LENNOX™

HEARTH PRODUCTS

INSTALLATION INSTRUCTIONS

DIRECT VENT MULTI-OPEN ELITE® SERIES

VENTED GAS FIREPLACE HEATERS - DIRECT VENT MODELS
P/N 850,018M REV. E 08/2007

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or mobile home, where not prohibited by 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.

In the Commonwealth of Massachusetts:
• Installation must be performed by a licensed plumber or gas fitter.
See Table of Contents for location of additional Commonwealth of Massachusetts requirements.

WARNING: IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

FOR YOUR SAFETY: What to do if you smell gas:

- DO NOT light any appliance.
- DO NOT touch any electrical switches.
- DO NOT use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow your gas suppliers instructions.
- If your gas supplier cannot be reached, call the fire department.

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

O-T-L C
OMNI-Test Laboratories, Inc.

OTL Report No. 116-F-04-5

A French manual is available upon request. Order Form Number 850,018CF.

Ce manuel d'installation est disponible en francais, simplement en faire la demande. Numéro de la pièce 850,018CF.

MODELS

Millivolt Models		*Electronic Models*	
EDVSTNM	EDVCRNM	EDVSTNE	EDVCRNE
EDVSTPM	EDVCRPM	EDVPFNE	EDVCLNE
EDVPFNM	EDVCLNM		
EDVPFPM	EDVCLPM		

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

AVERTISSEMENT: ASSUREZ-VOUS DE BIEN SUIVRE LES INSTRUCTIONS DONNÉ DANS CETTE NOTICE POUR RÉDUIRE AU MINIMUM LE RISQUE D'INCENDIE OU POUR ÉVITER TOUT DOMMAGE MATÉRIEL, TOUTE BLESSURE OU LA MORT.

POUR VOTRE SÉCURITÉ: Ne pas entreposer ni utiliser d'essence ni d'autre vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

POUR VOTRE SÉCURITÉ: Que faire si vous sentez une odeur de gaz:

- Ne pas tenter d'allumer d'appareil.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le batiment où vous vous trouvez.
- Evacuez la piéce, le bâtiment ou la zone.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service dos incendies.

L'installation et service doit être exécuté par un qualifié installeur, agence de service ou le fournisseur de gaz.

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NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED www.nficertified.org

We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

DO NOT ATTEMPT TO ALTER OR MODIFY THE CONSTRUCTION OF THE APPLIANCE OR ITS COMPONENTS. ANY MODIFICATION OR ALTERATION MAY VOID THE WARRANTY, CERTIFICATION AND LISTINGS OF THIS UNIT.

PACKAGING

The assembled vented gas fireplace heater is packaged with:

1 - one log set, is packaged in a carton located within the firebox.

2 - one plastic bag of glowing embers, is located in the bottom compartment.

3 - one envelope containing the literature package which consists of the homeowner's manual, installation instructions, warranty, and 8 (EDVST), 4 (EDVPF, EDVCR and EDVCL) nailing flanges; envelope is located in the control area.

4 - one vent restrictor to be applied as shown on ***page 10***; restrictor is taped to the envelope.

5 - two hoods (EDVST, EDVCR, EDVCL), or three hoods (EDVPF) taped to the top of the fireplace.

6 - one-piece ceramic ember panel.

INTRODUCTION

These fireplaces are designed, tested and listed for operation and installation with, and only with, **Secure Vent**™ Direct Vent System Components, **Secure Flex**™ Flexible Vent Components manufactured by Security Chimneys International and **Z-Flex**™ Model GA Venting Systems, listed to UL1777 and ULCS635 manufactured by Flexmaster Canada Limited. These approved vent system components are labeled for identification. DO NOT use any other manufacturer's vent components with these appliances.

The millivolt appliances are designed to operate on either natural or propane gas. A millivolt gas control valve with piezo ignition system provides safe, efficient operation. If any optional accessories which require electrical power are being installed, the electrical power must be provided at the time of appliance installation.

Electronic appliances are designed to operate on natural or propane gas. An electronic intermittent pilot ignition system provides safe, efficient operation. External electrical power is required to operate these units.

These appliances comply with National Safety Standards and are tested and listed by Omni-Test Laboratories (Report No. 116-F-04-5) to ANSI Z21.88 (in Canada, CSA-2.33), and CAN/CGA-2.17-M91 in both USA and Canada, as vented gas fireplace heaters.

Both millivolt and electronic versions of these appliances are listed by Omni-Test Laboratories for installation in bedrooms and mobile homes.

The Installation must conform to local codes or, in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, or the *Natural Gas and Propane Installation Code, CSA B149.1*. The 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*.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

DO NOT ATTEMPT TO ALTER OR MODIFY THE CONSTRUCTION OF THE APPLIANCE OR ITS COMPONENTS. ANY MODIFICATION OR ALTERATION MAY VOID THE WARRANTY, CERTIFICATION AND LISTINGS OF THIS UNIT.

GENERAL INFORMATION

Note: *Installation and repair should be performed by a qualified service person. The appliance should be inspected annually by a qualified professional service technician. More frequent inspections and cleanings may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartment, burners and circulating air passage ways of the appliance be kept clean.*

S'assurer que le brùleur et le compartiment des commandes sont propres. Voir les instructions d'installation et d'utilisation qui accompagnent l'appareil.

Provide adequate clearances around air openings and adequate accessibility clearance for service and proper operation. Never obstruct the front, back and/or side viewing surfaces of the appliance.

These appliances are designed to operate on natural or propane gas only. The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous.

TYPICAL INSTALLATION

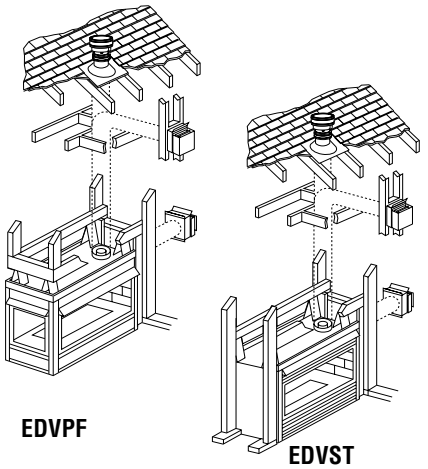


Figure 1

Millivolt Models -
Millivolt models come standard with the manually-modulated gas valve; flame appearance and heat output can be controlled at the gas valve.

Input of millivolt models is shown in the following table:

Millivolt Models	
Natural and Propane Gas Models	**Input rate (BTU/H) Manually-modulated**
EDVSTNM, EDVPFNM, EDVCLNM, EDVCRNM, EDVSTPM, EDVPFPM, EDVCLPM, EDVCRPM	31,000 TO 39,000

Electronic Models -
Electronic models have a fixed rate gas valve. Input of electronic models is shown in the following table:

Electronic Models	
Natural and Propane Gas Models	**Input rate (BTU/H) Fixed Rate**
EDVSTNE, EDVPFNE, EDVCLNE, EDVCRNE,	39,000

All Models -
Maximum manifold pressure is 3.5 in. w.c. (0.87 kPa) for natural gas and 10 in. w.c. (2.49 kPa) for LP/Propane gas.

Installations at Altitudes of 0 to 4500 ft.- Units are tested and approved for elevations of 0 to 4500 feet (0 to 1372 meters).

Installations at Altitudes above 4500 ft.- For elevations above 4500 feet (1372 meters), install the unit according to the regulations of the local authorities having jurisdiction and, in the USA, the latest edition of the National Fuel Gas Code (ANSI Z223.1) or, in Canada, the latest edition of the CAN1-B149.1 and .2 codes.

***Table 1* shows the units' gas orifice size for the elevations indicated.**

Model No.	Orifice size		Elevation Feet (meters)
	Nat.	Prop.	
EDVST EDVPF EDVCR EDVCL	0.125"	#49	0-4500 (0-1372)

Table 1

The millivolt appliances are manually controlled and feature a spark ignitor (piezo) that allows the appliance's pilot gas to be lit without the use of matches or batteries. This system will still function in the event of a power outage.

Do not use these appliances if any part has been under water. Immediately call a qualified, professional service technician to inspect the appliance and to replace any parts of the control system and any gas control which have been under water.

Ne pas se servir de cet appareil s'il a été plongé dans l'eau, complètement ou en partie. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or mobile home, where not prohibited by 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.

Cet appareil peut être installé dans un maison préfabriquée (É.-U. seulement) ou mobile déjà installée à demeure si les réglements locaux le permettent. Cet appareil doit être utilisé uniquement avec les types de gaz indiqués sur la plaque signalétique. Ne pas l'utiliser avec d'autres gaz sauf si un kit de conversion certifié est installé.

Test gage connections are provided on the front of the millivolt gas control valve (identified IN for the inlet and OUT for the manifold side). A 1/8" NPT test gage connection is provided at the inlet and outlet side of the electronic gas control valve.

Minimum inlet gas pressure to these appliances is 5.0 inches water column (1.24 kPa) for natural gas and 11.0 inches water column (2.74 kPa) for propane for the purpose of input adjustment.

Maximum inlet gas supply pressure to these appliances is 10.5 inches water column (2.61 kPa) for natural gas and 13.0 inches water column (3.23 kPa) for propane.

These appliances must be isolated from the gas supply piping system (by closing their individual manual shut-off valve) during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psig (3.5 kPa).

These appliances and their individual shut-off valves must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of 1/2 psig (3.5 kPa).

These appliances must not be connected to a chimney or flue serving a separate solid fuel burning appliance.

These heater rated appliances are intended for use as supplemental heaters only.

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Turn off the gas supply to the appliance and have it serviced by a qualified professional, as it may not be operating correctly.

WARNING: FAILURE TO COMPLY WITH THE INSTALLATION AND OPERATING INSTRUCTIONS PROVIDED IN THIS DOCUMENT WILL RESULT IN AN IMPROPERLY INSTALLED AND OPERATING APPLIANCE, VOIDING ITS WARRANTY. ANY CHANGE TO THIS APPLIANCE AND/OR ITS OPERATING CONTROLS IS DANGEROUS. IMPROPER INSTALLATION OR USE OF THIS APPLIANCE CAN CAUSE SERIOUS INJURY OR DEATH FROM FIRE, BURNS, EXPLOSION OR CARBON MONOXIDE POISONING.

WARNING: CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES. USE CAUTION AROUND THE APPLIANCE TO AVOID BURNS OR CLOTHING IGNITION. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

WARNING: DO NOT PLACE CLOTHING OR OTHER FLAMMABLE MATERIALS ON OR NEAR THIS APPLIANCE.

AVERTISSEMENT: SURVEILLER LES ENFANTS. GARDER LES VÊTEMENTS, LES MEUBLES, L'ESSENCE OU AUTRES LIQUIDES À VAPEUR INFLAMMABLES À COTE DE L'APPAREIL.

LOCATION

In selecting the location, the aesthetic and functional use of the appliance are primary concerns. However, vent system routing to the outside atmosphere and access to the fuel supply are also important. Consideration should be given to traffic ways, furniture, draperies, etc., due to high surface temperatures (***see Figure 2***). The location should also be free of electrical, plumbing or other heating/air conditioning ducting.

These direct vent appliances are uniquely suited for installations requiring a utility shelf positioned directly above the fireplace. Utility shelves like these are commonly used for locating television sets and decorative plants.

To achieve the lowest possible shelf height, use the alternative rear vent outlet. **Do not insulate the space between the appliance and the area above it. See *Figure 3 on page 4*.** The minimum height from the base of the appliance to the underside of combustible materials used to construct a utility shelf in this fashion is shown in the table in ***Figure 3 on page 4***.

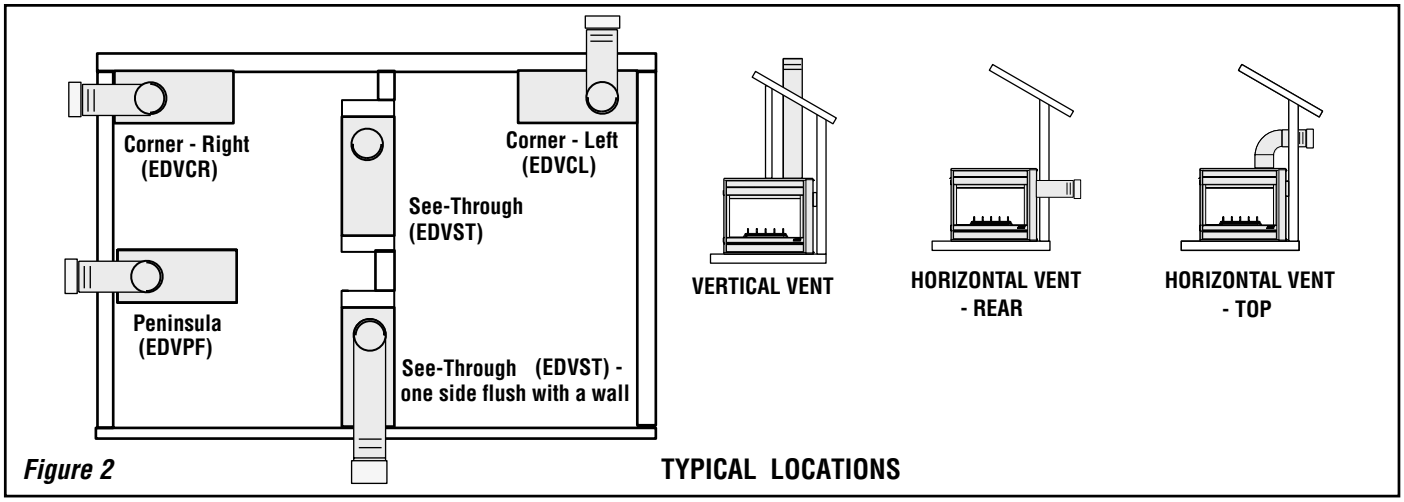


Figure 2 **TYPICAL LOCATIONS**

The appliance should be mounted on a fully supported base extending the full width and depth of the unit. The appliance may be located on or near conventional construction materials. However, if installed on combustible materials, such as carpeting, vinyl tile, etc., a metal or wood barrier covering the entire bottom surface must be used.

APPLIANCE AND VENT CLEARANCES

The appliance is approved with zero clearance to combustible materials on all sides (as detailed in ***Table 2)***, with the following exception: When the unit is installed with one side flush with a wall, the wall on the other side of the unit must not extend beyond the front edge of the unit. In addition, when the unit is installed in the middle of a room, the side walls surrounding the unit must not extend beyond the front or rear edge of the unit. See ***Figure 2***.

BACK	1/2 in. (13 mm) 0 in. (0 mm) spacers
SIDES	1/2 in. (13 mm)** 0 in. (0 mm) spacers
TOP SPACERS	0 in. (0 mm)
FLOOR	0 in. (0 mm)
From Bottom of Unit to Ceiling	64 in. (1626 mm)
VENT	1 in. (25.4 mm)*
SERVICE CLEARANCES	
VIEWING SIDES - (FRONT BACK OR SIDE)	3 Feet. (0.9 meters)

***Note:** 3 in. (75 mm) above any horizontal/inclined vent component.*

Table 2

Model No.	Shelf Height inches (mm)			
	Top Vent - with One 90 Degree Elbow		Rear Vent - Straight Out the Back	
	Secure Vent	Secure Flex	Secure Vent	Secure Flex
EDVST EDVPF EDVCR EDVCL	53 7/8 (1368)	55 5/8 (1413)	41 1/8 (1045)	41 1/8 (1045)

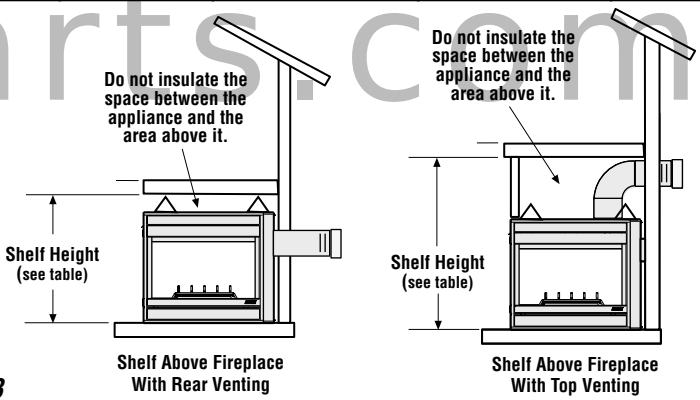


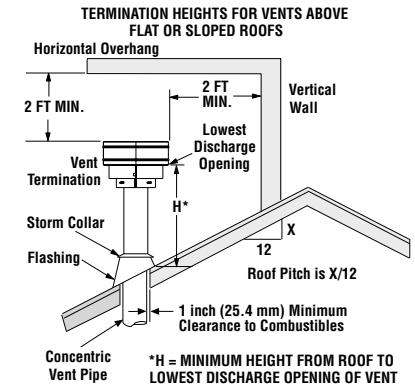
Figure 3

VENT TERMINATION CLEARANCES

These instructions should be used as a guideline and do not supersede local codes in any way. Install vent according to local codes, these instructions, the current National Fuel Gas Code (ANSI-Z223.1) in the USA or the current standards of CAN/CGA-B149.1 and -B149.2 in Canada.

Vertical Vent Termination Clearances

Terminate single vent caps relative to building components according to *Figure 4*.



Roof Pitch	H (feet)
Flat to 6/12	1.0
Over 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
Over10/12 to 11/12	3.25
Over 11/12 to 12/12	4.0

Figure 4

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Terminate multiple vent terminations according to the installation codes listed above.

Horizontal Vent Termination Clearances

The horizontal vent termination must have a minimum of 3" (76 mm) clearance to any overhead combustible projection of 2-1/2" (64 mm) or less. See ***Figure 5.*** For projections exceeding 2-1/2" (64 mm), see ***Figure 5***. All horizontal terminations may be located as close as 6" (152mm) to any (non-combustible and combustible) exterior sidewall. This distance may be decreased to 2" (51mm) for non-combustible exterior sidewalls only, if the SV4.5HT-2 termination is used. For additional vent location restrictions refer to ***Figure 8 on page 6***.

TYPICAL INSTALLATION SEQUENCE

The typical sequence of installation follows, however, each installation is unique resulting in variations to those described.
See the page numbers references in the following steps for detailed procedures.

Step 1. (page 10) Construct the appliance framing. Position the appliance within the framing and secure with nailing brackets.
Step 2. (page 10) Route gas supply line to appliance location.
Step 3. (page 10) Install the vent system and exterior termination.
Step 4. (page 23) Field Wiring
a. Millivolt Appliances – The operating control switch is factory installed.
b. Electronic Appliances – Connect 120 Vac electrical power to the appliance receptacle.
Step 5. (page 24) Install blower kit (optional equipment).
Step 6. (page 24) Make connection to gas supply.
Step 7. (page 24) Install the log set, vermiculite and ceramic fiber chunks.
Step 8. (page 24) Checkout appliance operation.
Step 9. (page 25) Install glass enclosure panels.
Step 10. (page 25) Adjust burner primary air shutter to achieve proper flame appearance.
Step 11. (page 26) Install the hoods.

DETAILED INSTALLATION STEPS

The appliance is shipped with all gas controls and components installed and pre-wired.
1 - Remove the shipping carton.
2 - Remove the top radiant panel ***(see Figure 6)***.
3 - Lift the pressure relief plates and remove the cardboard from underneath each of them.
4 - Open the control compartment access panel, by actuating the spring-loaded magnetic catches securing the panel, gently depressing the outer top corners of the panel until the catches "pop" the panel free and allowing it to swing out and down to open.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

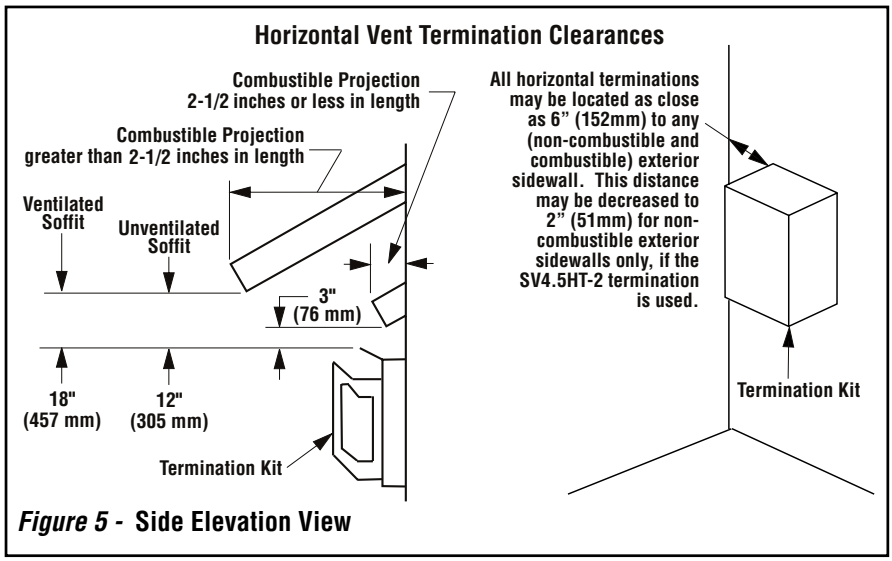


Figure 5 - **Side Elevation View**

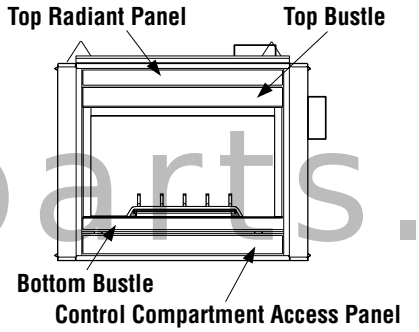


Figure 6 ***Unit Parts Identification***

5 - Remove the bottom control compartment access panel by compressing the spring-loaded hinge pin on the left side until it disengages from the left cabinet panel hole.

