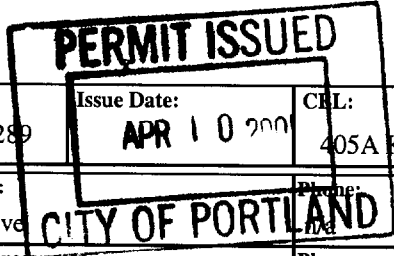


**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 01-0289	Issue Date: <b>APR 10 2001</b>	CEL: 405A K001001
-----------------------	-----------------------------------	----------------------

Location of Construction: 2 Liberty Way	Owner Name: Pines Of Portland Inc	Owner Address: 426 Forest Ave	Phone: n/a
Business Name: n/a	Contractor Name: Bill Recs Builders Insulation	Contractor Address: 515 Riverside Industrial Parkw Portlan	Phone: 2078786600
Lessee/Buyer's Name n/a	Phone: n/a	Permit Type: HVAC	Zone:



Past Use: Heat	Proposed Use: Heat	Permit Fee: *30.00 \$0.00	Cost of Work: \$0.00	Area 2
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: Type:	

Proposed Project Description:  
HVAC

Signature: *[Handwritten Signature]*      Signature: *[Handwritten Signature]*

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action:  Approved     Approved w/Conditions     Denied

Signature:      Date:

Permit Taken By: cih	Date Applied For: 03/27/2001	<b>Zoning Approval</b>		
-------------------------	---------------------------------	------------------------	--	--

<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p><b>Special Zone or Reviews</b></p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date:</p>	<p><b>Zoning Appeal</b></p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>	<p><b>Historic Preservation</b></p> <p><input type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>
---	--	--	--

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

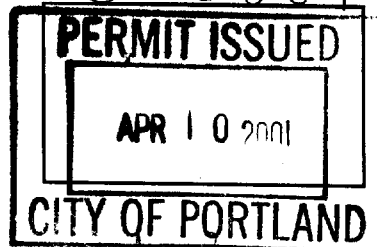
SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



FILL IN AND SIGN WITH INK

01-0289

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



To the INSPECTOR OF BUILDINGS, PORTLAND, ME. CBL# 405AK001

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location #2 Liberty Way Lot 19 Use of Building Home Date 3/27/01

Name and address of owner of appliance The Pines of Portland  
420 Forest Ave.

Installer's name and address Builders Insul. Portland  
515 Riverside Ind. Parkway Portland 04103 Telephone (407) 878-6699

**Location of appliance:**

Basement       Floor  
 Attic             Roof

**Type of Fuel:**

Gas       Oil       Solid

**Appliance Name:** FMT

U.I. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes       No

IF NO Explain: \_\_\_\_\_

**The Type of License of Installer:**

Master Plumber # \_\_\_\_\_  
 Solid Fuel # \_\_\_\_\_  
 Oil # \_\_\_\_\_  
 Gas # PNT 3025  
 Other \_\_\_\_\_

**Type of Chimney:**

Masonry Lined  
Factory built \_\_\_\_\_

Metal  
Factory Built U.L. Listing # \_\_\_\_\_

Direct Vent  
Type Bois UL# \_\_\_\_\_

**Type of Fuel Tank**

Oil  
 Gas

Size of Tank \_\_\_\_\_

Number of Tanks \_\_\_\_\_

Distance from Tank to Center of Flame \_\_\_\_\_ feet.

**Approved**

**Approved with Conditions**

Fire: M407

Ele.: \_\_\_\_\_

Bldg.: Donald Crotwell

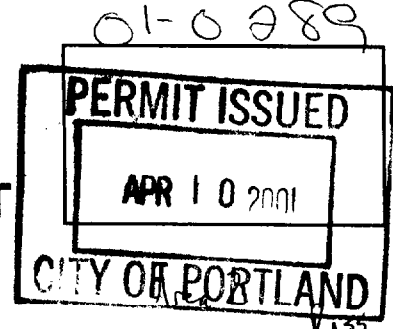
See attached letter or requirement \$30.00

Signature of Installer Bill Rice



FILL IN AND SIGN WITH INK

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



To the INSPECTOR OF BUILDINGS, PORTLAND, ME. CBL# 405AK001

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location #2 Liberty Way Lot 19 Use of Building Home Date 3/27/01

Name and address of owner of appliance The Pines of Portland  
427 Forest Ave.

Installer's name and address Builders Insul Portland  
515 Riverside Ind. Parkway Portland 04103 Telephone 878-6600

**Location of appliance:**

Basement  Floor  
 Attic  Roof

**Type of Fuel:**

Gas  Oil  Solid

**Appliance Name:** FMI

U.L. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes  No

IF NO Explain: \_\_\_\_\_

\_\_\_\_\_

**The Type of License of Installer:**

Master Plumber # \_\_\_\_\_  
 Solid Fuel # \_\_\_\_\_  
 Oil # \_\_\_\_\_  
 Gas # PNT 3025  
 Other \_\_\_\_\_

**Type of Chimney:**

Masonry Lined  
 Factory built \_\_\_\_\_

Metal  
 Factory Built U.L. Listing # \_\_\_\_\_

Direct Vent  
 Type Horiz. UL# \_\_\_\_\_

**Type of Fuel Tank**

Oil  
 Gas

Size of Tank \_\_\_\_\_

Number of Tanks \_\_\_\_\_

Distance from Tank to Center of Flame \_\_\_\_\_ feet.

Approved

Approved with Conditions

Fire: 14407

Ele.: \_\_\_\_\_

Bldg.: James Crotwell

See attached letter or requirement \$30.00

Signature of Installer Bill Rose



# CITY OF PORTLAND, MAINE

Department of Building Inspection

March 27<sup>th</sup> 20 01

Received from Builders Insulation a fee

of One hundred and twenty ~~100~~ <sup>120</sup> Dollars \$ 120.00

for permit to install  
erect  
alter install Fireplaces

at move  
demolish 46 Wyoming Ave 400 A 044 Est. Cost \$           

17 Liberty Way 405A 6600

Vermont Ave 405A 8001

115 Penn Ave 405A 6011 Inspector of buildings

CKH 8096 Per [Signature]

## THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less \$5.00 or 10% whichever is greater.

- WHITE - Applicant's Copy
- YELLOW - Office Copy
- PINK - Auditors Copy



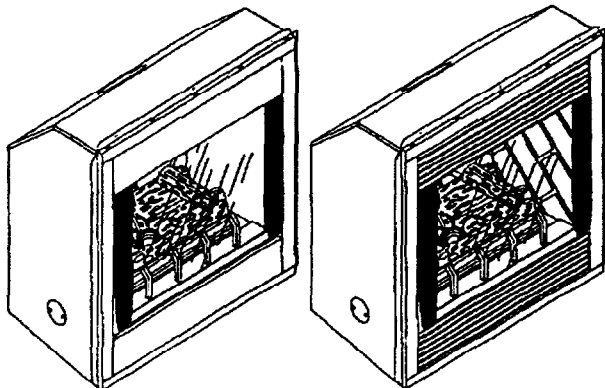
*The Symbol of Excellence*

# Executive Series

DVF36/P/E/EP (Ceramic Glass)  
 DVF36L/PL/EL/EPL (Circulating Unit)  
 DVF36R/RP/ER/REP (Brick Lined)  
 DIRECT- VENT GAS FIREPLACES  
**INSTALLATION INSTRUCTIONS**

### 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.



This appliance may be installed in an aftermarket\* permanently located, manufactured (mobile) home, where not prohibited by state or local codes. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

\* Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

# DESA

## INTERNATIONAL

2701 Industrial Drive  
 P.O. Box 90004  
 Bowling Green, KY 42101-9004

www.desatech.com

**Warning:** If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

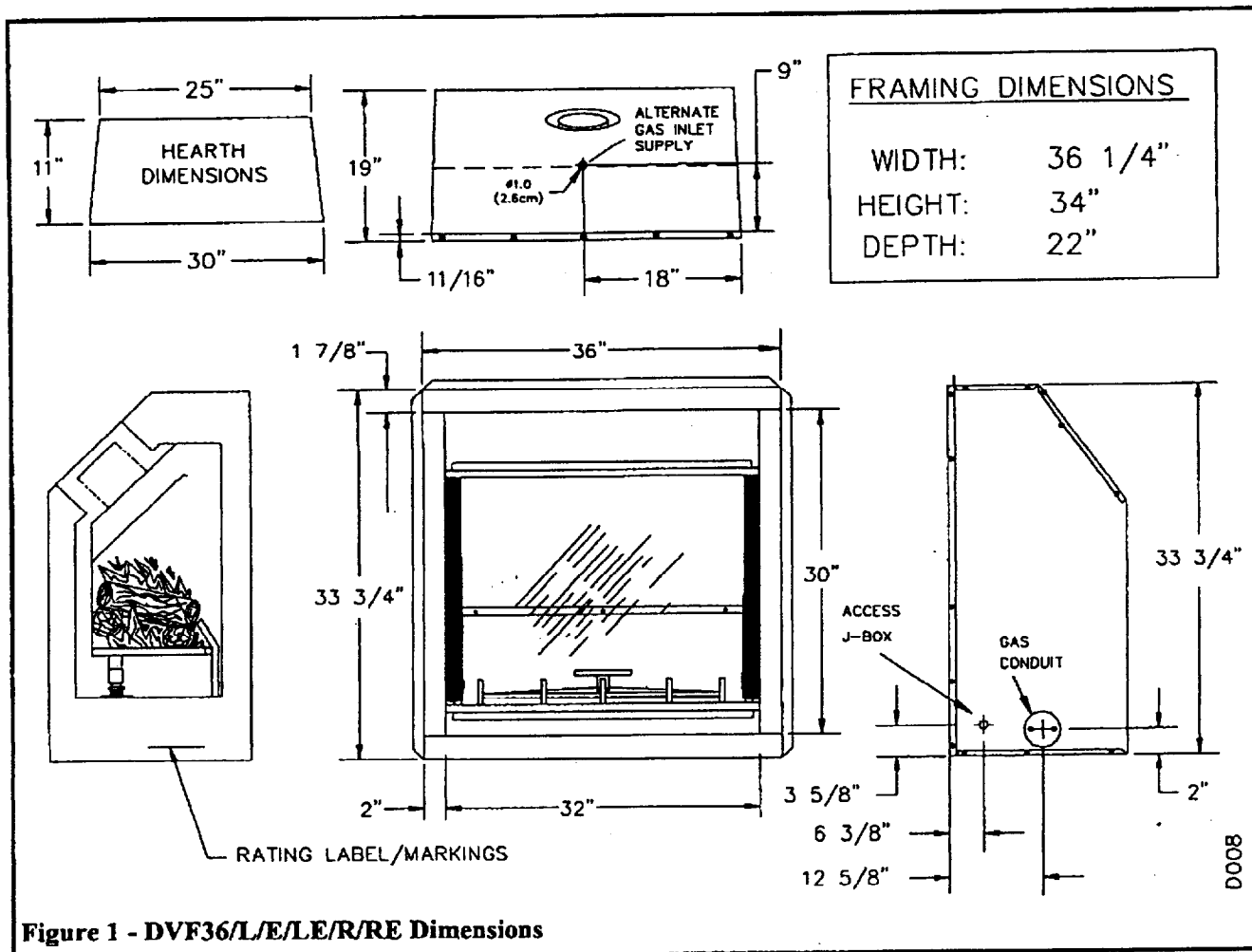
- Do not store or use gasoline or any other flammable vapors or liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS :**
  - Do not try to light any appliance.
  - Do not touch any electrical switch.
  - Do not use any phone in your building.
  - Immediately call your 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.

