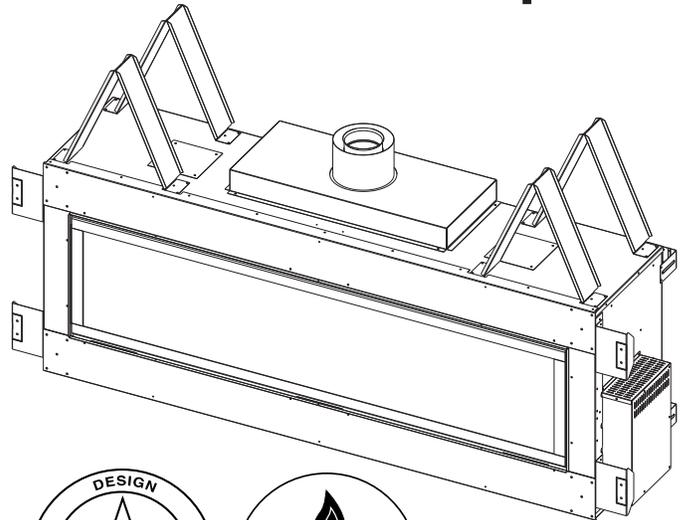




70" Linear Wideview Direct Vent Gas Fireplace

Model: VWDV70

Installation and Operating Instructions



WARNINGS

IF THE INFORMATION IN THESE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

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

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

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(s) of gas indicated on the rating plate unless a certified kit is used.

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



WARNING



DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURE AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION.

YOUNG CHILDREN SHOULD BE SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CLOTHING OR OTHER FLAMMABLE MATERIAL SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.

KEEP THE ROOM AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

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

**Thank you and congratulations on your purchase of a
Vermont Castings Fireplace.**

PLEASE READ THE INSTALLATION AND OPERATION INSTRUCTIONS BEFORE USING THE APPLIANCE!

IMPORTANT: Read all instructions and warnings carefully before starting installation.

Failure to follow these instructions may result in a possible fire hazard and will void the warranty.

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INSTALLER

Please leave these instructions with the appliance.

OWNER

Please retain these instructions for future reference.

WARNING

- **Read this owner’s manual carefully and completely before trying to assemble, operate, or service this fireplace.**
- **Any change to this fireplace or its controls can be dangerous.**
- **Improper installation or use of this fireplace can cause serious injury or death from fire, burns, explosions, electrical shock and carbon monoxide poisoning.**

This fireplace is a vented product. This fireplace must be properly installed by a qualified service person. The glass door must be properly seated and sealed. If this unit is not properly installed by a qualified service person with glass door properly seated and sealed, combustion leakage can occur.

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, the fireplace may not have been installed properly. Get fresh air at once! Have the fireplace inspected and serviced by a qualified service person. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

Propane/LP gas and natural gas are both odorless. An odor-making agent is added to each of these gases. The odor helps you detect a gas leak. However, the odor added to these gases can fade. Gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this fireplace.

1. 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.
2. For propane/LP fireplace, do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors. To prevent performance problems, do not use propane/LP fuel tank of less than 100 lbs. capacity.
3. If you smell gas
 - shut off gas supply.
 - do not try to light any appliance.
 - do not touch any electrical switch; do not use any phone in your building .
 - immediately call your gas supplier from a neighbor’s phone. Follow the gas supplier’s instructions.

4. Never install the fireplace
 - in a recreational vehicle
 - where curtains, furniture, clothing, or other flammable objects are less than 42" from the front, top, or sides of the fireplace
 - in high traffic areas
 - in windy or drafty areas
5. This fireplace reaches high temperatures. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Fireplace will remain hot for a time after shutdown. Allow surfaces to cool before touching.
6. Carefully supervise young children when they are in the room with fireplace.
7. Do not modify fireplace under any circumstances. Any parts removed for servicing must be replaced prior to operating fireplace.
8. Turn fireplace off and let cool before servicing, installing, or repairing. Only a qualified service person should install, service, or repair the fireplace. Have burner system inspected annually by a qualified service person.
9. You must keep control compartments, burners, and circulating air passages clean. More frequent cleaning may be needed due to excessive lint and dust. Turn off the gas valve and pilot light before cleaning fireplace.
10. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired. Refer to *Cleaning and Maintenance, Page 42*.
11. Keep the area around your fireplace clear of combustible materials, gasoline, and other flammable vapor and liquids. Do not run fireplace where these are used or stored. Do not place items such as clothing or decorations on or around fireplace.
12. Do not use this fireplace to cook food or burn paper or other objects.
13. Never place anything on top of fireplace.

14. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this fireplace. Use only the gas type indicated on rating plate.
15. This appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the *National Electrical Code*, *ANSI/NFPA 70*, or the *Canadian Electrical Code*, *CSA C22.1*.
16. Do not obstruct the flow of combustion and ventilation air in any way. Provide adequate clearances around air openings into the combustion chamber along with adequate accessibility clearance for servicing and proper operation.
17. When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, you must set appliance on a metal or wood panel or hearth pad extending the full width and depth of the appliance.
18. Do not use fireplace if any part has been exposed to or has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and any gas control which as been submerged in water.
19. Do not operate fireplace if any log is broken.
20. Do not use a blower insert, heat exchanger insert, or any other accessory not approved for use with this fireplace.
21. Do not operate the fireplace with glass door removed, cracked, or broken.



**IMPORTANT:
PLEASE READ THE FOLLOWING
CAREFULLY**

It is normal for fireplaces fabricated of steel to give off some expansion and/or contraction noises during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.

**IMPORTANT:
PLEASE READ THE FOLLOWING
CAREFULLY**

It is not unusual for gas fireplace to give off some odor the first time it is burned. This is due to the manufacturing process.

Please ensure that your room is well ventilated during burn off — open all windows.

It is recommended that you burn your fireplace for at least ten (10) hours the first time you use it. Place the fan switch in the "OFF" position during this time.

WARNING

Never connect unit to private (non-utility) gas wells. This gas is commonly known as wellhead gas.



We recommend 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.

CODE APPROVAL

Direct Vent type appliances draw all combustion air from outside of the dwelling through the vent pipe.

These appliances have been tested by CSA and found to comply with the established standards for DIRECT VENT GAS FIREPLACE HEATERS in the USA and Canada as follows:

LISTED VENTED GAS FIREPLACE HEATER

TESTED TO: ANSI Z21.88-2009 / CSA 2.33-2009 STANDARDS

A manufactured home (USA only) or mobile home OEM installation must conform with the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280*, or when such a standard is not applicable, the *Standard for Manufactured Home Installations, ANSI/NCSCS A225.1*, or *Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA Z240.4*.

PRODUCT SPECIFICATIONS

- This appliance has been certified for use with either natural or propane gas. See appropriate data plates.
- This appliance is not for use with solid fuels.
- The appliance is approved for bedroom or bedsitting room installations.
- The appliance must be installed in accordance with local codes if any. If none exist use the current installation code. ANSI Z223.1/NFPA 54 in the USA, CSA B149 in Canada.
- This appliance is mobile home approved.
- The appliance must be properly connected to a venting system.
- The appliance is not approved for closet or recessed installations.

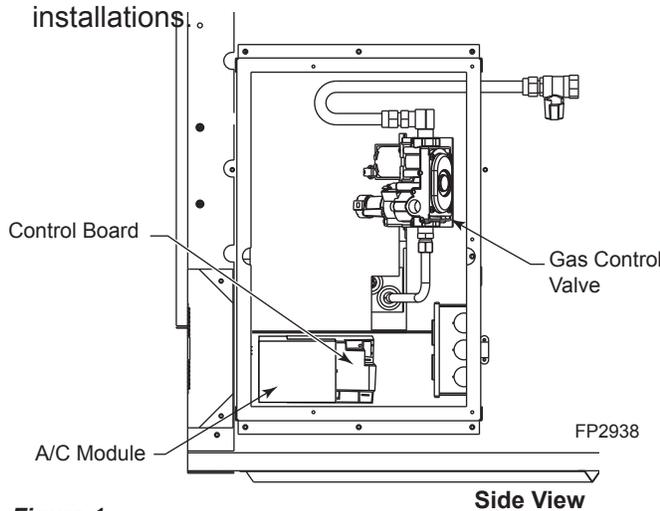


Figure 1 - VWDV70 Fireplace Features

HIGH ELEVATIONS

Input ratings are shown in BTU per hour and are certified without deration for elevations up to 4,500 feet (1,370 m) above sea level.

For elevations above 4,500 feet (1,370 m) in USA, installation must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.

In Canada, please consult provincial and/or local authorities having jurisdiction for installation at elevations above 4,500 feet (1,370 m).

GAS PRESSURES

	Natural	Propane (LP)
Inlet Minimum	4.5" w.c.	11.0" w.c.
Inlet Maximum	10.5" w.c.	13.0" w.c.
Manifold Pressure	3.5" w.c.	10.0" w.c.

GAS SPECIFICATIONS & ORIFICE SIZE

Model	Fuel	Max. Input Btu/hr	Min. Input Btu/hr	Orifice Sizes		
				Left	Middle	Right
VWDV70	Nat.	51,000	32,500	#44	#43	#45
VWDV70	LP	43,000	32,000	1.25 mm	1.20 mm	#56

BEFORE YOU START

Read this homeowner manual thoroughly and follow all instructions carefully. Inspect all contents for shipping damage and immediately inform your dealer if any damage is found. Do not install any unit with damaged, incomplete, or substitute parts. Check your packing list to verify that all listed parts have been received. You should have the following:

- Fireplace (Firebox and Burner System)
- Reflective Decorative Glass
- Stone Set
- Conversion Kit
- Wall Switch Kit

ITEMS REQUIRED FOR INSTALLATION

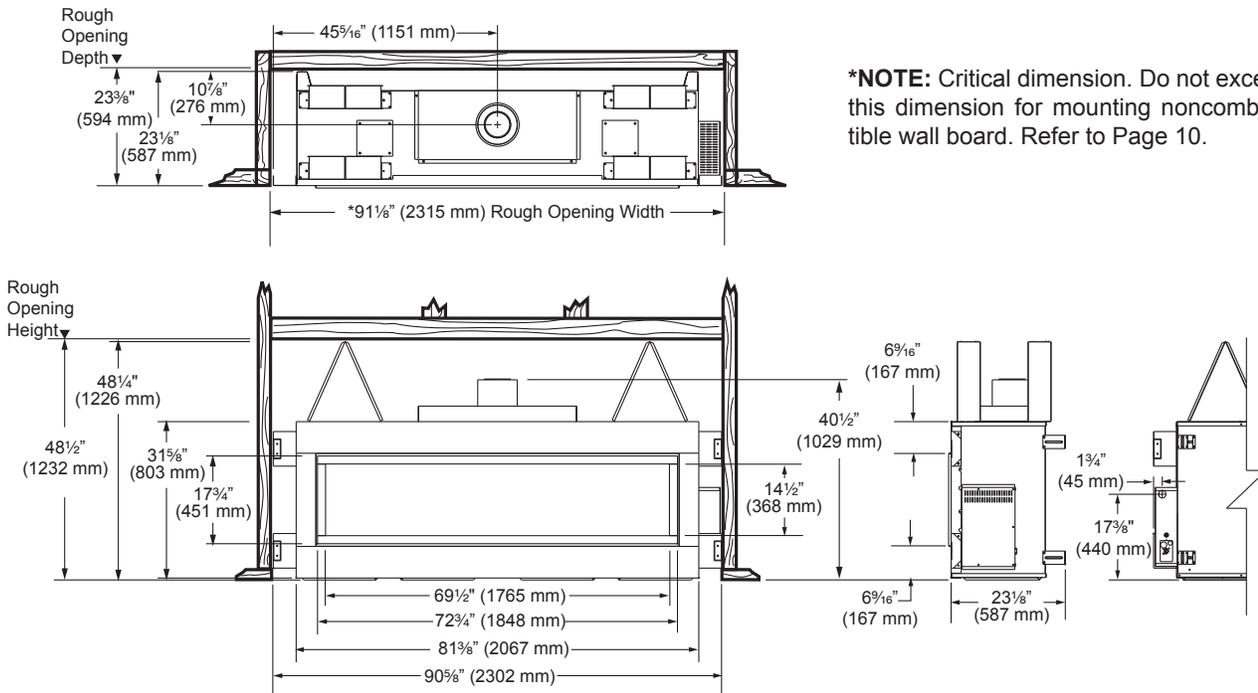
- Phillips Screwdriver
- Hammer
- Saw and/or saber saw
- Measuring Tape
- Electric Drill and Bits
- Pipe Wrench
- Caulking Material (noncombustible)
- Fireplace Surround Material (noncombustible)
- Piping Complying with Local Codes
- Pipe Sealant Approved for use with Propane/LPG (Resistant to sulfur compounds)
- Noncombustible finishing material or dura-rock*
- Framing Materials
- Wall Finishing Materials
- Level
- Pliers
- Square
- Tee Joint

* Only used if desired to cover painted face other than using tiles or marble. If tiles or marble are used around the face, the noncombustible material is not needed.

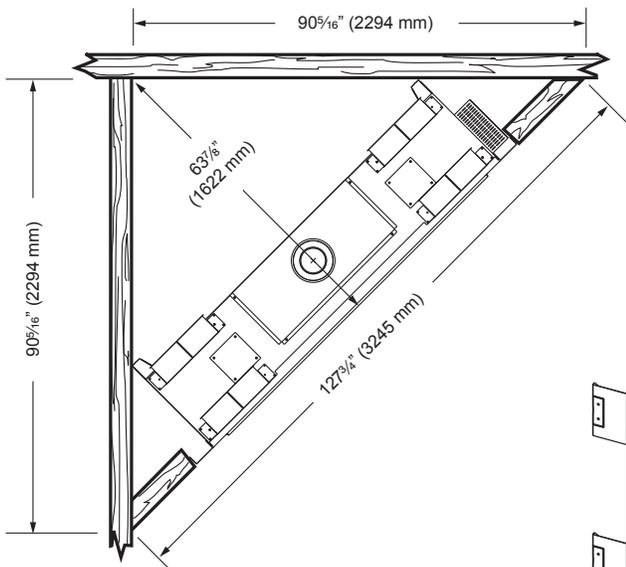
FIREBOX FRAMING

Firebox framing can be built before or after the appliance is set in place. Refer to *Figure 2* for fireplace and framing dimensions. The framing headers may rest on the top of the firebox standoffs. Do not bring headers below top of standoffs. **NOTE:** When planning your framing and installation, keep in mind that both the gas line and electricity should come in on the right side of the firebox (as you are facing the front of the fireplace).

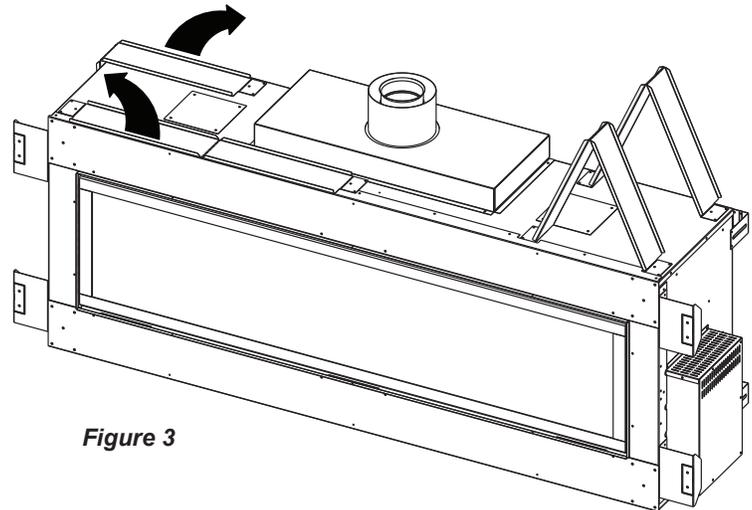
The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. When the firebox is installed directly on carpeting, tile, or other combustible material, other than wood flooring, the firebox shall be installed on a metal or wood panel extending the full width and depth of the enclosure.



***NOTE:** Critical dimension. Do not exceed this dimension for mounting noncombustible wall board. Refer to Page 10.



Unfold standoffs into upright position and fasten into place using #8 screws provided, three (3) screws per standoff. *Figure 3*



FP2931

Figure 2 - Fireplace and Framing Dimensions

Figure 3

WARNING

Do not fill spaces around firebox with insulation or other materials. This could cause a fire.

WARNING

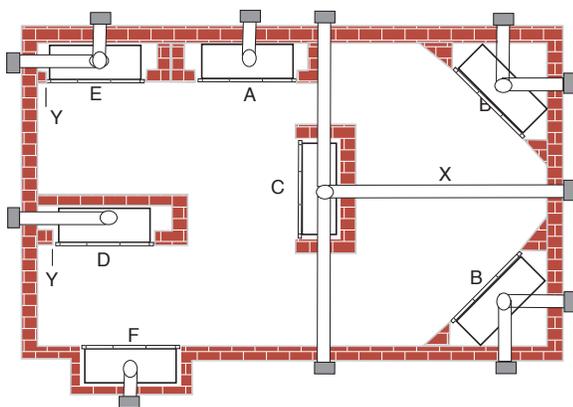
Unit framing is to be rectangular front to back. Failure to do so will cause fire and damage to property.

FIREPLACE LOCATION

Plan for the installation of your appliance. This includes determining where the unit is to be installed, the vent configuration to be used, framing and finishing details, and whether any optional accessories (i.e. blower, wall switch, or remote control) are desired. Consult your local building code agency to ensure compliance with local codes, including permits and inspections.

The following factors should be taken into consideration:

- Clearance to side-wall, ceiling, woodwork, and windows. Minimum clearances to combustibles **must be maintained**.
- This fireplace may be installed along a wall, across a corner, or use an exterior chase. See *Figure 4* for suggested locations.
- Location should be out of high traffic areas and away from furniture and draperies due to heat from appliance.
- Never obstruct the front opening of the fireplace.
- Do **not** install in the vicinity where gasoline or other flammable liquids may be stored.
- Vent pipe routing. See *Venting* section found in this manual for allowable venting configurations.
- These units can be installed in a bedroom. Refer to the National Fuel Gas Code ANSI Z233.1/ NFPA 54 — (current edition), the Uniform Mechanical Code — (current edition), and Local Building Codes for specific installation requirements.
- These units can be installed in a bathroom.



- A Flat on Wall
- B Cross Corner
- C Island**
- D Room Divider*
- E Flat on Wall Corner*
- F Chase Installation
- Y 4" Minimum

** Island (C) and room divider (D) installation is possible as long as the horizontal portion of vent system (X) does not exceed 20'. Refer to *Installing Horizontal Termination Configuration* on Page 13.

* When you install your fireplace in (D) room divider or (E) flat on wall corner positions (Y), a minimum of 6" clearance must be maintained from perpendicular wall and front of fireplace.

Figure 4 - Possible Fireplace Locations

NOTE

COLD CLIMATE INSULATION

If you live in a cold climate, seal all cracks around your appliance, and wherever cold air could enter the room, with noncombustible material. It is especially important to insulate the outside chase cavity between the studs and under the floor on which the appliance rests, if the floor is above ground level.

CLEARANCES TO COMBUSTIBLES

WARNING

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

The appliance cannot be installed on a carpet, tile or other combustible material other than wood flooring. If installed on carpet or vinyl flooring, the appliance shall be installed on a metal, wood or noncombustible material panel extending full width and depth of the appliance.

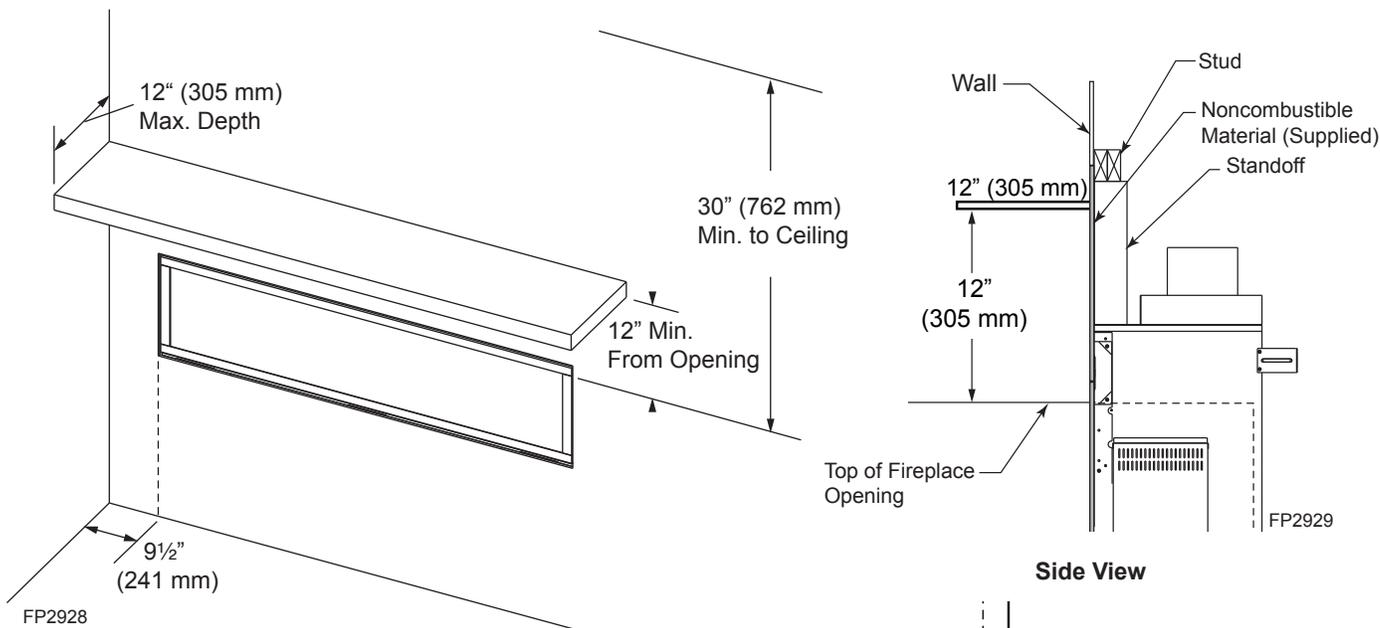


Figure 5 - Ceiling and Sidewall Clearances

NOTE: Refer to mantel installation instructions on Page 11.