Pull the panel away from the fireplace. ***See Figure 54 on page 24.***
6 - Remove the modesty panel by pulling the bottom right corner of the modesty panel out slightly to disengage the snap-fit feature; lift the modesty panel by the tab on the panel's right end, pull the right end of the panel away from the cabinet and then pull the panel diagonally out of the left side cabinet panel slots. (In the above procedure, reverse the words "left" and "right" for EDVCR models). Remove the modesty panel carefully, so that none of the wires become loose or disconnected.
7 - Open the two latches (located under the firebox floor) securing the glass enclosure panel. Remove the panel by tilting it outward at the bottom and lifting it up. Set the door aside protecting it from inadvertent damage. *See* ***Figure 57 on page 25.***

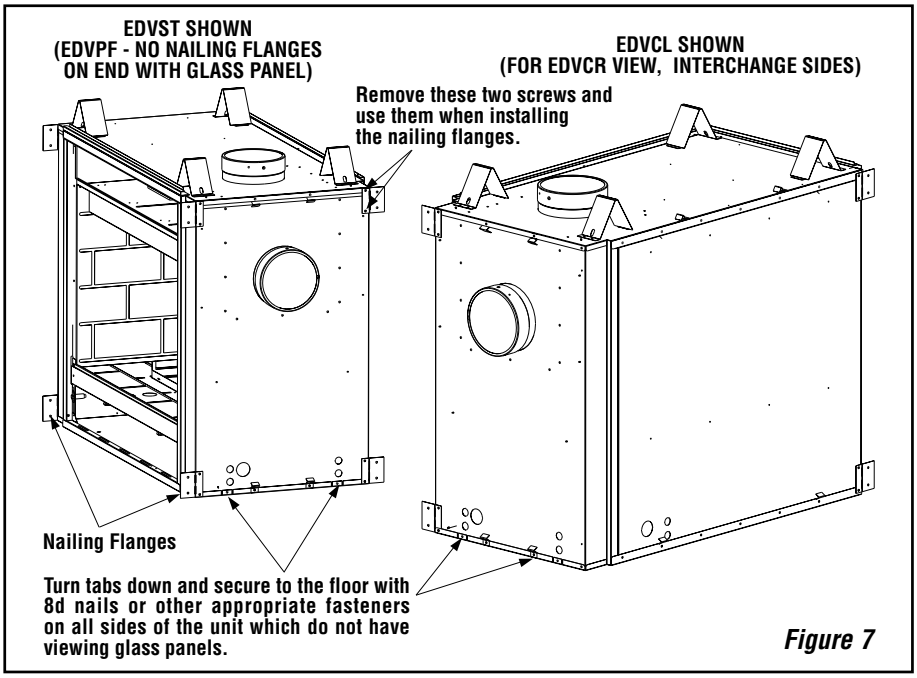
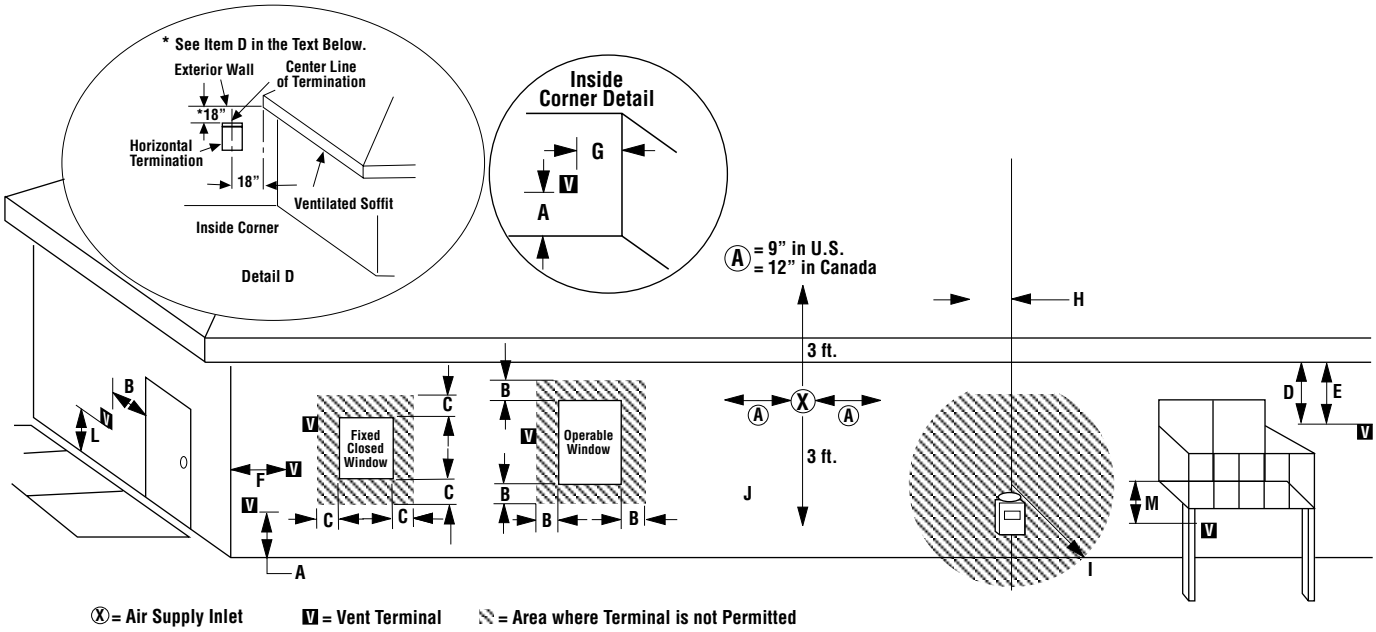


Figure 7

EXTERIOR HORIZONTAL VENT TERMINATION CLEARANCE REQUIREMENTS



	Canadian Installation*	US Installation**
A = Clearance above grade, veranda, porch, deck, or balcony.	12 inches (30cm)*	12 inches (30cm)**
B = Clearance to window or door that may be opened.	6 in (15cm) for appliances < 10,000 Btuh (3kW), 12 in (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36 inches (91cm) for appliances > 100,000 Btuh (30kW)*	6 in (15cm) for appliances < 10,000 Btuh (3kW), 9 in (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12 inches (30cm) for appliances > 50,000 Btuh (15kW)**
C = Clearance to permanently closed window	12" (305mm) recommended to prevent window condensation	9" (229mm) recommended to prevent window condensation
D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 18 inches (458mm) from the center line of the terminal	18" (458mm)	18" (458mm)
E = Clearance to unventilated soffit	12" (305mm)	12" (305mm)
F = Clearance to outside corner	5" (12.7cm) minimum	5" (12.7cm) minimum
G = Clearance to inside corner	2" (5.08cm) minimum - SV4.5HT-2 • 6" (15.2cm) minimum - SV4.5HTSS	2" (5.08cm) minimum - SV4.5HT-2 • 6" (15.2cm) minimum - SV4.5HTSS
H = Clearance to each inside of center line extended above meter/regulator assembly	3 feet (91cm) within a height of 15 feet above the meter/regulator assembly*	3 feet (91cm) within a height of 15 feet above the meter/regulator assembly**
I = Clearance to service regulator vent outlet	3 feet (91cm)*	3 feet (91cm)**
J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 in (15cm) for appliances < 10,000 Btuh (3kW), 12 in (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36 inches (91cm) for appliances > 100,000 Btuh (30kW)*	6 in (15cm) for appliances < 10,000 Btuh (3kW), 9 in (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12 inches (30cm) for appliances > 50,000 Btuh (15kW)**
K = Clearance to a mechanical air supply inlet	6 feet (1.83m)*	3 feet (91cm) above if within 10 feet (3m) horizontally**
L = Clearance above paved sidewalk or paved diveway located on public property	7 feet (2.13m)‡	7 feet (2.13m)‡
M = Clearance under veranda, porch, deck or balcony	12 inches (30cm)*‡	12 inches (30cm)‡

* In accordance with the current CSA-B149.1 National Gas And Propane Installation Code.
** In accordance with the curent ANSI SZ223.1/NFPA 54 National Fuel Gas Codes.
‡ A vent shall 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 2 sides beneath the floor:
• 2" Clearance to Non-Combustibles for SV4.5HT-2 Only.

Figure 8

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

FIREPLACE FRAMING SPECIFICATIONS

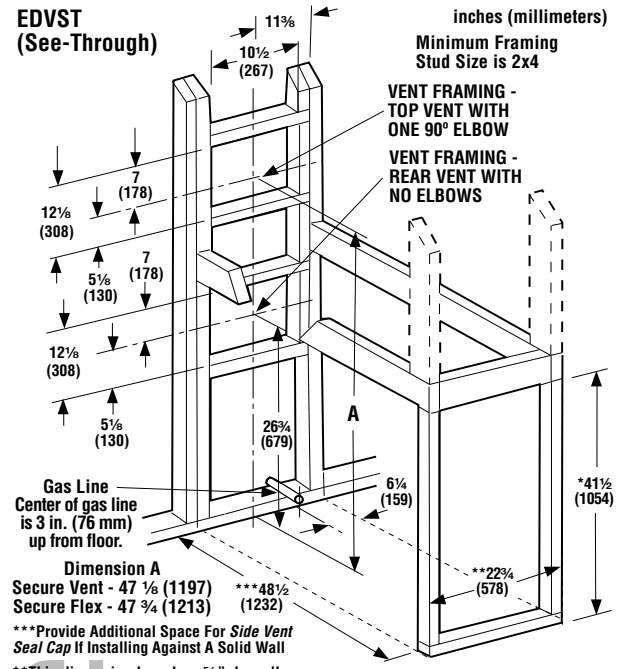


Figure 9

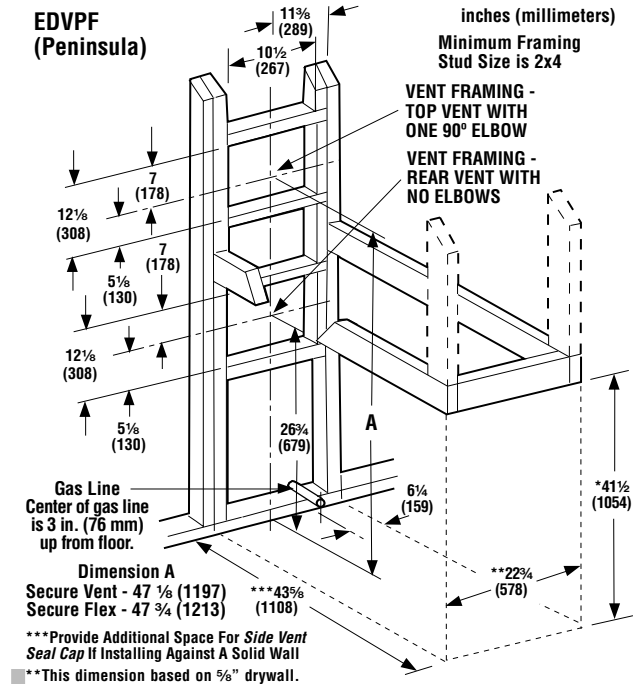


Figure 10

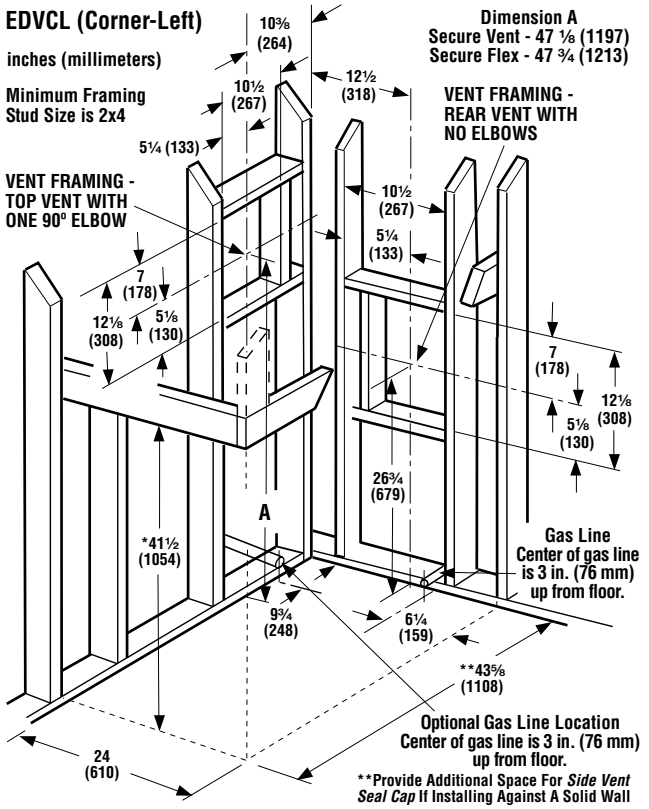


Figure 11

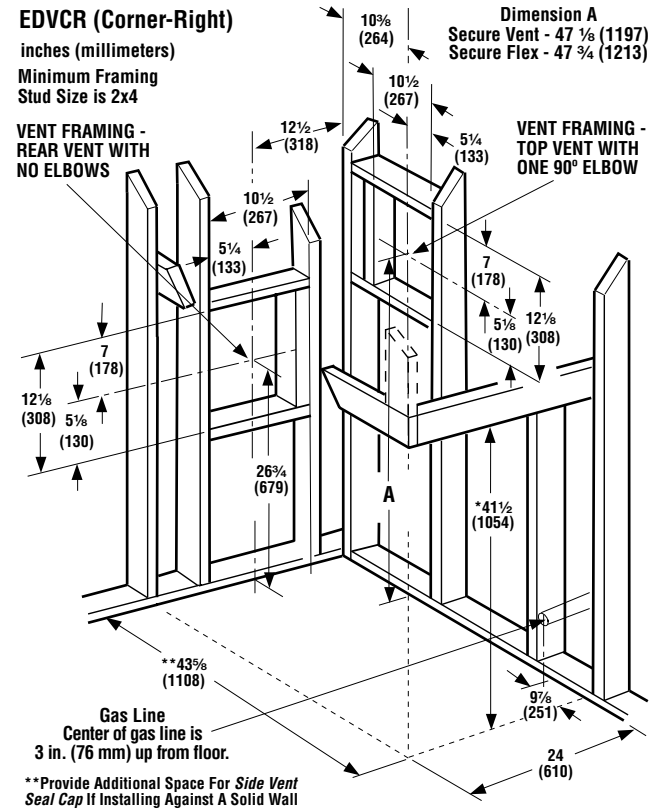


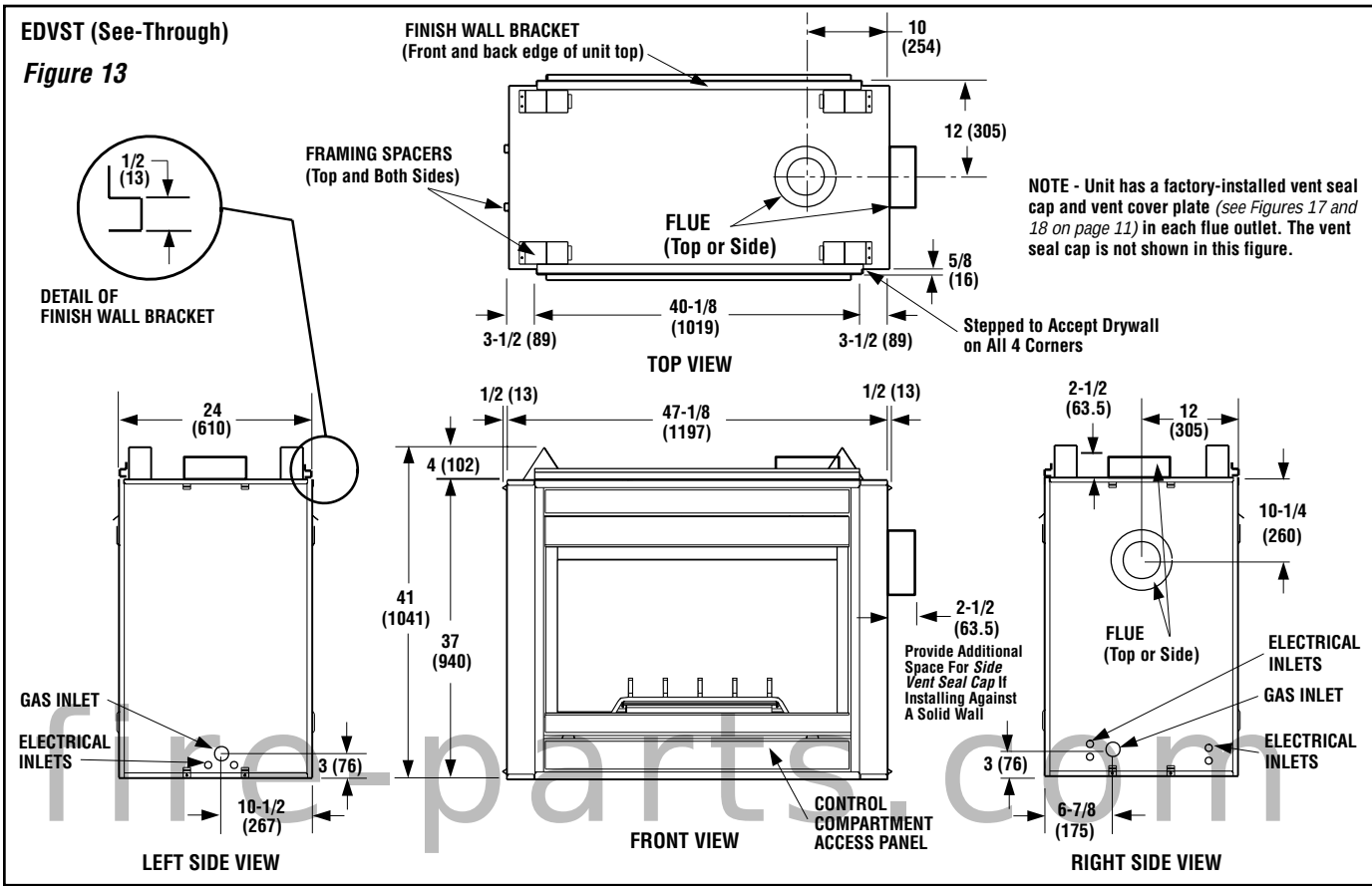
Figure 12

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

FIREPLACE SPECIFICATIONS

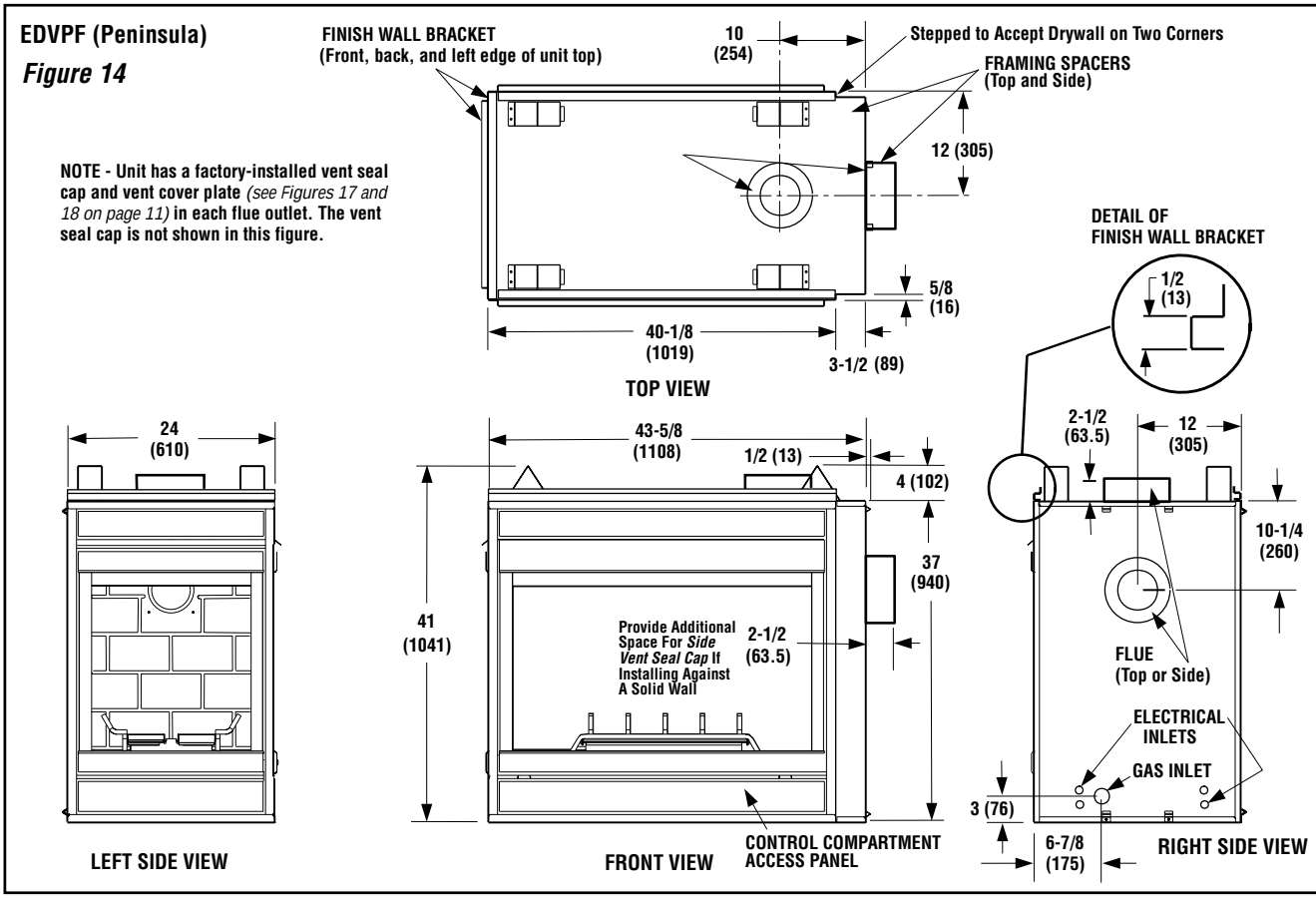
EDVST (See-Through)

