WIRES!</b> from the Operator Head. (B) With an Ohm meter, measure electric resistance between the TP and TH Terminals. If the resistance does not fall within specification, replace the Valve.
	Debris on Seat of Main Valve.	Replace Valve.
	Main Seat blown out as a result of exposing an LPG Gas Valve to an unregulated line pressure in excess of 15psi.	Replace Valve.

## XV. REPLACEMENT PARTS

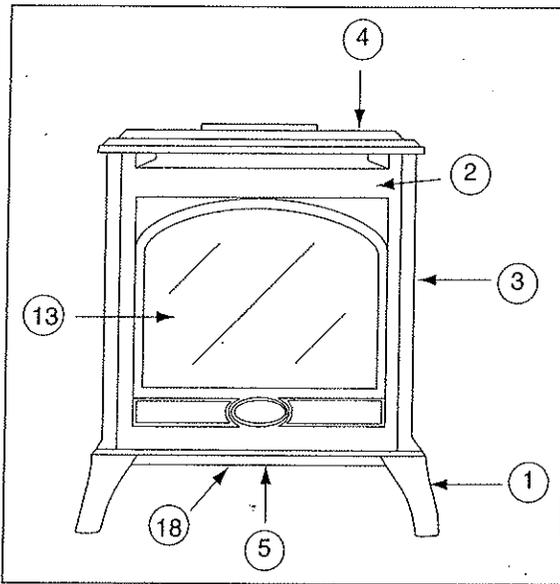
Replacement parts are available from your distributor/dealer, or through Aladdin Hearth Products, 401 N. Wynne, Colville, WA 99114.

If necessary, a Conversion Kit is available from your distributor/dealer, or through Dovre. To convert from propane to natural gas, use the SNCK425S. To convert from natural to propane gas, use the SPCK425S.

ITEM	PART#	DESCRIPTION
A	29253	Burner Assembly
1	19942	Knob
2	30224	Control Rod
3	25398	"ON/OFF" Rocker Switch
4	30145	Valve Cover Assembly
5	13416	Push Button Ignitor
6	29180	Rocker Switch Wire Assembly
7	14326	Brass Elbow
8	30049	Control Rod Knob
9	17524	Brass Elbow
10	17245	Flex Tube
11	29478	Pilot Assembly - Natural Gas
	72965	Pilot Orifice - Natural Gas
	29479	Pilot Assembly - Propane
	72843	Pilot Orifice - Propane
12	29484	Valve Assembly - Natural Gas
	29485	Valve Assembly - Propane
13	19837	Burner Orifice - Natural Gas
	17236	Burner Orifice - Propane
14	26457	Bulkhead



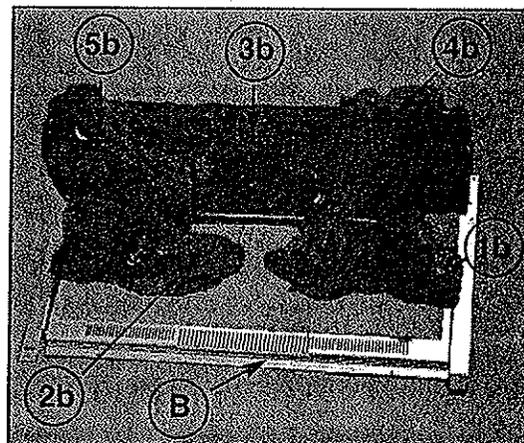
\*\* If any of the original wiring as supplied with the heater must be replaced, it must be replaced with Type 18 ga., 105C wire, or its equivalent.



**Figure A**  
**DV425S Parts Identification**

ITEM	PART #	DESCRIPTION
1	26404	Leg-Black
	26420	Leg-Porcelain Black
	26425	Leg-Porcelain Blue
	26431	Leg-Porcelain Creme
	26437	Leg-Porcelain Green
2	26403	Front Face-Black
	26419	Front Face-Porcelain Black
	26426	Front Face-Porcelain Blue
	26432	Front Face-Porcelain Creme
	26438	Front Face-Porcelain Green
3	26400	Side Plate-Black
	26417	Side Plate-Porcelain Black
	26423	Side Plate-Porcelain Blue
	26429	Side Plate-Porcelain Creme
	26435	Side Plate-Porcelain Green
4	26401	DV425S Top Plate-Black
	26418	DV425S Top Plate-Porcelain Black
	26424	DV425S Top Plate-Porcelain Blue
	26430	DV425S Top Plate-Porcelain Creme
	26436	DV425S Top Plate-Porcelain Green
5	26402	Bottom Plate
6	31252	Refractory - Left (not shown)
	31253	Refractory - Right (not shown)
	26397	Refractory - Back (not shown)
7	26455	Regulator Adapter (not shown)
9	26447	Shutter (not shown)
10	26443	Shutter Screw (not shown)
11	26388	Ceramic Glass Assembly
12	26454	DV425S Glass Gasket (not shown)
13	29545	Glass Frame Assembly
14	26448	Switch Bracket (not shown)
15	29290	Latch Arm Assembly (not shown)
18	26415	Wing Bolt (not shown)