**CHECK LOCAL CODES PRIOR TO INSTALLATION**

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**Figure 1 - DVF36/L/E/LE/R/RE Dimensions**

**NOTE: ALL DIMENSIONS IN THIS INSTALLATION MANUAL ARE IN INCHES UNLESS OTHERWISE SPECIFIED.**

## INTRODUCTION

Model DVF36 / DVF36P series are direct-vented gas fireplaces with a sealed combustion chamber that use a millivolt gas control with a millivolt ignition system. The models DVF36E / DVF36EP use a direct spark ignition with a 24 VAC control module. All models have a manual HI/LO valve to control the flame height. These units can be equipped with louvers for circulating or with panels for non-circulating operation. Either a DVFFBK or a DVFFBKT fan kit is available for this model as an option.

These units requires a unique termination which includes transition pipes and must be installed prior to operation

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

\* Models DVF36, DVF36/L/R/EL/RE use NATURAL GAS ONLY.

\* Models DVF36P, DVF36/PL/PR/EP/EPL/REP use PROPANE/LP GAS ONLY.

If you have any doubts as to which gas your appliance is approved and tested for, please check the CSA (AGA/CGA) rating plate located at the interior of the appliance opening (see figure 1) or consult your local distributor.

### BEFORE YOU BEGIN:

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

This DESA appliance and its approved components are safe when installed according to this installation manual and operated as recommended by DESA. Unless you use DESA approved components tested for this appliance, **YOU MAY CAUSE A FIRE HAZARD!**

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

- Modification of the appliance or any of the components manufactured by DESA unless otherwise permitted in writing by DESA.
- The use of any components or parts not approved by DESA in combination with this DESA appliance.
- Installation and/or operation in a manner other than instructed in this manual.
- The burning of anything other than the type of gas approved for use in this gas appliance.

This appliance, 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 to local codes, or in the absence of local codes, with the National Fuel Gas Code ANSI Z223.1 or the Canada Installation Code CAN/CGA-B149. This appliance complies with ANSI Z21.50 and CSA 2.22M98 as a vented gas fireplace and is listed and tested by the Canadian Standards Association.

**NOTICE:** Installation and repair should be done by a qualified service person. The appliance should be inspected before use, and at least annually thereafter by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding, etc. It is imperative that the control compartments, burners, and circulating air systems be kept clean.

## SELECTING LOCATION

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

1. The location must allow for all the proper clearances (see section on Clearances).
2. Consider a location where the heat output would not be affected by drafts, air conditioning ducts, windows or doors.

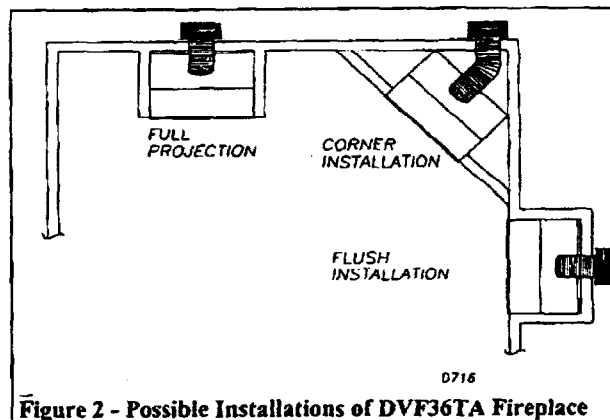


Figure 2 - Possible Installations of DVF36TA Fireplace

Figure 2 shows a few common locations.

**Flush installations** are recommended where living space is limited or at a premium.

**Projected installations** can extend a maximum of 22" into the room as shown on figure 10, page 4. A projection may be ideal for a new addition on an existing, finished wall.

**Corner installations** make use of space that may not normally be used and provides a wider angle of view.

**ALSO, IN SELECTING A LOCATION, THE FOLLOWING PRECAUTIONS MUST BE OBSERVED;**

1. Do not connect this appliance to a chimney system used for a solid fuel burning fireplace.
2. Due to high temperatures, do not locate this appliance in high traffic areas or near furniture and draperies.
3. NEVER obstruct the front opening of the appliance or the flow of combustion and ventilation air. Keep the control compartments accessible.
4. Do not locate close to where gasoline or other flammable liquids may be stored. The appliance area must be kept clear and free from these combustible materials.

### CLEARANCES

**MINIMUM CLEARANCES TO COMBUSTIBLES ARE:**

- BACK AND SIDES: ..... 0" MIN.
- VENT SURFACES: ..... 1" MIN.
- CEILING TO OPENING:..... 42" MIN.
- FLOOR: ..... 0" MIN.
- SIDEWALL (at nailing flanges): ..... 0" MIN.
- PERPENDICULAR WALL: ..... 12" MIN.

**CAUTION: DO NOT BLOCK REQUIRED AIR SPACES WITH INSULATION OR ANY OTHER MATERIALS. DO NOT OBSTRUCT THE EFFECTIVE OPENING OF THE APPLIANCE WITH ANY TYPE OF FACING MATERIAL.**

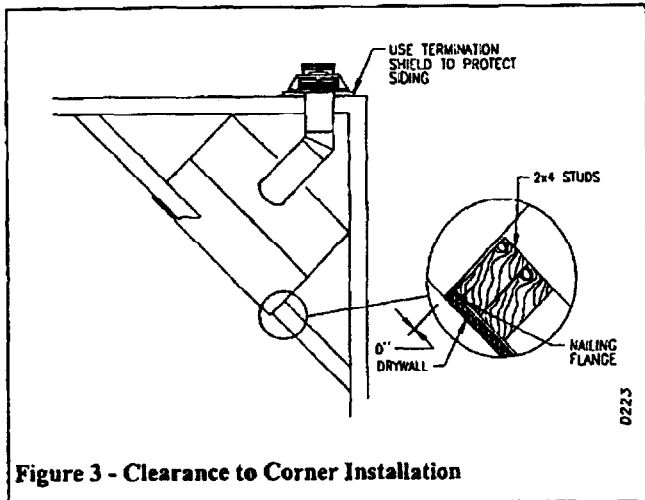


Figure 3 - Clearance to Corner Installation

### MANTEL CLEARANCES

Woodwork, such as wood trims, mantels, and other combustible materials, should not be placed within 7 inches of the opening of this appliance (Figure 5 & 6). Combustible material above projecting more than 1-1/2 inches from the appliance's front face must not be placed less than 12 inches from the opening of the appliance (Ref. NFPA Standard 211 Sec. 7.2.3.3).

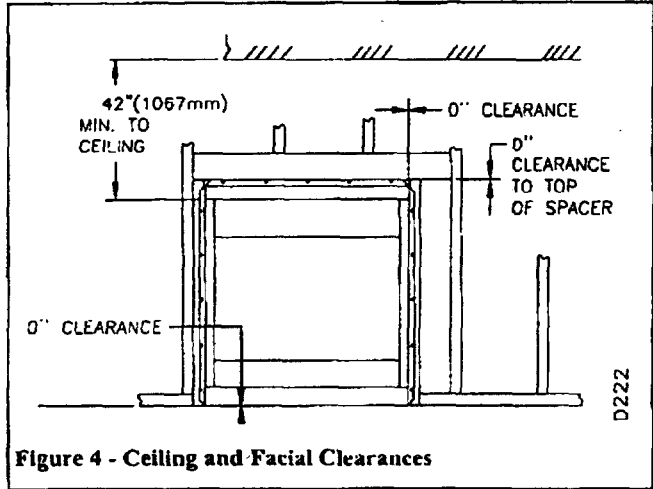


Figure 4 - Ceiling and Facial Clearances

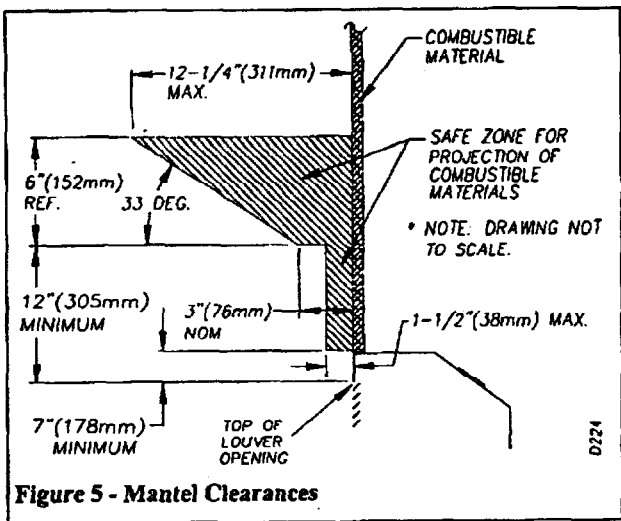


Figure 5 - Mantel Clearances

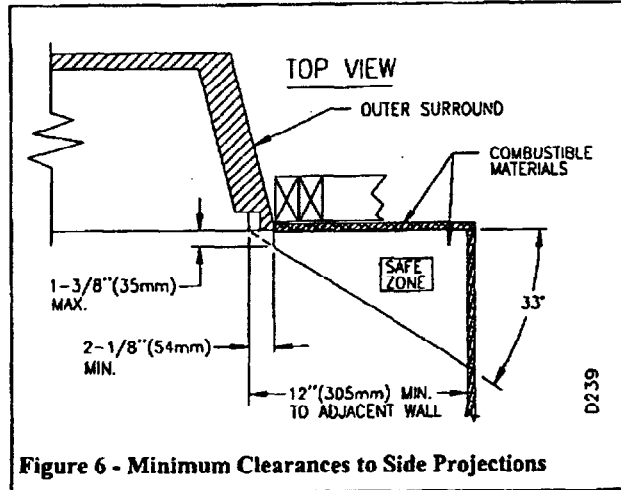


Figure 6 - Minimum Clearances to Side Projections

### FRAMING

Once the final location has been determined, construct the framing using the dimensions shown in figures 7 through 9. Be certain to follow all dimensions and clearances required for the particular 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 upon a metal or wood panel extending the full width and depth of the appliance.

Depending on the type of installation, refer to the appropriate illustration. On a flush or on a projected installation having a wall thickness of up to 11 inches, use termination DVF-K (See Figure 10).

On a corner installation having a wall thickness of up to 11 inches, use a DVF-K termination with a flex extension (See Figure 11).