Figure 13



EDVPF (Peninsula)

Figure 14

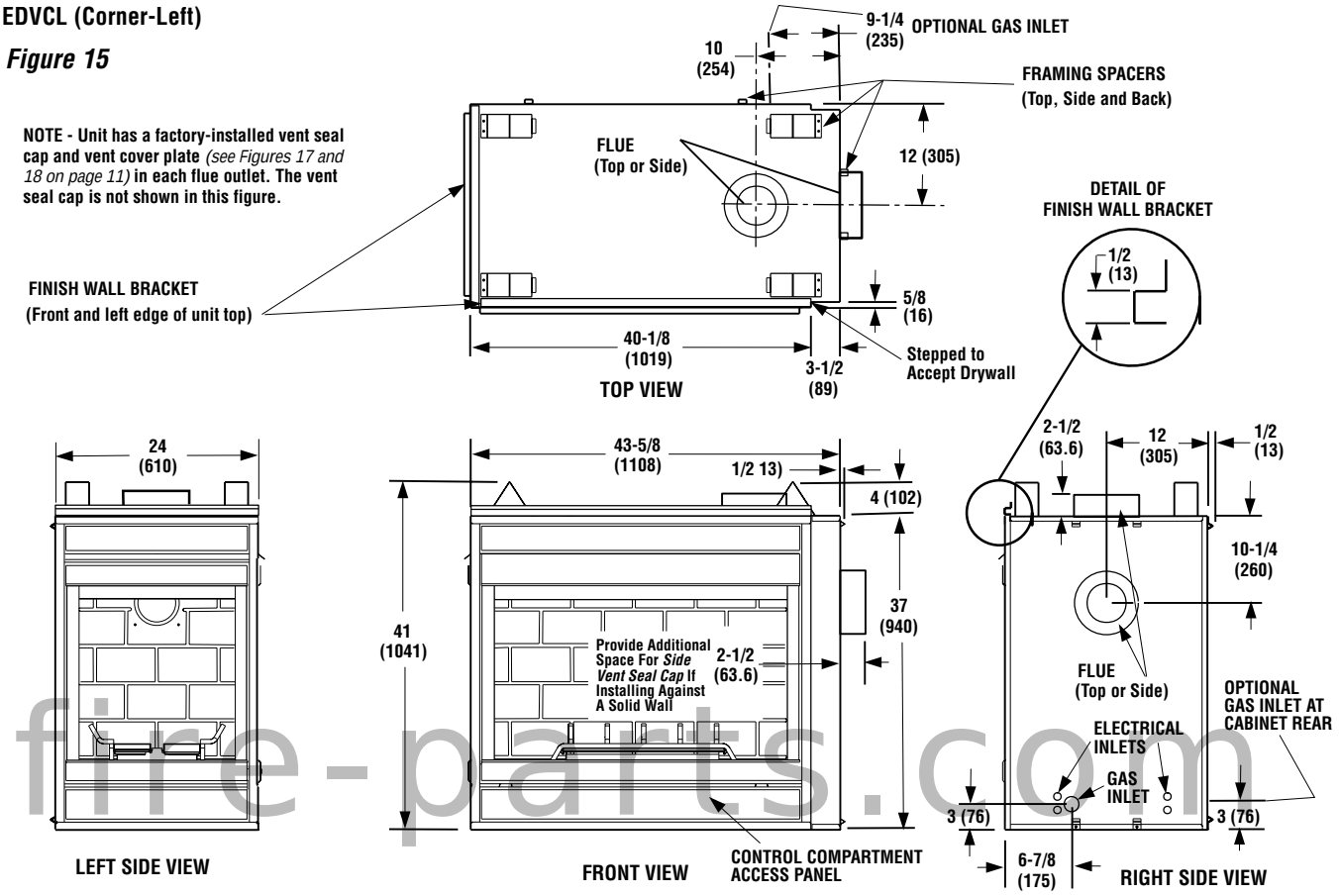


NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

FIREPLACE SPECIFICATIONS CONTINUED

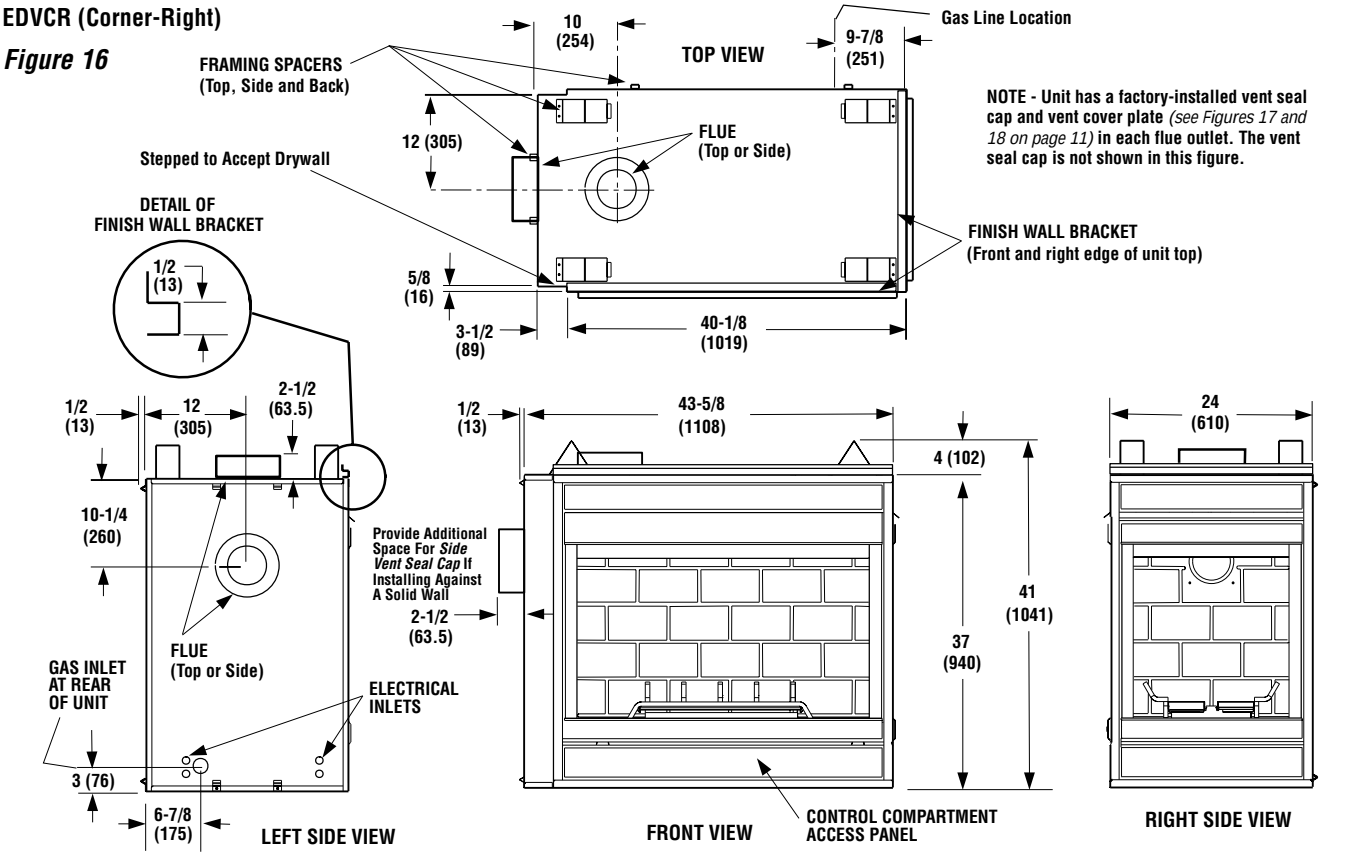
EDVCL (Corner-Left)

Figure 15



EDVCR (Corner-Right)

Figure 16



NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Step 1. FRAMING

Frame these appliances as illustrated in ***Figures 9 (EDVST), 10 (EDVPF), 11 (EDVCL) or 12 (EDVCR)***. All framing details must allow for a minimum clearance to combustible framing members as shown in ***Table 2 on page 4***. If the appliance is to be elevated above floor level, a solid continuous platform must be constructed. Headers may be in direct contact with the appliance top spacers but must not be supported by them or notched to fit around them. All construction above the appliance must be self supporting, **DO NOT** use the appliance for structural support.

Side Nailing Flanges

The fireplace should be secured to the framing at the side(s) and/or rear of the unit using the factory-provided nailing flanges. Install the nailing flanges - 8 (EDVST), 4 (EDVPF, EDVCL and EDVCR) - as shown in ***Figure 7 on pge 5*** using the existing screws.

Position the fireplace within the framing. When required, the flanges may be bent 90 degrees by hand or with the assistance of a hammer. Use wood screws to secure the nailing flanges to the framing. ***See Table 2 on page 4*** for clearances of framing members to cabinet parts in the nailing flange area. The nailing flange itself is exempt from these clearances.

Floor Nailing Tabs

Secure the fireplace to the floor as shown in ***Figure 7 on page 5.***

Step 2. ROUTING GAS LINE

Route a ½" (13 mm) gas line as shown in ***Figure 9 (EDVST), 10 (EDVPF), 11 (EDVCL) or 12 (EDVCR) on pages 8 and 9***. Gas lines must be routed, constructed and made of materials that are in strict accordance with local codes and regulations. All appliances are factory-equipped with a flexible gas line connector and 1/2 inch shutoff valve. **(See step 6 on page 23)**.

Step 3. INSTALL THE VENT SYSTEM

GENERAL INFORMATION

These instructions should be used as a guideline and do not supersede local codes in any way. Install vent according to local codes, these instructions, the current National Fuel Gas Code (ANSI-Z223.1) in the USA or the current standards of CAN/CGA-B149.1 and -B149.2 in Canada.

These fireplaces are designed, tested and listed for operation and installation with, and only with, Secure Vent™ Direct Vent System Components, Secure Flex™ Flexible Vent Components manufactured by Security Chimneys International and Z-FLEX™ Model GA Venting Systems listed to UL1777 and ULCS635 manufactured by Flexmaster Canada Limited. These approved vent system components are labeled for identification. DO NOT use any other manufacturer's vent components with these appliances.

Massachusetts And New York City, NY Requirements

These appliances are approved for installation in the following USA locations listed in the following:

Massachusetts:
Installation of these fireplaces are approved for installation in the US state of Massachusetts if the following additional requirements are met-

- Installation and repair must be done by a plumber or gas fitter licensed in the Commonwealth of Massachusetts.
- The flexible gas line connector used shall not exceed 36 inches (92 centimeters) in length.
- The individual manual shut-off must be a T-handle type valve.

New York City, NY:
Installation of these fireplaces are approved for installation in New Your City in the US state of New York.

Massachusetts Horizontal Vent Requirements

In the Commonwealth of Massachusetts, horizontal terminations installed less than seven (7) feet above the finished grade must comply with the following additional requirements:

- A hard wired carbon monoxide detector with an alarm and battery back-up must be installed on the floor level where the gas fireplace is installed. The carbon monoxide detector must comply with NFPA 720, be ANSI/UL 2034 listed and be ISA certified.
- A metal or plastic identification plate must be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade and be directly in line with the horizontal termination. The sign must read, in print size no less than one-half (1/2) inch in size, GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS.

These fireplaces must be vented directly to the outside.

The vent system must not service multiple appliances, and must never be connected to a flue serving a solid fuel burning appliance.

The vent pipe is tested to be run inside an enclosure (such as a chase). There is no requirement for inspection openings in the enclosure at any of the joints in the vent pipe.

Preparing the Appliance Vent Collar

Each of the unit's two vent collars are sealed with a cover plate and a seal cap. The cover plate and seal cap must be removed from the vent collar being used. Refer to ***Figure 17*** for top vent usage and ***Figure 18*** for rear, and the following steps to prepare the appropriate collar for use.

From the vent collar being used, remove the two screws securing the vent cap. Twist the cap counterclockwise. Pull it away from the unit and discard, along with the piece of insulation.

When the top vent collar is being used, from inside the firebox, loosen the two screws in the keyhole slots of the cover plate and remove the remaining two cover plate securing screws. Remove and discard the cover plate. **Reinstall and securely tighten all four screws.**

When the rear vent collar is being used, from inside the firebox, loosen the two screws in the keyhole slots of the cover plate and remove the remaining two cover plate securing screws. Remove and discard the cover plate. **Reinstall and securely tighten all four screws.**

WARNING: FAILURE TO REINSTALL AND SECURELY TIGHTEN COVER PLATE SCREWS COULD RESULT IN LEAKAGE OF FLUE PRODUCTS INTO THE LIVING SPACE. VENT COVER PLATE AND VENT SEAL CAP MUST REMAIN SECURELY INSTALLED ON UNUSED VENT COLLAR. FAILURE TO DO SO COULD RESULT IN LEAKAGE OF FLUE PRODUCTS INTO LIVING SPACE.

TOP VENT SEAL CAP & COVER PLATE REMOVAL WHEN USING THE TOP VENT

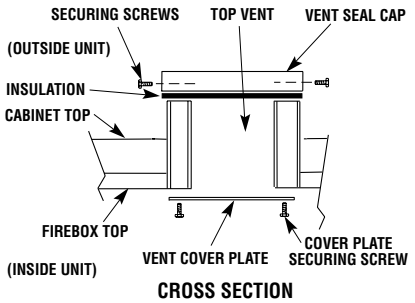


Figure 17

SIDE VENT SEAL CAP & COVER PLATE REMOVAL WHEN USING THE SIDE VENT

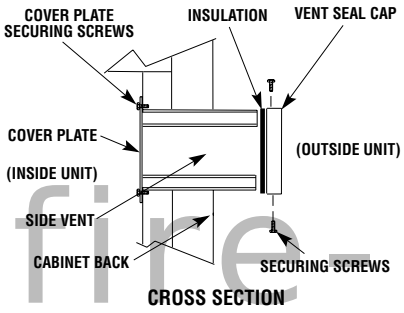


Figure 18

VENT RESTRICTOR INSTALLATION (TOP VENT)

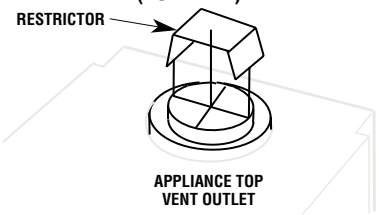


Figure 19

VENT RESTRICTOR INSTALLATION (REAR VENT)

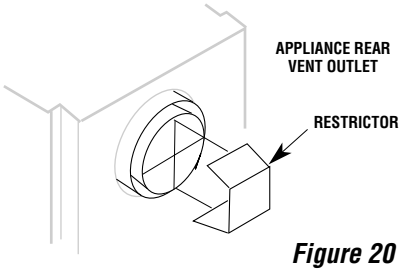


Figure 20

VENT SECTION LENGTH CHART

Nominal Section Length (inches)		6	12	24	36	48	TOTAL QTY
Net Section Length (inches)		4-1/2	10-1/2	22-1/2	34-1/2	46-1/2	
Height of Vent		Number of Vent Sections					
inches	ft						
4.5	0.375	1	0	0	0	0	1
9	0.75	2	0	0	0	0	2
10.5	0.875	0	1	0	0	0	1
15	1.25	1	1	0	0	0	2
19.5	1.625	2	1	0	0	0	3
21	1.75	0	2	0	0	0	2
22.5	1.875	0	0	1	0	0	1
25.5	2.125	1	2	0	0	0	3
31.5	2.625	0	3	0	0	0	3
34.5	2.875	0	0	0	1	0	1
37.5	3.125	1	1	1	0	0	3
43.5	3.625	0	2	1	0	0	3
45	3.75	0	0	2	0	0	2
46.5	3.875	0	0	0	0	1	1
49.5	4.125	1	0	2	0	0	3
51	4.25	1	0	0	0	1	2
55.5	4.625	0	1	2	0	0	3
57	4.75	0	0	1	1	0	2
66	5.25	0	2	2	0	0	4
67.5	5.625	0	0	3	0	0	3
69	5.75	0	0	0	2	0	2
72	6	1	0	3	0	0	4
73.5	6.125	1	0	0	2	0	3
79.5	6.625	0	1	0	2	0	3
81	6.75	0	0	0	1	1	2
90	7.5	0	2	1	0	1	4
91.5	7.625	0	0	2	0	1	3
93	7.75	0	0	0	0	2	2
96	8	1	0	1	2	0	4
97.5	8.125	1	0	0	0	2	3
102	8.5	2	0	0	0	2	4
103.5	8.625	0	0	0	3	0	3
108	9	1	0	0	3	0	4
114	9.5	0	2	0	0	2	4
117	9.75	1	0	5	0	0	6
118.5	9.875	1	1	0	3	0	5
126	10.5	0	0	1	3	0	4
130.5	10.875	1	0	1	3	0	5
135	11.25	0	0	6	0	0	6
138	11.5	0	0	0	4	0	4
139.5	11.625	0	0	0	0	3	3
142.5	11.875	1	0	0	4	0	5

VENT SECTION LENGTH CHART

Nominal Section Length (inches)		6	12	24	36	48	TOTAL QTY
Net Section Length (inches)		4-1/2	10-1/2	22-1/2	34-1/2	46-1/2	
Height of Vent		Number of Vent Sections					
inches	ft						
144	12	1	0	0	0	3	4
150	12.5	0	1	0	0	3	4
154.5	12.875	1	1	0	0	3	5
160.5	13.375	0	2	0	0	3	5
172.5	14.375	0	0	0	5	0	5
177	14.75	1	0	0	5	0	6
183	15.25	0	1	0	5	0	6
186	15.5	0	0	0	0	4	4
190.5	15.875	1	0	0	0	4	5
196.5	16.375	0	1	0	0	4	5
205.5	17.125	0	1	1	5	0	7
207	17.25	0	0	0	6	0	6
211.5	17.625	1	0	0	6	0	7
217.5	18.125	0	1	0	6	0	7
229.5	19.125	0	0	1	6	0	7
232.5	19.375	0	0	0	0	5	5
237	19.75	1	0	0	0	5	6
241.5	20.125	0	0	0	7	0	7
246	20.5	1	0	0	7	0	8
252	21	0	1	0	7	0	8
264	22	0	0	1	7	0	8
276	23	0	0	0	8	0	8
279	23.25	0	0	0	0	6	6
280.5	23.375	1	0	0	8	0	9
283.5	23.625	1	0	0	0	6	7
289.5	24.125	0	1	0	0	6	7
301.5	25.125	0	0	1	0	6	7
310.5	25.875	0	0	0	9	0	9
315	26.5	1	0	0	9	0	10
325.5	27.125	0	0	0	0	7	7
330	27.5	1	0	0	0	7	8
336	28	0	1	0	0	7	8
345	28.75	0	0	0	10	0	10
349.5	29.125	1	0	0	10	0	11
372	31	0	0	0	0	8	8
376.5	31.375	1	0	0	0	8	9
379.5	31.625	0	0	0	11	0	11
418.5	34.875	0	0	0	0	9	9
423	35.25	1	0	0	0	9	10
465	38.75	0	0	0	0	10	10

Preparing the Appliance Top or Rear Vent Outlet when vertically terminating the vent system above the roof

A vent restrictor may be needed with this appliance. If needed, install the vent restrictor (provided) in the appliance top flue outlet as shown in ***Figure 19*** or rear flue outlet as shown in ***Figure 20*** when vertically terminating the vent system above the roof. It may be installed either from inside or outside the unit, in the inner fireplace collar. It is press-fitted in place.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Select Venting System - Horizontal or Vertical

With the appliance secured in framing, determine vent routing and identify the exterior termination location. The following sections describe vertical (roof) and horizontal (exterior wall) vent applications. Refer to the section relating to your installation. **A list of approved venting components is shown in the two tables on page 27.**

VERTICAL TERMINATION SYSTEMS (ROOF)

Figure 21, and Figures 32 through 36 on pages 14 and 15 and their associated Vertical Vent Tables illustrate the vertical venting configurations that are allowed to be used with these appliances. **Secure Vent** pipe applications are shown in these figures; **Secure Flex** pipe may also be used. ***See page 21***. A Vertical Vent Table summarizes each system's minimum and maximum vertical and horizontal length values that can be used to design and install the vent components in a variety of applications.