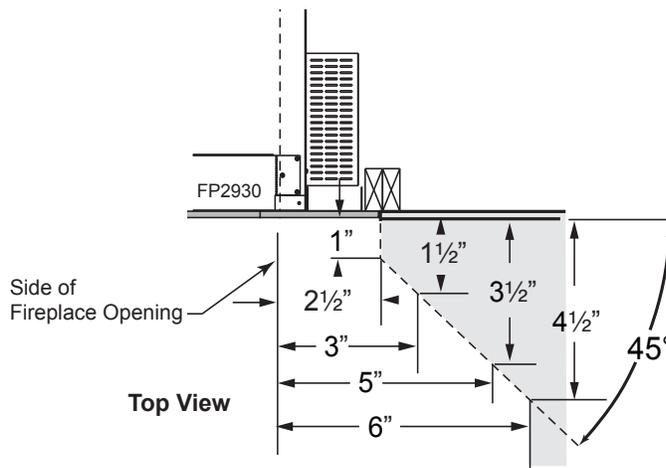


Figure 6 - Mantel clearances

The fireplace must be secured to the floor and/or to framing studs as shown in *Figure 7*. Use two (2) wood screws or masonry/ concrete screws to secure fireplace to the floor. Use four (4) screws to attach fireplace to framing. The side nailing flanges are 1/2" or 5/8" to accommodate different wall thickness.

NOTE Fireplace may be installed on top of framing or platform constructed of combustible materials which do not protrude beyond the face.

NOTE Never install combustible materials over front face of fireplace or in noncombustible zone shown below.

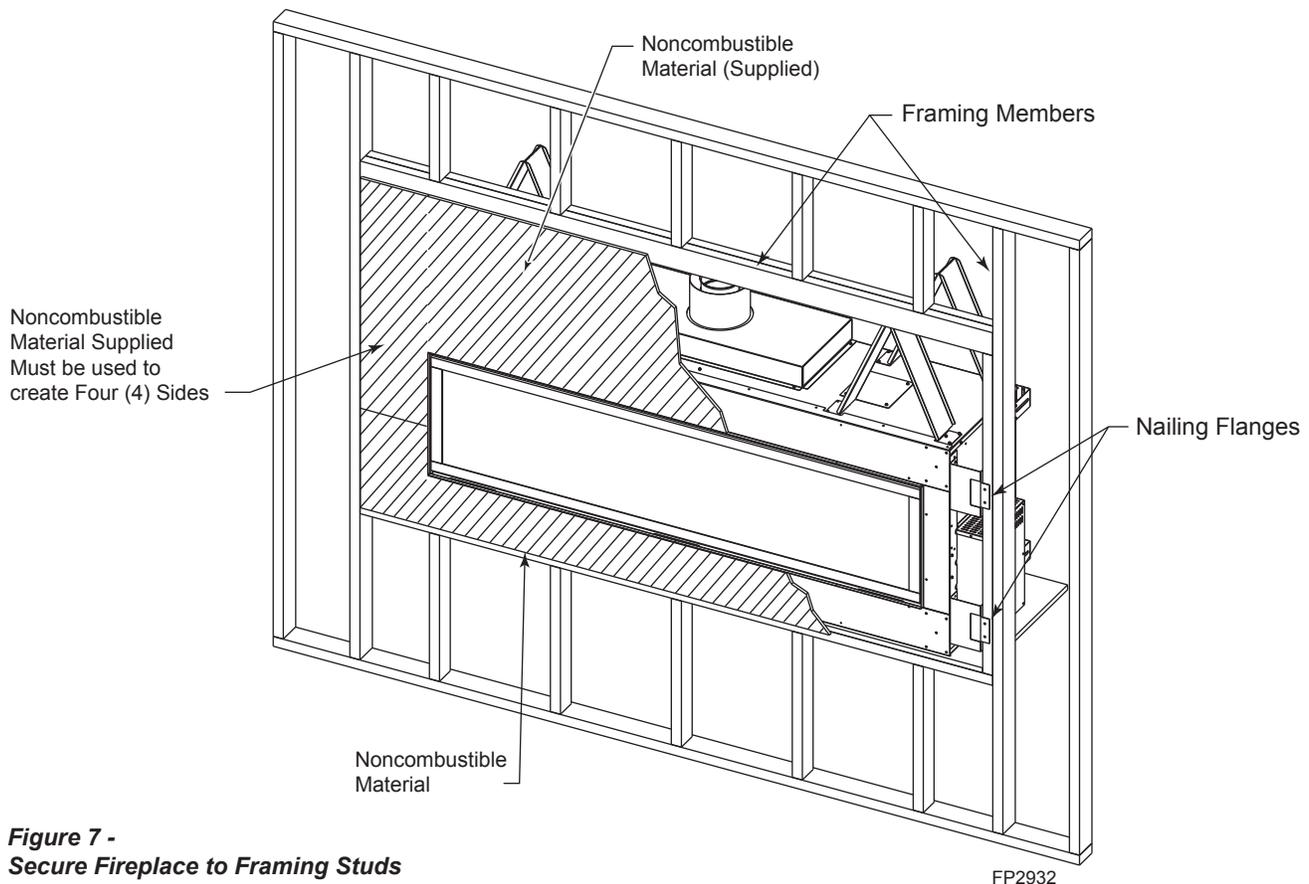


Figure 7 - Secure Fireplace to Framing Studs

FINISHING MATERIAL

NOTE: Any wiring must be done prior to final finishing to avoid costly reconstruction.

Only noncombustible materials (i.e. brick, tile, slate, steel, or other materials with a UL fire rating of Zero) may be used to cover up to the glass opening. It is permissible to bring combustible wall board to the top of the standoffs on the top and the sides of the unit. A 300°F minimum adhesive may be used to attach facing materials to noncombustible surface.

NOTE If the unit is to be installed into a bare painted wall, without finishing materials (i.e. brick, tile, slate, marble, etc.), a Vermont Casting accessory face **MUST** be used (VWDV70CSS, VWDV70BT, VWDV70IA, etc.). The supplied noncombustible board shown in *Figure 6* **MUST** be used for ALL installations.

NONCOMBUSTIBLE FACING INSTALLATION

CAUTION: The noncombustible wall board supplied with this unit can be damaged if dropped or struck. Handle with care.

1. Using drywall screws secure noncombustible board to framing and top nailing strip. Attach every 6" (152 mm). *Figures 8 & 9*

IMPORTANT: To avoid cracking the board, pre-drill holes prior to securing to unit/framing.

2. Wipe any debris or dust from the noncombustible board and drywall.

3. It is highly recommended to prime the facing using a quality primer prior to taping and mudding. This will ensure proper adhesion of both the tape and mud. The supplied board is very porous.

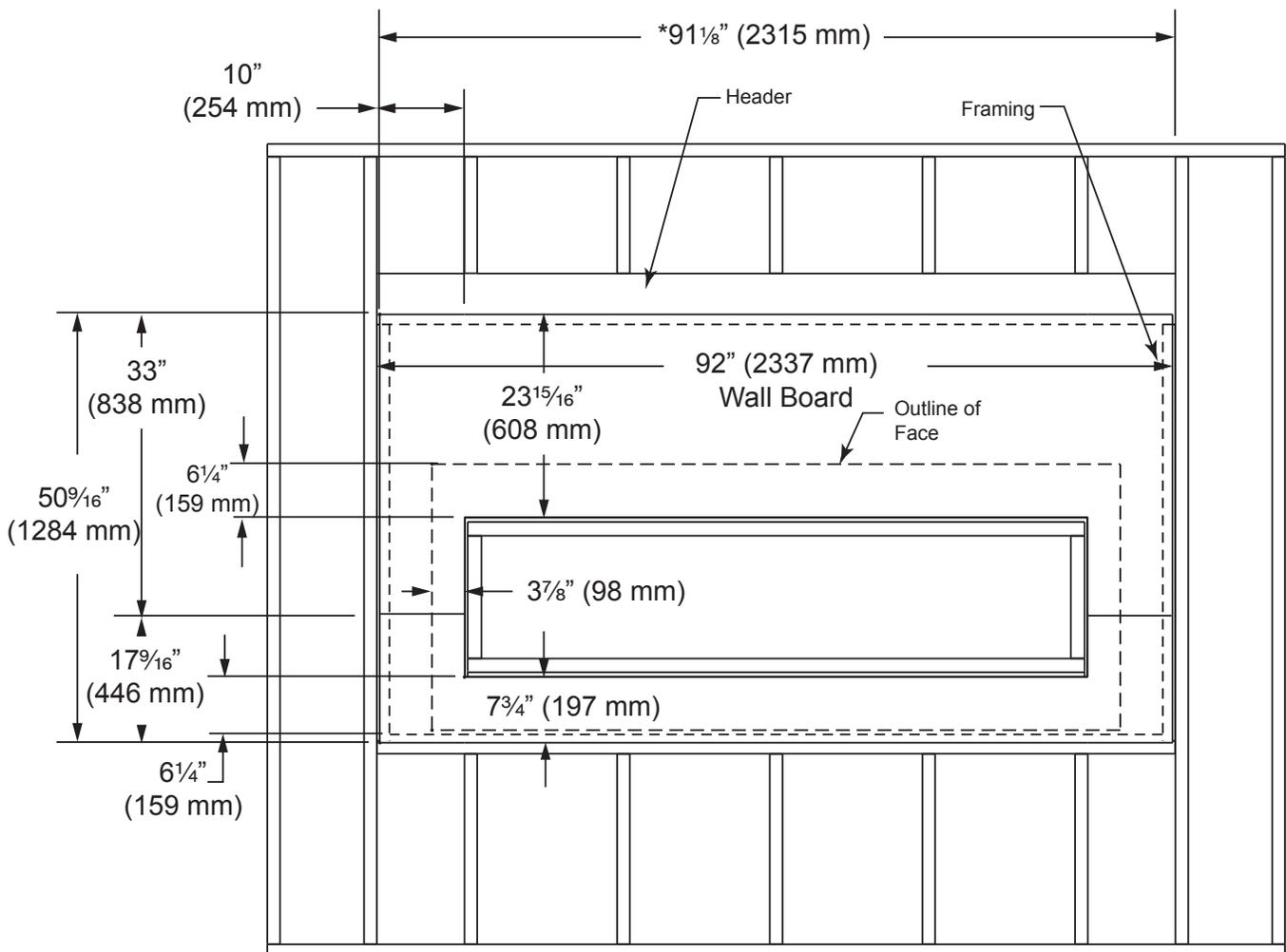
4. Tape the seams using a mesh type tape.

5. Mud seams as normal. We recommend using a product called Durabond high strength compound for the first coat. This product can be purchased at any hardware store. Follow manufacturer's recommendations for curing the mud.

NOTE: Depending upon the final finishing method, use a minimum rated 300 degree sealant, drywall compound or thin set to seal the side and top joints.

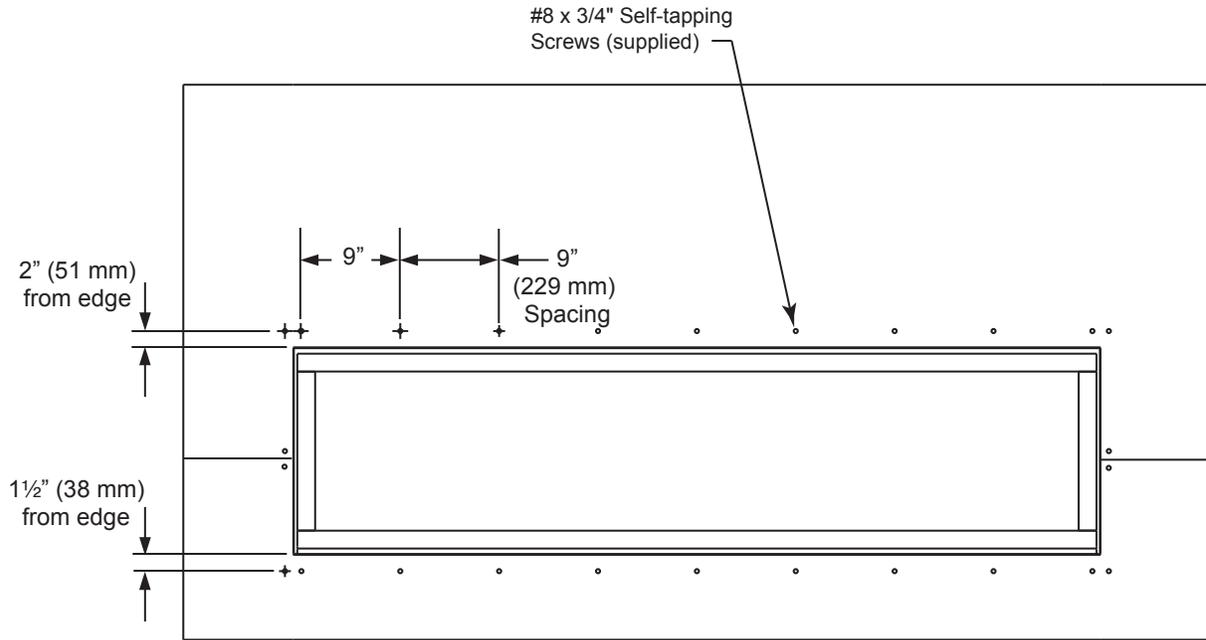
6. Prime wall for a second time for proper adhesion of paint.

***Do Not Exceed This Dimension**



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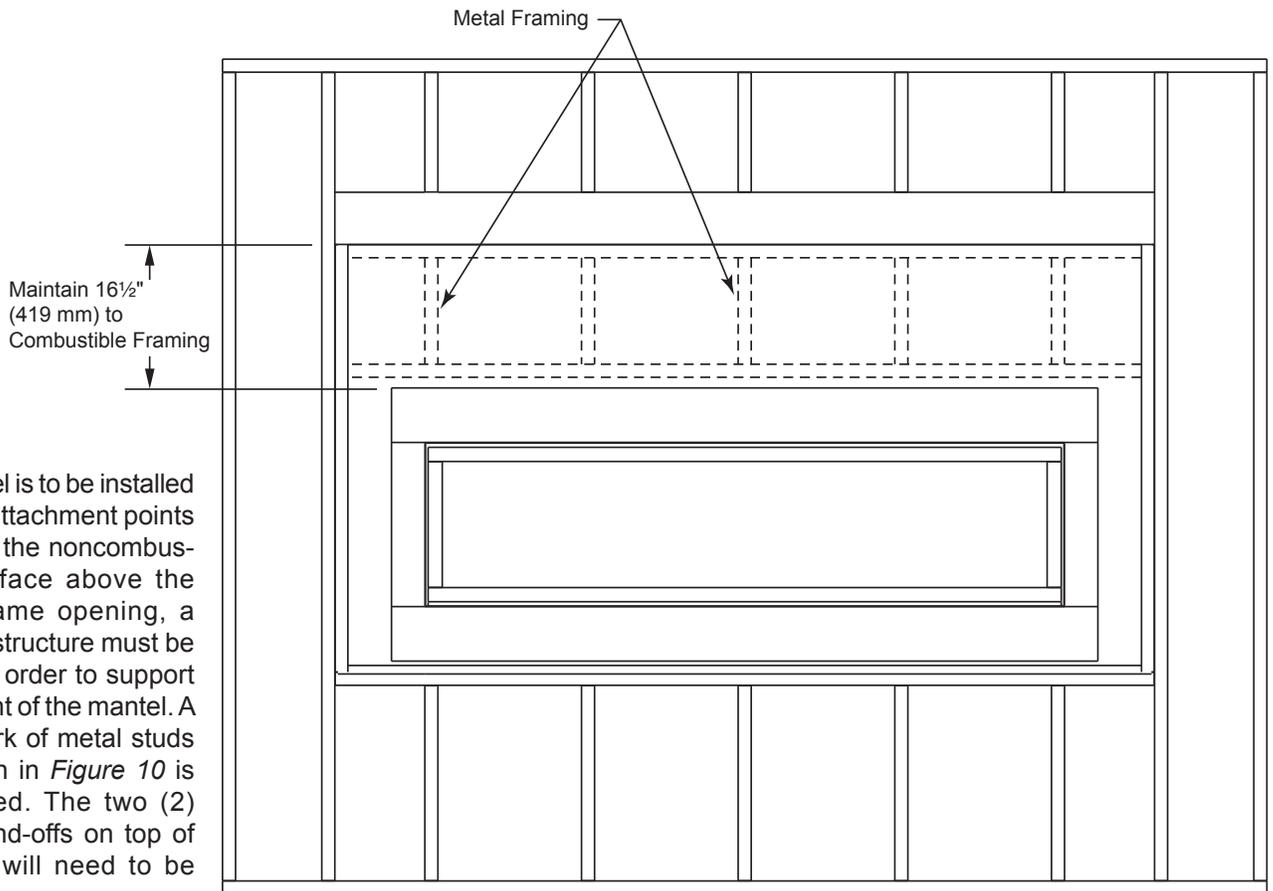
Figure 8



FP2940

Figure 9

NOTE: Use this illustration as a guide when attaching the noncombustible boards to the face of the fireplace. Use the #8 x 3/4" self-tapping screws provided.



FP2941

Figure 10

If a mantel is to be installed and the attachment points fall upon the noncombustible surface above the glass frame opening, a suitable structure must be added in order to support the weight of the mantel. A framework of metal studs as shown in Figure 10 is suggested. The two (2) front stand-offs on top of the unit will need to be removed.

WARNING

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

INSTALLATION PRECAUTIONS

Consult local building codes before beginning the installation. The installer must make sure to select the proper vent system for installation. The approved 5 x 8 venting components are Simpson Duravent and Selkirk products listed on *Page 49*. UL1777 flexible venting is also approved for use on these models. Before installing vent kit, the installer must read this fireplace manual and vent kit instructions.

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

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

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

- Installation of any damaged venting component.
- Unauthorized modification of the venting system.
- Installation of any component part not manufactured or approved by MHSC.
- Installation other than permitted by these instructions.