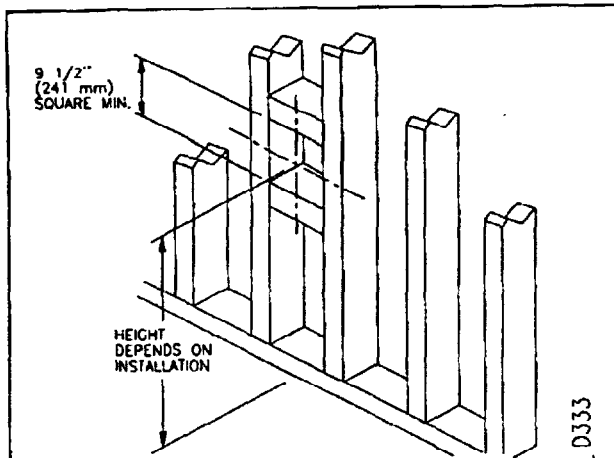


Figure 7 - Rough Opening for Installation of Exterior Vent Terminal

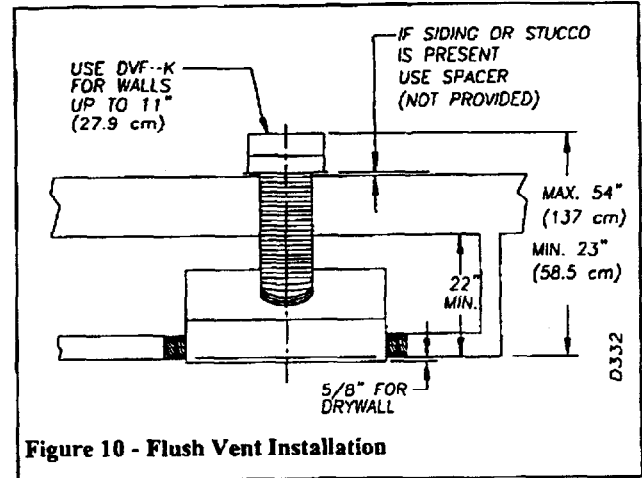


Figure 10 - Flush Vent Installation

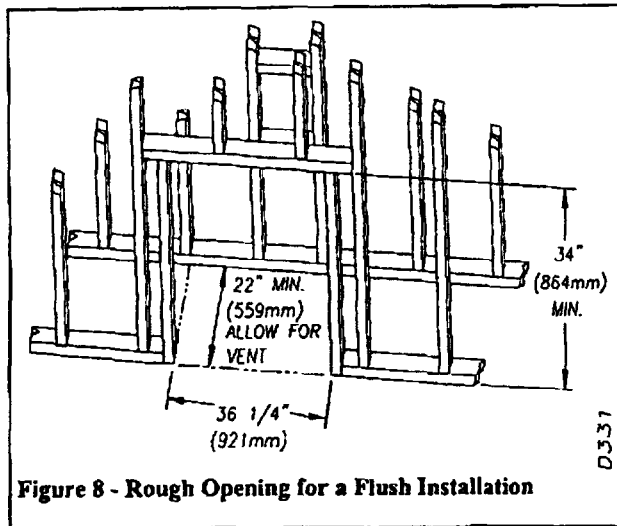


Figure 8 - Rough Opening for a Flush Installation

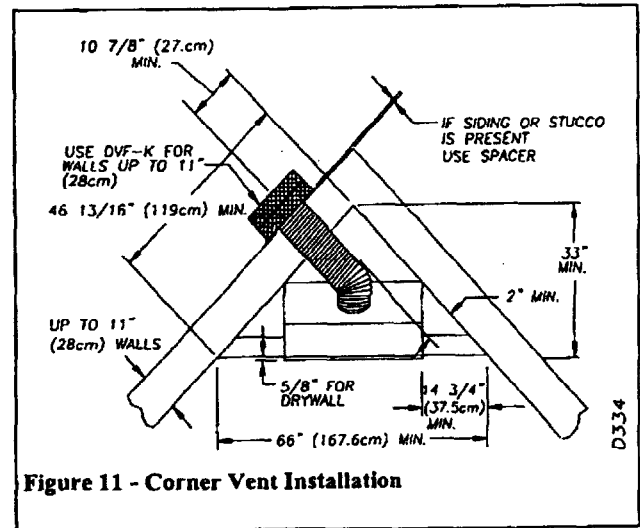


Figure 11 - Corner Vent Installation

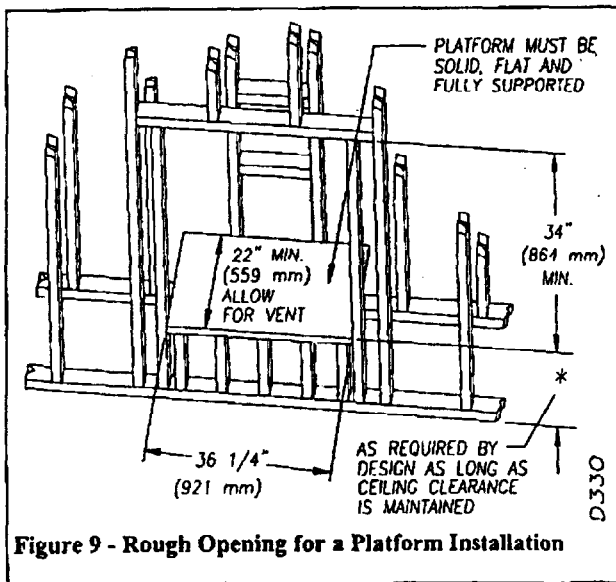


Figure 9 - Rough Opening for a Platform Installation

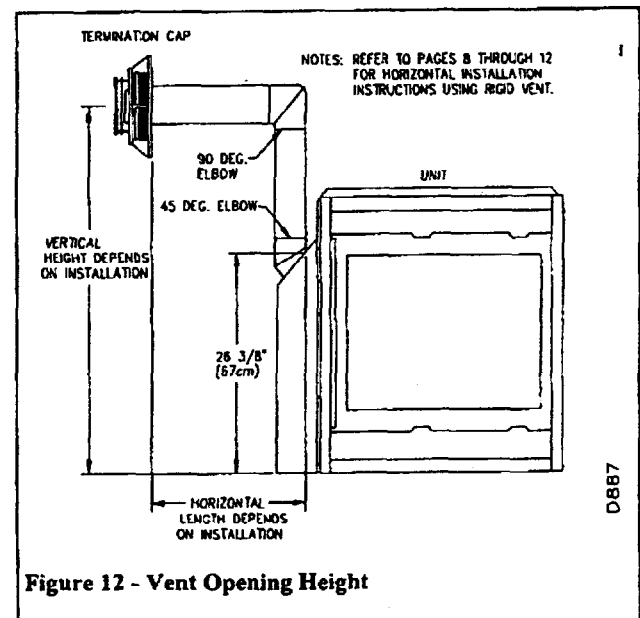


Figure 12 - Vent Opening Height

## GENERAL VENTING

These models are approved for use with Simpson, Dura-Vent<sup>®</sup>, rigid type direct vent pipe as supplied by FMI or may be used with approved types of flexible vent pipe (i.e. ECCO-FLEX<sup>™</sup> or Z-Flex<sup>™</sup>) when appropriately sized for a 7" outer and 4" inner diameter application.

Your Fireplace is approved for venting either horizontally through a side wall, or vertically through a roofline using the following guidelines:

- Only use DESA supplied or approved types of venting components or venting kits. Do not mix different types of vent components, modify vent components, or custom fabricate vent components for use in any one installation.
- Minimum clearances between vent pipes and combustible material is 1" (25mm), except where stated otherwise.
- Combustible material may be flush with the top front of the fireplace with a maximum thickness of 3/4".
- Do not recess venting terminals into a wall or siding
- Do not install vent terminals below grade level maintain a minimum height of 12" above snow line.
- Do not terminate the venting system into an attic or garage.
- Install horizontal venting with a 1/4" rise for every 12" of run towards the termination.
- There must not be any obstruction such as bushes, garden sheds, fences, decks, or utility buildings within 24" from the front of the termination cap.
- Do not locate termination cap where excessive snow or ice build up may occur. Be sure to clear vent termination area after snow falls to prevent accidental blockage of the venting system. When using snow blowers, do not direct snow towards vent termination area.

## VENT TERMINATION CLEARANCES

The final position of your appliance depends on the location of the vent termination in relation to the clearances that must be observed as shown in figures 12, 13 and 14. You may avoid extra framing by positioning your fireplace against an already existing framing member. The back of the fireplace may be positioned directly against a combustible wall.

\* Check with local codes or with the current CAN/CGA B149 (.1 or .2) Installation Codes for Canada, For Installations in the USA follow the current National Fuel Gas Code, ANS Z223.1 also known as NFPA 54.