Both these vertical vent systems terminate through the roof. In the USA, the minimum vent height above the roof and/or adjacent walls is specified in ANSI Z223.1(latest edition); in Canada, by the current CAN-1 B149 installation code. It is also specified in major building codes. Always consult your local codes for specific requirements. A general guide to follow is the Gas Vent Rule (refer to ***Figure 4*** **on page 4).**

Vertical (Straight) Installation

Determine the number of straight vent sections required. 4-1/2" (114 mm), 10-1/2" (267 mm), 22-1/2" (572 mm), 34-1/2" (876 mm) and 46-1/2" (1181 mm) net section lengths are available. Plan the vent lengths so that a section joint does not occur within the space defined by ceiling joists or roof rafters. Refer to the Vent Section Length Chart.

Vertical (Offset) Installation

Analyze the vent routing and determine the number of vent sections and elbows required. Refer to **Vertical Vent Figures and Tables on page 15 and 16** to select the type of vertical installation desired. Vent sections are available in net lengths of 4-1/2" (114 mm), 10-1/2" (267 mm), 22-1/2" (572 mm), 34-1/2" (876 mm) and 46 ½" (1181 mm). Refer to the **Vent Section Length Chart on page 11** for an aid in selecting length combinations. Elbows are available in 45° and 90° configurations. Refer to ***Figure 27*** for the SV4.5E45 and SV4.5E90 elbow dimensional specifications.

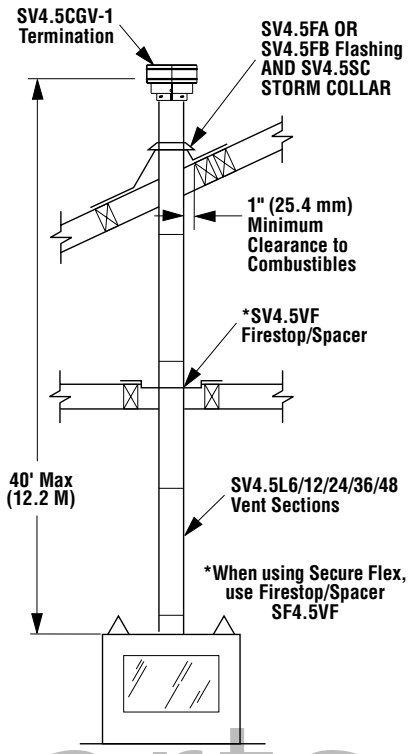


Figure 21

Where required, a **telescopic vent section (SV4.5LA)** may be used to provide the installer with an option in installing in tight and confined spaces or where the vent run made up of fixed length pieces develops a joint in a undesirable location, or will not build up to the required length. The SV4.5LA Telescopic Vent Section has an effective length of from 1-1/2" (38 mm) to 7-1/2" (191 mm). The SV4.5LA is fitted with a locking inclined channel end (identical to a normal vent section component) and a plain end with 3 pilot holes. Slip the plain end over the locking channel end of a standard SV4.5 vent component the required distance and secure with three screws.

Maintain a minimum 1" (25 mm) clearance to combustible materials for all vertical elements. Clearances for all horizontal elements are 3" (76 mm) on top, 1" (25 mm) on sides and 1" (25 mm) on the bottom.

A. Frame ceiling opening - Use a plumb line from the ceiling above the appliance to locate center of the vertical run. Cut and/or frame an opening, 10-1/2" x 10-1/2" (267mm x 267mm) inside dimensions, about this center mark ***(Figure 22)***.

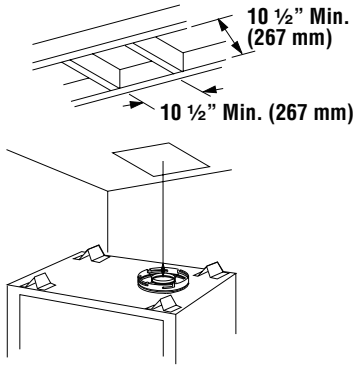


Figure 22

B. Attach vent components to appliance - Secure Vent SV4.5 direct vent system components are unitized concentric pipe components featuring positive twist lock connections (*see* ***Figure 23***). All of the appliances covered in this document are fitted with collars having locking inclined channels. The dimpled end of the vent components fit over the appliance collar to create the positive twist lock connection.

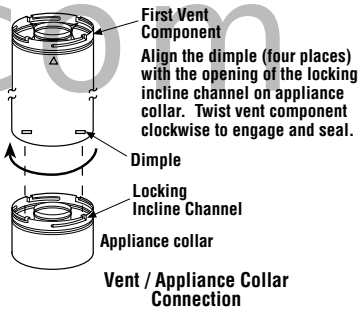


Figure 23

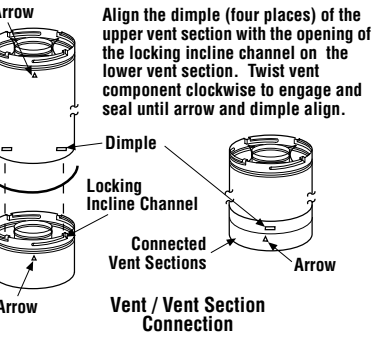


Figure 24

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

To attach a vent component to the appliance collar, align the dimpled end over the collar, adjusting the radial alignment until the four locking dimples are aligned with the inlet of the four inclined channels on the collar (*refer to **Figure 23***). Push the vent component against the collar until it fully engages, then twist the component clockwise, running the dimples down and along the incline channels until they seat at the end of the channels.

The unitized design of the **Secure Vent** components will engage and seal both the inner and outer pipe without the need for sealant or screws. If desired a #6 x 1/2" screw may be used at the joint, but it not required as the pipe will securely lock when twisted.

C. Attach vent components to each other - Other vent sections may be added to the previously installed section in accordance with the requirements of the vertical vent figures and tables.

To add another vent component to a length of vent run, align the dimpled end over the inclined channel end of the previously installed section, adjusting the radial alignment until the four locking dimples are aligned with the inlets of the four incline channels of the previous section. Push the vent component against the previous section until it fully engages, then twist the component clockwise running the dimples down and along the incline channels until they seat at the end of the channels.**This seating position is indicated by the alignment of the arrow and dimple as shown in *Figure 24.***

D. Install firestop/spacer at ceiling - When using Secure Vent, use SV4.5VF firestop/spacer at ceiling joists; when using Secure Flex, use SF4.5VF firestop/spacer. If there is living space above the ceiling level, the firestop/spacer must be installed on the bottom side of the ceiling. If attic space is above the ceiling, the firestop/spacer must be installed on the top side of the joist. Route the vent sections through the framed opening and secure the firestop/spacer with 8d nails or other appropriate fasteners at each corner.

Remember to maintain 1" (25 mm) clearance to combustibles, framing members, and attic or ceiling insulation when running vertical chimney sections. Attic insulation shield (96K94) may be used to obtain the required clearances indicated here. See installation accessories table on page 27.

E. Support the vertical vent run sections - ***Note -*** *Proper venting support is very important. The weight of the vent must not be supported by the firplace in any degree.*

Support the vertical portion of the venting system every 8 feet (2.4m) above the fireplace vent outlet. One method of support is by utilizing field provided support straps (conventional plumber's tape). Secure the plumber's tape to the framing members with nails or screws.

Loop the tape around the vent, securing the ends of the tape to the framing. If desired, sheet metal screws #6 x 1/2" length may be used to secure the support straps to the vent pipe. See ***Figure 25***.

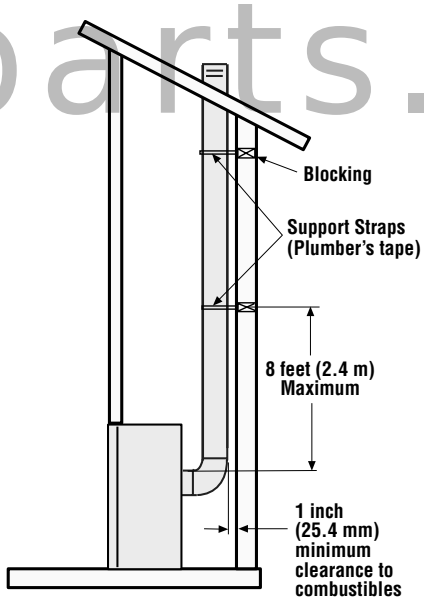


Figure 25

Another method, where the vent is not adjacent to a wall, is illustrated in ***Figure 26***. Here, support straps (96K93) and support plates (96K92) can be used to support the weight of the vent.

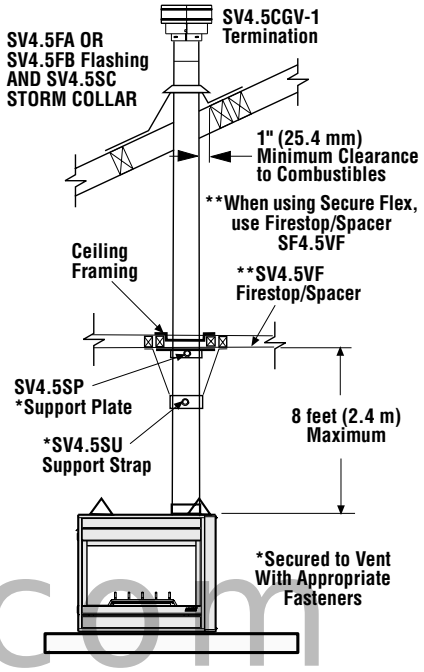


Figure 26

F. Change vent direction to horizontal/inclined run - At transition from or to a horizontal/inclined run, install the SV4.5E45 and SV4.5E90 elbows in the same manner as the straight vent sections. The elbows feature a twist section to allow them to be routed about the center axis of their initial collar section to align with the required direction of the next vent run element. **Twist elbow sections in a clockwise direction only so as to avoid the possiblity of unlocking any of the previously connected vent sections.** See ***Figure 27***.

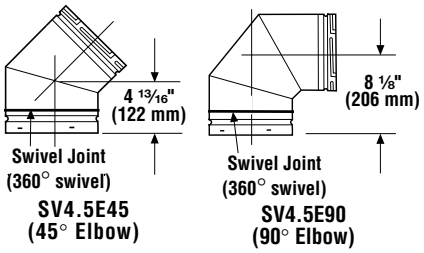


Figure 27

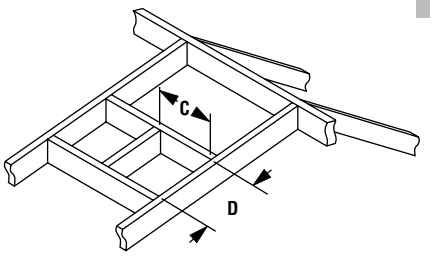
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

G. Continue installation of horizontal/inclined sections - Continue with the installation of the straight vent sections in horizontal/inclined run as described in **Step C.** Install support straps every 5 ft. (1.52 m) along horizontal/inclined vent runs using conventional plumber's tape. ***See page 17, Figure 37.*** **It is very important that the horizontal/inclined run be maintained in a straight (no dips) and recommended to be in a slightly elevated plane, in a direction away from the fireplace of** ¼" rise per foot (20 mm per meter) which is ideal, though rise per foot run ratios that are smaller are acceptable all the way down to at or near level**.**

Use a carpenter's level to measure from a constant surface and adjust the support straps as necessary.

It is important to maintain the required clearances to combustibles: 1" (25 mm) at all sides for all vertical runs; and 3" (76 mm) at the top, 1" (25 mm) at sides, and 1" (25 mm) at the bottom for all horizontal/inclined runs.

H. Frame roof opening - Identify location for vent at the roof. Cut and/or frame opening per Roof Framing Chart and ***Figure 28***.



Framing Dimensions for Roof

Pitch	C	D
0/12	10-1/2 in. (267 mm)	10-1/2 in. (267 mm)
6/12	10-1/2 in. (267 mm)	12 in. (305 mm)
12/12	10-1/2 in. (267 mm)	17-3/4 in. (451 mm)

Figure 28

I. Install the roof flashing - Extend the vent sections through the roof structure. Install the roof flashing over the vent section and position such that the vent column rises vertically (use carpenters level) (***Figure 29***). Nail along perimeter to secure flashing or adjust roofing to overlap the flashing edges at top and sides only and trim where necessary. Seal the top and both sides of the flashing with waterproof caulking.

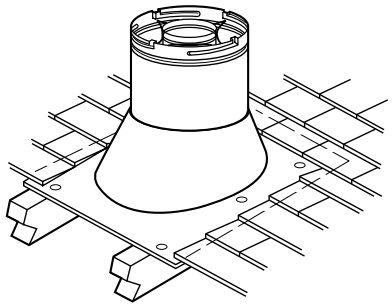


Figure 29

J. Install the storm collar - Install the storm collar, supplied with the flashing, over the vent/flashing joint. See ***Figure 30.*** Loosen the storm collar screw. Slide collar down until it meets the top of the flashing. Tighten the adjusting screw. Apply non-combustible caulking or mastic around the circumference of the joint to provide a water tight seal.

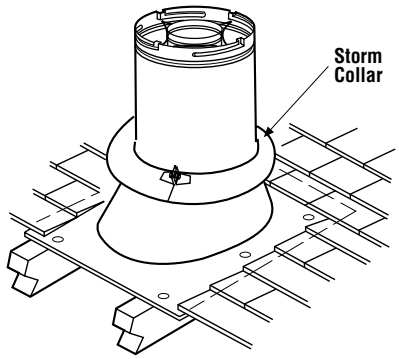


Figure 30

K. Install the vertical termination - The final step involves installation of the SV4.5CGV-1 Vertical Termination. Extend the vent sections to the height as shown in the "Vertical vent termination section" on **page 4**. The SV4.5CGV-1 Vertical Termination ***(Figure 31)*** can be installed in the exact same fashion as any other **Secure Vent** section.

Align the termination over the end of the previously installed section, adjusting the radial alignment until the four locking dimples of the termination are aligned with the inlets of the four incline channels of the last vent section. Push the termination down until it fully engages, then twist the termination clockwise running the dimples down and along the incline channels until they are seated at the end of the channels.

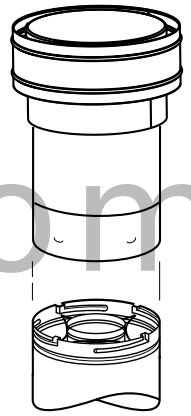


Figure 31

If the vent system extends more than 5' (1.5 m) above the roof flashing, stabilizers may be necessary. Additional screws may be used at section joints for added stability. Guide wires may be attached to the joint for additional support on multiple joint configurations.

VERTICAL VENT FIGURES/TABLES

Note: Secure Vent *(rigid vent pipe) is shown in the figures;* ***Secure Flex*** *(flexible vent pipe) may also be used* ***(see page 22).***

WARNING: UNDER NO CIRCUMSTANCES MAY SEPARATE SECTIONS OF CONCENTRIC FLEXIBLE VENT PIPE BE JOINED TOGETHER.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Note: It is very important that the horizontal/ inclined run be maintained in a straight (no dips) and recommended to be in a slightly elevated plane, in a direction away from the fireplace of *1/4" rise per foot (20 mm per meter) which is ideal, though rise per foot run ratios that are smaller are acceptable all the way down to at or near level.*

Note: *SV4.5VF (Secure Vent), SF4.5VF (Secure Flex) firestop/spacer must be used anytime vent pipe passes through a combustible floor or ceiling. SV4.5HF (Secure Vent), SF4.5HF (Secure Flex)firestop/spacer must be used anytime vent pipe passes through a combustible wall.*

Note: *Two 45 degree elbows may be used in place of one 90 degree elbow. The same rise to run ratios, as shown in the venting figures for 90 elbows, must be followed if 45 degree elbows are used.*

Note: An elbow is acceptable as 1 foot of vertical rise, except where an elbow is the only vertical component in the system. (See Figure 41 on page 19).

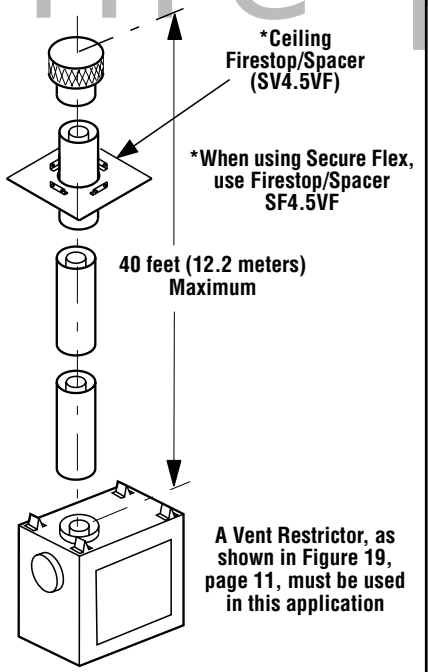
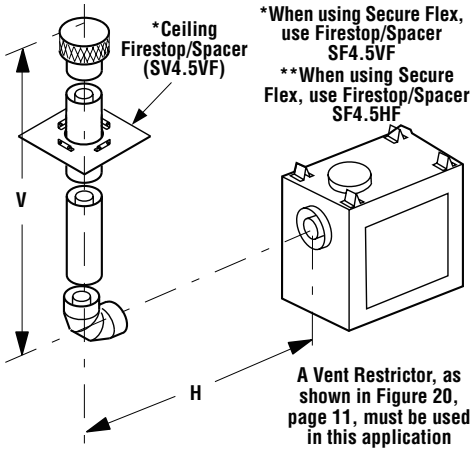


Figure 32 **- Top Vent - STRAIGHT**

TABLE A			
H Maximum		V Minimum	
feet	(meters)	feet	(meters)
2	(0.610)	1	(0.305)
4	(1.219)	2	(0.610)
6	(1.829)	3	(0.914)
8	(2.438)	4	(1.219)
V + H = 40 feet (12.2 meters) Max. H = 8 feet (2.4 meters) Max. *Ratio V to H ratio is 1:2*			

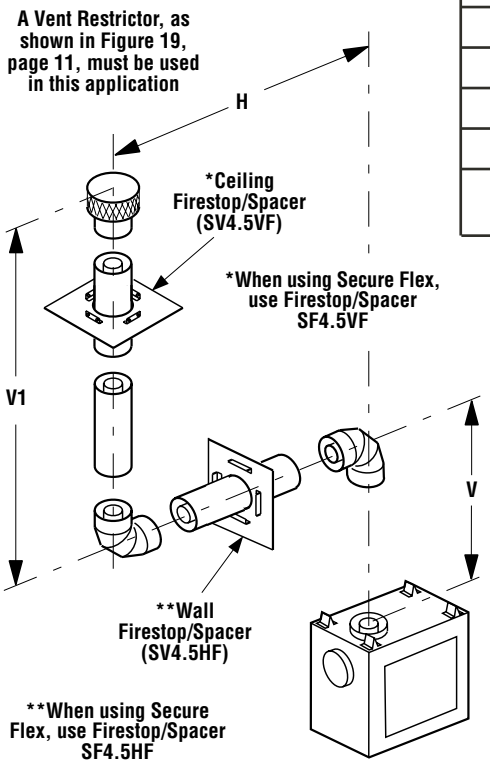


Example: *If 8 feet of (H) horizontal vent run is needed, then 4 feet minimum (V) vertical vent will be required.*

This table shows a 1 (V) to 2 (H) ratio. For every 1 foot of (V) vertical, you are allowed 2 feet of (H) horizontal run, up to a maximum horizontal run of 8 feet.