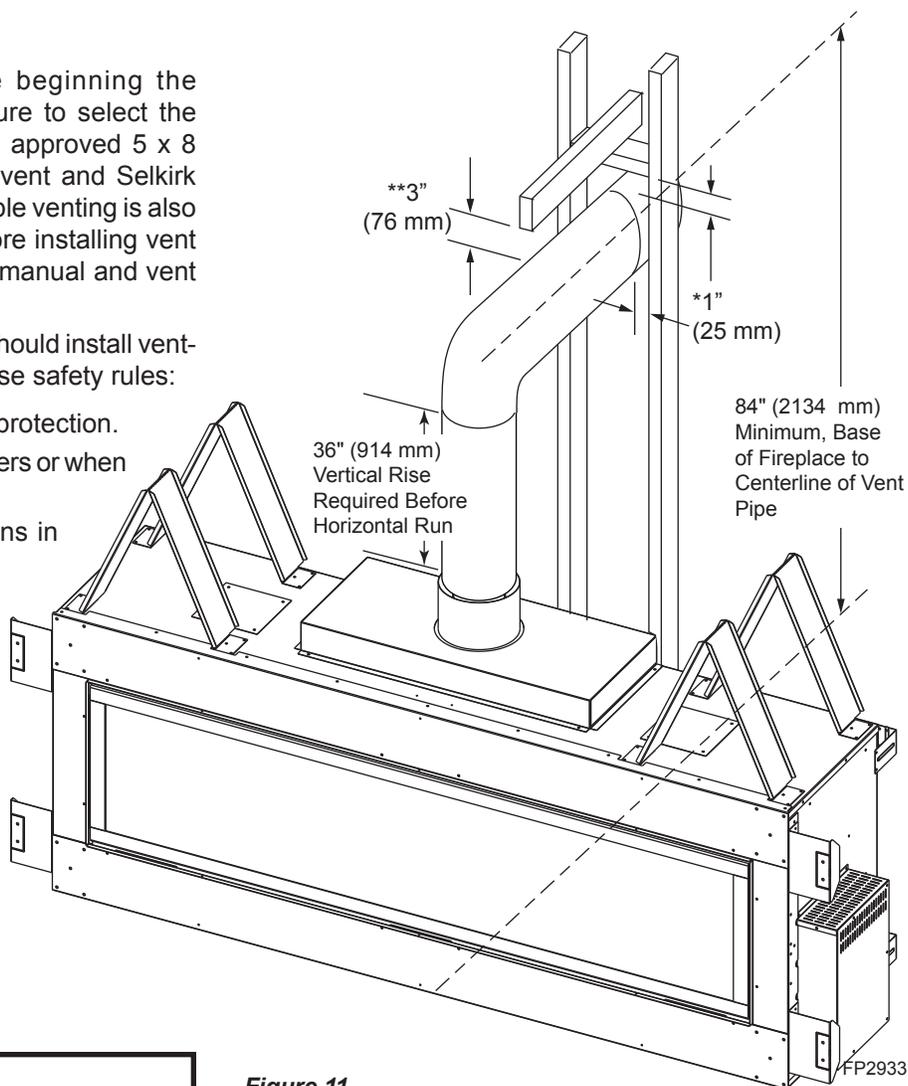


Figure 11 - Combustible Clearances for Vent Pipe

* A minimum 1" clearance to combustibles permitted all around flue at outside wall.

** A minimum of 3" clearance to all sides is required along horizontal and vertical length.

NOTICE

Failure to follow these instructions will void the warranty.

WARNING

This fireplace must be vented to the outside. The venting system must NEVER be attached to a chimney serving a separate solid fuel burning appliance. Each gas appliance must use a separate vent system. Do not use common vent systems.

WARNING

Horizontal and vertical sections of this vent system require a minimum of 3" clearance to combustibles on all sides.

INSTALLATION PLANNING

There are two basic types of direct-vent installation:

- Horizontal Termination
- Vertical Termination

WARNING	Never run the vent pipe level down. This may cause excessive temperatures which could cause a fire.
----------------	--

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

FOR HORIZONTAL TERMINATION

Select the amount of vertical rise desired. All horizontal run of venting must have 1/4" rise for every 12" of run towards the termination below 7½ feet of vertical rise from the floor of the fireplace. With 7½ feet or more vertical rise from the floor of the fireplace, the horizontal run may run level. NEVER run vent piping down.

You may use up to three 90° elbows in this vent configuration. Refer to Vertical/Horizontal Termination Configurations on *Page 15*.

FOR VERTICAL TERMINATION

Measure the distance from the fireplace floor to the ceiling. Add the ceiling thickness, the vertical rise in an attic or second story, and allow for sufficient vent height above the roof line.

NOTE: You may use two 45° elbows in place of a 90° elbow. You must follow rise to run ratios when using 45° elbows. The appliance is approved for use with three 90° elbows maximum or a combination of 90° and 45° elbows up to a maximum of 270°.

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

You may use a chase with a vent termination with exposed pipe on the exterior of the house.

Refer to *Installing A Vent System in an Outside Chase* below. If pipe is enclosed in chase, it is not exposed.

It is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust. Certain limitations apply to vent configurations and must be strictly followed.

INSTALLING A VENT SYSTEM IN AN OUTSIDE CHASE

A chase is a vertical boxlike structure built to enclose venting that runs along the outside of a building. A chase is required for such venting.

NOTICE	When installing in a chase, you should insulate the chase as you would the outside walls of your home. This is especially important in cold climates. Insulation should be considered a combustible material. Maintain proper clearances to all combustible materials.
---------------	---

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

WARNING	Always maintain minimum clearances around vent systems. The minimum clearances to combustibles for horizontal and vertical vent pipe are 1" at the top, sides and bottom of the vent system. Do not pack the open air spaces with insulation or other materials. This could cause high temperatures and may present a fire hazard.
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GENERAL VENTING INFORMATION - TERMINATION LOCATION

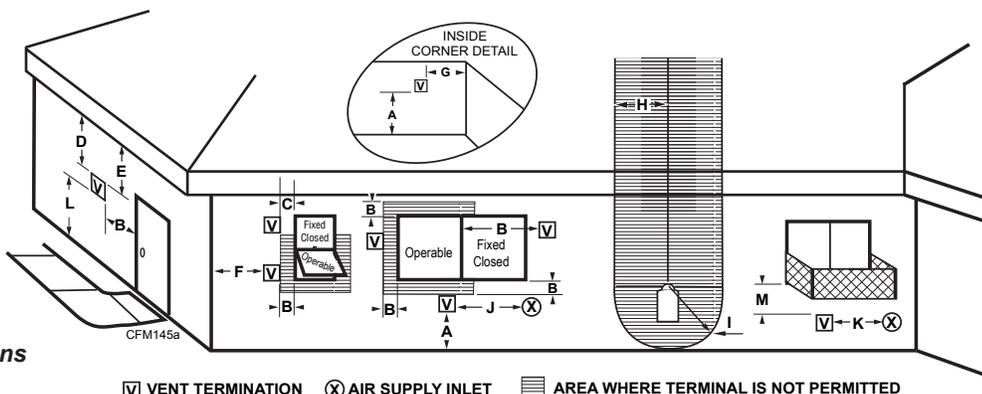


Figure 12 - Termination Locations

V VENT TERMINATION
 X AIR SUPPLY INLET
 AREA WHERE TERMINAL IS NOT PERMITTED

Canadian Installations¹

US Installations²

	Canadian Installations ¹	US Installations ²
A = Clearance above grade, veranda, porch, deck, or balcony	12" (30 cm)	12" (30 cm)
B = Clearance to window or door that may be opened	6" (15 cm) for appliances < 10,000 BTU/h (3kW), 12" (30 cm) for appliances > 10,000 Btuh (3kW) and < 100,000 BTU/h (30kW), 36" (91 cm) for appliances > 100,000 BTU/h (30kW)	6" (15 cm) for appliances < 10,000 BTU/h (3kW), 9" (23 cm) for appliances > 10,000 Btuh (3kW) and < 50,000 BTU/h (15kW), 12" (30 cm) for appliances > 50,000 BTU/h (15kW)
C = Clearance to permanently closed window	12" (305 mm) recommended to prevent window condensation	12" (305 mm) recommended to prevent window condensation
D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2' (610mm) from the center line of the terminal	18" (458 mm)	18" (458 mm)
E = Clearance to unventilated soffit	12" (305 mm)	12" (305 mm)
F = Clearance to outside corner	see next page	see next page
G = Clearance to inside corner (see next page)	see next page	see next page
H = Clearance to each inside of center line extended above meter/regulator assembly	3' (91 cm) within a height of 15' (5 m) above the meter/regulator assembly	3' (91 cm) within a height of 15' (5 m) above the meter/regulator assy
I = Clearance to service regulator vent outlet	3' (91 cm)	3' (91 cm)
J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliances	6" (15 cm) for appliances < 10,000 BTU/h (3kW), 12" (30 cm) for appliances > 10,000 BTU/h (3kW) and < 100,000 Btuh (30kW), 36" (91 cm) for appliances > 100,000 BTU/h (30kW)	6" (15 cm) for appliances < 10,000 BTU/h (3kW), 9" (23 cm) for appliances > 10,000 BTU/h (3kW) and < 50,000 BTU/h (15kW), 12" (30 cm) for appliances > 50,000 BTU/h (15kW)
K = Clearance to a mechanical air supply inlet	6' (1.83 m)	3' (91 cm) above if within 10' (3 m) horizontally
L = Clearance above paved sidewalk or paved driveway located on public property	7' (2.13 m)†	7' (2.13 m)†
M = Clearance under veranda, porch, deck or balcony	12" (30 cm)‡	12" (30cm)‡

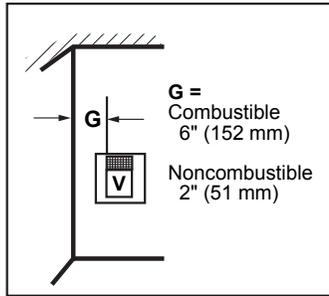
1 In accordance with the current CSA-B149 Installation Codes
 2 In accordance with the current ANSI Z223.1/NFPA 54 National Fuel Gas Codes
 † A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings
 ‡ only permitted if veranda, porch, deck or balcony is fully open on a minimum 2 sides beneath the floor:

NOTE: 1. Local codes or regulations may require different clearances.
 2. The special venting system used on Direct Vent Fireplaces are certified as part of the appliance, with clearances tested and approved by the listing agency.
 3. MHSC assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

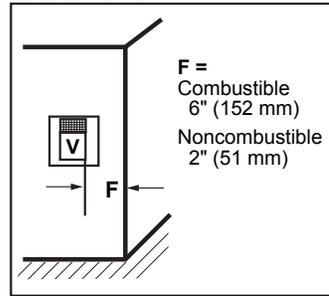
Termination Clearances

Termination clearances for buildings with combustible and noncombustible exteriors.

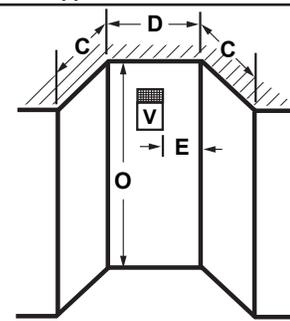
Inside Corner



Outside Corner



Alcove Applications*

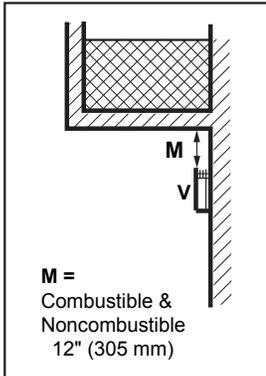


E = Min. 6" (152 mm) for non-vinyl sidewalls
 Min. 12" (305 mm) for vinyl sidewalls
 O = 8' (2.4 m) Min.

No. of Caps	D _{Min.}	C _{Max.}
1	3' (914 mm)	2 x D _{Actual}
2	6' (1.8 m)	1 x D _{Actual}
3	9' (2.7 m)	2/3 x D _{Actual}
4	12' (3.7 m)	1/2 x D _{Actual}

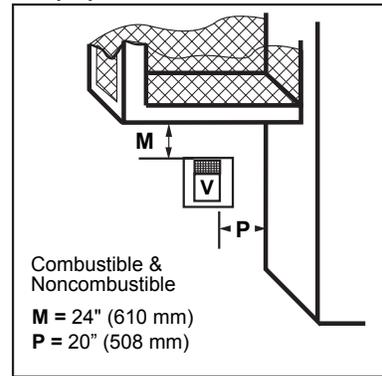
D_{Min.} = # of Termination caps x 3
 C_{Max.} = (2 / # termination caps) x D_{Actual}

Balcony - with no side wall



M = Combustible & Noncombustible 12" (305 mm)

Balcony - with perpendicular side wall



Combustible & Noncombustible
 M = 24" (610 mm)
 P = 20" (508 mm)

Figure 13 - Termination Clearances

584-15

***NOTE:** Termination in an alcove space (spaces open only on one side and with an overhang) is permitted with the dimensions specified for vinyl or non-vinyl siding and soffits. 1. There must be a 3' (914 mm) minimum between termination caps. 2. All mechanical air intakes within 10' (1 m) of a termination cap must be a minimum of 3' (914 mm) below the termination cap. 3. All gravity air intakes within 3' (914 mm) of a termination cap must be a minimum of 1' (305 mm) below the termination cap.

HOW TO USE THE VENT GRAPH

The Vent Graph should be read in conjunction with the following vent installation instructions to determine the relationship between the vertical and horizontal dimensions of the vent system.

1. Determine the height of the center of the horizontal vent pipe exiting through the outer wall. Using this dimension on the Sidewall Vent Graph below, locate the point intersecting with the slanted graph line.
2. From the point of this intersection, draw a vertical line to the bottom of the graph.
3. Select the indicated dimension, and position the fireplace in accordance with same.

Example: If the vertical dimension from the base of the fireplace is 11' (3.4 m) the horizontal run to the face of the outer wall must not exceed 16' (4.9 m).

Sidewall Vent Graph showing the relationship between vertical and horizontal dimensions for a Direct Vent flue system.

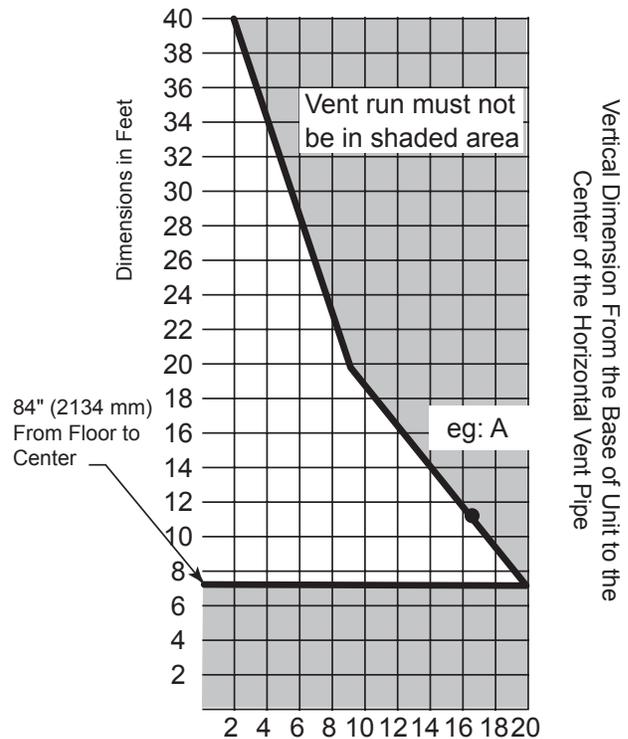


Figure 14 - Rear Wall Venting Graph

VERTICAL SIDEWALL INSTALLATION

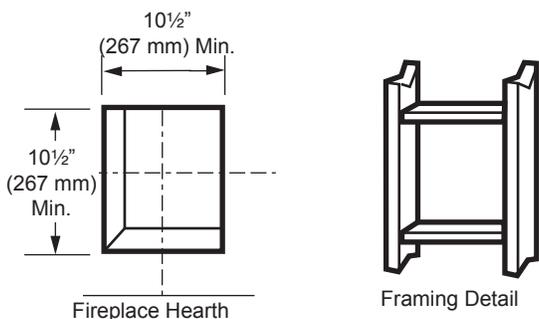
Step 1

Locate vent opening on the wall. It may be necessary to first position the fireplace and measure to obtain hole location. Depending on whether the wall is combustible or noncombustible, cut opening to size. *Figure 15* (For combustible walls first frame in opening.)

Combustible Walls: Cut a 10½”H x 10½”W (267 x 267 mm) hole through the exterior wall and frame as shown. *Figure 15*

Noncombustible Walls: Hole opening must be 8½” (216 mm) in diameter.

Vent Opening for Combustible Walls



Opening for Noncombustible Wall

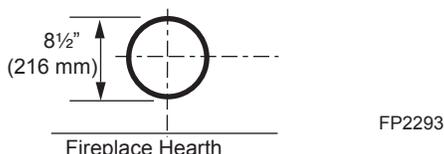


Figure 15 -
Locate vent opening on wall

Step 2

Secure firestop to the inside frame, center in the 10½” x 10½” vent opening.

Step 3

Place fireplace into position. Measure the vertical height (X) required from the base of the flue collars to the center of the wall opening. *Figure 16*

Step 4

Using appropriate length of pipe section(s) attach to fireplace with three (3) screws. Follow with the installation of the elbow.

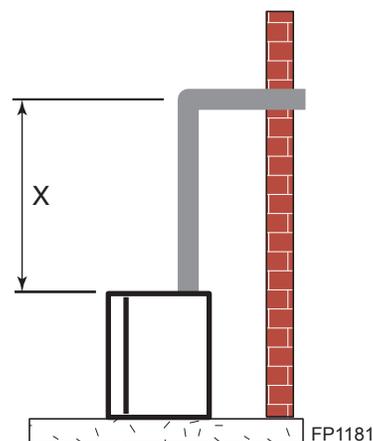


Figure 16 -
Vertical Height Requirement

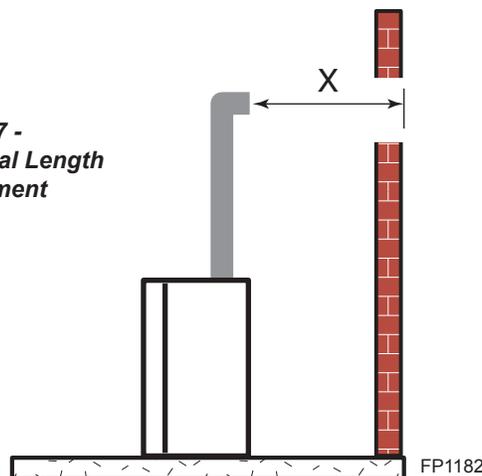
Step 5

Measure the horizontal length requirement figuring a 1¼” (32 mm) overlap, i.e. from the elbow to the outside wall cap. *Figure 17*



Always install horizontal venting on a level plane.

Figure 17 -
Horizontal Length Requirement



Step 6

Use appropriate length of pipe sections - telescopic or fixed - and install.

Sealing vent pipe and firestop gaps with high temperature sealant will restrict cold air being drawn in around fireplace.

Step 7

Guide the vent terminations 5” and 8” collar into their respective vent pipes. Double check that the vent pipes overlap the collars by a minimum 1¼” (32 mm). Secure the termination to the wall with screws provided and caulk around the wall plate to weatherproof. As an alternative to screwing the termination directly to the wall, you may also use expanding plugs or an approved exterior construction adhesive.



Support horizontal pipes every 36” (914 mm) with metal pipe straps.

VERTICAL/HORIZONTAL TERMINATION CONFIGURATIONS

Since it is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

The Vent Graph, showing the relationship between vertical and horizontal side wall venting, will help to determine the various dimensions allowable. *Figure 14*

NOTE: Horizontal and vertical sections of this vent system require a minimum of 3" (76 mm) clearance to combustibles on all sides.

When vent exits through foundations less than 20" below outcrop, the termination must be flush up with outcropped wall above.

It is best to locate the fireplace in such a way that minimizes the number of offsets and horizontal vent length.

The horizontal vent run refers to the total length of vent pipe from the flue collar of the fireplace (or the top of the Transition Elbow) to the face of the finished outside wall.

- The maximum number of 90° elbows per side wall installation is three (3). *Figure 18*
- A minimum of 36" (914 mm) is required before a 90° elbow. If a 90° elbow is fitted directly after 36" (914 mm) vertical section mounted to the top of the fireplace, the maximum horizontal vent run before the termination or a vertical rise is 36" (914 mm). *Figure 19*

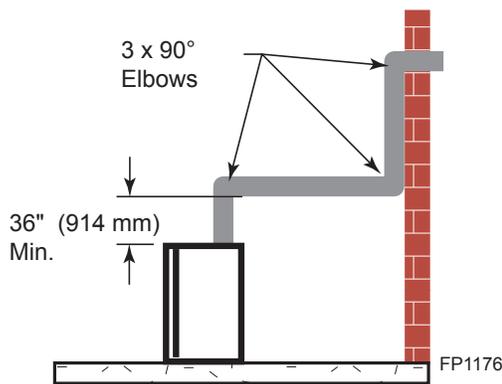


Figure 18 -
Maximum Three (3) 90° Elbows Per Installation

- If a 90° elbow is used in the horizontal vent run (level height maintained) the horizontal vent length is reduced by 36". Refer to *Figures 20 and 21*. This does not apply if the 90° elbows are used to increase or redirect a vertical rise. *Figure 20*

Example: According to the vent graph (Page 15) the maximum horizontal vent length in a system with a 10' vertical rise is 17½' (5.3 m) and if a 90° elbow is required in the horizontal vent it must be reduced to 14½' (4.4 m).

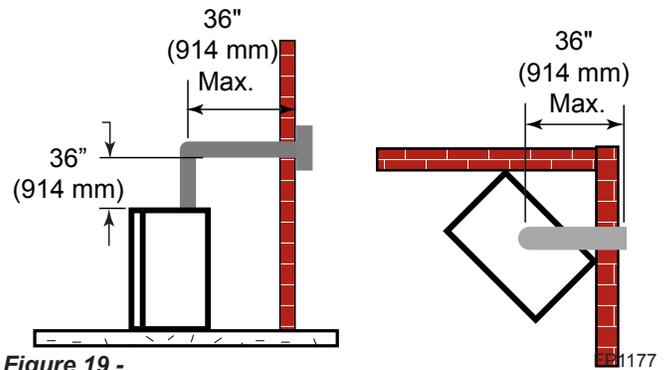


Figure 19 -
Maximum Horizontal Run with No Rise

In *Figures 20 and 21* dimension A plus B must not be greater than 17' (5.2 m).