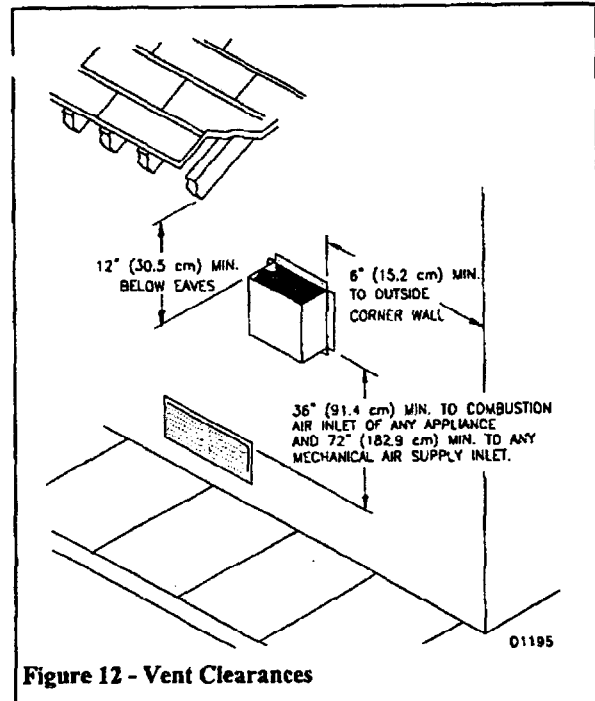


Figure 12 - Vent Clearances

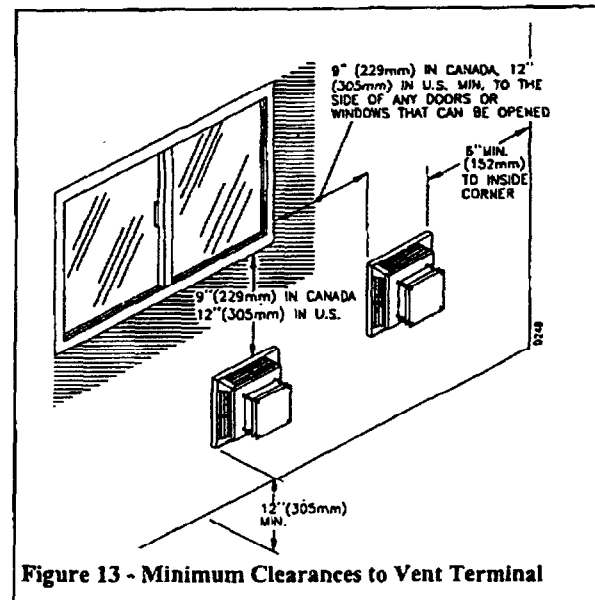
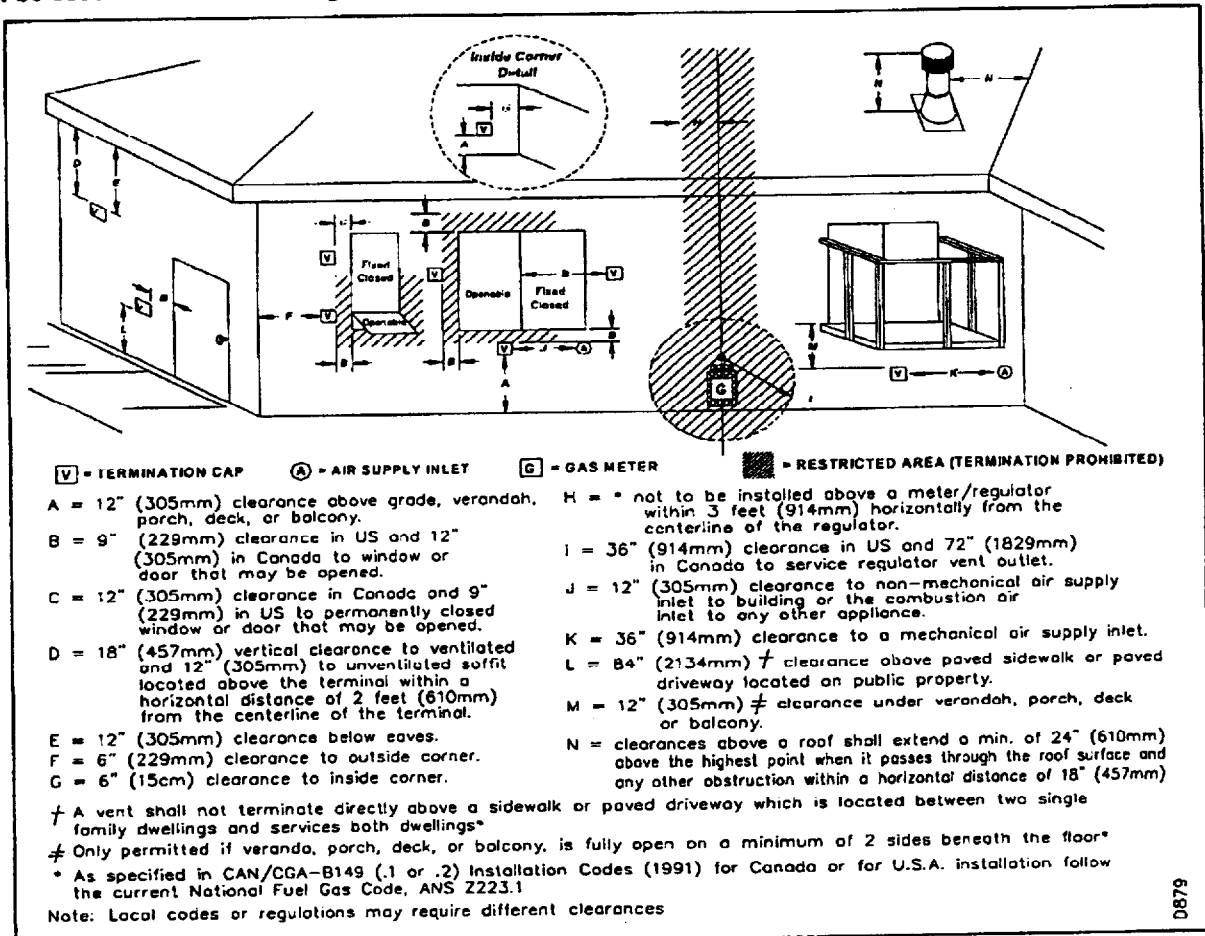


Figure 13 - Minimum Clearances to Vent Terminal

### GENERAL VENTING & TERMINATION CLEARANCES

The final position of your appliance depends on the location of the termination in relation to the clearances that must be observed as shown in Figure 14.



#### Termination Clearances for Buildings with Combustible and Noncombustible Exteriors

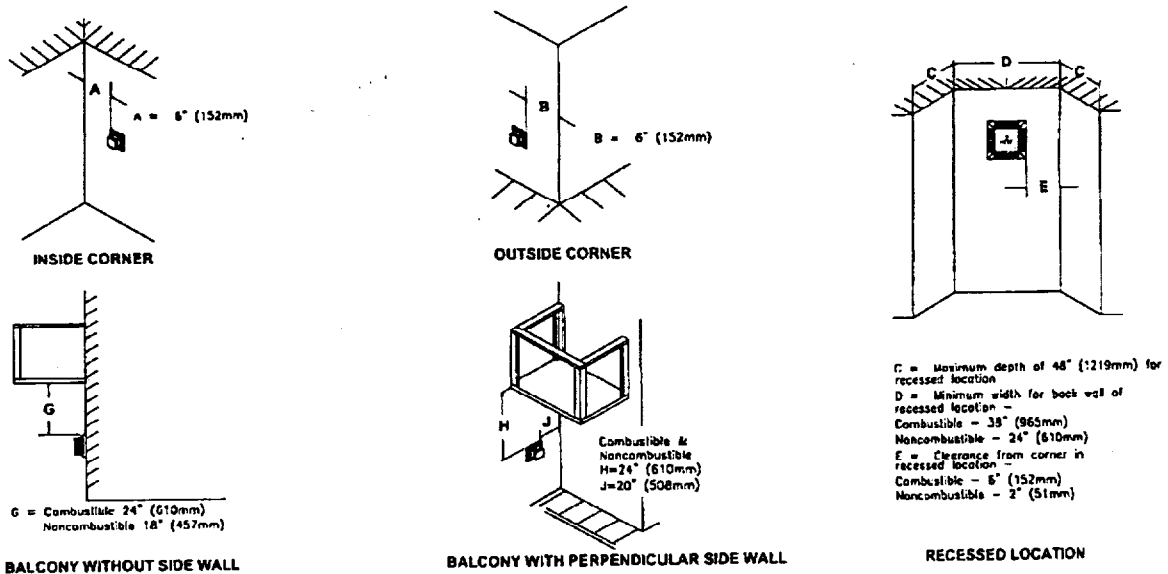


Figure 14 - Minimum Clearances for Vent Terminations

## VENTING INSTALLATION

**▲ 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 an improperly installed and maintained venting system could result in serious injury, property damage or loss of life.

**▲ WARNING:** Seal all of the connections with high temperature silicone (600°F/316°C) every time a vent connection is made. Before joining elbows and pipes, apply a bead of high temperature silicone sealant (GE RTV 106/Loctite RTV 81585) to the end of the elbow or pipe. High temperature silicone must also be used to re-seal any connections after maintenance to venting system.

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

## 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 a vent kit, the installer must read this fireplace manual and any vent kit instructions.

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

- Wear gloves and safety glasses for protection.
- Use extreme caution when using ladders or when working on top of roofs.
- 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.

**▲ WARNING:** This gas fireplace and its 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 in a common vent system.

## INSTALLATION PLANNING

There are two basic types of direct-vent installations:

- Horizontal Termination
- Vertical Termination

It is important to select the proper length of vent pipe for the type of termination you choose and to note the wall thickness.

Note: Up to two 90° elbows may be used in any vent configuration and you may use two 45° elbows in place of each 90° elbow. In either case, you must follow the rise to run ratios.

**For Horizontal Termination:** Select the amount of vertical rise desired. The horizontal run of venting must have 1/4" rise for every 12" of run towards the termination. See Horizontal Termination Configurations pages 10 and 11.

**▲ WARNING:** Never run the vent downward as this may cause excessive temperatures, which could cause a fire.

**For Vertical Terminations:** Measure the distance from the fireplace flue outlet to the ceiling. Add the ceiling thickness, the vertical rise in an attic or second story, and allow for sufficient vent height above the roofline. See Vertical Termination Configurations on pages 13 and 14.

For two-story applications, fire stops are required at each floor level. If an offset is needed in the attic, additional pipe and elbows will be required.

You may use a chase with a vent termination having exposed pipe on the exterior of the house. See Installing Vent System in a Chase, below.

Your DESA direct-vent fireplace has been tested for a maximum of 14" straight horizontal extension using one 45° elbow and 12" of extension at the vent collar, (see figure 24 on page 11). Walls up to 11" thickness can be accommodated when using a round slip-fit termination. Any horizontal application longer than 12" must provide a minimum of one (1) foot of vertical rise for every three (3) feet of horizontal run. Depending on the number of elbows used, the maximum amount of horizontal run is 20' with 7' of vertical rise (see Installation for Horizontal Termination, page 8). The maximum straight vertical rise is 30' (see Installation for Vertical Termination, page 12).

### **Installing Vent System in a Chase**

A chase is a vertical box-like structure built to enclose venting that runs along the outside of a building. A chase is not required for such venting.

**NOTICE:** Treatment of firestops and construction of the chase may vary from building type to building type. These instructions are not substitutes for the requirements of local building codes. You must follow all local building codes.

**NOTE:** When installing in a chase, you should insulate the chase as you would the outside walls of your home. This is especially important in cold climates. Minimum clearances between vent pipes and combustible materials such as insulation is 1".

After framing the chase install the venting system by following the installation instructions for vertical installations on page 12.

**VENTING INSTALLATION continued**

**INSTALLATION FOR HORIZONTAL TERMINATION**

1. Determine the route your horizontal venting will take.  
NOTE: The location of the horizontal vent termination on the exterior wall must meet all local and national building codes and must not be easily blocked or obstructed.

**⚠ WARNING:** Do not recess a vent terminal into a wall or a siding. This will cause a fire hazard.

Snorkel terminations are available for terminations requiring a vertical rise on the exterior of the building (see Figures 15 and 16). Snorkel kits are available for rigid pipe applications only to provide for a 14" rise and a 36" rise (see page 19). Follow the same installation procedures used for standard horizontal terminations. If installing the snorkel termination to raise the vent termination from below grade level such as in a basement installation, you must provide proper drainage to prevent water from entering the snorkel termination (see Figure 16). Do not back fill around the snorkel termination.

2. Rigid vent-pipes and fittings have special twist-lock connections. Assemble the desired combinations of pipe and elbows to the appliance adapter with pipe seams oriented towards the wall or floor.

**Twist-lock Procedure:** The female ends of the pipes and fittings have four locking lugs (indentations). These lugs will slide straight into matching slots on the male ends of the adjacent pipes and fittings. (All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 7.) Push the pipe sections together and twist one section clockwise approximately one-quarter turn until the sections are fully locked. (See figure 17). NOTE: Horizontal runs of vent must be supported every three feet. Use wall strap for this purpose.

Flexible vent pipe must be installed with spacer springs every 12" and especially near each bend (See Figure 18). Make the 4" inner pipe connection to the unit with the clamp provided. Install the spacer springs by looping them around the 4" pipe and connecting at both ends. Slide the 7" outer pipe over the springs and inner section and continue adding sections in this manner. All connections need a minimum of 1 1/4" (32mm) overlap, must be clamped tightly and sealed with high temperature silicone sealant as specified in the second warning statement on page 7.