Figure 33 **- Rear Vent - ONE 90 DEGREE ELBOW**

TABLE B			
H Maximum		V Minimum	
feet	(meters)	feet	(meters)
5	(1.524)	Elbow Only	
5	(1.524)	1	(0.305)
10	(3.048)	2	(0.610)
15	(4.572)	3	(0.914)
20	(6.096)	4	(1.219)
$V + V_1 + H = 40$ feet (12.2 m) Max. H = 20 feet (6.096 meters) Max.			



Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

An elbow is acceptable as 1 foot of vertical rise except where an elbow is the only vertical component in the system. See ***Figure 41****.*

Figure 34 **- Top Vent - TWO 90 DEGREE ELBOWS**

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

TABLE C					
$H+H_1$ Maximum		H Maximum		V Minimum	
feet	(meters)	feet	(meters)	feet	(meters)
5	(1.524)	2	(0.610)	1	(0.305)
10	(3.048)	4	(1.219)	2	(0.610)
15	(4.572)	6	(1.829)	3	(0.914)
20	(6.096)	8	(2.438)	4	(1.219)
$V + V_1 + H + H_1 = 40$ feet (12.2 m) Max H = 8 feet (2.438 meters) Max. $H + H_1 = 20$ feet (6.096 meters) Max.					

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

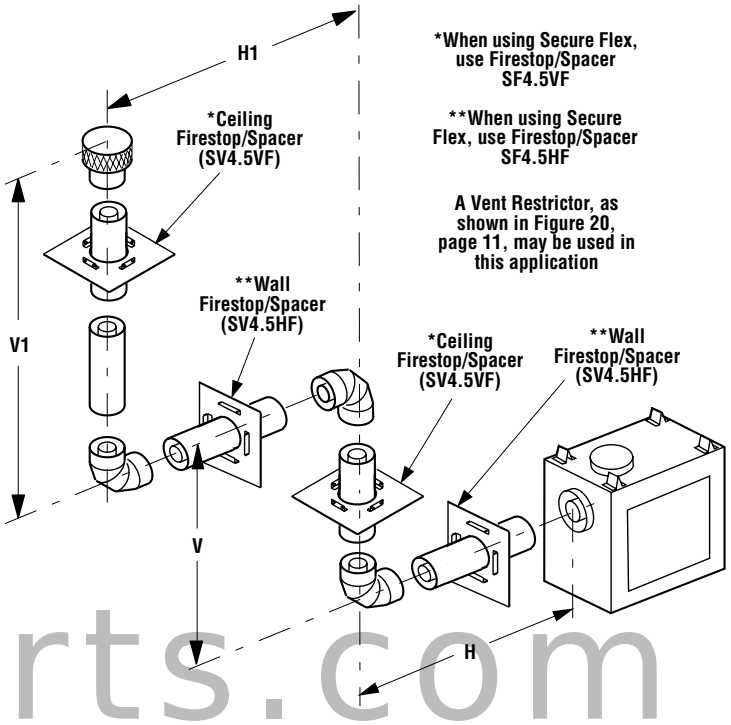


Figure 35 **- Rear Vent - THREE ELBOWS**

TABLE D			
$H + H_1$ Maximum		V Minimum	
feet	(meters)	feet	(meters)
5	(1.524)	Elbow Only	
5	(1.524)	1	(0.305)
10	(3.048)	2	(0.610)
15	(4.572)	3	(0.914)
20	(6.096)	4	(1.219)
$H + H_1 = 20$ feet (6.096 m) Max. $V + V_1 + H + H_1 = 40$ ft. (12.192 m) Max.			

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

An elbow is acceptable as 1 foot of vertical rise except where an elbow is the only vertical component in the system. See ***Figure 41****.*

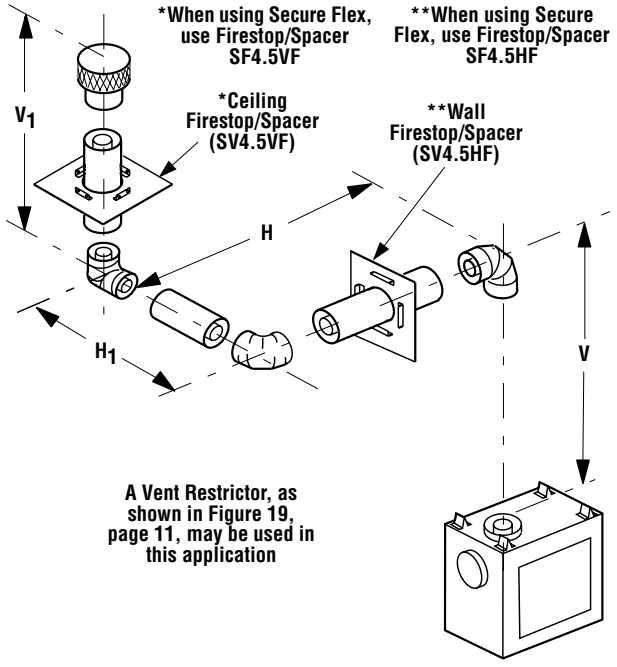


Figure 36- **Top Vent - THREE ELBOWS**

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

HORIZONTAL (OUTSIDE WALL) TERMINATION SYSTEM

Figure 37, and Figures 40 to 46 on page 19 to 21 and their associated Horizontal Vent Table illustrate the horizontal venting configurations that are allowed to be used with these appliances. **Secure Vent** pipe applications are shown in these figures; **Secure Flex** pipe may also be used. ***See page 22.*** A Horizontal Vent Table summarizes each system's minimum and maximum vertical and horizontal length values that can be used to design and install the vent components in a variety of applications.

Both of these horizontal vent systems terminate through an outside wall. Building Codes limit or prohibit terminating in specific areas. Refer to ***Figure 8*** **on page 6** for location guidelines.

Secure Vent SV4.5 direct vent system components are unitized concentric pipe components featuring positive twist lock connection, (*refer to* ***Figure 23*** **on page 12**). All of the appliances covered in this document are fitted with collars having locking inclined channels. The dimpled end of the vent components fit over the appliance collar to create the positive twist lock connection.

A. Plan the vent run -
Analyze the vent routing and determine the types and quantities of sections required 4-1/2" (114 mm), 10-1/2" (267 mm), 22-1/2" (572 mm), 34-1/2" (876 mm) and 46-1/2" (1181 mm) net section lengths are available. Plan the vent lengths so that a section joint does not occur within the space defined by ceiling joists, roof rafters or wall studs. Make allowances for elbows as indicated in ***Figure 27 on page 13***. **Maintain a minimum 1" (25 mm) clearance to combustibles on the vertical sections. Clearances for the horizontal runs are; 3" (76 mm) on top, 1" (25 mm) on sides, and 1" (25 mm) at the bottom.**

B. Frame exterior wall opening -
Locate the center of the vent outlet on the exterior wall according to the dimensions shown in ***Figures 9 (EDVST), 10 (EDVPF), 11 (EDVCL), or 12 (EDVCR)*** **on page 7**. Cut and/or frame an opening, 10-1/2" x 12-1/8" (267 mm x 308mm) inside dimensions, about this center.

C. Frame ceiling opening - If the vertical route is to penetrate a ceiling, use plumb line to locate the center above the appliance. Cut and/or frame an opening, 10-1/2" x 10-1/2" (267 mm x 267 mm) inside dimensions, about this center (refer to ***Figure 22*** **on page 12**).

D. Attach vent components to appliance - To attach a vent component to the appliance collar, align the dimpled end over the collar, adjusting the radial alignment until the four locking dimples are aligned with the inlets of the four incline channels on the collar (*refer to* ***Figure 23*** **on page 12**).

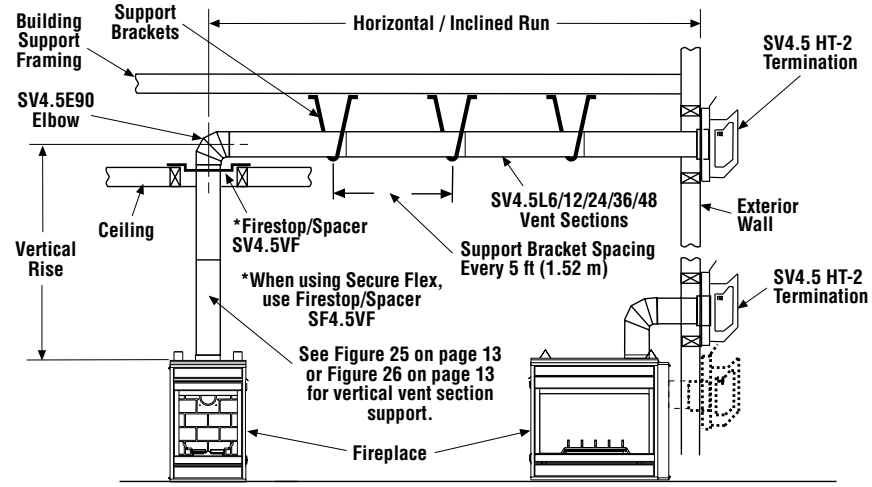


Figure 37

Push the vent component against the collar until it fully engages, then twist the component clockwise, running the dimples down and along the incline channels until they seat at the end of the channels. The unitized design of the **Secure Vent** components will engage and seal both the inner and outer pipe elements with the same procedure. Sealant and securing screws are not required.

E. Attach vent components to each other - Other vent sections may be added to the previously installed section in accordance with the requirements of the vent tables. To add another vent component to a length of vent run, align the dimpled end of the component over the inclined channel end of the previously installed section, adjusting the radial alignment until the four locking dimples are aligned with the inlets of the four incline channels of the previous section. Push the vent component against the previous section until it fully engages, then twist the component clockwise running the dimples down and along the incline channels until they seat at the end of the channels. **This seating position is indicated by the alignment of the arrow and dimple as shown in *Figure 24 on page 12.***

F. Install firestop/spacer at ceiling -
When using Secure Vent, use SV4.5VF firestop/spacer at ceiling joists; when using Secure Flex, use SF4.5VF firestop/spacer. If there is living space above the ceiling level, the firestop/ spacer must be installed on the bottom side of the ceiling. If attic space is above the ceiling, the firestop/ spacer must be installed on the top side of the joist. Route the vent sections through the framed opening and secure the firestop/spacer with 8d nails or other appropriate fasteners at each corner.

Remember to maintain 1" (25 mm) clearance to combustibles, framing members, and attic or ceiling insulation when running vertical chimney sections.

Attic insulation shield (96K94) may be used to obtain the required clearances indicated here. See installation accessories table on page 27.

G. Support the vertical run sections - ***See section E on page 13.***

H. Change vent direction - At transition from or to a horizontal/inclined run, install the SV4.5E45 and SV4.5E90 elbows in the same manner as the straight vent sections. The elbows feature a twist section to allow them to be routed about the center axis of their initial collar section to align with the required direction of the next vent run element. **Twist elbow sections in a clockwise direction only so as to avoid the possiblity of unlocking any of the previously connected vent sections.** See ***Figure 27 on page 13***.

I. Continue installation of horizontal/inclined sections - Continue with the installation of the straight vent sections in horizontal/inclined run as described in **Step E**. Install support straps every 5 ft. (1.52 m) along horizontal/inclined vent runs using conventional plumber's tape. See ***Figure 37.*** **It is very important that the horizontal/inclined run be maintained in a straight (no dips) and recommended to be in a slightly elevated plane, in a direction away from the fireplace of** ¼" rise per foot (20 mm per meter) which is ideal, though rise per foot run ratios that are smaller are acceptable all the way down to at or near level. Use a carpenter's level to measure from a constant surface and adjust the support straps as necessary.

It is important to maintain the required clearances to combustibles: 1" (25 mm) at all sides for all vertical runs; and 3" (76 mm) at the top, 1" (25 mm) at sides, and 1" (25 mm) at the bottom for all horizontal/inclined runs.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

J. Assemble vent run to exterior wall - If not previously measured, locate the center of the vent at the exterior wall. Prepare an opening as described in **Step B**. Assemble the vent system to point where the terminus of the last section is within 7-1/2 in. (191 mm) to 11-3/4 in. (298 mm) inboard of the exterior surface to which the SV4.5 HTS termination is to be attached, see ***Figure 39***.

If the terminus of the last section is not within this distance, use the **telescopic vent section SV4.5LA,** as the last vent section. For wall thicknesses greater than that shown in ***Figure 38***, refer to ***Table 3 on page 19***. This table lists the additional venting components needed (in addition to the termination and adapter) for a particular range of wall thicknesses.

K. Attach termination adapter - Attach the adapter (adapter - SV4.5RCH - provided with the termination) to the vent section or telescoping vent section), elbow or appliance collar as shown in ***Figure 38*** in the same manner as any SV4.5 vent component (refer to **Step E**).

L. Install Firestop/Spacer at exterior wall - When using the **square** termination, install SV4.5HF (Secure Vent), SF4.5HF (Secure Flex) Firestop/Spacer over the opening at the exterior side of the framing, long side up, with the 3 inch spacer clearance at the top as shown in ***Figure 38***, and nail into place.

(The Firestop/Spacer may also be installed over the opening at the interior side of the framing.)

M. Install the desired termination -

1. Install the square termination (SV4.5HT-2)- For the last step , from outside the exterior wall, slide the collars of the termination onto the adapter until the termination seats against the exterior wall surface to which it will be attached. Orient the housing of the termination with the arrow pointed upwards. Secure the termination to the exterior wall. **The horizontal termination must not be recessed into the exterior wall or siding** by more than the 1-1/4" (32 mm) as shown in ***Figure 39***.

SVHRK Snorkel Cap –The snorkel cap is designed to be fitted into a basement window box. The SVHRK cap is for use with flex vent pipe. Vertical distance between the inlet and outlet of the cap is 28 in. (711 mm).

IMPORTANT: The vent termination is hot while in operation and for a period of time following use of the fireplace. To prevent contact with hot surfaces, we recommend the use of a Termination Guard. This can be purchased at your local dealer.

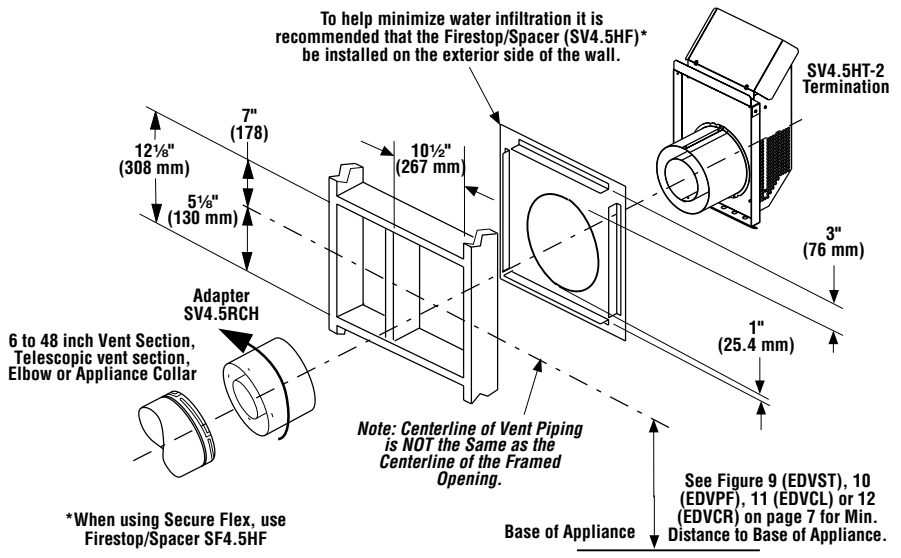


Figure 38 **Installing the Square Horizontal Termination (SV4.5HT-2)**

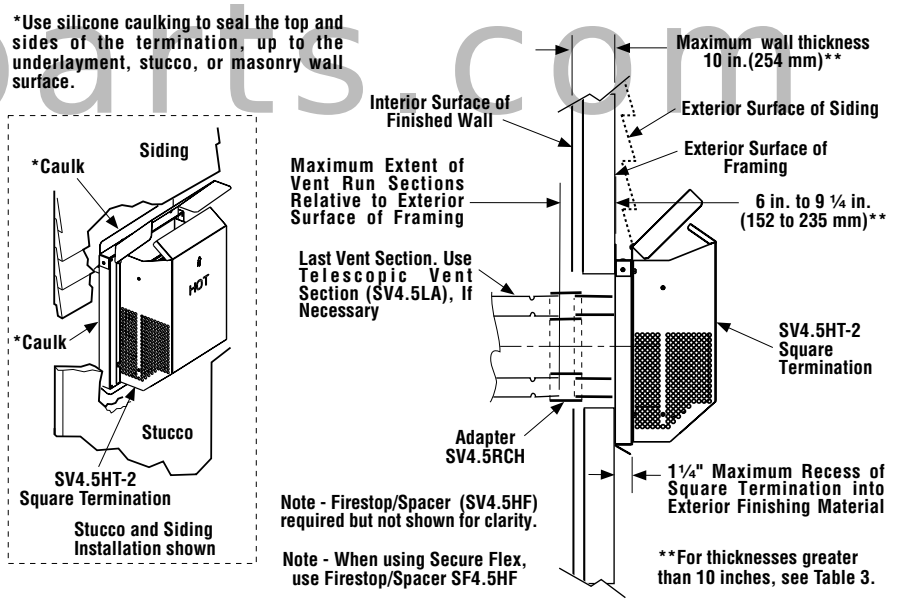


Figure 39 **Venting Connection and Exterior Wall Recessing of the Square Horizontal Termination (SV4.5HT-2)**

Horizontal terminations have been designed to perform in a wide range of weather conditions. Our terminations meet or exceed industry standards.

When selecting the locations of your horizontal terminations, do not place the termination where water from eaves and adjoining rooflines may create a heavy flow of cascading water onto the termination cap. If the cap must be placed where the possibility of cascading water exists, it is the responsibility of the builder to direct the water away from the termination cap by using gutters or other means.

Take care to carefully follow the installation instructions for the termination, including the use of silicone caulking where required.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

HORIZONTAL VENT FIGURES/TABLES

Note: Secure Vent *components (rigid vent pipe and terminal) are shown in the figures;* ***Secure Flex*** *components (flexible vent pipe and terminal) may also be used.*

Note: *Two 45 degree elbows may be used in place of one 90 degree elbow. The same rise to run ratios, as shown in the venting figures for 90 elbows, must be followed if 45 degree elbows are used.*

Note: It is very important that the horizontal/inclined run be maintained in a straight (no dips) and recommended to be in a slightly elevated plane, in a direction away from the fireplace of *1/4" rise per foot (20 mm per meter) which is ideal, though rise per foot run ratios that are smaller are acceptable all the way down to at or near level.*

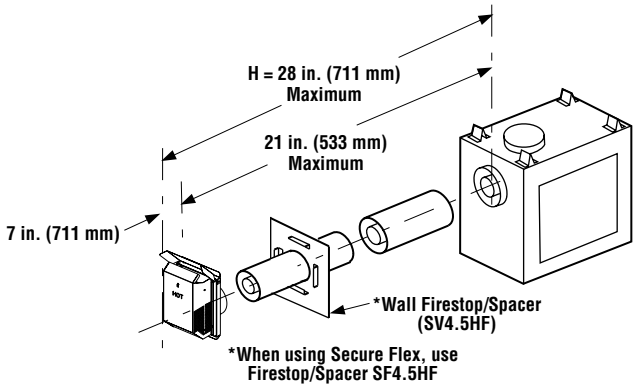
Note: *SV4.5VF (Secure Vent), SF4.5VF (Secure Flex) firestop/spacer must be used anytime vent pipe passes through a combustible floor or ceiling. SV4.5HF (Secure Vent), SF4.5HF (Secure Flex) firestop/spacer must be used anytime vent pipe passes through a combustible wall.*

WARNING: UNDER NO CIRCUMSTANCES MAY SEPARATE SECTIONS OF CONCENTRIC FLEXIBLE VENT PIPE BE JOINED TOGETHER.