- For each 45° elbow installed in the horizontal run, the length of the horizontal run **MUST** be reduced by 18" (457 mm). This does not apply if the 45° elbows are installed on the vertical part of the vent system.
- The maximum number of elbow degrees in a system is 270°. *Figure 21*

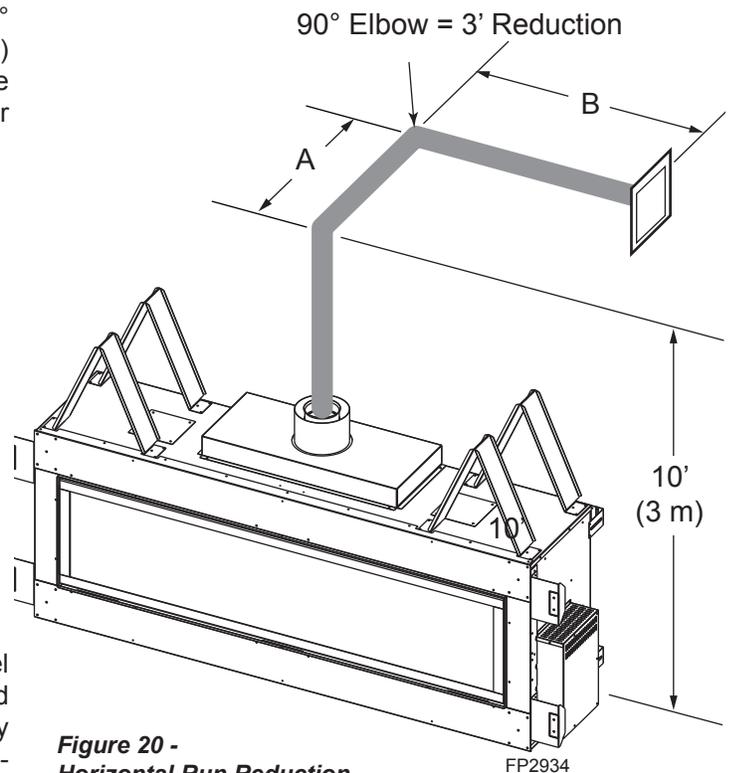
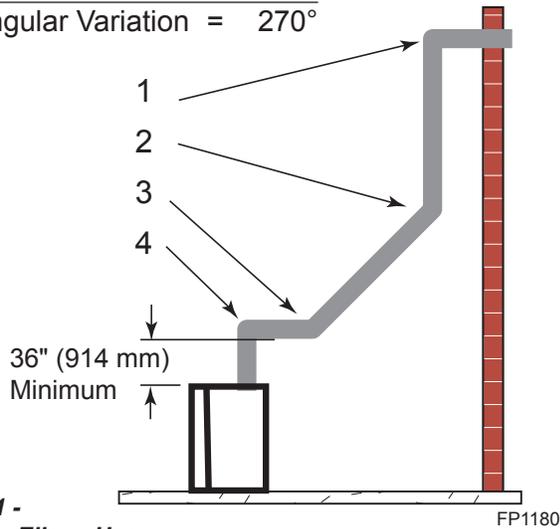


Figure 20 -
Horizontal Run Reduction

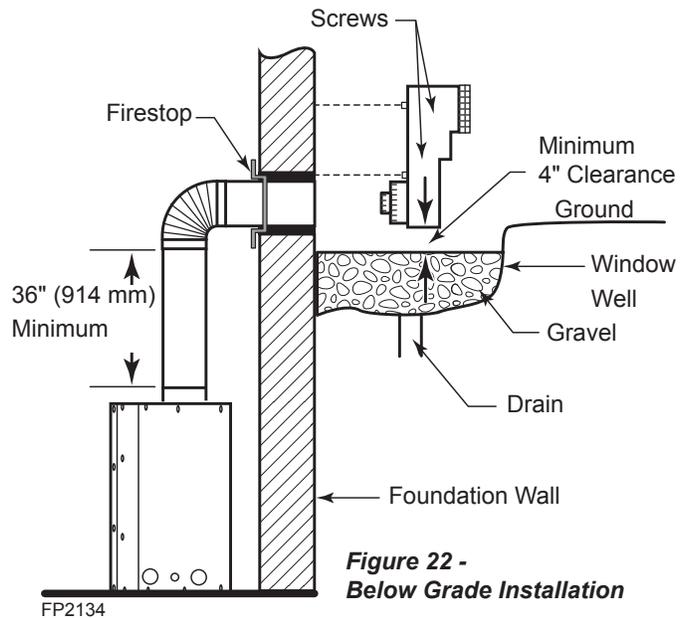
Example: Elbow 1 = 90°
 Elbow 2 = 45°
 Elbow 3 = 45°
 Elbow 4 = 90°

 Total Angular Variation = 270°



**Figure 21 -
 Maximum Elbow Usage**

7. Level the soil so as to maintain a 4" clearance below snorkel. *Figure 19*



**Figure 22 -
 Below Grade Installation**

BELOW GRADE INSTALLATIONS

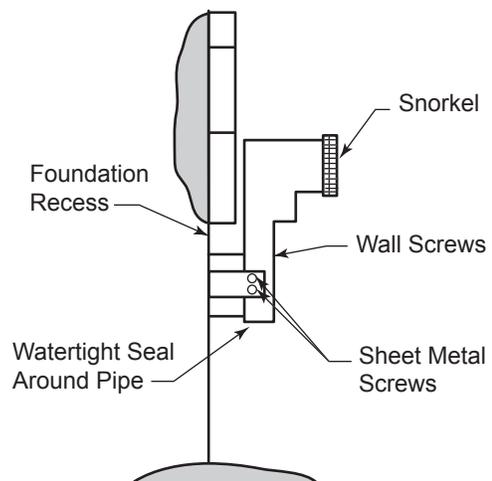
When it is not possible to meet the required vent terminal clearances of 12" above grade level, a snorkel kit is recommended. It allows installation depth down to 7" (178 mm) below grade level. The 7" (178 mm) is measured from the center of the horizontal vent pipe as it penetrates through the wall.

Ensure that sidewall venting clearances are observed. If venting system is installed below ground, we recommend a window well with adequate and proper drainage to be installed around the termination area.

If installing a snorkel, a minimum 36" (914 mm) vertical rise is necessary. The maximum horizontal run with the 36" (914 mm) vertical pipe is 36". This measurement is taken from the collar of the fireplace (or transition elbow) to the face of the exterior wall. See the Sidewall Venting Graph for extended horizontal run if the vertical exceeds 12".

1. Establish vent hole through the wall.
2. Remove soil to a depth of approximately 16" (406 mm) below base of snorkel. Install drain pipe. Install window well (not supplied). Refill hole with 12" (305 mm) of coarse gravel leaving a clearance of approximately 4" (102 mm) below snorkel. *Figure 22*
3. Install vent system.
4. Ensure a watertight seal is made around the vent pipe coming through the wall.
5. Apply high temperature sealant caulking (supplied) around the 5" and 8" snorkel collars.
6. Slide the snorkel into the vent pipes and secure to the wall.

If the foundation is recessed, use recess brackets (not supplied) for securing lower portion of the snorkel. Fasten brackets to wall first, then secure to snorkel with self drilling #8 x 1/2" sheet metal screws. It will be necessary to extend vent pipes out as far as the protruding wall face. *Figure 23*



**Figure 23 -
 Snorkel Installation, Recessed Foundation**

WARNING

- Do not back fill around snorkel.
- A clearance of at least 4" must be maintained between the snorkel and the soil.

VERTICAL (THROUGH-THE-ROOF) APPLICATIONS

This gas fireplace has been approved for,

- Vertical installations up to 40' (12 m) in height. Up to a 10' (3 m) horizontal vent run can be installed within the vent system using a maximum of two 90° elbows.

Figure 24

NOTE: Horizontal and vertical sections of this vent system require a minimum 1" clearance to combustibles at the top, sides and bottom.

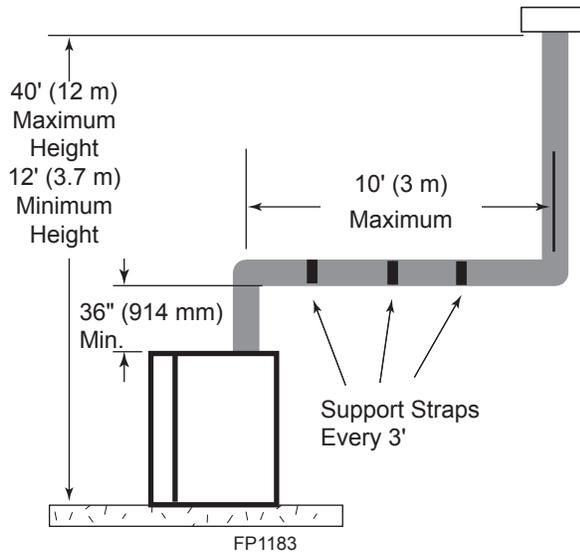


Figure 24 - Support Straps for Horizontal Runs

- Up to two 45° elbows may be used within the horizontal run. For each 45° elbow used on the horizontal plane, the maximum horizontal length must be reduced by 18" (450 mm).

Example: Maximum horizontal length

- No elbows = 10' (3 m)
- 1x45° elbows = 8.5' (2.6 m)
- 2x45° elbows = 7' (2.1 m)

- A minimum of a 36" (914 mm) vertical rise is required.
- Two sets of 45°elbows offsets may be used within the vertical sections. From 0 to a maximum of 8' (2.5 m) of vent pipe can be used between elbows. *Figure 25*
- The maximum angular variation allowed in the system is 270°. *Figure 25*

Example:

Elbow 1	=	90°
Elbow 2	=	45°
Elbow 3	=	45°
Elbow 4	=	90°
Total Angular Variation		= 270°

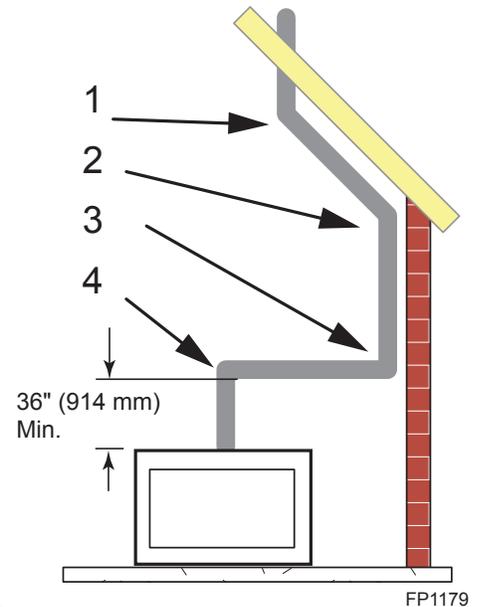


Figure 25 - Maximum Elbow Usage

INSTALLATION FOR VERTICAL TERMINATION

1. Determine the route your vertical venting will take. If ceiling joist, roof rafters or other framing will obstruct the venting system, consider an offset. Refer to Figure 26 to avoid cutting load bearing members.

For optimal flame appearance on straight vertical runs of 10 feet (3 m) or higher, the two (2) restrictor sliding plates on the inside roof of the firebox should be partially closed. Use the following guidelines as a starting point:

Height of Venting	Restrictor Plate Setting
30' to 40' (9.1 to 12.2 m)	1/4 open
20' to 30' (6.1 to 9.1 m)	1/3 open
10' to 20' (3 to 6.1 m)	1/2 open

After initially setting the plate openings, replace glass door and operate fireplace for at least 15 minutes to observe the flames.

For natural gas, the average flame height should be approximately 6" to 7" (152 to 178 mm).

For LP gas, the average flame height should be approximately 4" to 5" (102 to 127 mm).

If the flames are too tall, open plates slightly.

If the flames are too short, close plates slightly.

CAUTION: Allow fireplace to cool completely before touching or opening the glass door.

- Runs may not incorporate elbows.

NOTE: Pay special attention to these installation instructions for required clearances (air space) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters, etc. Do not pack air spaces with insulation. Also note maximum vertical rise of the venting system and any maximum horizontal offset limitations. Offsets must fall within the parameters shown in Figures 25 and 26.

2. Set fireplace in desired location. Drop a line plumb down from the ceiling to the position of the flue exit. Mark the center point where the vent will penetrate the ceiling. Drill a small locating hole at this point.

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

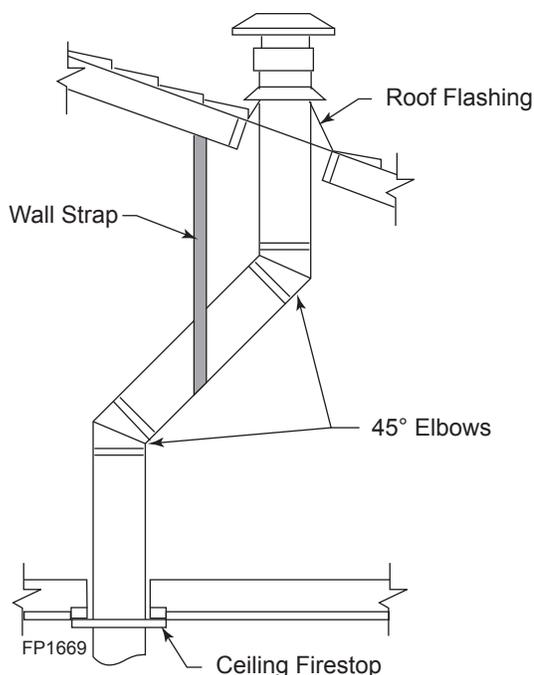


Figure 26 -
Offset with Wall Strap and 45° Elbows

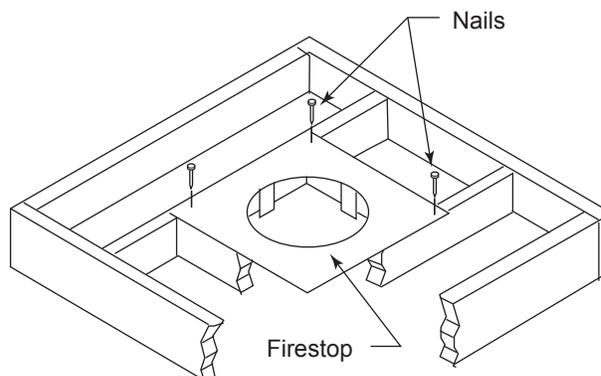


Figure 27 - If Area Above is a Room, Install Firestop above Framed Hole as Shown

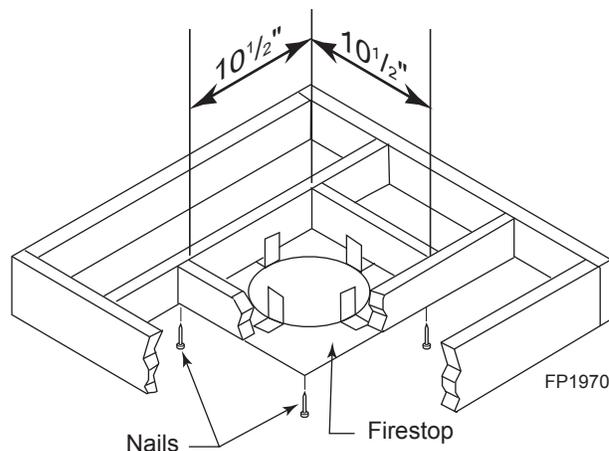


Figure 28 - If Area Above is Not a Room, Install Firestop above Framed Hole as Shown

3. Cut a hole in the roof using the locating hole as a center point. (Cover any exposed open vent pipes before cutting hole in roof). The 10½"x10½" (241 x 241 mm) hole must be measured on the horizontal. Actual length may be larger depending on the pitch of the roof. There must be a 1" minimum clearance from the vent pipe to combustible materials. (Insulation should be considered a combustible material).
4. Connect a section of pipe and extend up through the hole.

NOTE: If an offset is needed to avoid obstructions, you must support the vent pipe every three (3) feet. Use wall straps for this purpose. Refer to Figure 24. Whenever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of the flue gases and intake air.

5. Place the flashing over the pipe section(s) extending through the roof. Secure the base of the flashing to the roof and framing with roofing nails. Be sure roofing material overlaps the top edge of the flashing. There must be a 1" clearance from the vent pipe to combustible materials.
6. Continue to add pipe sections until the height of the vent cap meets the minimum building code requirements.

NOTE: You must increase vent height for steep roof pitches. Nearby trees, adjoining roof lines, steep pitched roofs, and other similar factors may cause poor draft or down-drafting in high winds. Increasing the vent height may solve this problem.

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

TERMINATION HEIGHTS FOR VENTS ABOVE FLAT OR SLOPED ROOFS

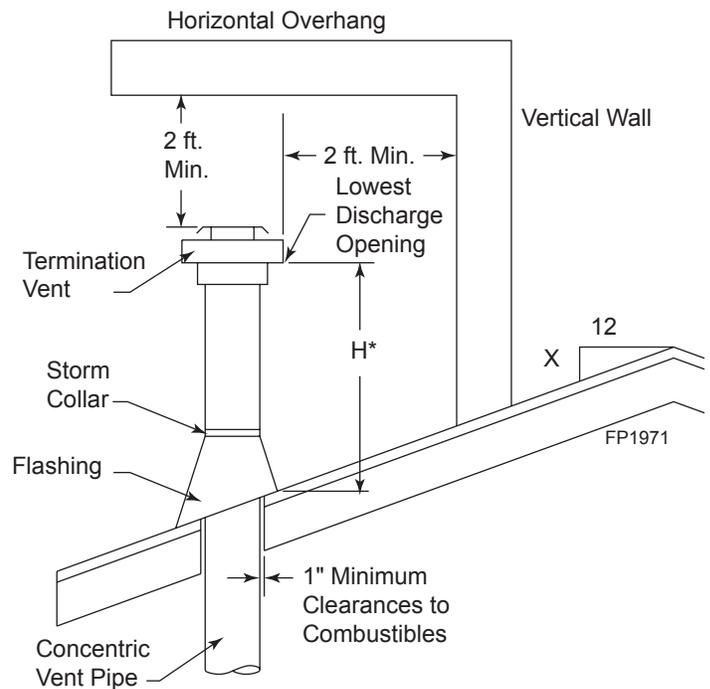


Figure 29 - Minimum Chimney Clearance

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
Over 10/12 to 11/12	3.25
Over 11/12 to 12/12	4.0

*H - Minimum height from roof to lowest discharge opening of vent

1. Flexible UL1777 listed venting may be used in any venting application where rigid direct vent components can be used. **All restrictions, clearances and allowances that pertain to the rigid piping apply to the flexible venting.** Flex kits may not be modified. Flex kits may be added to the end of a vent run made of rigid vent sections using pipe manufacturer's approved flex to pipe adapters. This may occur only if doing so does not violate any of the venting length, height, routing, horizontal to vertical ratio requirements or clearance considerations detailed in this manual.

2. The flex adapter starter kit (DVFF8A/8) is used to attach flex venting to the appliance starting collar. It includes 5" inner and 8" outer adapter rings. *Figure 30*

- The inner and outer adapter rings are required to start all flex runs.
- Never install damaged or torn flexible venting.
- Over tightening clamps may rip, tear, or otherwise damage flexible venting.
- The adapter kit does not include individual pipe sections which may be purchased separately. (UL1777 listed type venting only.)

3. Start the flexible vent as follows:

A. Installing the inner flex adapter and pipe. *Figure 30*

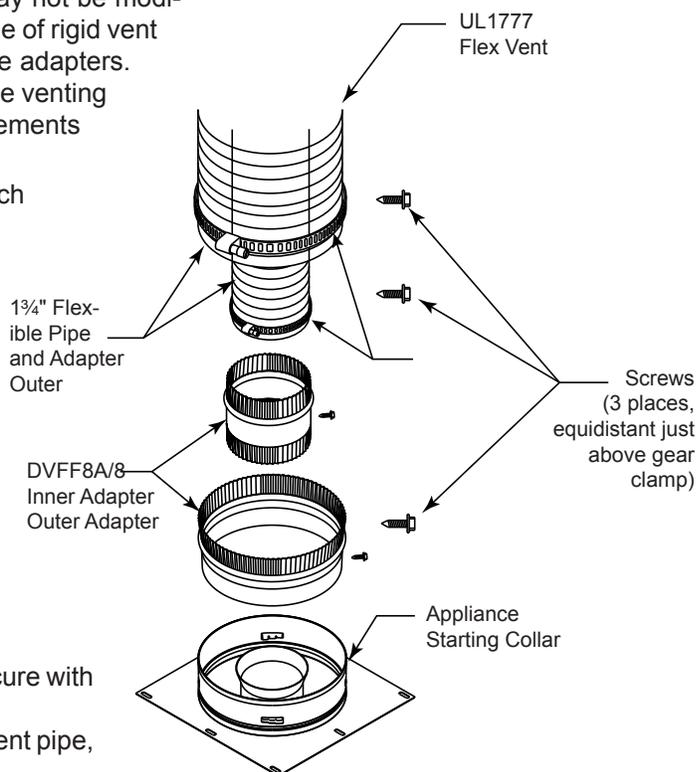
1. Insert the long side of the 5" inner ring into exhaust pipe, gently tap to seat into place, and secure with screws.
2. Slide the small gear clamp over the inner flexible vent pipe, and push out of the way.
3. Pull and extend the inner flexible vent.
4. Slide the inner vent onto the adapter collar, for a minimum 1 $\frac{3}{4}$ " overlap.
5. Locate the clamp at approximately 3/4" from the flex end and tighten.
6. Secure the clamped inner section with three self-tapping screws, drilled equidistant, just above the clamp perimeter.