ITEM	PART#	DESCRIPTION
B	29512	DV425S Log/Grate Assembly
1b	29408	Front Log - Right
2b	29409	Front Log - Left
3b	29412	Back Log
4b	29410	Top Log - Right
5b	29411	Top Log - Left
6b	14333	Mineral Wool (not shown)
7b	23509	Lava Rock (not shown)
8b	27880	Embers (not shown)



**Figure B**  
**DV425S Log Identification**

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# LIFETIME WARRANTY

## LIFETIME WARRANTY

The Aladdin Hearth Products limited Lifetime Warranty guarantees that the following components will work as designed for the lifetime of the stove or Aladdin Hearth Products will repair or replace them. These items include but are not limited to steel and cast iron components, flame plate, firebox reflector, combustion chambers, heat exchanger systems, stainless steel firebox components, burners, gas logs, gold plating, doors, glass damaged by thermal breakage, steel baffles and manifold tubes.

## THREE YEAR WARRANTY

Our EZ Clean and ceramic firepots are both covered under Aladdin's three-year warranty program.

## ONE YEAR WARRANTY

All electrical components such as but not limited to blowers, wiring vacuum switches, speed controls, control boxes, thermodisc switches, pilot assembly, ignitors and gas valves are covered under Aladdin's one-year warranty program. Carburetors are covered under Aladdin's one-year warranty. Labor to repair or replace these parts is covered for one year, reimbursed per our warranty service fee schedule.

## CONDITIONS

This warranty is non-transferable and is made to the original retail price purchaser only, provided that the purchase was made through an authorized dealer of Aladdin Hearth Products. This Aladdin product must be installed by a competent, authorized service contractor. It must be installed and operated at all times in accordance with the Installation and Operating Instructions furnished with this product, as well as any applicable local and national codes. Any alteration, willful abuse, accident, or misuse of the product shall nullify this warranty.

Labor to repair or replace items covered under the limited Lifetime Warranty will be covered for the first five years per our warranty service fee reimbursement schedule. Parts covered under the limited Lifetime Warranty will be covered for the lifetime of the appliance up to a maximum of five years after Aladdin Hearth Products discontinues the model. Adjustments, regular maintenance and cleaning, and temporary repairs do not qualify for a service call fee and will not be covered. The replacement of consumer replaceable items and installation of upgraded component parts do not qualify for a service call fee, and will not be covered.

This limited Lifetime Warranty does not extend to or include surface finish of the stove, door gasketing, glass gasketing, thermocouple covers, firebrick, kaowool or other ceramic insulating materials. It does not cover installation or operational-related such as overfiring, use of corrosive driftwood, downdrafts or spillage caused by environmental conditions, nearby trees, building, hilltops, mountains, inadequate venting or ventilation, excessive offsets, or negative air pressures caused by mechanical systems such as furnaces, fans, clothes dryers, etc.

Any installation, construction, transportation or other related costs or expenses arising from defective part(s), repair, replacement, etc., will not be covered by this warranty, nor will Aladdin Hearth Products assume responsibility for them. Further, Aladdin Hearth Products will not be responsible for any incidental, indirect, or consequential damages, except as provided by law. Aladdin Hearth Products will not be responsible for any alteration to the unit which causes sooting that results in damage to the interior or exterior of the building in which this appliance is installed. This limited Lifetime Warranty does not apply to venting components, hearth components or other accessories used in conjunction with the installation of this product not manufactured by Aladdin Hearth Products.

This warranty is void if the stove has been operated in atmospheres contaminated by chlorine, fluorine, or there is any damage to the stove or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation. Aladdin Hearth Products may, at its discretion, fully discharge all obligations with respect to this warranty by either repairing or replacing the unit, or refunding the wholesale price of the defective part(s).

This limited Lifetime Warranty is effective on all Dovre and Arrow stoves sold at point of purchase after July 1, 1998, and all Quadra-Fire stoves sold after September 1, 1996, and supersedes any and all warranties currently in existence.

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# *Attention*

## **INSTALLER**

***Please return these  
Operating & Installation  
Instructions to the  
Consumer***



Aladdin Hearth Products  
401 N. Wynne  
Colville, WA 99114  
A Division of Hearth Technologies Inc.