TABLE 3 - Venting Components Required for Various Exterior Wall Thicknesses, When Using The Square Termination (SV4.5HT-2)

Venting Components Required	Exterior Wall Thicknesses inches (mm)
Termination Kit Only	6 to 9-1/4 (152 to 235)
Termination Kit and 6 in. vent section (SV4.5L6)	10-1/2 to 13-3/4 (267 to 349)
Termination Kit and12 in. vent section (SV4.5L12)	16-1/2 to 19-3/4 (419 to 502)
Termination Kit and Telescopic section (SV4.5LA) and 6 in. vent section (SV4.5L6)	11 to 19-3/4 (279 to 502)

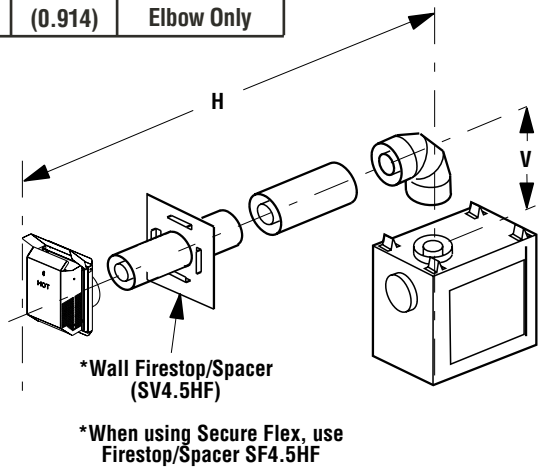
Note: See Figure 39 for wall thickness range reductions when using SV4.5HT-2 termination.



Only the square termination (SV4.5HT-2) may be used.
See ***Table 3*** as an aid in venting component selection for a particular range of exterior wall thicknesses.

Figure 40 **- Rear Vent - NO ELBOWS**

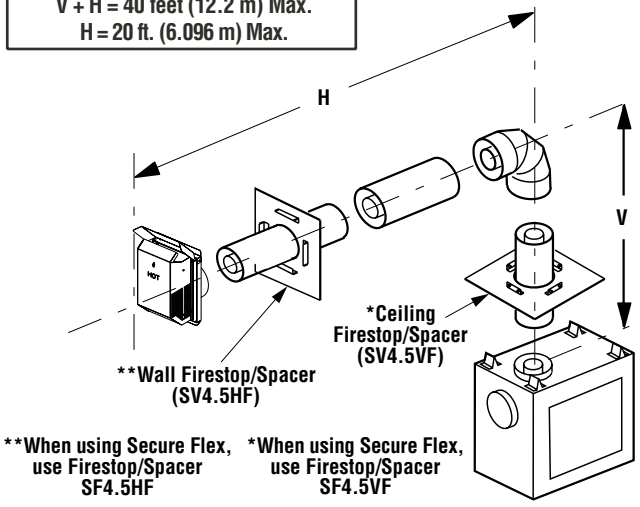
TABLE F			
H Maximum		V Minimum	
feet	(meters)	feet	(meters)
3	(0.914)	Elbow Only	



Square termination (SV4.5HT-2) shown.

Figure 41 **- Top Vent - ONE 90 DEGREE ELBOW - ELBOW CONNECTION AT APPLIANCE**

TABLE G			
H Maximum		V Minimum	
feet	(meters)	feet	(meters)
5	(1.524)	1	(0.305)
10	(3.048)	2	(0.610)
15	(4.572)	3	(0.914)
20	(6.096)	4	(1.219)
V + H = 40 feet (12.2 m) Max. H = 20 ft. (6.096 m) Max.			



Square termination (SV4.5HT-2) shown.

Figure 42 **- Top Vent - ONE 90 DEGREE ELBOW - ELBOW CONNECTION NOT DIRECTLY AT APPLIANCE**

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

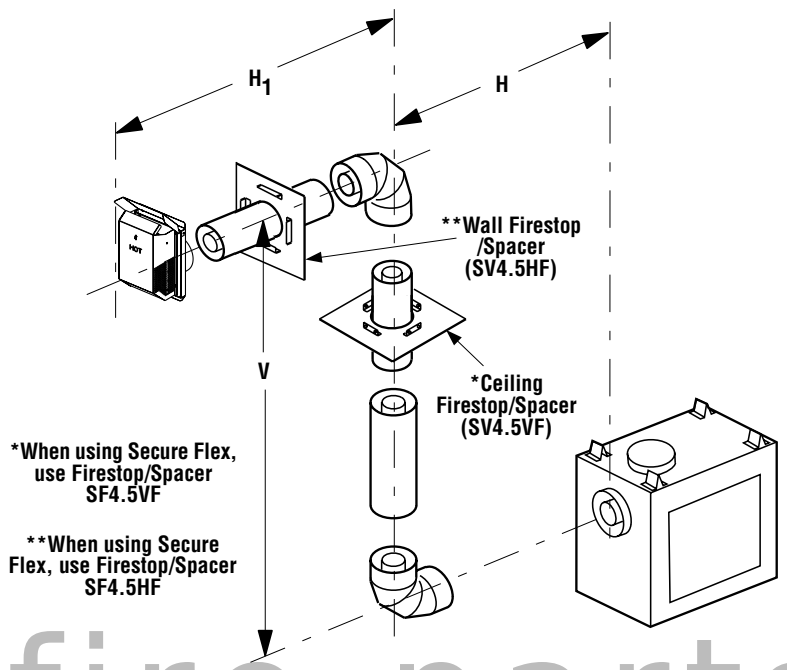


TABLE H					
$H+H_1$ Maximum		H Maximum		V Minimum	
feet	(meters)	feet	(meters)	feet	(meters)
5	(1.524)	2	(0.610)	1	(0.305)
10	(3.048)	4	(1.219)	2	(0.610)
15	(4.572)	6	(1.829)	3	(0.914)
20	(6.096)	8	(2.438)	4	(1.219)
$V + H + H_1 = 40$ feet (12.2 m) Max. H = 8 feet (2.438 meters) Max. $H + H_1 = 20$ feet (6.096 meters) Max.					

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

See ***Table 3 on page 19*** as an aid in venting component selection for a particular range of exterior wall thicknesses.

Figure 43 **- Rear Vent - TWO 90 DEGREE ELBOWS** ***Square termination (SV4.5HT-2) shown.***

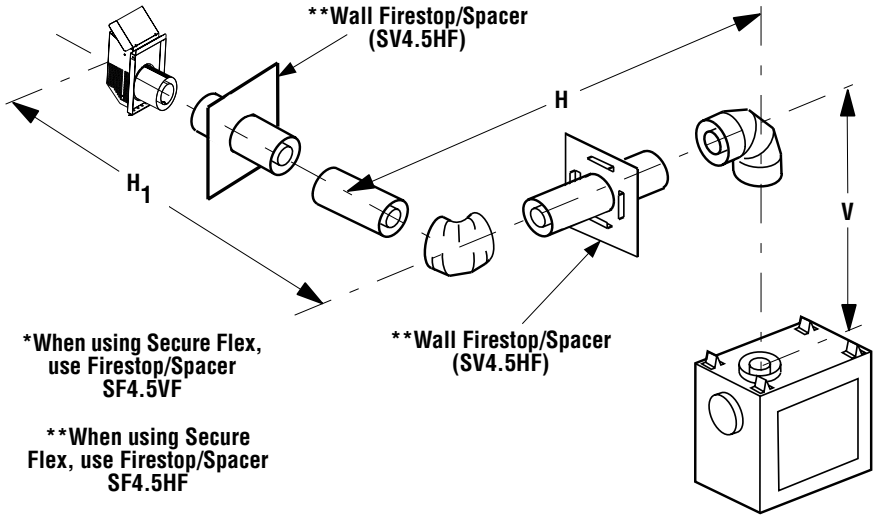


TABLE J			
$H + H_1$ Maximum		V Minimum	
feet	(meters)	feet	(meters)
3	(0.914)	Elbow Only	
5	(1.524)	1	(0.305)
10	(3.048)	2	(0.610)
15	(4.572)	3	(0.914)
20	(6.096)	4	(1.219)
$V + H + H_1 = 40$ feet (12.2 m) Max. $H + H_1 = 20$ ft. (6.096 m) Max.			

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

An elbow is acceptable as 1 foot of vertical rise except where an elbow is the only vertical component in the system. See ***Figure 41****.*

See ***Table 3 on page 19*** as an aid in venting component selection for a particular range of exterior wall thicknesses.

Figure 44 **- Top Vent - TWO 90 DEGREE ELBOWS** ***Square termination (SV4.5HT-2) shown.***

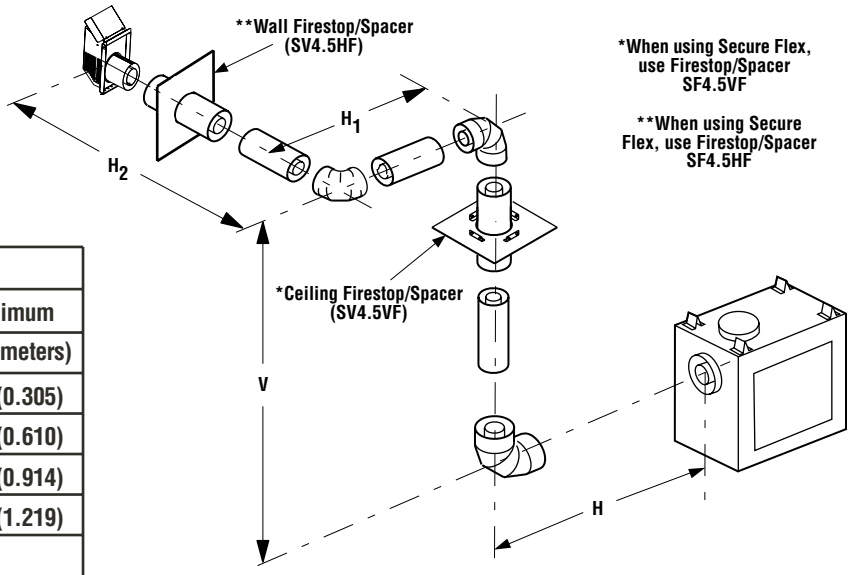
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

HORIZONTAL VENT FIGURES/TABLES (continued)

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

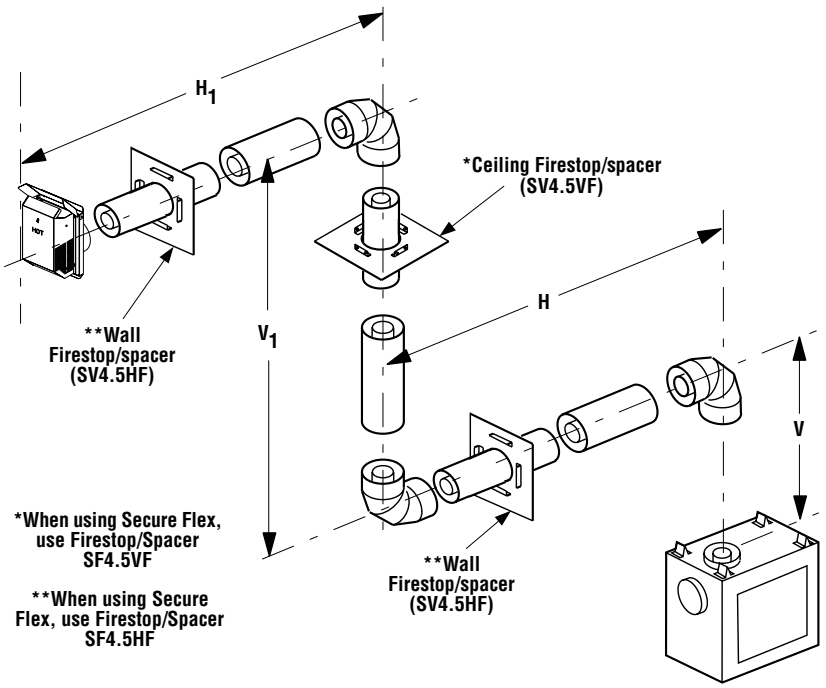
This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

TABLE K					
$H + H_1 + H_2$ Maximum		H Maximum		V Minimum	
feet	(meters)	feet	(meters)	feet	(meters)
5	(1.524)	2	(0.610)	1	(0.305)
10	(3.048)	4	(1.219)	2	(0.610)
15	(4.572)	6	(1.829)	3	(0.914)
20	(6.096)	8	(2.438)	4	(1.219)
$V + H + H_1 + H_2 = 40$ feet (12.2 m) Max. H = 8 feet (2.438 meters) Max. $H + H_1 + H_2 = 20$ feet (6.096 meters) Max.					



See ***Table 3 on page 19*** as an aid in venting component selection for a particular range of exterior wall thicknesses.

Figure 45 **- Rear Vent - THREE 90 DEGREE ELBOWS** ***Square termination (SV4.5HT-2) shown.***



See ***Table 3 on page 19*** as an aid in venting component selection for a particular range of exterior wall thicknesses.

Figure 46 **- Top Vent - THREE 90 DEGREE ELBOWS**

TABLE L			
H Maximum		V Minimum	
feet	(meters)	feet	(meters)
5	(1.524)	Elbow Only	
5	(1.524)	1	(0.305)
10	(3.048)	2	(0.610)
15	(4.572)	3	(0.914)
20	(6.096)	4	(1.219)
$H + H_1 = 20$ feet (6.096 m) Max. $V + V_1 + H + H_1 = 40$ ft. (12.192 m) Max.			

Example: *If 20 feet of (H) horizontal vent run is needed, then 4 feet minimum of (V) vertical vent will be required.*

This table shows a 1 (V) to 5 (H) ratio. For every 1 foot of (V) vertical, you are allowed 5 feet of (H) horizontal run, up to a maximum horizontal run of 20 feet.

An elbow is acceptable as 1 foot of vertical rise except where an elbow is the only vertical component in the system. See ***Figure 41****.*

Square termination (SV4.5HT-2) shown.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

VERTICAL OR HORIZONTAL VENTING USING *SECURE FLEX* KITS AND COMPONENTS

Secure Flex venting kits and components may be used in any venting application in place of rigid **Secure Vent** (SV4.5) direct vent components. All restrictions, clearances and allowances that pertain to the rigid piping apply to the flexible venting. ***Secure Flex* kits may not be modified; also, under no circumstances may separate sections of flex pipe be joined together**.

Using adapter (SV4.5RF), **Secure Flex** kits may be added to the end of a vent run made up of rigid **Secure Vent** (SV4.5) vent sections provided that doing so does not violate any of the venting length, height, routing, horizontal to vertical ratio requirements or clearance considerations detailed in this manual.
Secure Flex kits come with an adapter that can be fitted to the inclined channel end of the last **Secure Vent** (SV4.5) vent section in a rigid system in the exact same fashion as any other **Secure Vent** section.

Align the dimpled end of the adapter over the previously installed section or appliance collar, adjusting the radial alignment until the four locking dimples of the adapter are aligned with the inlets of the four incline channels of the last vent section or collar. Push on the adapter until it fully engages, then twist the adapter clockwise running the dimples down and along the incline channels until they seat at the end of the channels.

Attach the flexible vent to the adapter as follows *(see also Figure 47):*

A. Install the Inner Flex Pipe -

1. Install the small gear clamp loosely around the inner flexible vent pipe, push it back out of the way.

2. Apply a bead of **Mill-Pac Black (700°F) high temperature sealant - Catalog No. 10K81)** to the inner adapter collar, approximately 1/2 inch from the end.

3. Pull and extend the inner flexible vent pipe.

4. Slide the inner flex pipe over the adapter collar. Ensure the flexible vent pipe completely engages the adapter collar to a distance of 1-3/4 inches from the end, and that it is free from damage or tears.

5. Slide the gear clamp down and tighten it fully to secure the flexible vent to the adapter inner collar approximately 3/4 inch from the end of the flex.

6. Install **three screws 120 degrees apart** through the flexible vent pipe and into the adapter collar just below the gear clamp to provide additional security to the connection.

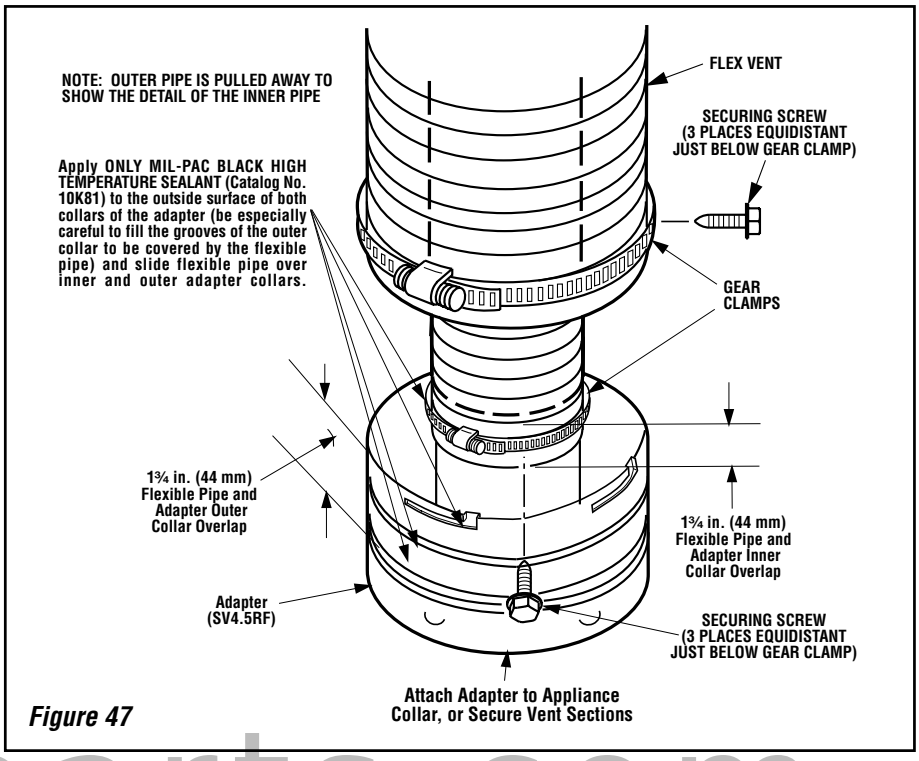


Figure 47

B. Install the Outer Flex Pipe -

1. Install the large gear clamp loosely around the outer flexible vent pipe, push it back out of the way.

2. Apply a bead of **Mill-Pac Black (700°F) high temperature sealant - Catalog No. 10K81)** to the outer adapter collar; to the grooves of the collar which extend approximately 1 inch from the end and to the flat surface, approximately 1⅜ inches from the end.

3. Pull and extend the outer flexible vent pipe.

4. Slide the outer flex pipe over the adapter collar. Ensure the flexible vent pipe completely engages the adapter collar to a distance of 1-3/4 inches from the end, and that it is free from damage or tears.

5. Slide the gear clamp down and tighten it fully to secure the flexible vent to the adapter outer collar approximately 3/4 inch from the end of the flex.

6. Install **three screws 120 degrees apart** through the flexible vent pipe and into the adapter collar just below the gear clamp to provide additional security to the connection.

C. Route Flex Vent -

Ensure that the flex vent is properly routed to provide the required clearance. **Do not** allow the flexible vent to bend in a radius tighter than 5" (127 mm). Refer to ***Figure 48***. Space out the internal flex vent spacers evenly - approximately every 6 inches - and avoid kinking of inner pipe. Support horizontal sections of flex with metal straps at 2 foot (0.61m) intervals.

D. Install Firestop/Spacers at ceilings and walls -

When Secure Flex penetrates a wall or ceiling, a firestop/spacer is required: use the SF4.5VF firestop/spacer for ceilings and the SF4.5HF firestop/spacer for walls. See the appropriate sections and figures shown throughout the venting section for their installation requirements.

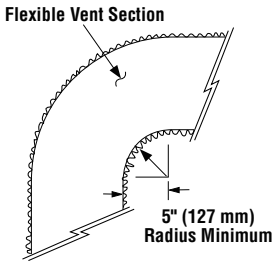


Figure 48

E. Attach Flex Vent to Termination -

Secure Flex components can be purchased separately and attached to bulk lengths of **Secure Flex** flexible tubing cut to size at the job site. Secure the flexible vent to the **Secure Flex** terminations in the same manner (see ***Figure 47)*** as it was attached to the adapter.