B. Installing the outer flex pipe. *Figure 30*

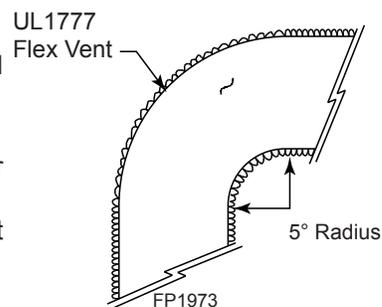
1. Firmly insert the 8" outer adapter ring into the outer appliance starting collar and secure with screws.
2. Slide the large gear clamp over the outer flexible vent pipe, and push out of the way.
3. Pull and extend the outer flexible vent.
4. Slide the outer vent onto the appliance collar outer adapter for a minimum 1 $\frac{3}{4}$ " overlap.
5. Locate the clamp at approximately 3/4" from the flex end and tighten.
6. Secure the clamped outer section with three self-tapping screws, drilled equidistant, just above the clamp perimeter.

C. Routing UL1777 flex pipe.

1. Always maintain the required clearance when routing the flex vent assembly.
2. Install firestop spacers, *Figure 32*, when penetrating ceiling, attic spaces, or walls.



**Figure 30 -
Typical Appliance Connection**



**Figure 31 -
Minimum Radius for Flex
Vent Section**

NOTE

Flex vent pipe spacers: Refer to manufacturer's specifications for correct positioning of the spacer springs to maintain proper distance between inside and outside pipe.

3. Do not allow the flexible vent to bend in radius tighter than 5°. *Figure 31*
 4. Horizontal runs of flexible vent shall be supported at maximum 2 foot intervals; vertical runs, five feet intervals. Metal strapping, properly secured, is an acceptable means to support the flexible vent.
 5. Flexible vent spacers are to be installed at intervals prescribed by the flexible vent manufacturer; and in such a way as to maintain concentric inner and outer vent spacing.
- D. Attaching flexible venting to vertical termination assemblies.
1. When using Simpson pipe, an MHSC flex-to-pipe adapter (FPA) and/or rigid pipe section(s) is required to connect the flexible vent assembly to the vertical termination by using three self-penetrating screws.
 2. Review *Figure 33* and corresponding instructions for proper overlap, clamp and screw placement.
 3. Three each self-penetrating screws are drilled opposite one another and below the gear clamp.
 4. Use only listed and approved terminations and accessories, installed per the installation instructions and *Figure 32*.
- E. Installing flexible venting to horizontal termination assemblies.
1. Connect the 5" flexible vent to the horizontal termination as in *Figure 34*.
 2. Connect the 8" flexible vent to the termination ring as in *Figure 34*.
 3. Review *Figure 34* for proper overlap and clamp placement.
 4. Three each self-penetrating screws are drilled opposite one another and below the gear clamp.
 5. Use only listed an approved terminations and accessories, installed per the termination instructions and *Figure 34*.

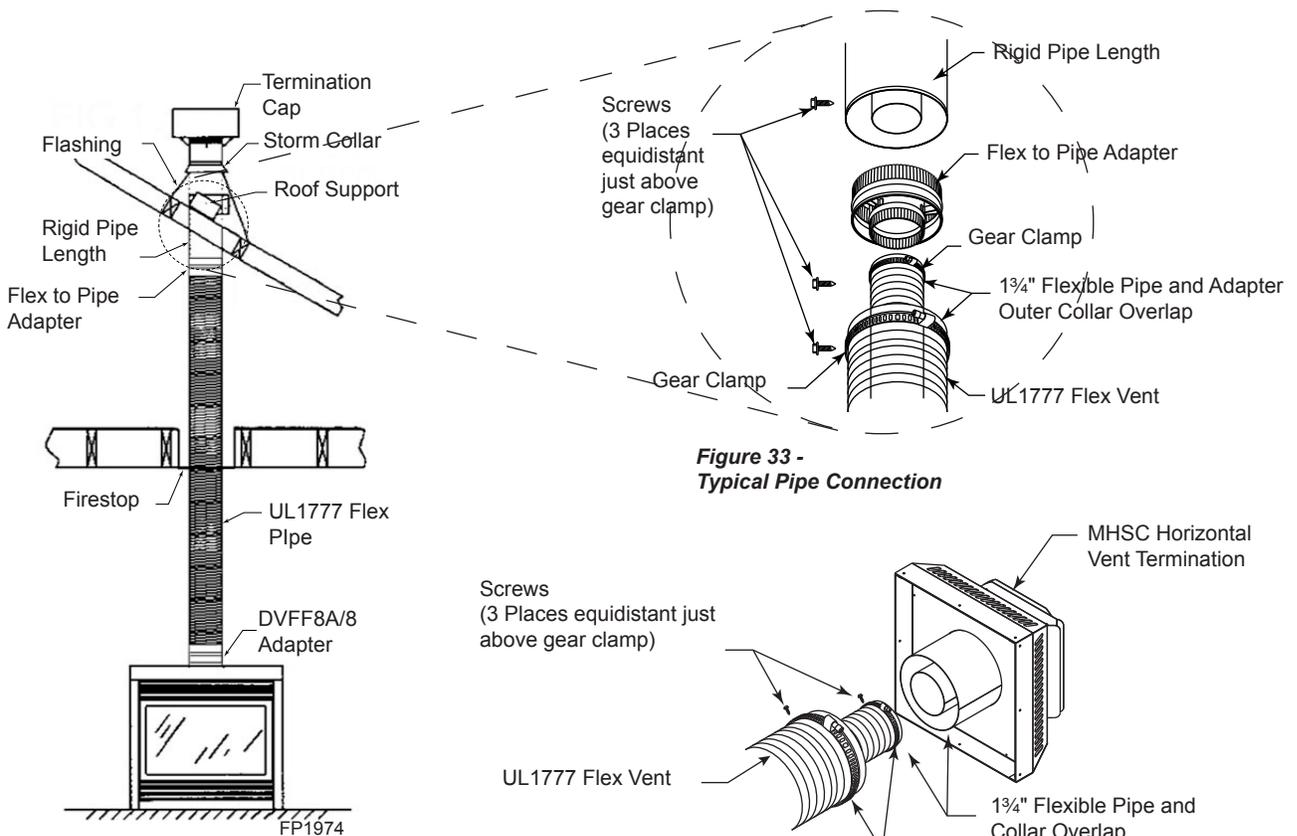


Figure 32 - Typical Vertical Flex Vent Installation

Figure 33 - Typical Pipe Connection

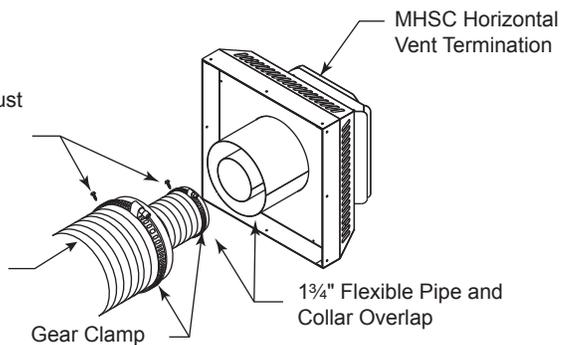


Figure 34 - Typical Horizontal Flex Vent Installation

CHECK GAS TYPE

Use proper gas type for the fireplace you are installing. If you have conflicting gas type, do not install fireplace. See dealer where you purchased the fireplace for proper fireplace for your gas type or conversion kit.

INSTALL GAS PIPING TO FIREPLACE LOCATION

WARNING

A qualified installer or service person must connect appliance to gas supply. Follow all local codes.

CAUTION

For propane/LP units, never connect fireplace directly to the propane/LP supply. This burner system requires an external regulator (not supplied). Install the external regulator between the burner system and propane/LP supply.

INSTALLATION ITEMS NEEDED

Before installing fireplace and burner system, make sure you have the items listed below.

- External regulator (supplied by installer)
- Piping (check local codes)
- Equipment shutoff valve*
- Sealant (resistant to propane/LP gas)
- Test gauge connection*
- Sediment trap (recommended)
- Tee joint
- Pipe wrench
- Approved flexible gas line with gas connector (if allowed by local codes — not provided)

* A CSA design-certified equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the CSA design-certified equipment shutoff valve from your dealer.

For propane/LP connections only, the installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 13 inches of water. If you do not reduce incoming gas pressure, burner system regulator damage could occur. Install external regulator with the vent pointing down as shown in *Figure 35*. Pointing the vent down protects it from freezing rain or sleet.

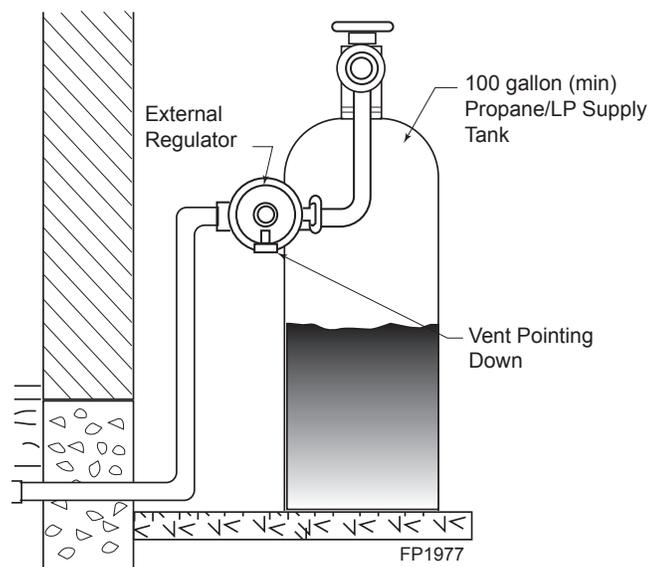


Figure 35 - External Regulator with Vent Pointing Down (Propane/LP Only)

CAUTION

Use only new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, Section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (listed on data plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

When using copper or flex connectors use only fittings approved for gas connections. The gas control inlet is 3/8" NPT.

The gas control is equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control.

Always provide a union when using black iron pipe so the gas line can be easily disconnected for burner or fan servicing. Refer to gas specifications for pressure details and ratings.

The fireplace valve must not be subjected to any test pressures exceeding 1/2 psi. Isolate or disconnect this and any other gas appliance control from the gas line when pressure testing.

WARNING

Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.

CAUTION

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. *Figure 36*

NOTE: The gas line connection may be made using 1/2" rigid tubing or an approved flex connector. Since some municipalities have additional local codes it is always best to consult your local authorities and the current edition of the National Fuel Gas Code ANSI.Z223.1, NFPA54. In Canada CSA-B149 (1 or 2) Installation Code.

A listed manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. *Figure 36*

IMPORTANT: Install main gas valve (equipment shutoff valve) in an accessible location. The main gas valve is for turning on or shutting off the gas to the fireplace.

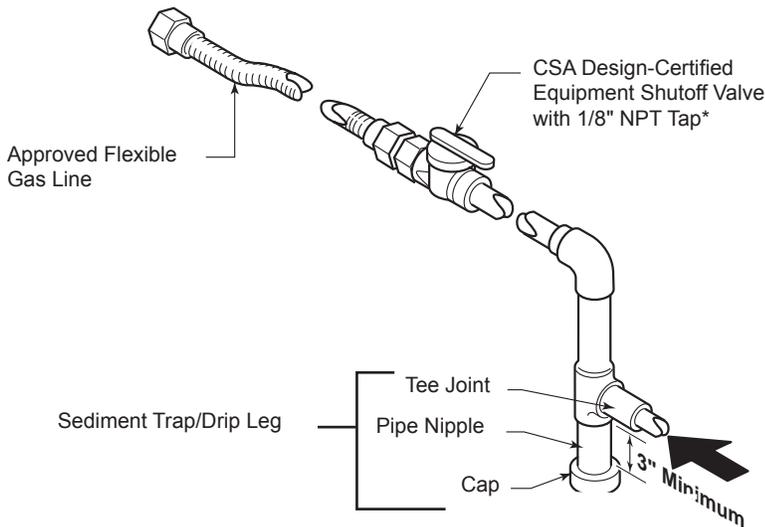
Check your building codes for any special requirements for locating equipment shutoff valve to fireplaces.

Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged burner system valves.

CAUTION

Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.

We recommend that you install a sediment trap/drip leg in supply line as shown in *Figure 36*. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and burner system. Locate sediment trap/drip leg where trapped matter is not likely to freeze. A sediment trap collects moisture and contaminants and keeps them from going into the burner system gas controls. If sediment trap/drip leg is not installed or is installed wrong, burner system may not run properly.

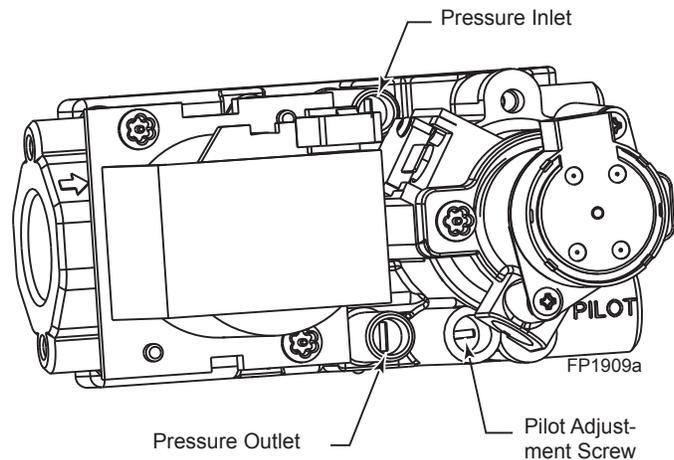


Natural Gas
From Gas Meter
(4.5" w.c. to 10.5" w.c. Pressure)

Propane/LP
From External Regulator
(11" w.c. to 13" w.c. Pressure)

Figure 36 - Gas Connection

1. Check gas type. The gas supply must be the same as stated on the appliance's rating decal. If the gas supply is different from the fireplace, **STOP!** Do not install the appliance. Contact your dealer immediately.
2. To ease installation, a 18" (457 mm) flex line with manual shut-off valve has been provided with this appliance. Install and attach 1/2" gas line onto shut-off valve.
3. After completing gas line connection, purge air from gas line and test all gas joints from the gas meter to the fireplace for leaks. Use a solution of 50/50 water and soap solution or a gas sniffer.
4. To check gas pressures at valve, turn captured screw counter clockwise 2 or 3 turns and then place tubing to pressure gauge over test point. Turn unit to high. *Figure 37.* After taking pressure reading, be sure and turn captured screw clockwise firmly to reseal. Do not over torque. Check test points for gas leaks.



**Figure 37 -
Signature Command Valve**

WARNING

Do not use open flame to check for gas leaks.

ELECTRICAL WIRING

General

1. This fireplace is equipped with the Signature Control valve which operates on 6 volts. The A/C module plugs into the fireplace junction box A/C power supply. Four (4) "AA" batteries are used for back up during power outages.
2. The Signature Command System can also be operated without A/C power. The system can run on four (4) "AA" batteries for approximately six (6) months under normal use.
3. A/C power must be used to power the A/C module, blowers, lights and AUX accessories used with this fireplace.

WARNING

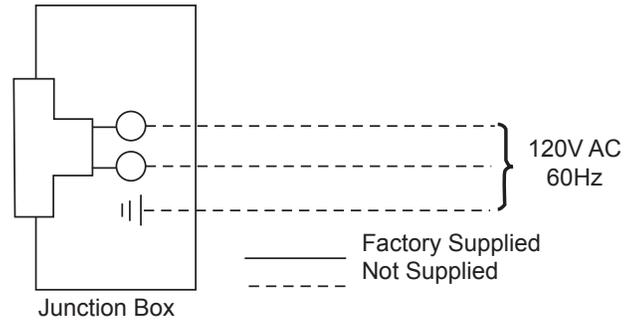
Electrical connections should only be performed by a qualified, licensed electrician. Main power must be off when connecting to main electrical power supply or performing service. All wiring shall be in compliance with all local, city and state codes. The appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70 (latest edition) and Canadian Electrical Code, CSA C22.1.

CAUTION

Label all wires before disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation.

JUNCTION BOX WIRING

1. This should be done before framing the fireplace. Wire the receptacle into an electrical circuit.
Wire with minimum 60° C wire in accordance with prevailing codes.
2. Remove the external junction box cover by removing the screw from the side of the outside firebox wall. Junction box was installed at the factory.
3. The junction box cover has a factory installed “romex” style strain relief connector. After connecting the wires, route the wire leads through this connector. Refer to the wiring diagram in *Figure 38*.

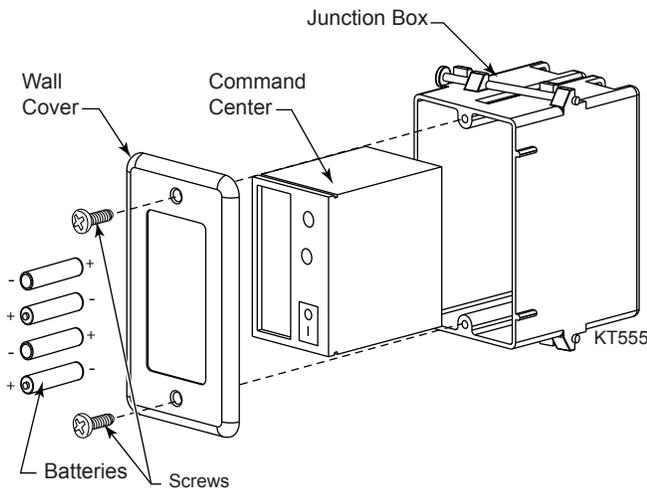


**Figure 38 -
Junction Box Wiring Diagram**

COMMAND CENTER WALL INSTALLATION

The Command Center should be mounted on the wall using the parts supplied (15 ft. cable, junction box, wall cover).

1. Mount the junction box provided at the desired location on the wall. Do not extend beyond the 15 ft. wire cable provided. If a longer distance is required, the 15 ft. may be extended to 30 ft. maximum by using two (2) cables plugged together.
2. Attach cable to Command Center by inserting connector into socket at rear of Command center.
3. Snap wall cover provided onto Command Center and screw into junction box. *Figure 39*



**Figure 39 -
Snap Wall Cover in Place**

WARNING

Do not connect wall switch to 110 V circuit.

4. Route the cable end without connector into the fireplace control housing through the plastic grommet on the rear wall.
5. Attach the plastic connector to the 6 pins from the cable by pushing each pin into connector. Make sure to follow the color code on connector. *Figure 40*
6. Attach connector into control board socket. Refer to wiring schematic.