3. Attach the vent pipe assembly to the fireplace using twist-lock connections for rigid pipe or clamp, method for flex pipe. See figures 20 and 21, on page 9 and 10. Set fireplace in front of its permanent location to insure minimum clearances. Mark the wall for a 9 1/2" x 9 1/2" (242mm x 242mm) square cut through combustible exterior wall or a (7 1/2" (190mm) diameter hole for non-combustible material such as masonry block or concrete. See figure 18, on page 9. The center of the hole should line up with the centerline of the rigid vent pipe. Frame if necessary to support outer vent terminal.

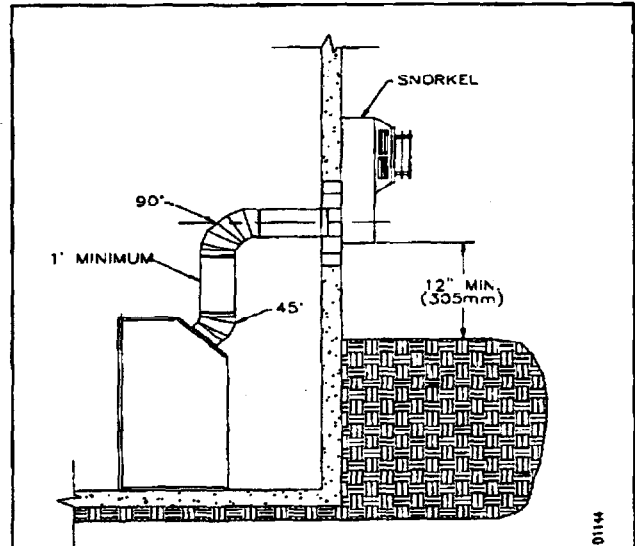


Figure 15 - Snorkel Termination 14"

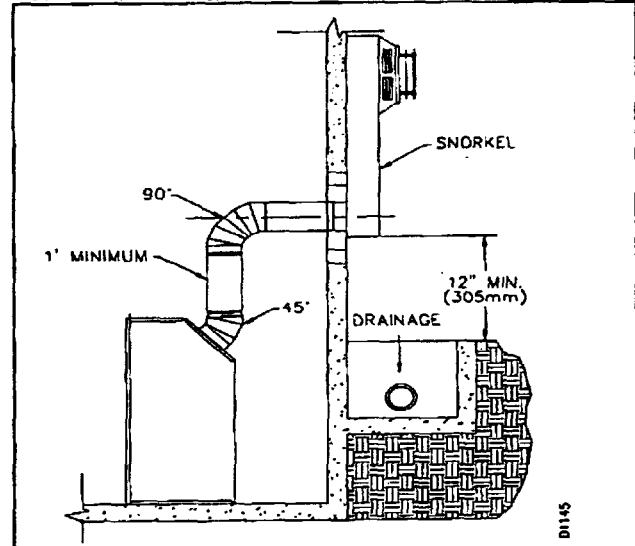


Figure 16 - Snorkel Installation 36"

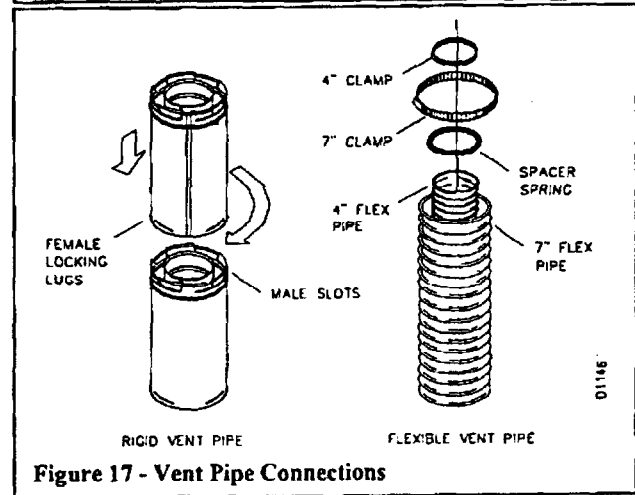


Figure 17 - Vent Pipe Connections

## VENTING INSTALLATION continued

4. Three types of vent caps are available for horizontal terminations. Two square terminals are available; one for rigid pipe applications and one for flex pipe applications. A round vent termination with a slip fit connection is also provided for rigid pipe applications, when a wall thickness or off spacing must be accommodated. See figure 22 on page 10. Each may be purchased as a kit, which includes a 45° elbow and a firestop that accommodates a square or round termination. When installing a square termination, apply a bead of non-hardening mastic around the outside edge of the vent cap. Position the square or the round vent cap in the center of the 7 1/2" hole on the exterior wall or in a firestop when installed over a 9 1/2" square cutout. Make certain that the arrow on the vent cap is pointing up after making the final connection. If installing the square flex vent termination the square open must be pointing up. The firestop must be used to insure that the proper clearance of 1" to combustibles is maintained. If using the square vent attach the vent cap with four wood screws. If installing the round vent cap use the firestop provided with the installation kit to accommodate the square hole and then seal the remaining edge with mastic. Note: Replace the wood screws with the appropriate type of removable fasteners for stucco, brick, concrete or other types of siding.

**NOTICE: The vent termination must be removable for service and vent pipe inspection.**

For vinyl siding, use vinyl siding standoffs between the vent cap and the exterior wall. The vinyl siding standoff prevents excessive heat from melting the vinyl siding and must not be used to substitute or replace a firestop. Bolt the vent cap to the standoff. Apply non-hardening mastic around the outside edge of the standoff instead of the vent terminal as described earlier. Use wood screws to attach the standoff (See Figure 23.)

5. There are several ways to make the final connection to the vent terminal. If installing a flush or recessed installation with a short vent system, you may pre-size the vent system, check for final fit and slide the unit into the framing with the firestop in place. This is especially helpful when using rigid pipe and a round vent termination, as the vent may be pre-connected and slipped through the firestop. However, you must make certain that the 45° connection at the unit is tight and does not come loose before finish nailing the unit to the framing. When installing a square vent or a long vent configuration, the vent pipe must be manipulated at the outer end to make the final connection. This may be accomplished by manually securing the pipe from within the open framing. However, if this is a retrofit installation in an inaccessible space, you may have to secure the outer end of the vent pipe with wall straps and tap screws at the outer end. When using tap screws with rigid pipe, make certain that the screws do not penetrate the inner pipe. These procedures may be followed as well for flexible pipe installations. However, the connections at the unit must first be adequately secured, the vent must be drawn through the end firestop, cut back to about 6 to 8 inches to permit easy connection of the flex termination and the termination must be slipped back into and secured to the installation. Make sure to use an adequate number of spring spacers at the ends and the closest bend to the termination to prevent kinks or collapsing of the pipe. Do not use screws with flex pipe. Remember, that the vent system must be code inspected and released before adding dry wall or other surface treatments.