Note: *Secure Flex* vent must be attached to *Secure Flex* terminations only. DO NOT substitute *Secure Vent* terminations or the *Secure Vent* adapter for *Secure Flex* components. The collars of *Secure Flex* terminations and adapters have a different diameter than that used with the *Secure Vent* pipe. Additionally, *Secure Flex* components have an extended length center tube for use in attaching the flexible vent.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Step 4. FIELD WIRING

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

Refer to Section A for millivolt appliances and Section B for electronic appliances. The gas valve is set in place and pre-wired at the factory on both models.

A. Millivolt Wiring *(See Figure 49)* –

1. Appliance-mounted ON/OFF burner control switch (rocker switch) is factory installed on the modesty panel. Optional wall-mounted switch, thermostat, or one of the optional remote control kits may also be added.

2. If wall-mounted ON/OFF control or thermostat is selected, mount it in a convenient location on a wall near the fireplace.

3. Wire the control within the millivolt control circuit using the 15 feet of 2 conductor wire supplied with the unit.

Note: *The supplied 15 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.*

Caution: do not connect the optional wall switch to a 120V power supply.

4. If an optional control switch is installed, turn the appliance-mounted ON/OFF burner control switch to the OFF position.

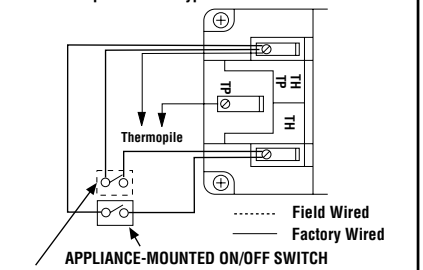


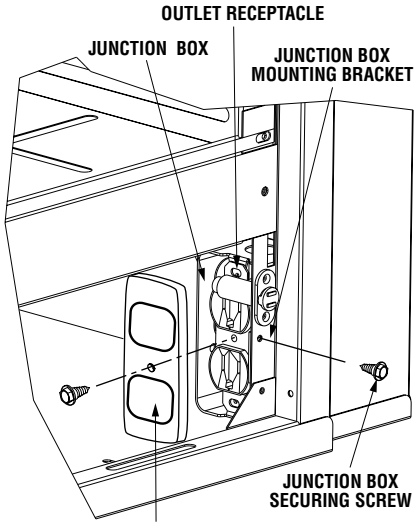
Figure 49

B. Electronic Wiring
(See either Figure 51 or 52)

Note: *The electronic appliance must be connected to the main power supply.*

1. Route a 3-wire 120Vac 60Hz 1ph power supply to the appliance junction box.

2. Open the control compartment access panel, by actuating the spring-loaded magnetic catches securing the panel, gently depressing the outer top corners of the panel until the catches "pop" the panel free and allowing it to swing out and down to open.



Receptacle, Junction Box and Cover Plate Installation

Figure 50

3. Remove the bottom control compartment access panel by compressing the spring-loaded hinge pin on the left side until it disengages from the left cabinet panel hole. Pull the panel away from the fireplace. ***See Figure 54 on page 24.***

4. Remove the modesty panel by sliding the panel forward until it contacts the cabinet bottom panel, then lift straight up and tilt forward. Remove the modesty panel carefully, so that none of the wires become loose or disconnected.

5. Remove the junction box/outlet receptacle assembly by removing the securing screw at the front right corner of the unit. See ***Figure 50.*** *(The left and right designations used here are reversed in EDVCR applications.)*

6. Remove the outlet receptacle from the junction box by removing the two securing screws.

7. Install a field-provided strain relief in the cabinet knockout opening for the protection of the power supply wires.

8. Connect the power supply wires to the receptacle as shown in ***Figure 51, or Figure 52.***

9. **Connect the ground supply wire and the junction box' green wire to the outlet receptacle's green ground screw.**

10. Appliance-mounted ON/OFF burner control switch (rocker switch) is factory installed in the modesty panel. Optional wall-mounted switch, thermostat, or one of the optional remote control kits may also be used.

11. If wall-mounted ON/OFF switch or thermostat is to be used, mount it in a convenient location on a wall near the fireplace.

12. If the wall-mounted ON/OFF switch is to be used, wire it to the the low voltage circuit as shown in ***Figure 51, or Figure 52.***

Note: *The supplied 15 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.*

13. After wiring is complete, reinstall the outlet receptacle, junction box/outlet receptacle assembly; install the field-provided the metal junction box cover plate; reinstall the modesty panel.

Note: *The gas valve ON/OFF switch is shown in* ***Figure 51, or Figure 52.*** *It is integral with the gas valve and should be set to the* ***ON*** *position.*

IMPORTANT: Ground lead must be connected to the green screw located on the outlet receptacle. See *Figure 51, or Figure 52.* **Failure to do so will result in a potential safety hazard. The appliance must be electrically grounded in accordance with local codes or, in the absence of local codes, the National Electrical Code, ANSI/NFPA 70-(latest edition). (In Canada, the current CSA C22-1 Canadian Electrical Code.)**

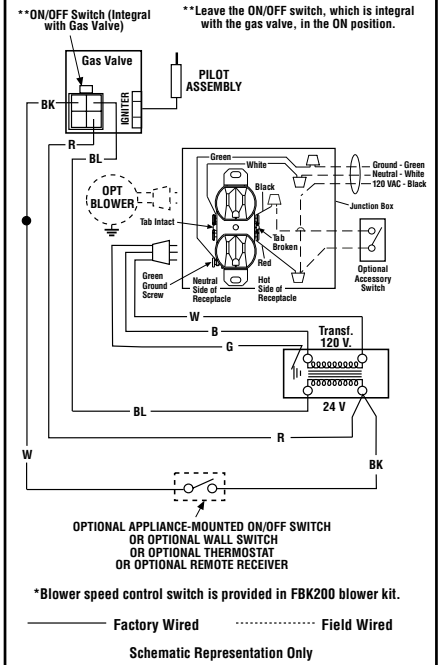


Figure 51

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Electronic Wiring Diagram (Honeywell) Showing the Blower Wiring for the Optional FBK-250 Kits

1. If any of the original wire as supplied must be replaced, it must be replaced with Type AWM 105°C – 18 GA. wire.
2. 120V, 60Hz – Less than 3 amps.

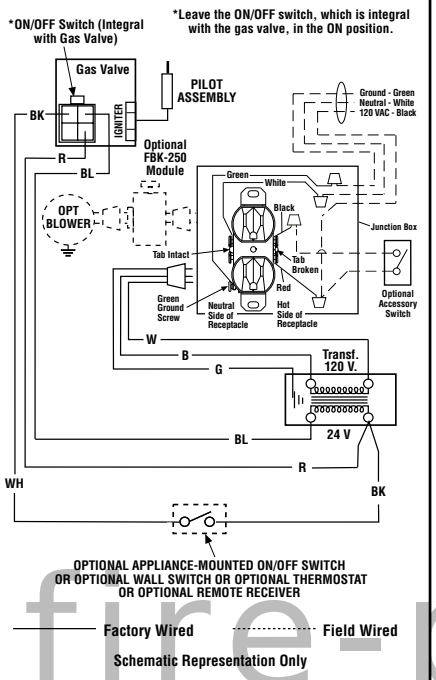


Figure 52

Step 5. WIRING - OPTIONAL FORCED AIR BLOWER KIT

FBK-100, FBK-200 and FBK250 Kits

(See Figure 51 for FBK-100, FBK-200 and Figure 52 for FBK-250 wiring) -

An electrical receptacle is provided for the installation of the **FBK-100**, **FBK-200 and FBK-250** forced air blower kits. Electrical power must be connected to this receptacle in order to operate these blowers. Install the blower kits according to the installation instructions provided with the kits.

Step 6. CONNECTING GAS LINE

Make gas line connections. All codes require a shut-off valve mounted in the supply line. ***Figure 53*** illustrates two methods for connecting the gas supply. The flex-line method is acceptable in the U.S., however, Canadian requirements vary depending on locality. Installation must be in compliance with local codes.

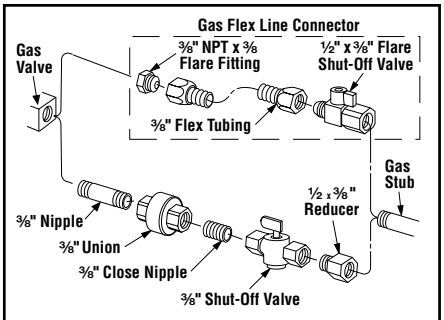


***Figure 53* - GAS CONNECTION**

These appliances are equipped with a gas flex line for use (where permitted) in connecting the unit to the gas line. A gas flex line is provided to aid in attaching the direct vent appliance to the gas supply. The gas flex line can only be used where local codes permit. See ***Figure 53*** for flex line description. The flex line is rated for both natural and propane gas. A manual shut off valve is also provided with the flex line.

The gas control valve is located in the lower control compartment. To access the valve proceed as follows:

1- Open the control compartment access panel, ***(Figure 54)*** by actuating the spring-loaded magnetic catches securing the panel, by gently depressing the outer top right corner of the panel until the magnetic catch "pops" free. Then, gently pulling the panel forward so that the upper left corner "pops" free, allowing the panel to swing out and down to open.

2- Remove the bottom control compartment access panel by compressing the spring-loaded hinge pin on the left side until it disengages from the left cabinet panel hole. Pull the panel away from the fireplace. ***See Figure 54.***

3- Remove the modesty panel. To remove the modesty panel, slide the panel forward until it contacts the cabinet bottom panel, then lift straight up and tilt forward. Remove the modesty panel carefully, so that none of the wires become loose or disconnected.

The millivolt control valve has a 3/8" (10 mm) NPT thread inlet port. The electronic control valve has a 1/2" (13 mm) NPT thread inlet port and is fitted with a 1/2" x 3/4" (13 mm x 10 mm) NPT fitting.

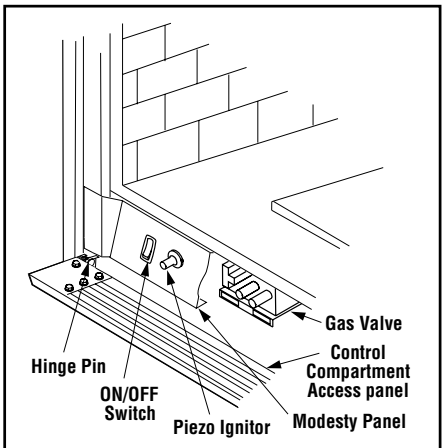


Figure 54

Secure all joints tightly using appropriate tools and sealing compounds (ensure propane resistant compounds are used in propane applications).

Turn on gas supply and test for gas leaks, using a gas leak test solution (also referred to as bubble leak solution).

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Note: Using a soapy water solution (50% dish soap, 50% water) is an effective leak test solution but it is not recommended, because the soap residue that is left on the pipes/fittings can result in corrosion over time. **Never use an open flame to check for leaks.**

A. Light the appliance (refer to the lighting instructions label in the control compartment or in the Homeowner's Care and Operation Instructions).

B. Brush all joints and connections with the gas leak test solution to check for leaks. If bubbles are formed, or gas odor is detected, turn the gas control knob to the "OFF" position. Either tighten or refasten the leaking connection and retest as described above.

C. When the gas lines are tested and leak free, be sure to rinse off the leak testing solution.

D. When the gas lines are tested and leak free, observe the individual tongues of flame on the burner. Make sure all ports are open and producing flame evenly across the burner. If any ports are blocked, or partially blocked, clean out the ports.

Step 7. INSTALLING CERAMIC EMBER PANEL, LOGS AND GLOWING EMBERS

The logs are packaged in a carton located within the firebox. One plastic bag of glowing embers is located in the bottom compartment. Refer to the **Log Set Placement Supplement** for detailed placement instructions for the ceramic ember panel, logs and glowing embers.

Step 8. CHECKING APPLIANCE OPERATION

With gas line installed, run initial system checkout before closing up the front of the unit. Follow the pilot lighting instructions provided in the Homeowner's Care and Operation Instructions. For piezo ignitor location see ***Figure 54*** (millivolt appliances only).

Note: Lighting instructions may also be found on the pull out lighting instruction labels attached to the gas control valve*. To access the label, see the procedure on the previous page described for accessing the gas control valve.*

When first lighting the appliance, it will take a few minutes for the line to purge itself of air. Once purging is complete, the pilot and burner will light and operate as indicated in the instruction manual. Subsequent lightings of the appliance will not require such purging. Inspect the pilot flame (remove logs, if necessary, handling carefully).

Millivolt Appliance Checkout

The top 3/8" (10 mm) at the pilot generator (thermopile) and the top 1/8" min (tip) of the quick drop out thermocouple should be engulfed in the pilot flame. The flame should project 1" (25 mm) beyond the hood at all three ports ***(Figure 55 on page 25)***.

The pilot flame should be steady and, not lifting or floating. Flame should be blue in color with traces of orange at the outer edge.
Replace logs after pilot inspection.

To light the burner; turn "ON" the modesty panel mounted ON/OFF switch and rotate the gas valve control knob counterclockwise to the "ON" position.

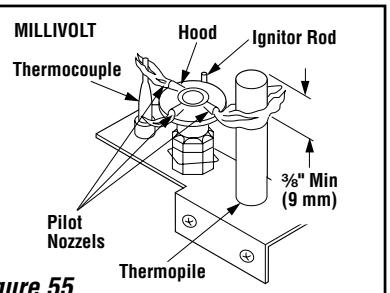


Figure 55

Electronic Appliance Checkout

To light the burner, turn 'ON' the modesty panel mounted ON/OFF switch and turn the gas control switch to the "ON" position. Ensure the ignitor lights the pilot. The pilot flame should engulf the flame rod as shown in ***Figure 56***.

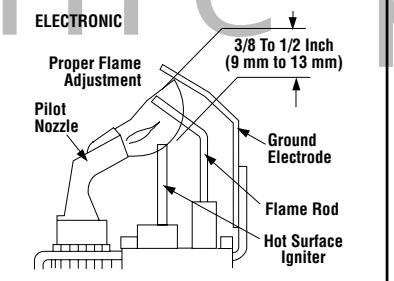


Figure 56

Step 9. INSTALLING GLASS ENCLOSURE PANELS

1. Visually inspect the gasket on the backside of the panels. The gasket surface must be clean, free of irregularities and seated firmly.
2. Position the glass enclosure panel in front of the firebox opening at a 45 degree angle and engage the top flange over the lip at the top of the firebox opening. ***See Figure 57.***
3. Swing the glass enclosure panel down and back. Ensure the gasket seats evenly as the panel draws shut. Engage the Vee-flange at the bottom of the panel with the latches and close the latches to secure the panel.
4. After installing the front glass enclosure panel, reinstall the bottom control compartment access panel by inserting the right side locating pin into the right side cabinet panel and then the left side spring-loaded pin into the left side cabinet panel.

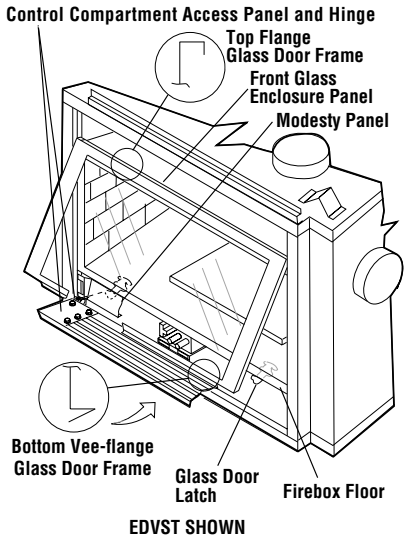


Figure 57 **Installing The Glass Door**

WARNING: HANDLE THE GLASS WITH EXTREME CARE! TEMPERED GLASS IS SUSCEPTIBLE TO DAMAGE (SCRATCHES, FOR EXAMPLE) – HANDLE GLASS DOORS (GLASS ENCLOSURE PANELS) GENTLY WHILE REINSTALLING THEM.

WARNING: NEVER OPERATE THE APPLIANCE WITHOUT THE GLASS ENCLOSURE PANELS IN PLACE AND SECURE.

Step 10. BURNER ADJUSTMENTS

Flame Appearance and sooting

Proper flame appearance is a matter of taste. Generally, most people prefer the warm glow of a yellow to orange flame. Appliances operated with air shutter openings that are too large will exhibit flames that are blue and transparent. These weak, blue and transparent flames are termed anemic. If the air shutter opening is too small sooting may occur.

Sooting is indicated by black puffs developing at the tips of very long orange flames. Sooting results in black deposits forming on the logs, appliance inside surfaces and on exterior surfaces adjacent to the vent termination. Sooting is caused by incomplete combustion in the flames and lack of combustion air entering the air shutter opening. To achieve a warm yellow to orange flame with an orange body that does not soot, the shutter opening must be adjusted between these two extremes.

No smoke or soot should be present. Reposition the log set if flames impinge on any part of it.

If the log set is properly positioned and sooting conditions exist, the air shutter opening on the main burner tube should be adjusted. Normally, the more offsets in the vent system, the greater the need for the air shutter to be opened further.

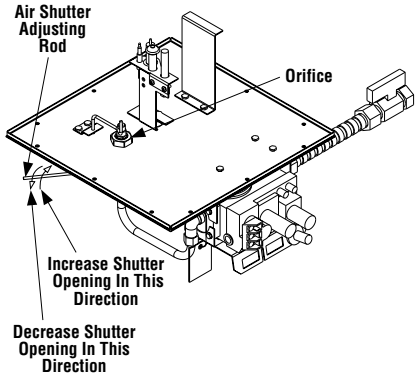
Burner Adjustment

WARNING: AIR SHUTTER ADJUSTMENT SHOULD ONLY BE PERFORMED BY A QUALIFIED PROFESSIONAL SERVICE TECHNICIAN.

IMPORTANT: ENSURE THAT THE GLASS ENCLOSURE PANELS ARE IN PLACE AND SEALED DURING ADJUSTMENT.

CAUTION: THE AIR SHUTTER DOOR AND NEARBY APPLIANCE SURFACES ARE HOT. EXERCISE CAUTION TO AVOID INJURY WHILE ADJUSTING FLAME APPEARANCE.

To adjust the flame, rotate the adjustment rod (located in the lower control area) counterclockwise to decrease or clockwise to increase the air shutter opening. **Adjust the air shutter to the recommended setting as shown in** *Figure 58***.** Allow the burner to operate for at least 15 minutes. Observe the flame continuously. If it appears weak or sooty as previously described, adjust the air shutter by rotating the adjustment rod until the flame appearance is as desired.



Note - Burners are omitted in this view for clarity.

MAIN BURNER FACTORY SHUTTER SETTING		
Models	Natural Gas inches (mm)	Propane Gas inches (mm)
EDVST EDVPF EDVCR EDVCL	1/4" (6.35)	5/8" (15.88)

Adjustment Rod Positions (when viewed from above)

Figure 58

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

The adjustment rod and associated adjustable air shutter is patented technology. Flame adjustments can be made quickly and accurately to taste without the need of disassembling the appliance and waiting for 15 minutes after each adjustment.

Propane models may exhibit a flame pattern that may candle or appear stringy. If this is problematic or persists as the appliance is continually operated, adjust the air shutter closed as described in the previous paragraphs. Operate the appliance for a period of time as the effect diminishes, ensuring that the appliance does not develop sooty flames.

When satisfied that the appliance operates properly, proceed to finish the installation. Leave the control knob in the ON position and the remote switch OFF. Close the lower control compartment door.

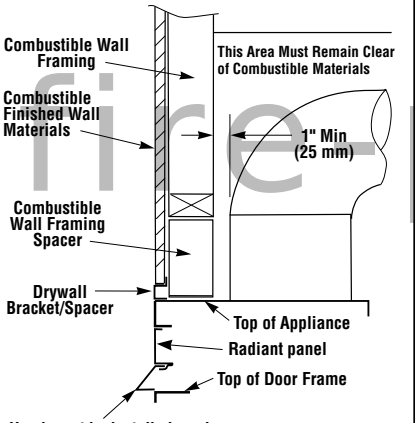


Figure 59

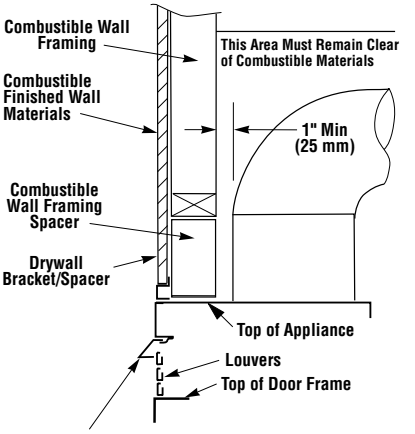


Figure 60

Step 11. HOOD INSTALLATION

All of these appliances must have hoods installed on all sides with glass enclosure panels prior to operating.