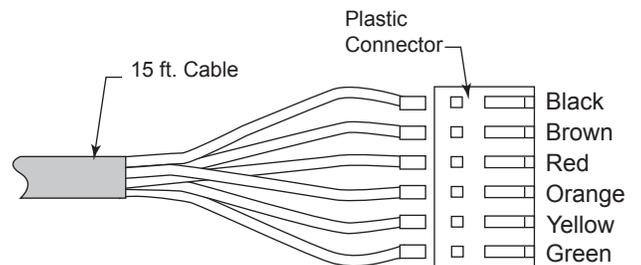


Figure 40

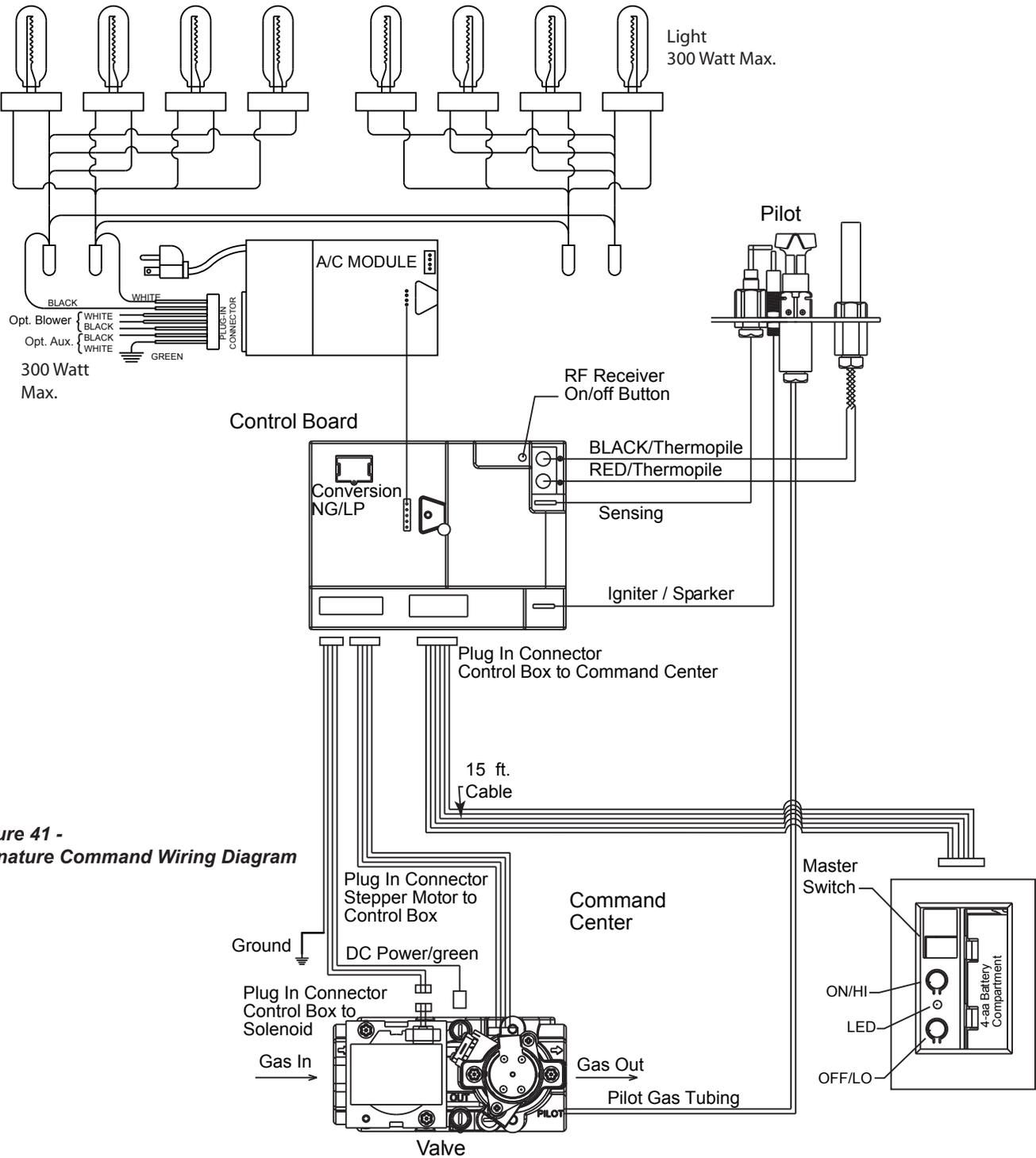


Figure 41 - Signature Command Wiring Diagram

CAUTION Electrical connections should only be performed by a qualified, licensed electrician. Main power supply must be turned off before connecting fans to the main electrical power supply or performing service.

GLASS FRAME REMOVAL

1. Use glass frame latch tool packed with unit to unlatch the three (3) frame latches.
2. Pull frame away from unit and lift up and away. **CAUTION:** Frame is heavy: lifting may require two (2) people.

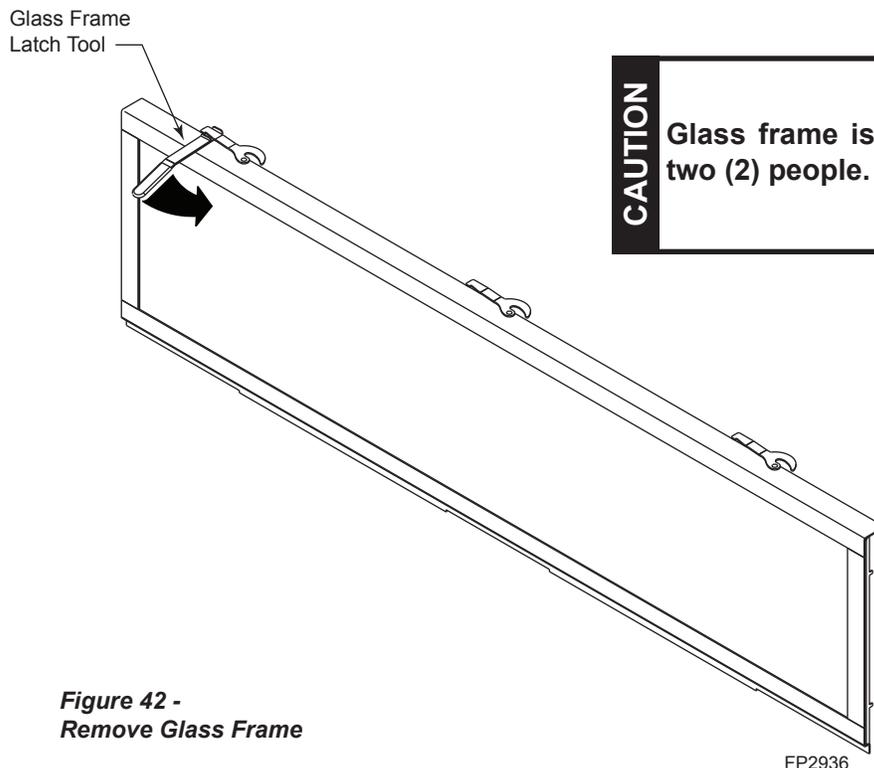


Figure 42 -
Remove Glass Frame

FP2936

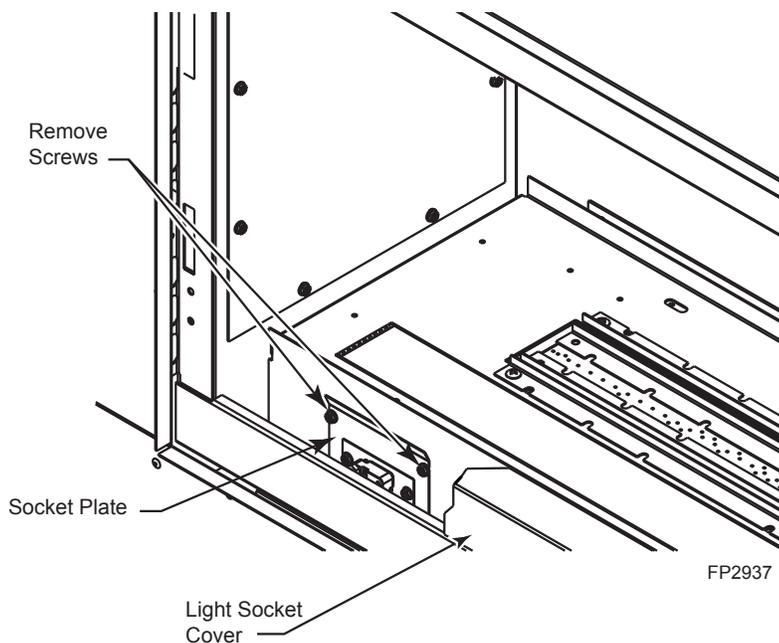
BULB REPLACEMENT

CAUTION: Main power supply must be turned OFF before replacing bulbs.

1. Remove front light socket cover.
2. Use a Phillips screwdriver to remove socket plate with bulb to be replaced. *Figure 41*
3. Replace socket and socket cover in reverse order.

PORCELAIN PANELS

NOTE: You must purchase and install a porcelain panel kit for this fireplace. Refer to Page 45 for kit part numbers.



FP2937

Figure 43 -
Replace Light Bulbs

GLASS AND STONE PLACEMENT

If you will be installing the optional accessory log set, Model LKW70, install the two (2) rear logs *before* installing the decorative colored glass. Refer to Accessory Log Set Installation, Page 31.

Find the pre-molded 4-stone assembly. Place these stones over the pilot assembly by aligning the holes in the bottom of the stone assembly with the pins on either side of the pilot assembly. *Figure 45*

NOTE: The 4-stone assembly must be installed before any decorative glass is installed.

CAUTION: Do not allow these stones to contact any part of the pilot parts. Do not allow any of the pilot flames to contact any stones. Do not allow stones to sit directly on burner ports or in flames.

Place three (3) pieces of hearth glass lenses (supplied) into opening on hearth in front of burner.

Unpack all decorative colored glass and stones included in kit. Carefully mix the two colors of decorative glass. Place the decorative colored glass above and outside the burner to cover hearth area. Spread decorative glass in a single layer. *Figure 44*

CAUTION: Do not place decorative colored glass over the open gap between burner and hearth as this will block the air flow and affect the performance of the unit. Keep decorative glass behind bracket surrounding the burner and hearth.

Find the four (4) large stones. Place them along the rear wall approximately equally spaced as shown in *Figure 46*.

Place the remaining stones randomly outside the burner area over the hearth and hearth glass all around the burner. *Figure 47*

Turn burner on and adjust decorative glass over the ported burner area to achieve an even, clean flame.

Replace glass door frame.



LG1100

Figure 44 - Glass Placement



LG1113

Figure 45



LG1114

Figure 46



Figure 47 -
Stone & Glass Placement

LG1115

**ACCESSORY LOG INSTALLATION:
MODEL LKW70**

WARNING: Turn fireplace off and allow to cool completely before beginning installation.

WARNING: Only a qualified service person should service or repair this fireplace.

Kit contents:

7 logs (1 each):

- #1, Large Rear Left Log (20303910)
- #2, Large Rear Right Log (20303911)
- #3, Medium Top Middle Log (20303912)
- #4, Medium Top Left Log (20303913)
- #5, Medium Top Right Log (20303914)
- #6, Small Front Left Log (20303915)
- #7, Small Front Right Log (20303916)
- 3, Log Support Pin Brackets (20303455)
- 6, #8 Bracket Mounting Screws



Figure 48

LG1108

Installation Instructions

NOTE: The two (2) large rear logs should be installed before installing the decorative colored glass on hearth.

1. Remove the glass door. Use glass door latch tool packed with unit to unlatch the three (3) frame latches. *Page 29, Figure 42.* **NOTE:** Glass door is heavy; an assistant may be necessary.
2. Mount the three (3) log support pin brackets along the left side and center of the rear floor at the sets of mounting holes using screws provided. *Figure 48*
IMPORTANT: Do not remove the two (2) short pins on either side of the pilot.
3. Place the large rear left log #1 by aligning the holes in the bottom of the log with the two (2) pins. *Figure 49*

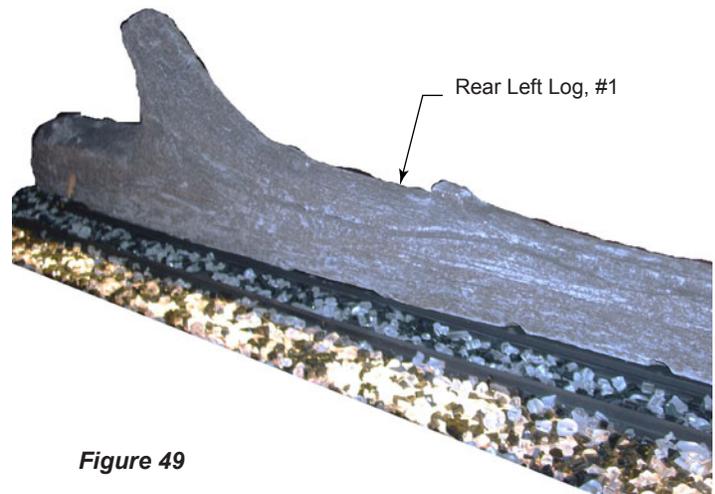


Figure 49

LG1102

4. Place the large rear right log #2 by aligning the three (3) holes in the bottom of the log with the three (3) pins. *Figure 50*
5. Place decorative colored glass supplied with fireplace. *Page 30*

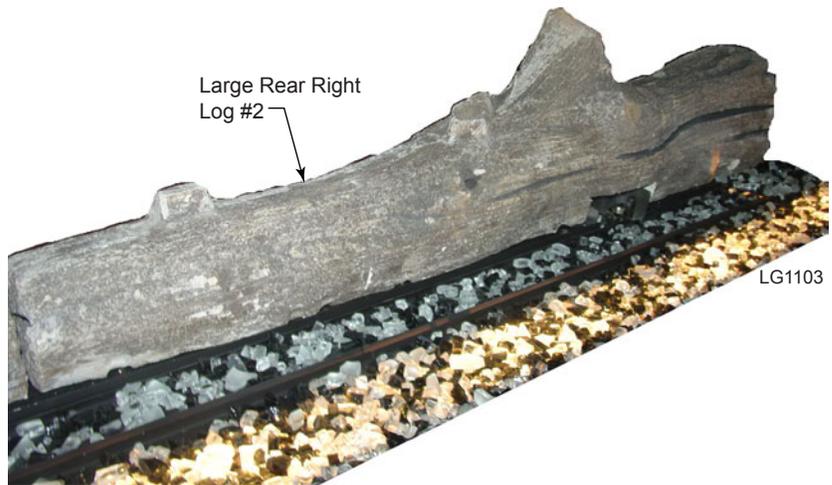
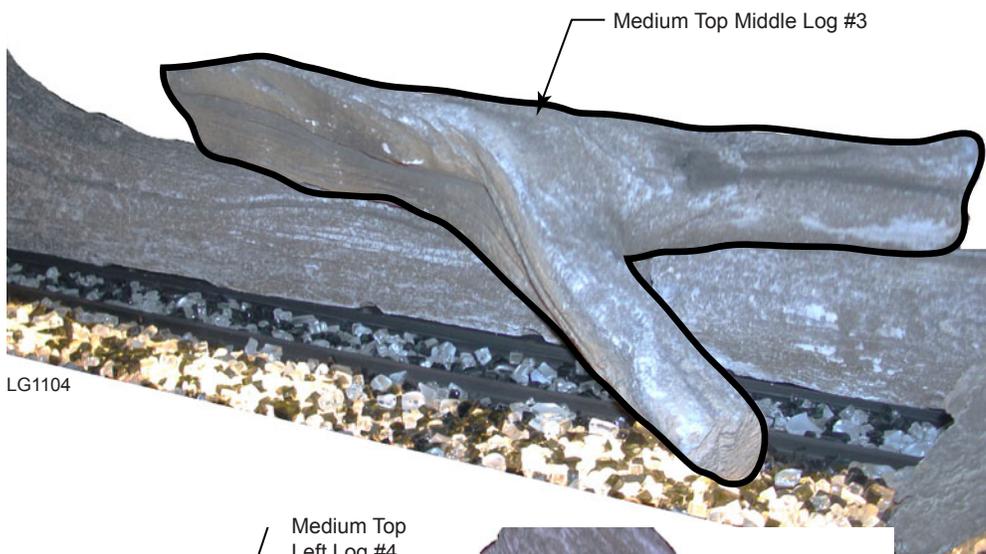
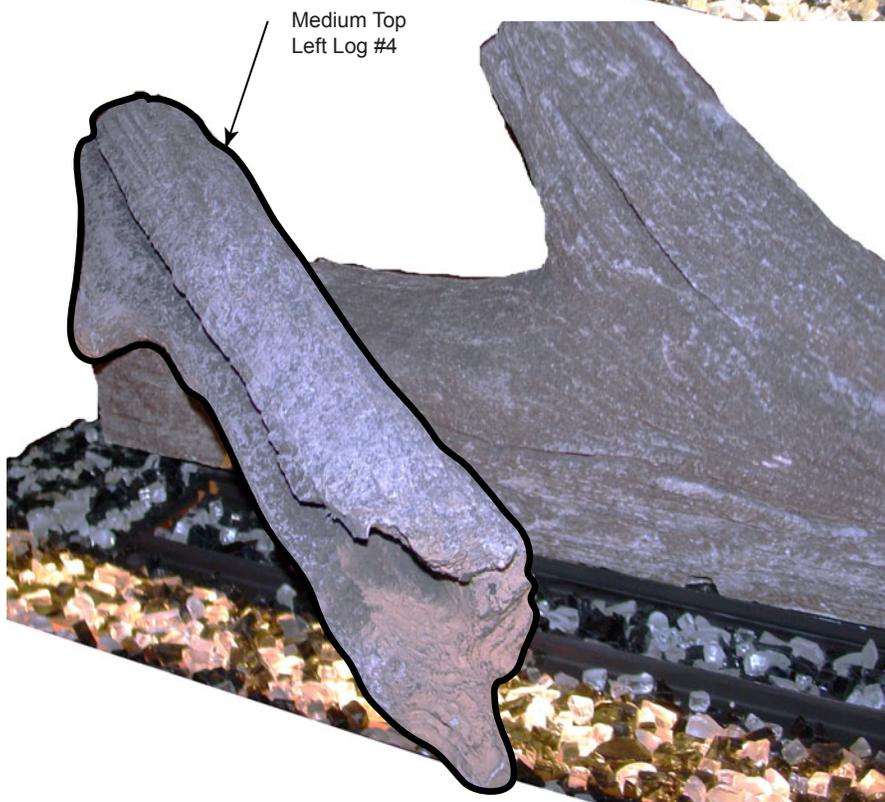


Figure 50



6. Place medium top middle log #3 across the rear logs by aligning the two (2) recesses on the bottom of the log with the key protrusions on each of the rear logs. The front branch of the top log may rest on top of the decorative colored glass. *Figure 51*

Figure 51



7. Place the medium top left log #4 onto the left end of the rear left log #1 by aligning the recess with the key protrusion on the rear left log. *Figure 52*

Figure 52

- 8. Place the medium top right log #5 onto the center of the rear right log #2 by aligning the recess with the key protrusion on the rear right log. *Figure 53*



Figure 53

- 9. Place the small front left log #6 on top of the decorative glass towards the left side of the hearth. *Figure 54*

IMPORTANT: Do not place this log in or near the burner port area. To prevent sooting and poor combustion, do not allow the burner flames to contact this log.



Figure 54

Small Front Left Log #6

LG1109



10. Place the small front right log #7 on top of the decorative glass towards the right side of the hearth. *Figure 55*
IMPORTANT: Do not place this log in or near the burner port area.

Figure 55

Figure 56 shows the completed log set installation.

11. It is not necessary, but if you choose, you may place a few stones randomly around the front of the logs on top of the decorative colored glass. If the accessory log set is installed, use no more than six (6) of the stones supplied.
12. Replace glass door.
Installation complete.



LG1110

*Figure 56 -
LKW70 Complete Log Set Installation*

FOR YOUR SAFETY READ BEFORE LIGHTING**WARNING**

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

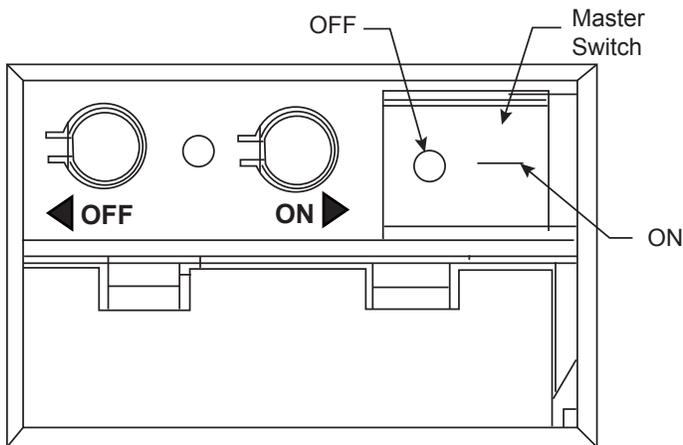
- A.** This appliance is equipped with an ignition device which automatically lights the pilot. Refer to the instructions.
- B.** BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

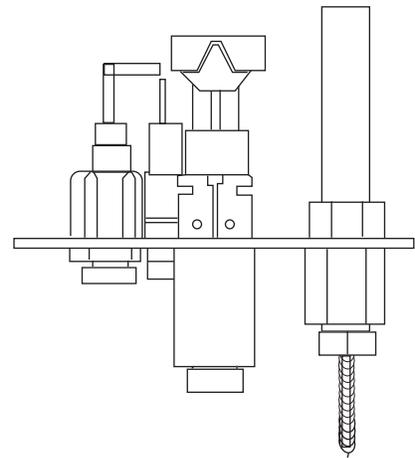
- Do not attempt to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C.** Use only your finger to push in the master switch. Never use tools. If the switch will not function by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D.** Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above.
2. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
3. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information on *Page 31*. If you do not smell gas, go to next step.
4. Press the master switch to the "ON" (-) position. Within eight (8) seconds it will beep once. This indicates the system is ready.
5. Press "ON " button. Sparker will spark and pilot flame will light.
6. Once pilot flame is established, the main burner flame will light automatically.
7. If the pilot will not stay lit after several tries, turn the master switch to "OFF" and call your service technician or gas supplier.