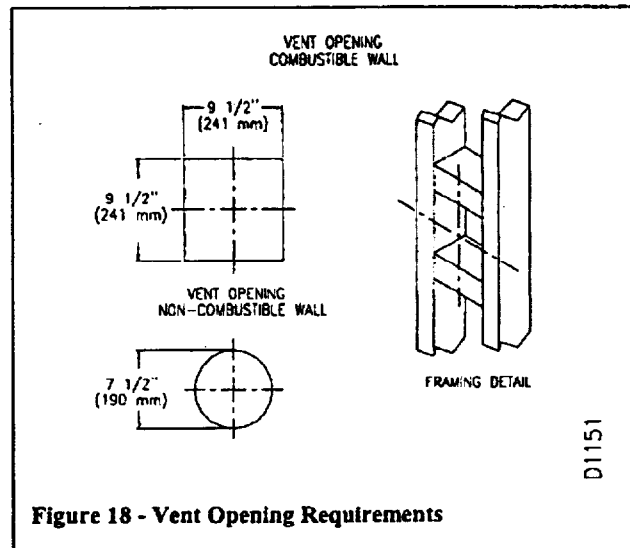


Figure 18 - Vent Opening Requirements

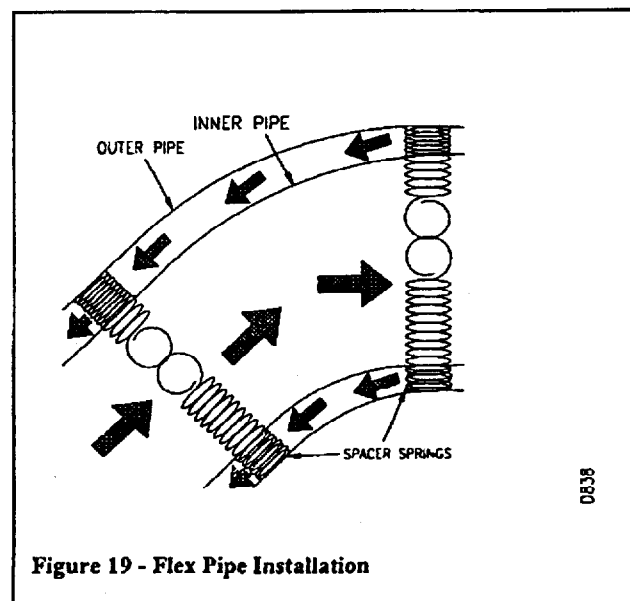


Figure 19 - Flex Pipe Installation

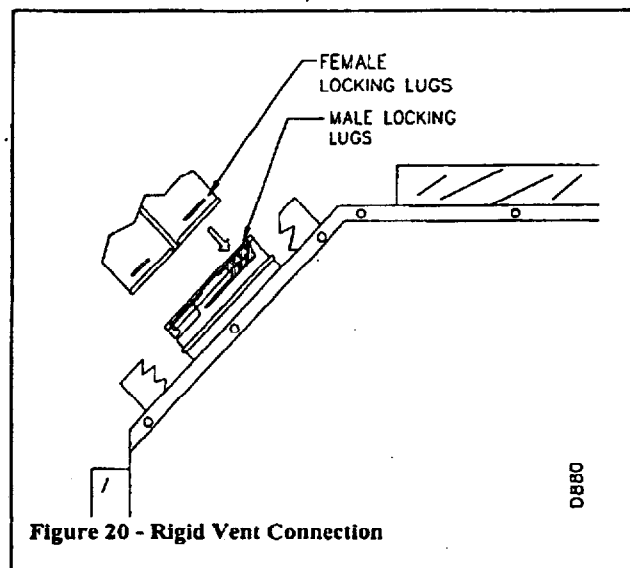


Figure 20 - Rigid Vent Connection

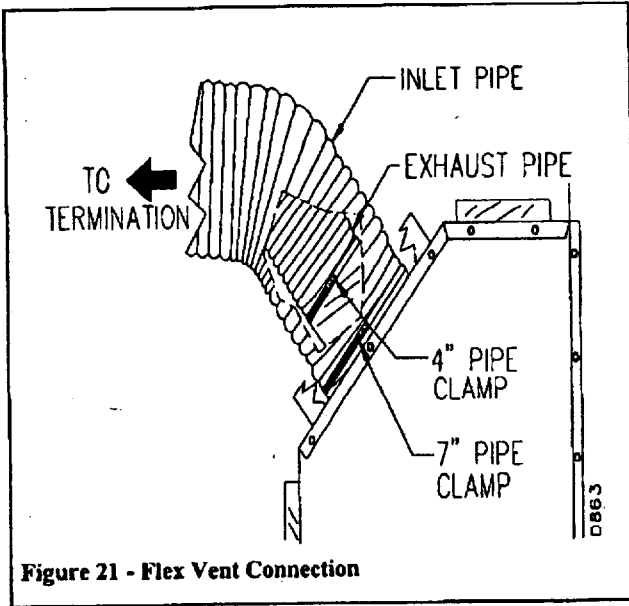


Figure 21 - Flex Vent Connection

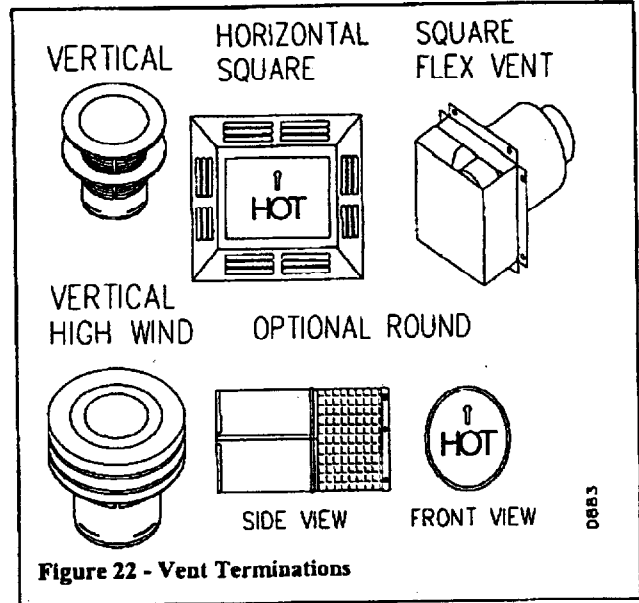


Figure 22 - Vent Terminations

**VENTING INSTALLATION continued**

**HORIZONTAL TERMINATION CONFIGURATIONS**

Figures 24 through 27 show different configurations for venting with horizontal termination. Each figure includes a chart with vertical minimum/maximum and horizontal maximum dimensions, which must be met. All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 7. All horizontal terminations require 1/4" rise per 12" of horizontal run. Therefore, you must add 1/4" of vertical height (V) in the following tables for each foot of horizontal run (H).

**Horizontal Flush Venting**

(Recommended for flush walls or cabinet mantels)

Vertical (V)	Horizontal (H)
29" min. (45° Elbow Without Starter Section)	11" max.
32" min.	18" max.
36" min.	24" max.

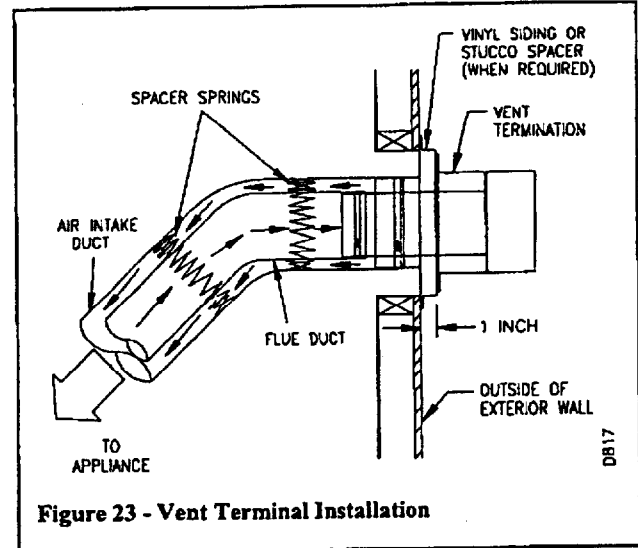


Figure 23 - Vent Terminal Installation

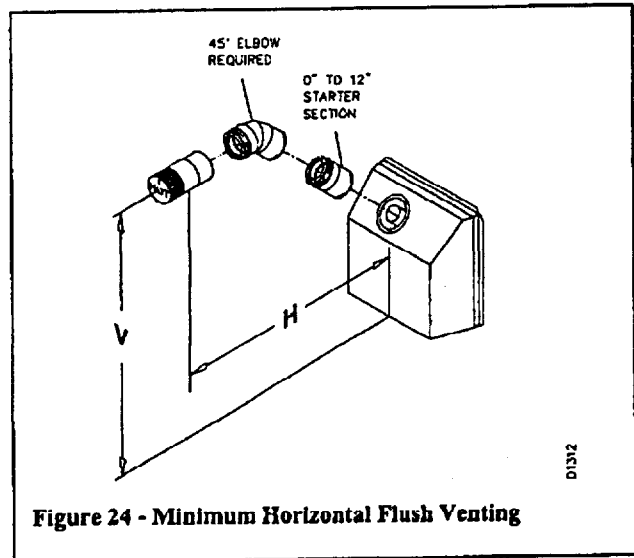


Figure 24 - Minimum Horizontal Flush Venting

## VENTING INSTALLATION continued

### HORIZONTAL TERMINATION CONFIGURATIONS

Figure 26 shows the acceptable configuration when venting horizontally using flexible venting systems. The same vertical height and horizontal length rules as shown in figure 25 also applies to flex vent with no linear gain losses. However, the flex vent system must be designed and supported to prevent restriction on the venting system. There should be no more than one 45° and one 90° degree bend. All bends must be made with a minimum bend radius of 3" plus the radius of the outer pipe or as specified by the pipe manufacturer to prevent reduction of the pipe diameter. As with rigid pipe, flex vent must be pitched upwards and supported without the use of screws in the vent pipe to prevent sagging and damage. All connections must be clamped and sealed with high temperature silicone sealant as specified in the second warning statement on page 7.

Figures 25 and 26 show the minimum vertical rise requirements for a horizontal system using one 90° elbow.

#### Horizontal Venting with One 90° Elbow or with One 45° Bend when using Flexible Vent

* Vertical (V)	* Horizontal (H)
36" min. (**)	11" max. (**)
(** Minimum configuration for flexible vent)	
40" min. (1/2')	19" max. (1.5')
48" min. (1')	39" max. (3')
60" min. (2')	73.5" max. (6')
72" min. (3')	108" max. (9')
84" min. (4')	144" max. (12')
94.5" min. (5')	178.5" max. (15')
106.5" min. (6')	221.5" max. (18')
118.5" min. (7')	237" max. (20')

Figure 27 shows the minimum vertical rise requirements for a horizontal system using two 90° elbows.

#### Horizontal Venting with Two 90° Elbows

* Vertical (V)	* Horizontal (H <sub>1</sub> ) + (H <sub>2</sub> )
48" min. (1')	49" max. (3')
60" min. (2')	85" max. (6')
72" min. (3')	121" max. (9')
84" min. (4')	157" max. (12')
94.5" min. (5')	191.5" max. (15')
106.5" min. (6')	225.5" max. (18')
20' max.	20' max.

\* These tables were determined using the maximum sized sections available and accounting for a loss of 1.5" linear gain per section. The number in (parentheses) indicates the integral foot equivalence of total straight pipe sections.

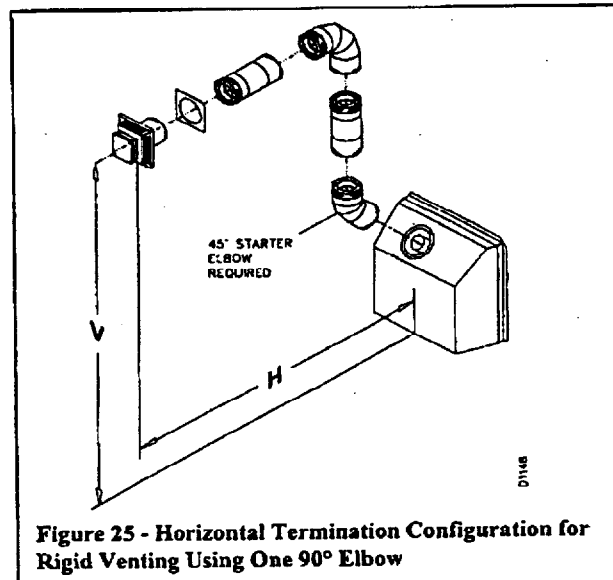


Figure 25 - Horizontal Termination Configuration for Rigid Venting Using One 90° Elbow

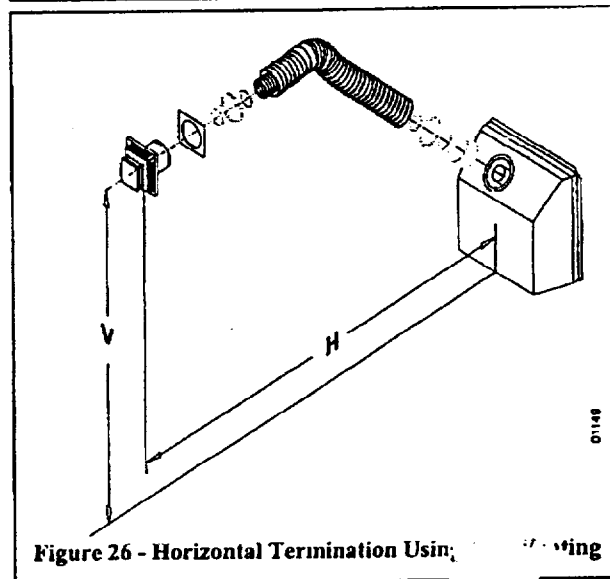


Figure 26 - Horizontal Termination Using Flexible Venting

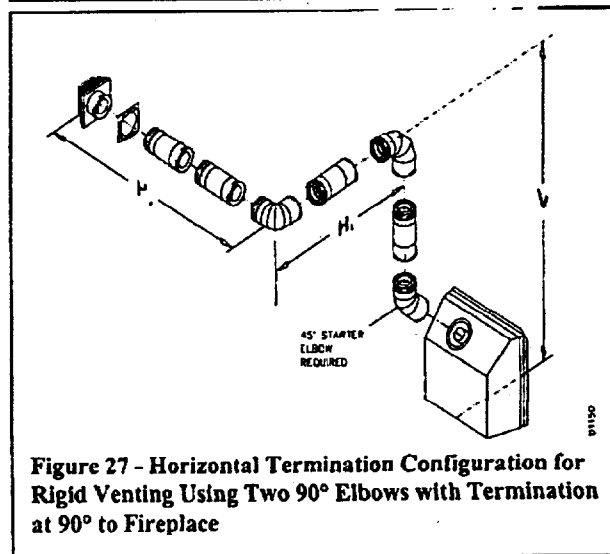


Figure 27 - Horizontal Termination Configuration for Rigid Venting Using Two 90° Elbows with Termination at 90° to Fireplace



## VENTING INSTALLATION continued

### INSTALLATION FOR VERTICAL TERMINATION

**NOTE: Use rigid pipe only. Flex venting is not to be used with a vertical termination.**

1. Determine the route that your vertical venting will take. If ceiling joists, roof rafters, or other framing will obstruct the venting system, consider an offset (see Figure 28) 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 required air spaces with insulation. Also note maximum vertical rise of the venting system and any maximum horizontal offset limitations. Offsets must fall within the parameters shown in Figure 29 and Figure 14 on page 6.

2. Set the fireplace in the desired location. Drop a plumb line down from the ceiling to the position of the fireplace exit flue. 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.