On all clean face units, slide the hoods into the slots on the lower edges of the radiant panels ***(Figure 59)***.

On louvered face units, slide the hoods into the slots on the lower edges of the cabinet top. ***(Figure 60)***.

Combustible materials may project beyond the sides of the fireplace opening as long as they are kept within the shaded areas illustrated in ***Figure 61***.

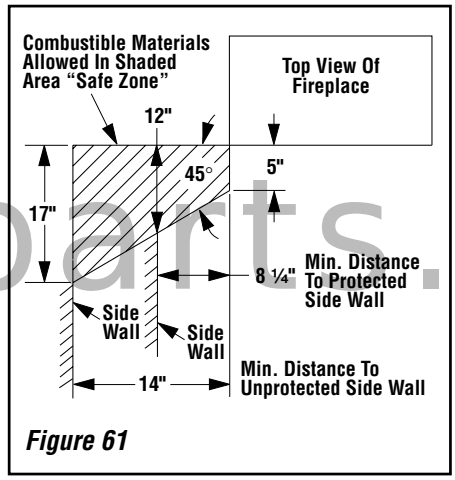


Figure 61

FINISHING REQUIREMENTS

Wall Details

Complete finished interior wall. To install the appliance facing flush with the finished wall, position framework to accommodate the thickness of the finished wall (***Figures 59 and 60***)

A hearth extension is not required with this appliance. If a hearth extension is used, do not block the control compartment access panel. Any hearth extension used is for appearance only and does not have to conform to standard hearth extension installation requirements.

Note: *Combustible wall finish materials and/or surround materials must not be allowed to encroach the area defined by the appliance front face (black sheet metal). Never allow combustible materials to be positioned in front of or overlapping the appliance front face. See* ***Figures 59 or 60****.*

Non-combustible materials, such as surrounds and other appliance trim, may be installed on the appliance front face with these exceptions: they must not cover any portion of the glass or louvers; they may cover any portion of the top radiant panel or the air gaps surrounding the top radiant panel up to the installed hood.

Vertical installation clearances to combustible mantels vary according to the depth of the mantel. See ***Figure 62***. Mantels constructed of non-combustible materials may be installed at any height above the appliance opening; however, do not allow anything to hang below the hood.

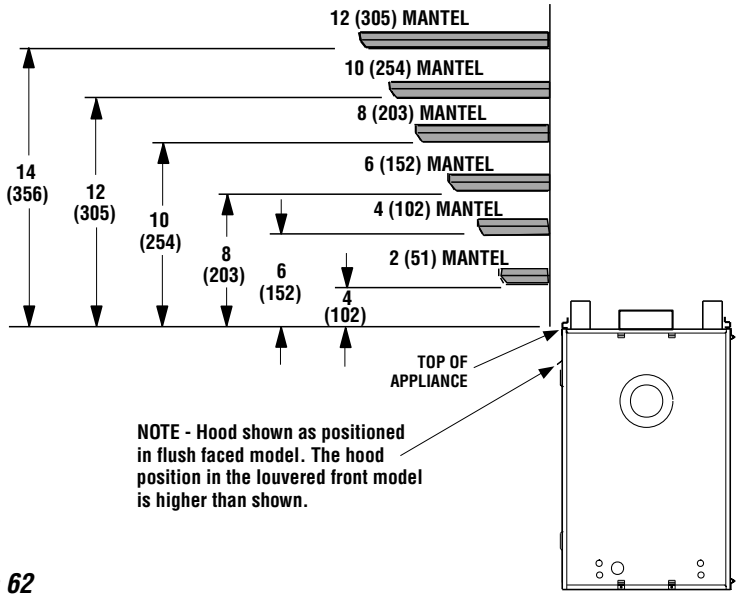


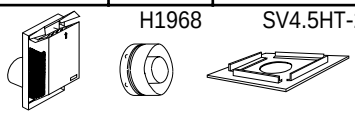
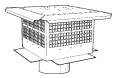
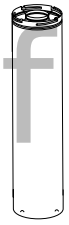
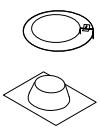
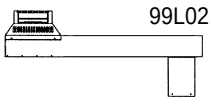
Figure 62

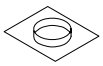
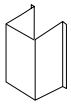
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

COLD CLIMATE INSULATION

For cold climate installations, seal all cracks around your appliance with noncombustible material and wherever cold air could enter the room. It is especially important to insulate outside chase cavity between studs and under floor on which appliance rests, if floor is above ground level. Gas line holes and other openings should be caulked or stuffed with unfaced fiberglass insulation. In cold climates, if the fireplace is being installed on a cement slab, a sheet of plywood or other raised platform can be placed underneath to prevent conducting cold up into the room. It also helps to sheetrock inside surfaces and tape for maximum air tightness and caulk firestops.

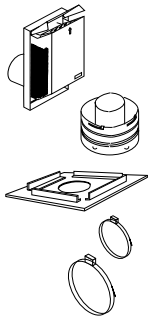
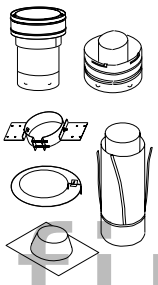
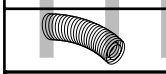
INSTALLATION ACCESSORIES

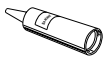
Listed **Secure Vent**™ Components			
	Cat.No.	**Model No.**	**Description**
	H1968	SV4.5HT-2	Horizontal Square Termination with Firestop/Spacer (96K80) and Adapter (74L61)
	H2152	SV4.5CGV-1	Vertical Termination
	H4687 H4716 H4717	SV4.5CTS SV4.5CTS-B SV4.5CTS-TC	Chase Top Term. Square Chase Top Term. Sq., Blk. Terra Cotta Termination
	77L70	SV4.5L6	6 inch (152 mm) Vent Section
	77L71	SV4.5L12	12 inch (305 mm) Vent Section
	77L72	SV4.5L24	24 inch (610 mm) Vent Section
	77L73	SV4.5L36	36 inch (914 mm) Vent Section
	77L74	SV4.5L48	48 inch (1219 mm) Vent Section
	77L75	SV4.5LA	Telescopic Section
	77L76	SV4.5E45	45 Degree Elbow
	77L77	SV4.5E90	90 Degree Elbow
The following flashings come packaged with a storm collar.			
	77L78	SV4.5F	Flat Roof Flashing
	77L79	SV4.5FA	1/12 to 7/12 Adjust. Flashing
	77L80	SV4.5FB	7/12 to 12/12 Adjust. Flashing
	77L81	SV4.5SC6	Storm Collars (6 collars/box)
	H2246	SV4.5HF	Firestop/Spacer - 10 Pack Horizontal (3-1-1 spacing)
	H2247	SV4.5VF	Firestop/Spacer - 10 Pack Vertical (1-1-1 spacing)
	96K93	SV4.5SU	Support Strap
	96K94	SV4.5RSA	Attic Insulation Shield
	99L03 99L02	SV4.5HRK36 SV4.5HRK14	Horizontal Riser Kit 36" Horizontal Riser Kit 14"

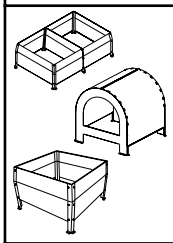
Listed **Secure Vent**™ Components			
	Cat.No.	**Model No.**	**Description**
	96K92	SV4.5SP	Support Plate
	87L02	SV4.5 HGS	Termination Guard

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

INSTALLATION ACCESSORIES

Listed **Secure Flex**™Components			
	Cat. No.	**Model No.**	**Description**
These termination kits include firestop/spacer, gear clamps and flex adapter.			
	H1969	SF4.5HT-2	Horizontal Square Termination without Flex
	77L87	SFKIT12	Flex Square Term. with 12 in. (305 mm of *compressed Flex
	77L88	SFKIT18	Flex Square Term. with 18 in. (457 mm) of *compressed Flex
	77L89	SFKIT24	Flex Square Term. with 24 in. (610 mm) of *compressed Flex
	77L90	SFKIT36	Flex Square Term. with 36 in. (914 mm) of *compressed Flex
	77L91	SFKIT48	Flex Square Term. with 48 in. (1219 mm) of *compressed Flex
	56L74	SFVT30	Vertical Termin. for Flex (flat to 6/12) with Flex Adapter, section of rigid vent, roof support collar assembly, roof flashing and storm collar.
	56L75	SFVT45	Vertical Termin. for Flex (6/12 to 12/12) with Flex Adapter section of rigid vent, roof support collar assembly, roof flashing and storm collar.
	60L10	SF-18	18 ft. (5.49 m) *compressed Flex
	98K03	SF-12	12 ft.(3.66 m) *compressed Flex

Listed **Secure Flex**™Components			
	Cat. No.	**Model No.**	**Description**
	10K81	SFMP	Mil Pac Black Hi-Temperature Sealant
	89L40	SFMP-12	Mil Pac Black Hi-Temperature Sealant - Bulk Pack 12
	91L66	SF-GC4-6	Gear Clamp 4.5in. (114 mm) for Flex (6 pieces)
	91L67	SF-GC7-6	Gear Clamp 7.5 in. (190.5 mm) for Flex (6 pieces)
	H2248	SF4.5HF	Firestop/Spacer - 10 Pack Horizontal (3-1-1 spacing)
	H2249	SF4.5VF	Firestop/Spacer - 10 Pack Vertical (1-1-1 spacing)

Listed Components			
	Cat. No.	**Model No.**	**Description**
	H1988	CTSA-33	Chase Top Shroud Kit, Arch Top 3 x 3
	H1985	CTSO-33	Chase Top Shroud Kit, Open Top 3 x 3
	H1987	CTSO-44	Chase Top Shroud Kit, Open Top 4 x 4
	H1986	CTSO-46	Chase Top Shroud Kit, Open Top 4 x 6

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

GAS CONVERSION KITS

WARNING: THIS CONVERSION KIT SHALL BE INSTALLED BY A QUALIFIED SERVICE AGENCY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REQUIREMENTS OF THE AUTHORIZED AGENCY HAVING JURISDICTION. IF THE INFORMATION IN THESE INSTRUCTIONS IS NOT FOLLOWED EXACTLY, A FIRE, EXPLOSION OR PRODUCTION OF CARBON MONOXIDE MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. THE INSTALLATION IS NOT PROPER AND COMPLETE UNTIL THE OPERATION OF THE CONVERTED APPLIANCE IS CHECKED AS SPECIFIED IN THE OWNER INSTRUCTIONS SUPPLIED WITH THE KIT. THE QUALIFIED SERVICE AGENCY PERFORMING THIS INSTALLATION ASSUMES RESPONSIBILITY FOR THIS CONVERSION.

AVERTISSEMENT: CET ÉQUIPEMENT DE CONVERSION SERA INSTALLÉ PAR UNE AGENCE QUALIFIÉE DE SERVICE CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT ET TOUTES EXIGENCES ET CODES APPLICABLES DE L'AUTORISÉS AVOIR LA JURIDICTION. SI L'INFORMATION DANS CETTE INSTRUCTION N'EST PAS SUIVIE EXACTEMENT, UN FEU, EXPLOSION OU PRODUCTION DE PROTOXYDE DE CARBONE PEUT RÉSULTER LE DOMMAGES CAUSER DE PROPRIÉTÉ, PERTE OU BLESSURE PERSONNELLE DE VIE. L'AGENCE QUALIFIÉE DE SERVICE EST ESPONSABLE DE L'INSTALLATION PROPRE DE CET ÉQUIPMENT. L'INSTALLATION N'EST PAS PROPRE ET COMPLÉTE JUSQU'À L'OPÉRATION DE L'APPAREIL CONVERTI EST CHÉQUE SUIVANT LES CRITÈRES ÉTABLIS DANS LES INSTRUCTIONS DE PROPRIÉTAIRE PROVISIONNÉES AVEC L'ÉQUIPEMENT.

In Canada:
THE CONVERSION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROVINCIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN1-B149.1 AND .2 INSTALLATION CODE.

LA CONVERSION DEVRA ÊTRE EFFECTUÉE CONFORMÉMENT AUX RECOMMANDATIONS DES AUTORITÉS PROVINCIALES AYANT JURIDICTION ET CONFORMÉMENT AUX EXIGENCES DU CODE D'INSTALLATION CAN1-B149.1 ET.2.

Gas conversion kits are available to convert your appliance from the use of one type of gas to the use of another. These kits contain all the necessary components needed to complete the task including labeling that must be affixed to ensure safe operation.

Kit part numbers are listed here and the following steps detail the conversion procedure.

Natural To Propane Gas Conversion Kit		
Models No.	Unit Type	Catalog No.
EDVST EDVPF EDVCR EDVCL	millivolt	H0568
	electronic	H0569

Propane to Natural Gas Conversion Kit		
Model No.	Unit Type	Catalog No.
EDVST EDVPF EDVCR EDVCL	millivolt	H0567

Step 1. Turn off the gas supply to the appliance.

a. Open the control compartment access panel, by actuating the spring-loaded magnetic catches securing the panel, gently depressing the outer top corners of the panel until the catches "pop" the panel free and allowing it to swing out and down to open.

b. Remove the bottom control compartment access panel by compressing the spring-loaded hinge pin on the left side until it disengages from the left cabinet panel hole. Pull the panel away from the fireplace. ***See Figure 57 on page 25.***

c. Remove the modesty panel by pulling the bottom right corner of the modesty panel out slightly to disengage the snap-fit feature; lift the modesty panel by the tab on the panel's right end, pull the right end of the panel away from the cabinet and then pull the panel diagonally out of the left side cabinet panel slots. (In the above procedure, reverse the words "left" and "right" for EDVCR models). Remove the modesty panel carefully, so that none of the wires become loose or disconnected.

d. Locate the two (2) latches at the top of the control compartment. To disengage the two latches from the bottom vee-flange of the glass enclosure panel, reach for the handles located towards the back of the latches and pull the handles down toward the front of the unit.

e. Swing the bottom of the door out and raise it slightly to lift the top flange of the door frame away from the appliance.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Step 2. Carefully remove the log set. **Exercise care as not to break the log set.**

Step 3. Referring to ***Figure 63***, remove the burner.

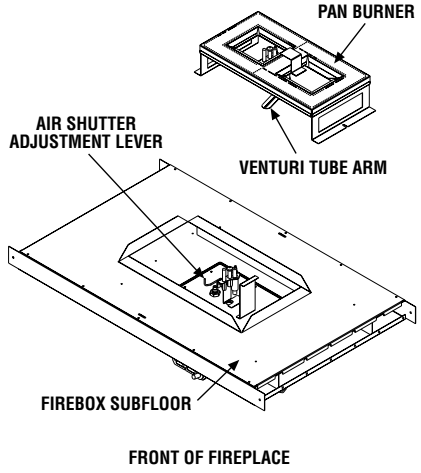


Figure 63

Millivolt Appliances

Step 4. Refer to ***Figure 64*** and the instructions provided with the kit. Using a Torx T20, remove and discard the three pressure regulator mounting screws. Remove the pressure regulator, spring, poppet, diaphragm and bushing. **Discard all removed components**. Ensure the rubber gasket installed on the back of the replacement pressure regulator is properly positioned and install the new pressure regulator using the new screws supplied with the kit. Tighten screws to 25 In. lb. torque.

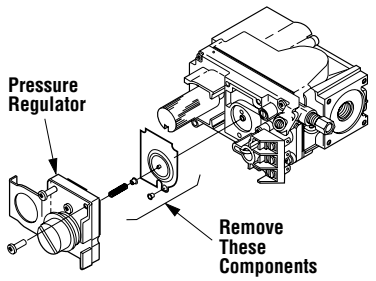


Figure 64

Step 5. Attach manometer to the manifold side pressure test fitting and verify manifold pressure reads 3.5 inches water column (0.87 kPa) for natural gas, and 10.0 inches water column (2.49 kPa) for propane gas.

Step 6. Refer to ***Figure 65*** and remove the pilot hood assembly to access the hexed pilot orifice. Remove and replace the orifice with the one provided with the kit.

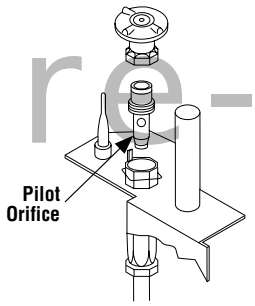


Figure 65

Electronic Appliances

Step 7. Honeywell Electronic Valves - See ***Figure 66*** and the instructions provided with the kit. Remove the slotted cap screw, o-ring, pressure-regulating adjusting screw and spring. Retain all parts for possible later use. Install new components from the kit. Black cap and red spring for propane gas units. Silver cap and stainless steel spring for natural gas units. Before installing the cap, attach manometer to the manifold side pressure test fitting and adjust screw until pressure reads 3.5 inches water column (0.87 kPa) for natural gas, and 10.0 inches water column (2.49 kPa) for propane gas.

See ***Figure 67*** and replace the pilot orifice as follows: Remove the ignitor assembly retainer clip, and carefully remove the ignitor assembly.

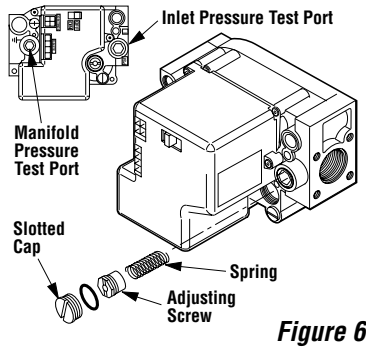
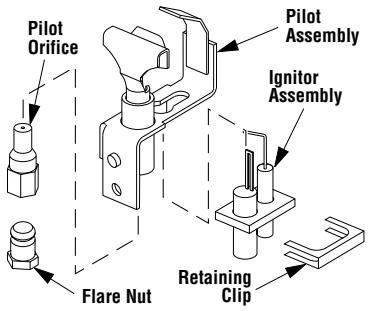


Figure 66

Exercise extreme care to prevent damage to or breakage of the ignitor assembly. Remove the screw securing the pilot assembly to its mounting bracket. Back off the flare nut at the end of the pilot gas line to free the pilot assembly from the gas line. Remove the pilot orifice and replace it with the one provided with the conversion kit. Reinstall the pilot assembly by reversing the **steps** detailed here.

When reinstalling the ignitor assembly, use extreme care to prevent damage and breakage. Do not apply any leverage to the ignitor assembly while restoring the retainer clip to its original position.



Note: If the ignitor is damaged, a replacement kit is available, order Catalog No. 87L54.

Figure 67

All Models

Step 8. (Refer to ***Figure 63 on page 29***)

A. Remove the orifice from the manifold and replace it with the one provided in the kit. The following table shows the orifice sizes for natural and propane models. ***Figure 68*** illustrates the orifice.

B. Install the burner as shown in ***Figure 69***.

Ensure that the arm of the venturi of the burner is hooked onto the air shutter adjustment lever (refer to ***Figure 63 on page 29).*** The primary air opening can be adjusted by rotating the adjustment lever from beneath the firebox floor. Refer to ***Figure 58 on page 25*** for the recommended minimum primary air opening setting.

Model No.	Orifice size	
	Nat.	Prop.
EDVST EDVPF EDVCR EDVCL	0.125"	#49

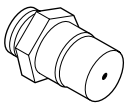


Figure 68

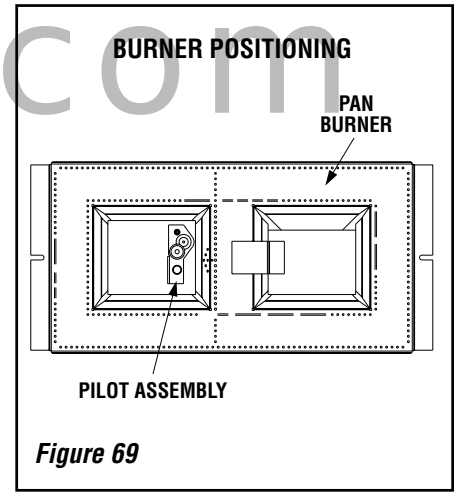


Figure 69

Step 9. Reassemble the remaining components by reversing the procedures outlined in the preceding steps. Use pipe joint compound or Teflon tape on all pipe fittings before installing (ensure propane resistant compounds are used in propane applications, do not use pipe joint compounds on flare fittings).

Step 10. Attach the conversion label provided in the conversion kit to the rating plate on the appliance.

Step 11. Turn on gas supply and test for gas leaks.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

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