Command Center



TO TURN OFF GAS TO APPLIANCE

1. Turn master switch to "OFF".
2. Turn off all electrical power to the appliance if service is to be performed.

FEATURES

Command Center

- Easy Access Function Operation and System Configuration
- Operation Confirmation/Fault Diagnostic Indications (LED/Buzzer)
- ON/OFF/HI/Med/Low Operation
- Optional Wall Mounting

Control Board

- Electronic Ignition
- Pilot Lockout safety feature
- Electric Power Regeneration from Thermopile to save battery
- 6-hour Automatic Shut Down Option
- Convenient NG/LP Gas Type Conversion
- Standing Pilot/Intermittent pilot Conversion
- Previous settings Restoration Ability (Memory Off)
- Uninterrupted Operation During Power Outage (Automatic Battery Backup)
- ON/OFF RF Remote Receiver
- Optional Transmitter Learn Capability

AC Module (Requires TSFSC Remote)

- Easy Snap-on Design
- Embedded Compact 120 VAC Adapter with Auto Battery Back up Feature
- Remote Controlled 3-step Blower, Lighting, and On/Off Auxiliary AC Outputs

Transmitter

Transmitter	TSFSC
Three Flame Height Settings	X
Low battery Indication for Transmitter	X
Child Proof Lock-out	X
LCD Backlight	X
Security Codes 16	X
Countdown 6 hr Timer	X
Standard Thermostatic Control Mode	X
Smart Mode Thermostat (Auto Flame & Blower Modulation)	X
Three Brightness Settings for Lights	X
Three Speed Control for Blower	X
On/Off Auxiliary	X
Programmable Timer to turn blower on and off	X

BATTERY INSTALLATION

The Command Center uses four (4) "AA" batteries as back up for power outages. The system can operate for approximately six (6) months on battery power.

To Install Batteries (not included):

1. Press down the battery door tabs and pull out to remove battery door.
2. Install the batteries as indicated on Command Center.
3. Close battery door by snapping in place.
4. When the four (4) batteries are installed the system will operate without power.
5. The batteries should be replaced when the LED indicates low battery or at least once a year.

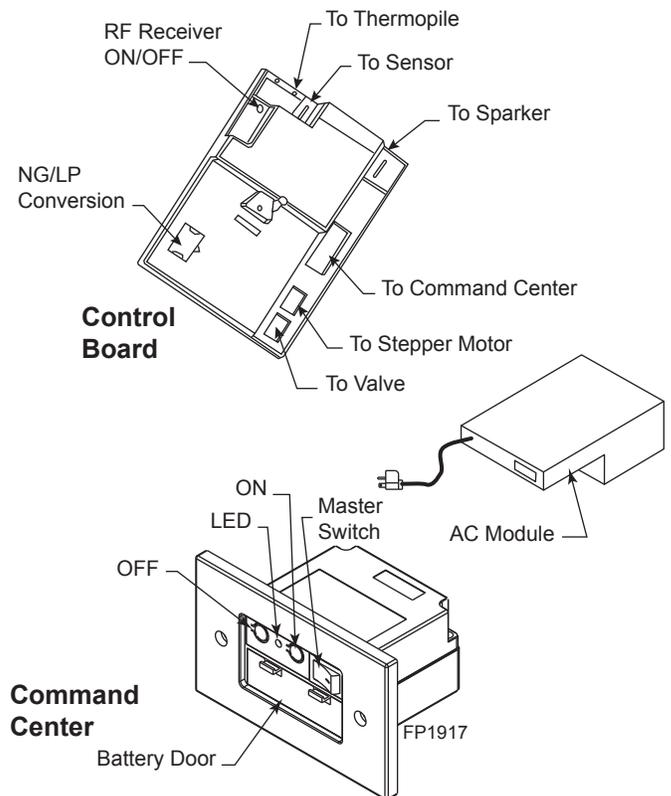


Figure 57 -
Signature Command System Components

SYSTEM CONFIGURATION/SETUP

All System configuration/setup is done on the Command Center.

NOTE: When using On/Off wall switch, the switch must be in the ON position to perform all configuration set ups at the command center.

Intermittent/Standing Pilot Setup (Default intermittent)

1. Holding the ON button on the Command Center while turning on the master switch will toggle between standing pilot and intermittent pilot.
2. After the above operation, one beep (for standing pilot) or two beeps (for intermittent pilot) will be given as confirmation.

Six-hour Safety Shutdown Option (Default ON)

1. The system comes preset from the factory with a six (6) hour shutdown from its last command of operation. This is done to prevent the fireplace from continuing to operate if unattended. You may disable this feature if you wish.

NOTE: By disabling this feature, your fireplace may continue to operate unattended.

2. When the master switch is in the ON position (“-”), pressing the ON button and the OFF button on the Command Center simultaneously will toggle between enabling and disabling the six-hour shutdown option.
3. After the above operation, one beep (for enabling the six-hour shutdown option) or two beeps (for disabling the six-hour shutdown option) will be given as confirmation.

Remote Transmitter Learn Function (Default ON)

1. The RF receiver button located on the Control Board must be in the on position before the learn function can begin. Use paper clip to depress button. One beep for RF receiver ON or two beeps for RF receiver OFF will be given as confirmation. Refer to *Figure 57* for location.
2. After the RF receiver is on, holding the OFF button on the Command Center while turning on the master switch will activate the learn function for the transmitter.
3. After the above operation, two beeps will be given and the green LED on the Command Center will flash for 10 seconds.
4. During the 10 seconds, press the OFF button on a transmitter to learn. Another two beeps will be given to confirm a successful learning. Refer to transmitter instructions for remote operations.

Shutting Off the Standing Pilot (Temporary Shut Off)

To shut off the standing pilot for service or summer shut down, press and hold the ON button on the Command Center for 3 seconds when the master switch is in the ON position (“-”) and the main burner is off.

Note: Pilot will resume the next time system is turned on.

Key Combinations for System Settings

NOTE: When On/Off wall switch is used, it must be in the On position to perform all system setups.

Function	Operation	Default Setting
Intermittent/Standing Pilot Setup	Hold the ON ▲ button while turning on the master switch (Beep once for standing pilot, twice for intermittent pilot)	Intermittent Pilot
Standing Pilot Temp. Shutoff	Hold the ON ▲ button 3 seconds (when the master switch on the main burner is off)	
RF Remote Receiver On/Off	Push the RF receiver On/Off button on the control board Beep once for ON and beep twice for OFF	RF OFF
Learn Remote Transmitter	Hold the OFF ▼ button while turning on the master switch (Beep twice then press any handheld remote button)	
6-hour safety shutdown setup	Press the ON ▲ button and OFF ▼ button simultaneously (Beep once for ON, twice for OFF)	ON

FUNCTIONS/OPERATION

Turning on the fireplace

1. Turn on the master switch and wait for a beep.
2. Press the ON button on the Command Center or turn on wall switch. Pilot will light and burner will come on High setting or last memory setting (See Turning Off Fireplace below). For memory feature.

Pilot Safety Lockout Function

1. If the pilot doesn't light after sparking for 30 seconds, pilot trial lockout happens. The LED on the Command Center flashes Green once every 2 seconds, until reset.
2. If the pilot flame is lost during normal operation, the system will try three (3) times to relight after three (3) failures, flame loss lockout happens. The LED on the Command Center flashes Red-Green once every 2 seconds, until reset.
3. Turning the master switch on the Command Center to the off position, then ON again will reset the system.

Flame Height Control

1. Press the ON button (on the Command Center) once to turn on the main burner with maximum flame height.
2. Press the OFF button to decrease flame height. The first two presses will decrease the flame height to medium and low.
3. The third press on OFF will turn off the main burner. In standing pilot configuration, the pilot will stay; in intermittent pilot configuration, the pilot will be shut off.

Turning the Fireplace Off

There are three ways to turn the fireplace off.

1. Flip the master switch to the off ("O") position. (This will turn the entire system OFF.)
2. Press the OFF button to Medium, Low, then Off.
3. Hold the OFF button anytime for three seconds or by turning off the wall switch. These two commands of OFF are (Memory Off) the system will remember all last settings before turning off. The next time the fireplace is turned on, all settings will resume. To reset, change to the desired settings and shut off by using the Memory Off commands and the system will be reset to those new settings.

Command Center Operations:

The following functions are available on the Command Center.

Function	Operation
Power Up	Flip the master switch to the ON (" ") position to power up the system
Fireplace ON	Press the ON ▲ button on the Command Center or turn on wall switch to turn the fireplace on
Fireplace OFF	Flip the master switch to the OFF ("o") position OR press the OFF ▼ button 3 times OR for Memory Off, hold the OFF ▼ button 3 seconds, or turn off wall switch
Flame Height Up	Press the ON ▲ button once to turn on the fireplace with maximum flame height
Flame Height Down	Press the OFF ▼ button to lower the flame height to Medium and Low

Self Diagnostics Chart:

The Command Center has a self-diagnostic LED enabling you to troubleshoot problems and potentially avoid a service call. Please refer to the charts below for indicator reference.

Fault	LED Indication
Conversion Cover Missing	One RED (1 time)
Spark Fail	Two RED (1 time)
No Sensor Signal	Three RED (1 time)
Pilot Lockout - trial	One GREEN, every 2 sec. (until manual reset)
Pilot Lockout - flame loss	One RED-GREEN, every 2 sec. (until manual reset)
Low Battery	One RED, every 10s (continuously)
No or Low Thermopile Power	Two RED, every 10s (continuously)
Learning	GREEN Flashes, every 1 sec. (for 10 sec.)
AC Power On	GREEN solid
Pressure Switch Failed (Power Vent only)	One RED every 2 sec. (until manual reset)

NOTE

Due to the sensitive temperature monitoring components in the transmitter, it is necessary to allow the transmitter to stabilize to room temperature before accurate room temperatures are displayed. If the transmitter is activated from a severe cold condition, allow 15 minutes for accurate temperature readings to appear on the LCD display.

WARNING

Turn appliance OFF (at the Master Switch) if you are away from your house for an extended period of time. Never leave anything on top of the surface of the transmitter.

Function Areas of the LCD Display

Figure 58 shows the display of the TSFSC LCD.

Information Bar

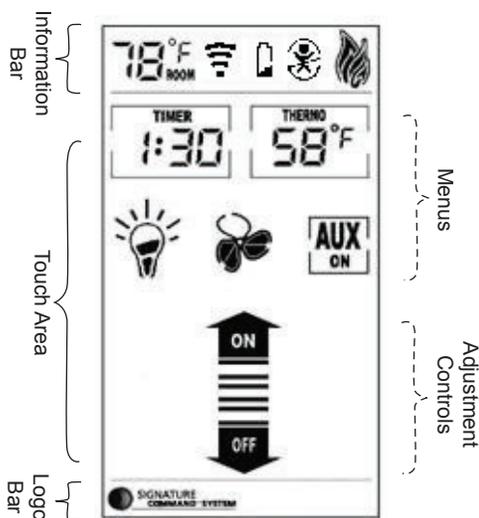
The information bar shows the room temperature, the “sending signal” radio icon, the low battery indication icon, the child-proof icon, and the flame icon. This area doesn't have touch buttons.

- The room temperature will always be shown after power-up. It displays the room temperature from 40 °F to 99 °F. “Lo” and “Hi” will be displayed when the room temperature is lower than 40°F or higher than 99°F, respectively.
- The radio icon will be shown when the transmitter is sending a signal.
- The low battery indication icon will be shown when the battery voltage is low.
- The child-proof icon will be shown when the child-proof mode is activated.
- The flame icon indicates the current flame height - Off, Low, Medium and High

Touch Area

The touch area contains all touch buttons to control the transmitter. It consists of two categories: menus and adjustment arrows. The blue LED backlight lights up for 8 seconds when any of the touch buttons is pressed.

- The menus include TIMER, THERMO, LIGHT, FAN and AUX.
- The adjustment arrows include ON/up and OFF/down. Their default function is to adjust the flame height. When a button from the menu is pressed, the ON/up and OFF/down buttons will temporarily become adjustment controls for the selected item. When the adjustment is done, the ON/up and OFF/down buttons go back to flame height controller again.



Function Areas of the LCD Display

Figure 58

Logo Bar

The Logo Bar contains the brand logo: Signature Command System.

Initialization and Setting up

Installing Batteries:

Figure 59

The remote transmitter has two battery compartments, one on each end of the transmitter. **Always change all four (4) batteries at the same time.**

To install batteries,

1. Press down the battery door tab and pull out to remove the battery door.
2. Install the batteries as indicated inside the battery compartments.
3. Close the battery door by snapping in place.
4. When all **four** batteries are installed, the transmitter will initialize for 5 seconds and then is ready for use.
5. The batteries should be replaced every 12 months or when the low battery icon indicator is displayed.

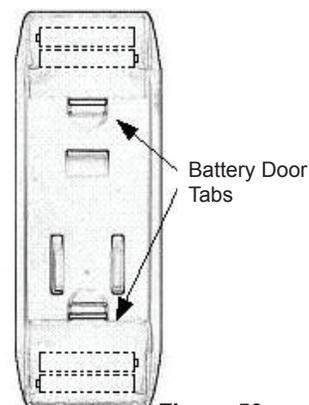


Figure 59

Changing Temperature Unit

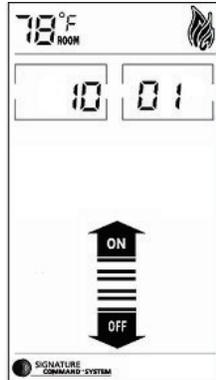
When batteries are installed in the transmitter,

1. All available icons on the LCD will be turned on then be cleared.
2. The LCD will display temperature unit: °F. Use ON Δ to toggle the units between °F and °C within the first 5 seconds.
3. The transmitter enters Manual Mode
4. The LCD displays room temperature with the chosen unit.

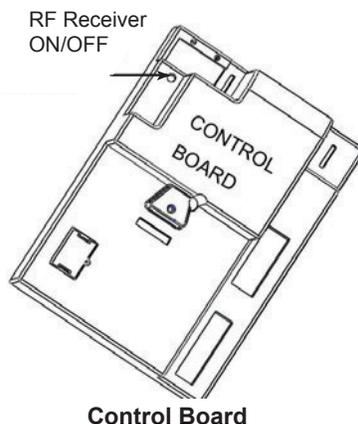
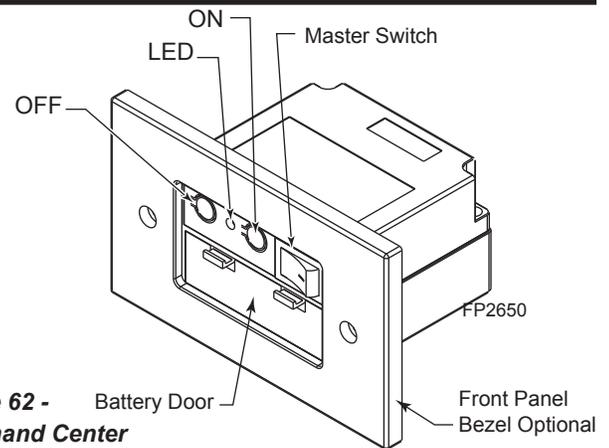
Setting Privacy Code on Transmitter:*Figure 60*

The remote transmitter privacy code is preset in factory. In the event of activation or interference from other nearby transmissions, change the code using the following procedures (learn function must be performed after changing the code):

1. Press the ON/arrow button and the TIMER button at the same time to enter privacy code setup mode.
2. The setup display is shown in the figure. The four digits on the top stand for the privacy code (as the actual DIP switches on Ambient's previous remotes). The default values of the four digits will be all "1" (ON).
3. The first digit will be flashing upon entering the setup mode. Push the ON button to toggle its value between "0" (OFF) and "1"(ON), and push the "OFF" button to jump to the next digit. The next digit will then start flashing and the first one stops flashing. Set up the four digits to your choice.
4. After setting up all the four digits, push "OFF" to finish the process and return to the previous mode.
5. The Signature Command control board then needs to re-learn the new setting.

*Figure 60***Performing Learn Function**

1. The RF receiver button on the control board in the fireplace must be in the on position before the learn function can begin. *Figure 61*. With the Command Center master switch in the ON position, use paper clip to depress the recessed button on Control Board, one beep for RF receiver ON or two beeps for RF receiver OFF.
2. Holding the OFF button on the Command Center while turning on the master switch will activate the learn function for the transmitter.
3. After the above operation, two beeps will be given and the green LED on the Command Center will flash for 10 seconds.

*Figure 61**Figure 62 - Command Center*

4. During the 10 seconds, press the OFF button on the transmitter to learn. Another two beeps will be given to confirm a successful learning. *Figure 62*

WARNING

Do not use two (2) or more remote control systems in the same area with the same privacy code setting, as they will communicate with each other. This may cause the appliances to malfunction.

Resetting the transmitter:

If the transmitter is not working properly, reinstall the batteries to reset the transmitter.

1. Pull out at least one of the batteries.
2. Press any key on the screen to discharge.
3. Wait for 10 seconds and reinstall the batteries.

Pushing and holding any key for more than 10 seconds until the display refreshes will also reset the transmitter.

Functions and Operations**General:**

The TSFSC Remote Control has four (4) operating modes: Manual, Timer, Thermostatic and Smart Mode. The control system can be set to temperature range between 45° F and 90° F. The blower speed and flame height can be adjusted in the manual, timer and thermostatic mode. The Smart Mode will automatically adjust flame height and blower speed according to the difference between Set and Room temperatures.

The transmitter will operate the remote receiver from 1 foot to a maximum of 30 feet. The distance is reduced when batteries are low.

Manual Mode*Figure 63*

In this mode, the TIMER button and the THERMO button will only display "TIMER" and "THERMO", respectively without showing the time and the SET temperature. Pressing the ON/up and OFF/down buttons will change the flame height if none of the menu buttons (TIMER, THERMO, LIGHT, FAN, AUX) are pressed and flashing.

1. Press the ON/up button to turn on the fireplace. The flame icon on the LCD displays High.

2. Press the OFF/down button to decrease the flame height and turn off the fireplace. When the OFF/down button is pressed for three times, the flame icon changes from High to Medium, to Low, then to Off.

3. If the OFF button is held for more than 3 seconds at any flame height, the fireplace will be turned off and the flame icon disappears.

4. Sliding up and down on the arrow buttons can also turn on or turn off the fireplace.

5. If the fireplace is shut off using the above methods in 3 and 4, all the settings will be remembered and will be resumed next time the fireplace is turned on (Memory Off).

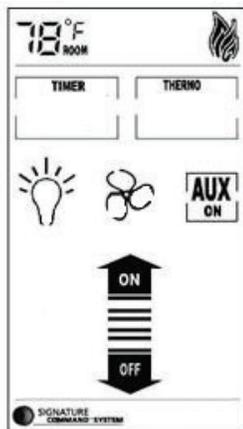


Figure 63

Timer Mode

Figure 64

Press the TIMER button to enter timer mode. The fireplace will stay on for a period of time as specified by the timer and then be shut off by the transmitter when the timer counts down to zero.

1. When the TIMER button is pressed, the Set Time appears in the frame of the button and flashes.
2. Use ON/up and OFF/down to increase or decrease the Set Time in 15 min. increments, between 0:00 to 6:00. Sliding up and down on the arrow buttons will increase or decrease the Set Time in 1 hour increments.

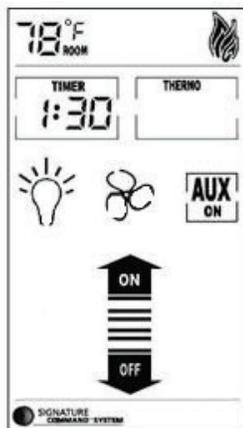


Figure 64

3. Push the TIMER button again to confirm the Set Time, the transmitter sends an ON signal to turn on the fireplace.
4. The flashing stops and the ON/up and OFF/down buttons become flame height controller again. The flame height will then stay as set up by the ON/up and OFF/down buttons.
5. The TIMER button can be used when the transmitter is in Manual Mode or in Thermostat Mode. In both modes, the fireplace will be shut down completely when the timer counts down to zero.
6. To exit Timer Mode,
 - a. Push and hold the TIMER button for 3 seconds Or
 - b. Use the OFF/down buttons to decrease the Set Time to zero Or

- c. Slide down on the arrow buttons to exit TIMER mode and shut off the fireplace.

Thermostat Mode

Figure 65

NOTE: The Command Center buttons will disable when thermostat is being used.

Press the THERMO button to set the transmitter in thermostat mode. The transmitter will automatically turn on the fireplace when the room temperature is below the set temperature and turn off the appliance when the room temperature is above the set temperature within one degree.