#### Flat Ceiling Installation

1. Cut a 9 1/2" hole in the ceiling using the locating hole as a center point. The opening should be framed to a 9 1/2" x 9 1/2" (241mm x 241mm) inside dimensions, as shown in Figure 18 on page 9 using framing lumber the same size as the ceiling joists. If the area above the ceiling is an insulated ceiling or a room, nail firestop from the topside. This prevents loose insulation from falling into the required clearance space. Otherwise, install firestop below the framed hole. The firestop should be installed with the flanges set into the framing and secured with no less than three nails per side (see figure 30).

2. Assemble the desired lengths of pipe and elbows necessary to reach from the fireplace flue up through the firestop. All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 7. Be sure all pipe and elbow connections are fully twist-locked (see Figure 17, on page 8).

3. Cut a hole in the roof using the locating hole as a center point. (Cover any exposed open vent pipes before cutting a hole in the roof). The 9 1/2" x 9 1/2" hole must be measured on the horizontal; actual length may be larger depending on the pitch of the roof. There must be a 1" clearance from the vent pipe to combustible materials. Frame the opening as shown in Figure 18, on page 9.

4. Connect a section of pipe and extend up through the hole.

Note: If an offset is needed to avoid obstructions, you must support the vent pipe every 3 feet. Use wall straps for this purpose (see Figure 28). Whenever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of the flue gases and intake air.

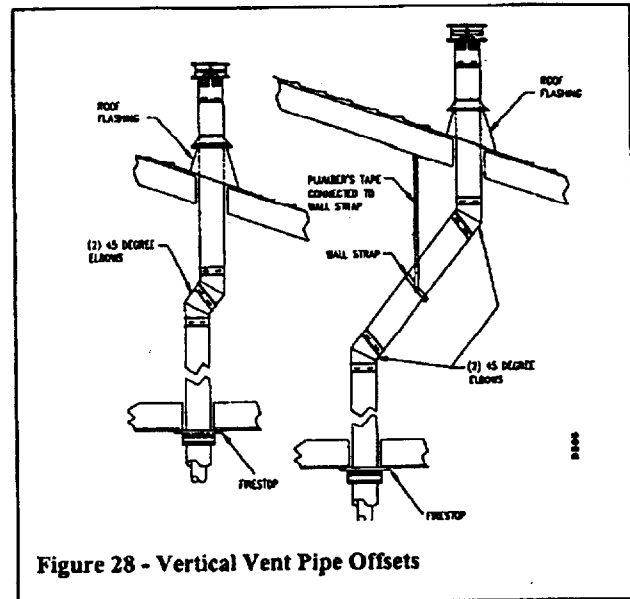


Figure 28 - Vertical Vent Pipe Offsets

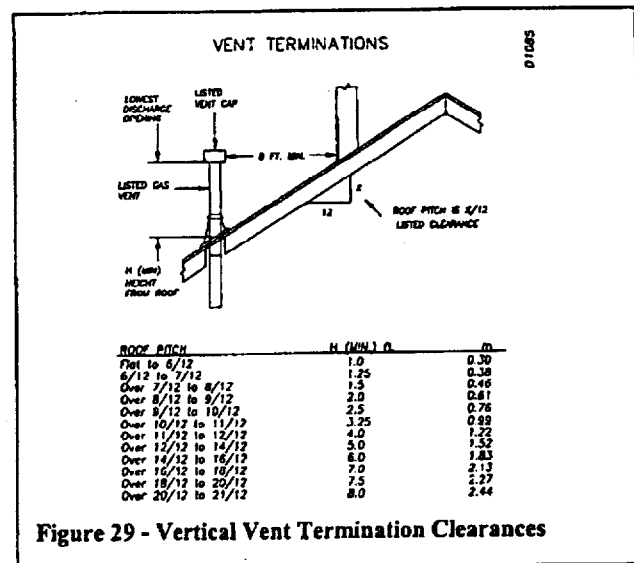


Figure 29 - Vertical Vent Termination Clearances

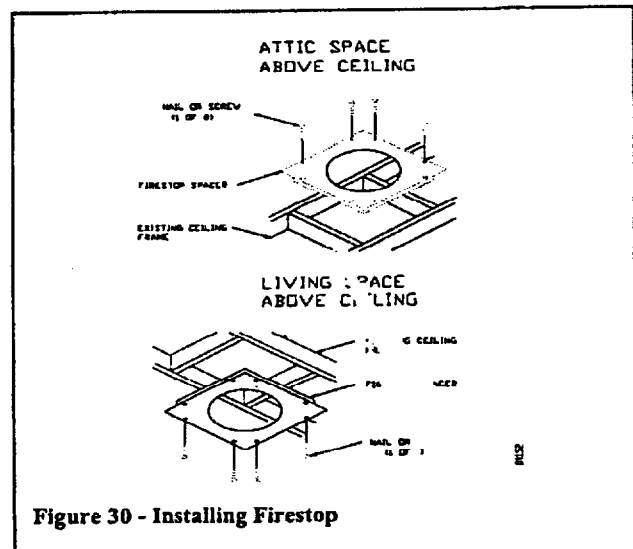


Figure 30 - Installing Firestop

## VENTING INSTALLATION continued

### INSTALLATION FOR VERTICAL TERMINATION

5. Place the flashing over the pipe section(s) extending through the roof. Apply a bead of silicone or roof sealer to the bottom flange of the flashing and secure the base of the flashing to the roof and framing with roofing nails. Be sure roofing material overlaps the top edge of the flashing as shown in figure 28, on page 12. There must be a 1" clearance from the vent pipe to combustible material.
6. Continue to add pipe section(s) until the height of the vent cap meets the minimum building code requirements described in Figure 14, on page 6. Note you must increase the vent height for steep roof pitches, nearby trees, adjoining rooflines and other adjacent factors, which may cause poor drafting or a down-draft condition (see Figure 29, on page 12). Increasing the vent height may solve this problem.
7. Apply a bead of sealer to the upper edge of the flashing collar and slide the storm collar over the pipe and down on the top edge of the flashing. Apply a second bead of silicone or roof sealer around the remaining seam of the storm collar. Twist-lock the vent cap onto the last section of vent pipe and seal with high temperature silicone as specified in the second warning statement on page 7. Finish sealing the flange around the roofing material with roofing sealer.

Note: If the vent pipe passes through any occupied areas above the first floor, including storage spaces and closets, you must enclose the entire exposed pipe. You may frame and sheetrock the enclosure with standard construction materials. Make sure the enclosure meets the minimum allowable clearances to combustibles. Do not fill any of the required air spaces with insulation.

### Vertical Termination Configurations

Figures 31 through 34 show four different configurations for vertical termination. These minimum vertical rises are based on horizontal runs with a minimum of 1/4" upwards pitch per foot and do not reflect constraints on a vertical system with 45° or greater offsets. Any offset pitch of 45° or less must be considered horizontal and sized within the maximum allowable lengths listed in the following examples. All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 7.

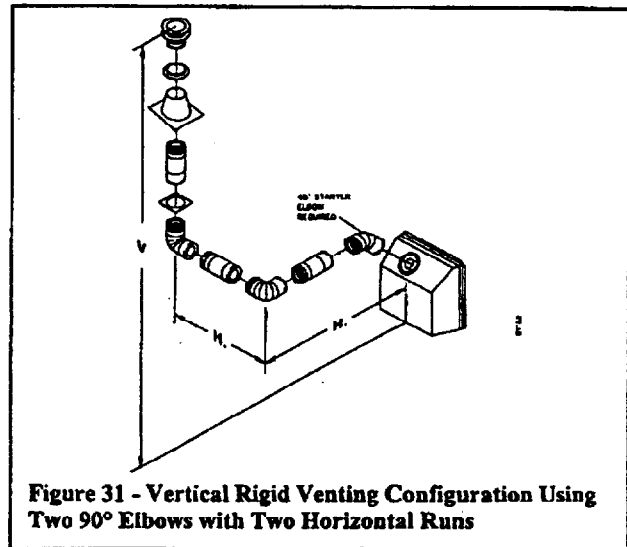


Figure 31 - Vertical Rigid Venting Configuration Using Two 90° Elbows with Two Horizontal Runs

#### Venting with Two 90° Elbows

Vertical (V)	Horizontal (H <sub>1</sub> ) + (H <sub>2</sub> )
5' min.	2' max.
6' min.	4' max.
7' min.	6' max.
<u>8' min.</u>	<u>8' max.</u>
20' max.	8' max.

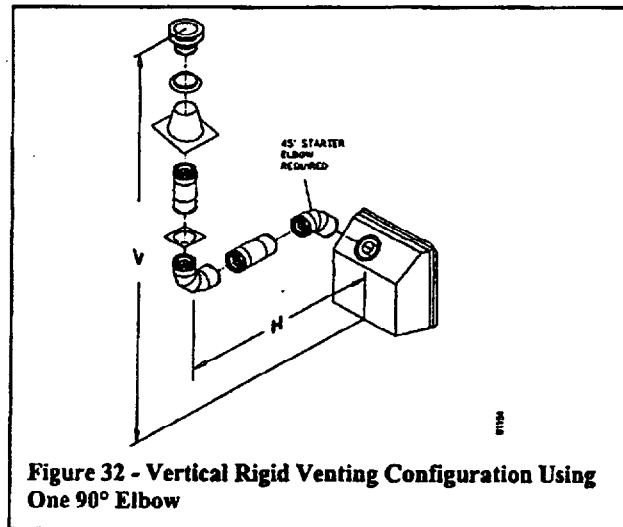


Figure 32 - Vertical Rigid Venting Configuration Using One 90° Elbow

#### Venting with One 90° Elbow

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

**VENTING INSTALLATION continued**

**INSTALLATION FOR VERTICAL TERMINATION**

**Vertical Termination Configurations**

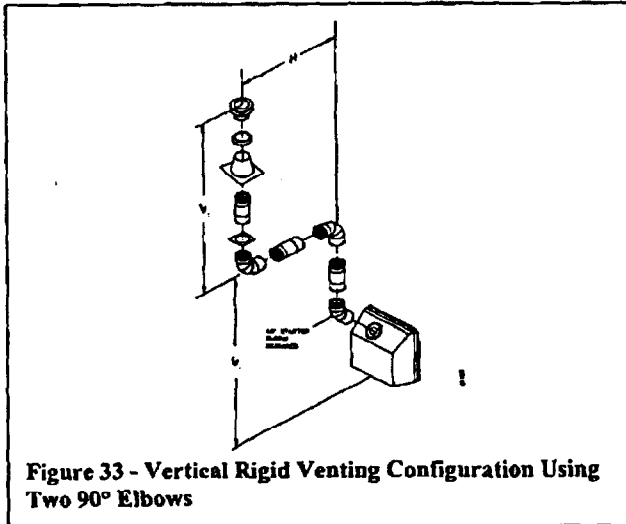


Figure 33 - Vertical Rigid Venting Configuration Using Two 90° Elbows

**Venting with Two 90° Elbows**

Vertical (V <sub>1</sub> )	Horizontal (H)
5' min.	6' max.
6' min.	12' max.
7' min.	18' max.
8' min.	20' max.

Note: Vertical (V<sub>1</sub>) + Vertical (V<sub>2</sub>) = 20' max.

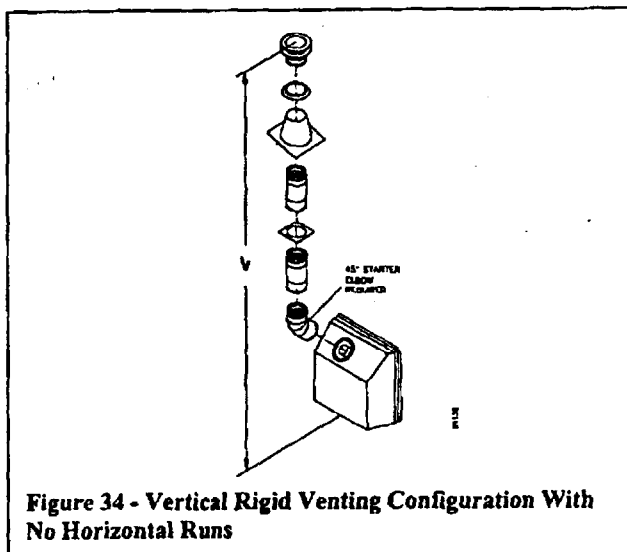


Figure 34 - Vertical Rigid Venting Configuration With No Horizontal Runs

**Vertical Venting**

V = 30' max.

**VENTING INSTALLATION continued**

**INSTALLATION FOR VERTICAL TERMINATION**

Your DESA vented fireplace has been AGA tested and approved for elevations from 0-2000 feet (609 m) and CGA certified for elevations from 0-4500 feet (1371 m).

When installing this fireplace at elevations above 2000 ft (in the USA), you may need to decrease the input rating by changing the existing burner orifice to a smaller size. Reduce the input 4% for each 1000 feet above sea level.

When installing this fireplace at an elevation above 4500 ft (1371 m) in Canada, check with local or provincial authorities.

Consult with your local gas company to help determine the proper orifice size and identification for your location.

For assistance with any high altitude installation contact your DESA dealer or distributor.

**PARTS LIST RIGID VENT**

PART #	DESCRIPTION	QTY.
01806	Basic Vertical Kit - Adjustable Flashing -Storm Collar Cap	1 per
01807	48" Pipe Length	6 per
01808	36" Pipe Length	6 per
01809	24" Pipe Length	6 per
01810	12" Pipe Length	6 per
01811	6" Pipe length	6 per
01812	17" to 24" Adjustable Pipe Length	6 per
01813	45 Degree Elbow	6 per
01814	90 Degree Elbow	6 per
01817	Wall Firestop.	6 per
01818	Adjustable Flashing (0/12-8/12).	6 per
01819	Steep Pitch Flashing (12/12).	6 per
01820	Vinyl Siding Standoff	1 per
01821	Firestop Plate	6 per
01822	Vertical Cap	1 per
01823	Horizontal Round Termination Cap	1 per
01824	Horizontal Square Termination Cap	1 per
01825	36" Snorkel Termination	1 per
01826	14" Snorkel Termination	1 per
01827	Termination, High Rise Horizontal	1 per
01828	Wall Strap	6 per
01829	Storm Collar	6 per
01815	45 Degree Twist Lock Connect/Retro	6 per
01816	Twist Lock to Flex Retro Connect	6 per

Components and parts must be ordered, by correct part number, through your local dealer or distributor.

## WALL SWITCH INSTALLATION

The DVF36E series uses a 24 VAC current supplied from a transformer mounted on the ignition module and is prewired for easy connection to a wall switch (see Figure 35). The DVF36 versions use a self-generated millivolt current that allows you to activate the gas control valve directly, without the use of normal household electricity (see Figure 36). Both versions are supplied with a wall switch kit for ready connection and mounting.

**WARNING:** Do not wire the remote wall switch to the main 120 VAC household supply current.

1. To remove the lower louvers simultaneously pull both top end spring latches towards the center of the appliance until they are disengaged from the locating holes. Repeat for the bottom spring latches and pull the louvers outward (see Figure 37).
2. Connect the WALL SWITCH to the gas control valve terminal marked TH or the ignition transformer wire with the 18 GA wire and connectors supplied with the appliance. Then connect the remaining wire to the microswitch with the connector provided. See figures 35 and 36.

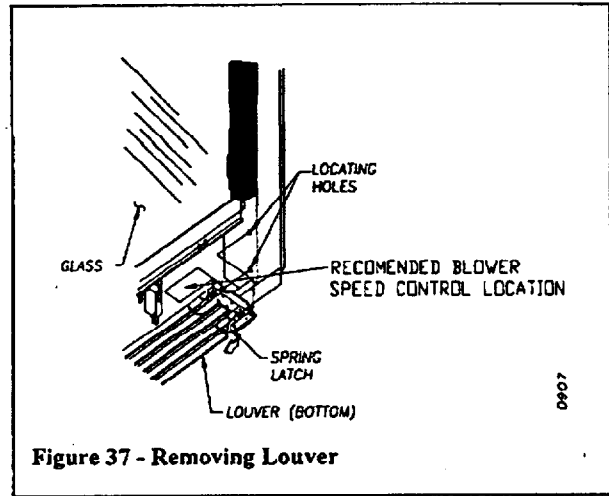


Figure 37 - Removing Louver

## ELECTRICAL HOOKUP FOR THE (OPTIONAL) BLOWER ACCESSORY

Before the optional blower accessory can be operated, the appliance outlet box must be properly connected to a standard 120 VAC power source. This must be done when the appliance is originally installed. Refer to the Wiring Diagram on page 23.

An outlet box with two receptacles has been provided for your convenience and is located on the lower right side of the appliance (see Figure 38). The variable speed controller is mounted on a magnetic base and may be positioned anywhere within an accessible distance behind the louvered opening (see Figure 37).

**CAUTION:** Due to high temperatures, make sure wires are not touching the upper firebox.

You may test the blower for operation by turning the control knob clockwise just until it clicks on, which is the full on position. Further turning no more than 1/4 of a turn clockwise, adjusts the fan speed to the lowest setting.

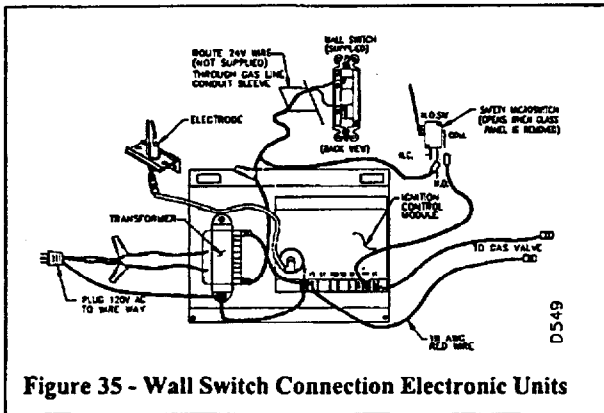


Figure 35 - Wall Switch Connection Electronic Units

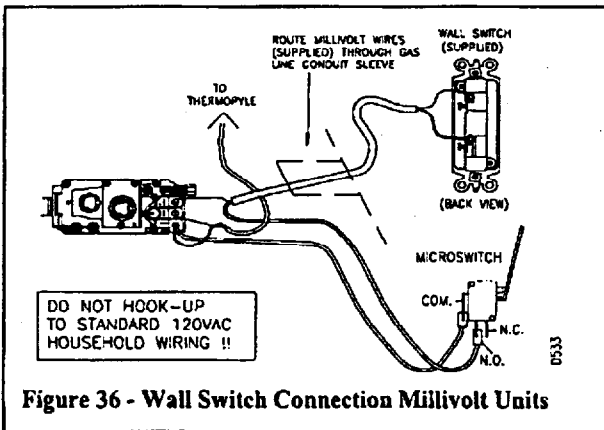


Figure 36 - Wall Switch Connection Millivolt Units

**NOTE:** If any of the original wire supplied, must be replaced, use type 18 AWG-105 °C (25 FT MAXIMUM length) or equivalent.

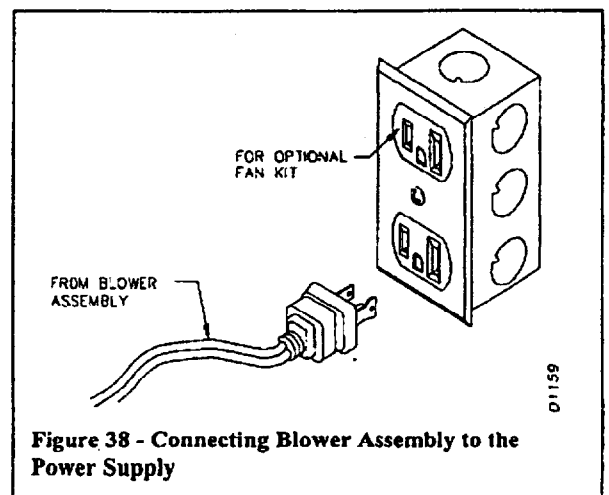


Figure 38 - Connecting Blower Assembly to the Power Supply

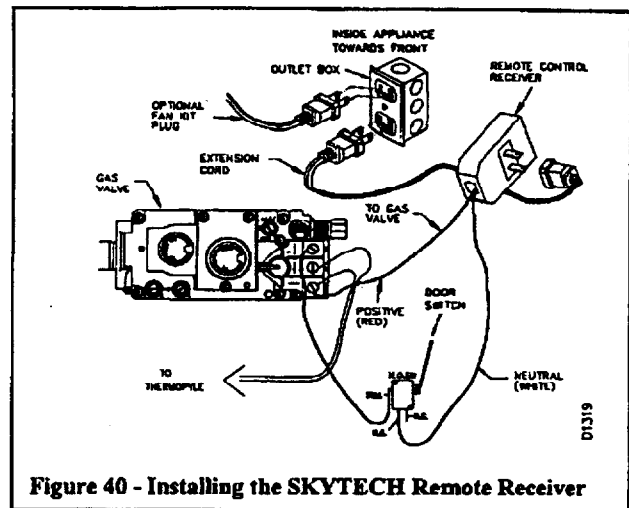
## **OPTIONAL WIRELESS HAND HELD REMOTE CONTROL INSTALLATIONS**

**NOTE:** If using an optional wireless hand held remote control, the wall switch is no longer operational.

**NOTICE:** Only use alkaline batteries (not included).

### **INSTALLING THE (SKYTECH) and (US-RC) MODEL REMOTE CONTROLS (MILLIVOLT MODELS ONLY)**

1. Remove lower louver access panel from fireplace (see Figure 37 on page 15).
2. Disconnect the wall switch wires from the terminals marked TH and TPTH on the control valve (see Figure 36, page 15).
3. Slide a 9 volt battery into the clip on the back of the US-RC remote receiver and connect the battery terminals to the battery. The US-RC receiver may be installed in the appliance or can be mounted in a standard wall switch box using the cover plate and screws provided.



**Figure 40 - Installing the SKYTECH Remote Receiver**

### **INSTALLING THE (SKYTECH) and (WRC) MODEL REMOTE CONTROLS (ELECTRONIC MODELS ONLY)**