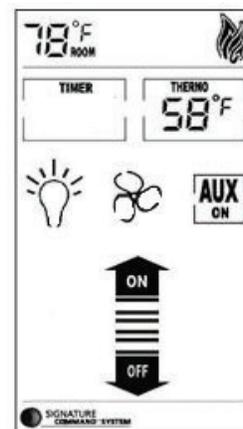


Figure 65

1. When the THERMO button is pressed, the Set temperature appears in the frame of the button and flashes.
2. Use ON/up and OFF/down to increase or decrease the Set temperature in 1 degree increments, between 45 degrees and 90 degrees. Slide up and down on the arrow buttons will increase or decrease the Set Temperature in 10 degrees increments.
3. Press the THERMO button again to confirm the Set Temperature. The transmitter will send out an On signal or an Off signal depending on the relationship between the Set temperature and the Room temperature.
4. The flashing stops and the ON/up and OFF/down buttons become flame height controller again. The flame height will then stay as set up by the ON/up and OFF/down buttons.
5. To exit Thermostat Mode:
 - a. push and hold the THERMO buttons for 3 seconds or
 - b. slide down on the arrow buttons to exit Thermostat mode and shut off the fireplace.

Smart Mode Option for Thermostat Mode

Figure 66

Press and hold the THERMO button and the ON/UP button at the same time for 3 seconds to toggle between Smart Mode and the regular Thermostat Mode. The icon "Smart Mode" will appear under the Set Temperature. The transmitter will automatically adjust the flame height according to the difference between the Set temperature and

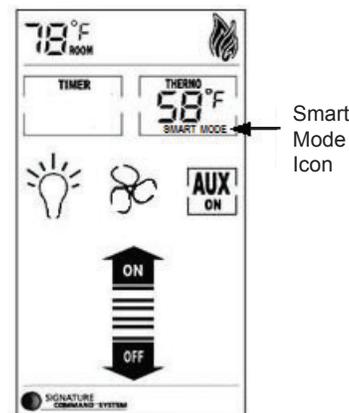


Figure 66

20303735

the Room temperature. There is no manual flame height adjustment. The fan speed will also automatically adjust if turned on.

NOTE: there will a 10 second delay for the flame adjustment when the fireplace is turned on.

1. When Set Temp. is 3° F or higher than Room Temp., flame height will be on High.
2. When Set Temp. is 2° F higher than Room Temp., flame height will be on Medium.
3. When Set Temp. is 1° F higher than Room Temp., flame height will be on Low.
4. When Set Temp. is equal to Room Temp., flame height does not change (stays on low).
5. When Set Temp. is lower than Room Temp., the fireplace will be shut off.
6. When Set Temp. is 1° F higher than Room Temp., again the flame height will be on Low.
7. the fan speed follows the flame height, if the fan is turned on.

To exit Smart Mode and shut off the fireplace;

- a. push and hold the THERMO buttons for 3 seconds, Or
- b. press the OFF button, Or
- c. slide down on the arrow buttons.

To shut off the Smart Mode option and return to regular thermostat mode, press and hold the THERMO button and the ON/UP button at the same time for 3 seconds again.

Blower Speed Control (not used with VWDV70)

Figure 67

NOTE: Blower will only work with flame on.

The blower speed control function is used to adjust the speed of the blower connected to the Signature Command System. There are four speed levels, Off, Low, Medium, High.

1. Press the FAN button to enter the blower speed control mode. The fan icon will start flashing.
2. Press the ON/up and OFF/down button to increase/decrease the blower speed.
3. Press the fan button again to confirm the speed setting. If the fireplace is on, the blower speed will take effect right away; if the fireplace is off, the receiver will remember this setting and the blower is still off (see blower On Delay and Off Delay in the next section).
4. After the signal is sent, the ON/up and OFF/down buttons become flame height controller again.

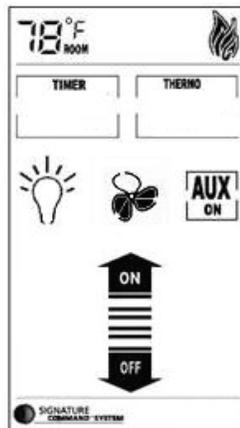


Figure 67

5. When the fan button is flashing, slide up and down on the arrow buttons will turn the blower speed to High or Off directly without pressing the fan button again to confirm.
6. If the blower is turned on using the FAN button, the blower speed will adjust automatically when using Smart Mode (See Smart Mode section).

Blower On Delay Time and Off Delay Time Setup

(not used with VWDV70)

Figure 68

1. Hold the FAN button for 3 seconds until two numbers appear on the LCD screen. The left number is blower On Delay and the right number is blower Off Delay Time.
2. When the first number is flashing, use the ON/up button to set the desired On Delay Time from 0 to 15 min.
3. Press the OFF/down button to jump to the Off Delay Time setup.
4. When the second number is flashing, use the ON/up button again to set the desired Off Delay Time from 0 to 15 min.
5. Press the OFF/down button again to finish the setup and the new settings will be transmitted to the receiver.
6. The default settings are 5 minutes for the On Delay Time and 8 minutes for the Off Delay Time, as shown.

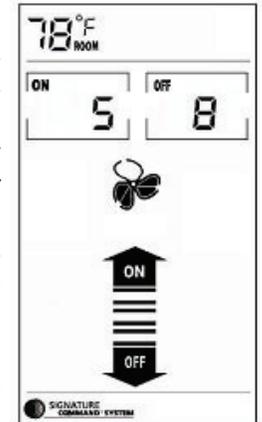


Figure 68

Light Brightness Control

Figure 69

The light brightness control function is used to adjust the brightness of the light bulbs connected to the AC module on the Signature Command System. There are four light brightness levels defined: Off, Low, Medium, High

1. Press the LIGHT button to enter the light brightness control mode. The LIGHT icon will start flashing.
2. Press the On/up and OFF/down buttons to increase/decrease the light brightness (Off-Low-Medium-High).
3. Press the light button again to confirm the setting. The new setting will be transmitted to the receiver.
4. After the signal is sent, the On/up and Off/down buttons become flame height controller again.

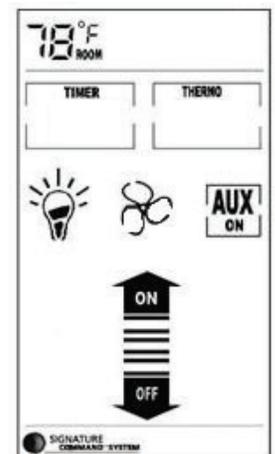


Figure 69

- When the light button is flashing, slide up and down on the arrow buttons will turn the light brightness to HIGH or Off directly without pressing the light button again to confirm

AUX Control (Optional)

The AUX control function is used to turn on or turn off the auxiliary component connected to the AC module of the Signature Command System. Press the AUX button to turn on or turn off the auxiliary.



- When the auxiliary is turned on, the icon will become solid text and the "ON" icon will appear below the "AUX" icon.
- When the auxiliary is turned off, the icon will become hollow text and the "ON" icon will disappear.

NOTE: Some fireplaces use the AUX function to control options within the fireplace. Refer to fireplace manual for operation.

Setting up Blank Screen or Constant Display in Idle

Figure 70

There is an option to set up how the LCD displays and functions when the transmitter is in idle. There are two choices:

- A) Mode. When the transmitter is in idle, the icons in the "touch area" (timer, thermostat, blower, light and AUX) will disappear, as shown in the figure on the left. When any of the touch buttons is pressed, those icons will appear and are ready to operate (default).



Figure 70

- B) Mode. The transmitter always displays all available icons showing current status of timer, thermostat, blower, light and AUX as shown in the figure on the right.

Press TIMER and THERMO buttons at the same time for 3 seconds to toggle between A) and B).

- When the current setting is A), touch any place in the touch area to bring up the icons then press TIMER button and THERMO button at the same time for 3 seconds. The backlight will flash once to indicate that the setting has changed to B).
- When the current setting is B), pressing TIMER button and THERMO button at the same time for 3 seconds will switch to A) Mode. The touch area icons will disappear.

■ Safety Features

- Low Battery Detection

When low battery condition occurs, the transmitter will turn off the fireplace.

- Battery voltage is checked every one minute. When the battery voltage is low, the LCD displays a low battery icon which will exist in all modes.



- The transmitter will not operate with low battery voltage. Change the batteries before the batteries become too weak for normal operations.

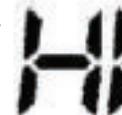
- Power On Initialization

After the power-on initialization, the transmitter sends a signal to turn off the fireplace.

- Thermal Shutdown

When the ambient temperature is more than 99°F, the transmitter will turn off the fireplace.

- The LCD will display "HI".
- The Transmitter will not function until the room temperature has dropped below 99 degree Fahrenheit.



- Low Temperature Condition

When the ambient temperature is less than 40 degrees Fahrenheit, the LCD will display "LO", and NO SIGNAL will be sent to turn on the appliance.



All functions still remain the same for both Manual Mode and Thermostat Mode

- Child-proof Protection

The child-proof icon will be shown when the child-proof mode is activated by pressing the ON button and the OFF button at the same time for three seconds.



- Enter childproof mode by pressing and holding both the ON button and the OFF button simultaneously for 3 seconds. The Childproof indicator will be shown on the LCD.

- Deactivate childproof mode by pressing and holding the ON button and the OFF button simultaneously for 3 seconds again. The Childproof indicator disappears on the LCD.

- The transmitter cannot be operated in childproof mode.

■ Using the Mounting Base

The transmitter comes with a mounting base which allows you to hang the transmitter on the wall.

1. Secure the mounting base on the wall with supplied screws. For best viewing angle, make it the same height as your eyes.
2. Hang the transmitter on the hook of the mounting base, then push down so the transmitter is flush to the mounting base.

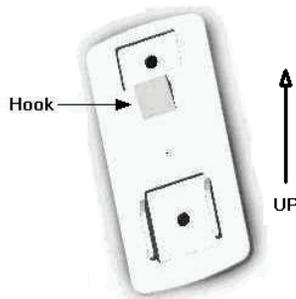


Figure 71

TROUBLESHOOTING

Symptom	Causes	Action
1. Battery icon on LCD on transmitter 2. LCD display is blank 3. LCD display shows "funny" display	1. Low Battery	1. Replace batteries. Change batteries every 6 to 9 months. 2. Check battery installation or replace batteries. 3. Reset the transmitter (see "Resetting the Transmitter" section).
4. Appliance does not come on	2. The transmitter did not match with the receiver	1. Make sure the transmitter has learned to the receiver.
	3. Transmitter measures temperature exceeding 99 degrees Fahrenheit and shows "HI" on LCD	1. Move transmitter to a cooler place and wait until temperature drops below 99 degrees.
	4. Distance between the transmitter and receiver is more than 30 feet	1. Make sure the operating distance is less than 30 feet.
5. Blower is not on after the fireplace is turned on	5. Blower setting is off	1. Press FAN key to select Fan speed you desire.
	6. Blower delay setting is set too high	1. Press and hold FAN key to set desired ON/OFF delays. This is done in minutes.

This Kit Must be Installed by a Qualified Service Agency

WARNING

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable code and requirements of the authority 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 qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

LOGS MAY BE HOT TO THE TOUCH. HANDLE THE LOGS WITH GLOVES AND PLACE THEM ON A NONCOMBUSTIBLE SURFACE WHEN THEY HAVE BEEN REMOVED FROM THE INSERT.

CAUTION

Before installing conversion kit...

- Disconnect electrical power.
- Shut off gas supply.
- Allow unit to cool.

FOR YOUR SAFETY

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

The procedure for converting from one gas to another is the same regardless of the initial gas used, except where noted. The only variation is in the orifice sizes and component part numbers. Your authorized service provider will ensure the correct parts are used.

The parts needed to convert from natural gas to LP are provided with the fireplace. The parts to convert from LP to natural gas must be purchased from an authorized dealer. Refer to Page 54.

Conversion parts included:

Burner orifice (refer to Table 1)
 Pilot orifice
 Gas valve regulator
 Conversion rating plate label
 Conversion cap
 Venturi air shutter (for conversion to Natural gas only)

Tools required: Torx T20 Driver (2½" minimum length recommended) or Slotted Screwdriver, 5/8", 11/16", 3/4" and 7/8" Combination Wrenches, Phillips Screwdriver

CONVERSION INSTRUCTIONS

1. Using the hand tool provided with the unit, remove the glass door by rotating the three (3) cams to release the door from its locked position. Tilt top of glass frame away from unit and lift up and away.

CAUTION: An assistant may be necessary to help remove glass frame.

2. Carefully remove the stones and glass on the left front 2/3 of the burner to expose the left lens placed in front of the burner.
3. Remove the two (2) left lenses placed in front of the burner.
4. Remove the right side panel and place on protected surface to prevent damage.
5. To gain access to the gas valve and control board, remove the access plate located on the right side of the unit by removing the screws that secure the plate to the side.
6. Using the Torx T20 driver or slotted screwdriver, remove and discard the regulator and rubber gasket in the face of the valve. *Figure 72*

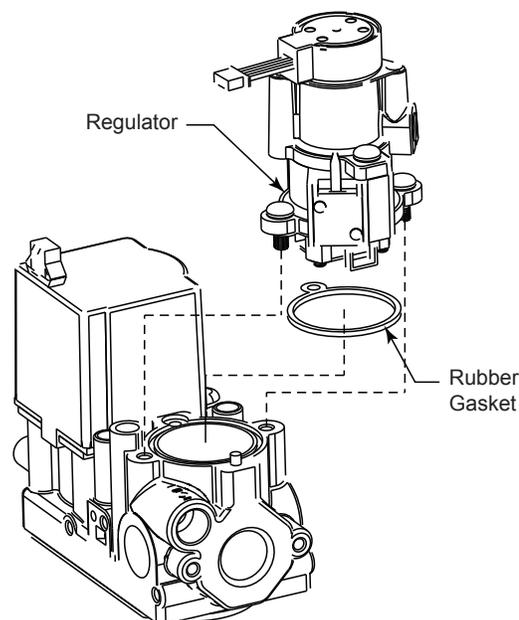


Figure 72

7. Install the new regulator with rubber gasket from the conversion kit. Make sure the gasket is seated properly.
8. Remove control board and A/C module assembly. It is attached with velcro fasteners to the wall of the enclosure behind the access plate removed earlier.

9. Separate the A/C module from the control board by removing screw. *Figure 73*
10. Replace conversion cap with new cap supplied in kit. Gently remove with small flat screwdriver. *Figure 74*
11. Reinstall A/C module and control board in reverse order.

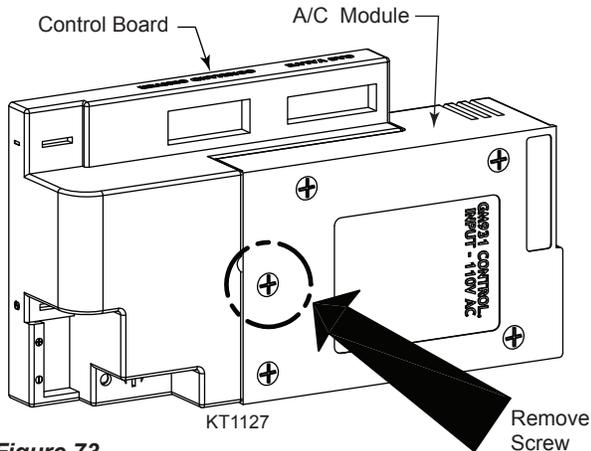


Figure 73

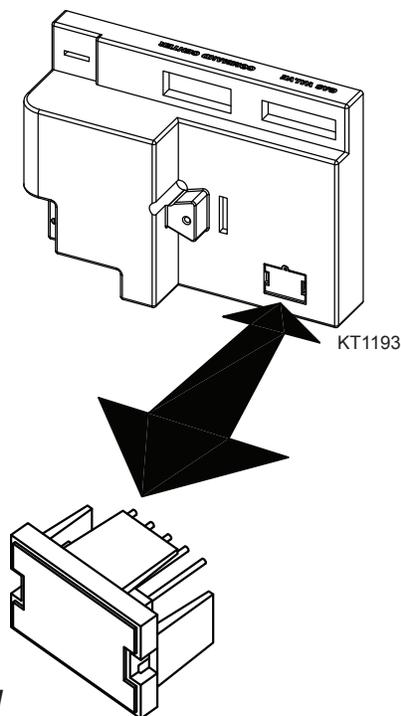


Figure 74 - Convert Control Board

12. Using open end wrenches of 5/8" and 3/4", loosen nuts secured to the injectors through the opening on the lenses removed earlier. Pull flex line away. Replace injectors with injectors provided in kit. Refer to Table 1 for correct injector sizes. Injectors are different in size and specific to each burner.
13. **For conversion to LP:** Unscrew three (3) air shutters through lens opening and discard. *Figure 75*. **NOTE:** Replace screws.

Table 1

	Fuel Type	Orifice Size		
		Left	Middle	Right
Burner Orifice	LP	1.25 mm	1.2 mm	#56
Burner Orifice	Natural	#44	#43	#45

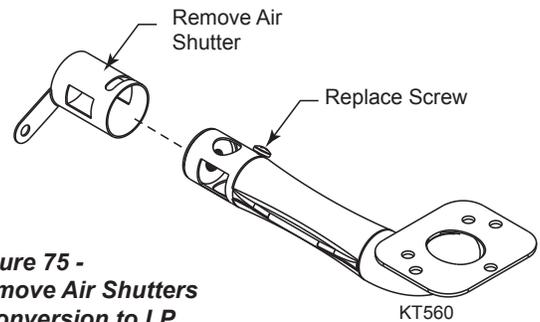


Figure 75 - Remove Air Shutters - Conversion to LP

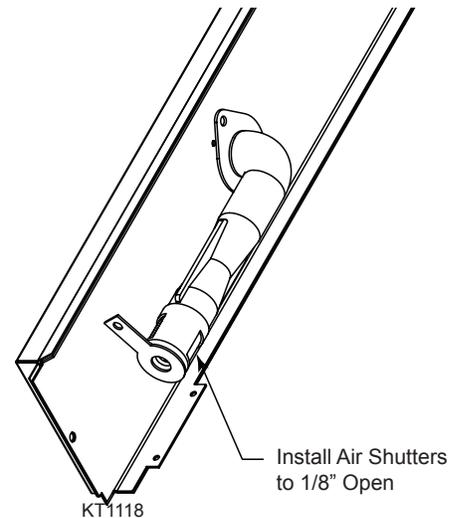


Figure 76 - Install Air Shutters - Conversion to Natural Gas

For conversion to Natural gas: Install new air shutters provided and adjust to 1/8" opening. *Figure 76*

14. Reassemble flex lines to injectors and tighten nuts.
15. Remove the top of the pilot assembly by pulling back slightly on the C-clamp (*Figure 77*) and pulling straight up on the hood. Remove the pilot orifice using a flat-blade screwdriver and replace with new pilot orifice provided in kit.
16. Replace pilot hood and C-clamp.

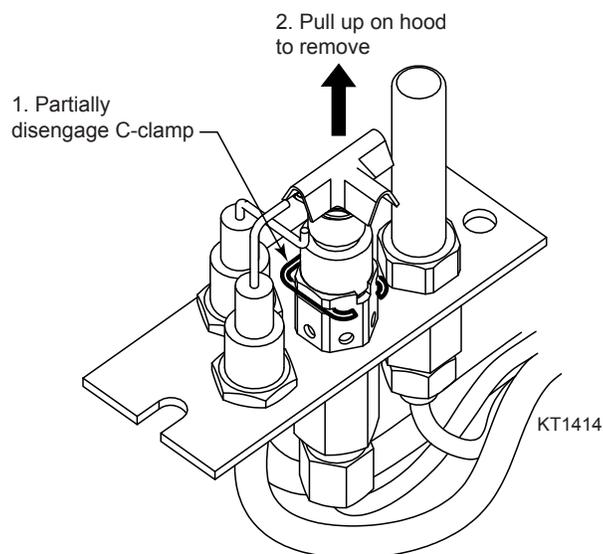


Figure 77

Testing Engine / Burner Assembly

1. Turn on the gas shut off valve.
2. Follow Lighting Instructions on the unit. Light the unit according to Homeowner's Manual. Use soapy water to check for leaks on the pilot assembly, regulator, burner and tubing. Turn off unit.
3. Place the correct Gas Conversion rating label plate and the regulator's conversion label on the existing rating plates. Attach conversion label to control valve.
4. Reinstall stones and glass. *Refer to Homeowner's Manual*
5. Reinstall glass door.
6. Light unit. Check for proper burner flame appearance. *Refer to Homeowner's Manual.*

DANGER**Never check for gas leak with open flame!**

WARNING Turn off gas before servicing fireplace. It is recommended that a qualified service technician perform these check-ups at the beginning of each heating season

BURNER, PILOT AND CONTROL COMPARTMENT

Keep the control compartment, stones, and burner areas surrounding the stones clean by vacuuming or brushing at least twice a year. Make sure the burner porting, pilot air opening and burner air opening are free of obstructions at all times.

PILOT FLAME

The flames from the pilot should be visually checked as soon as the heater is installed and periodically during normal operation. **The pilot flame must always be present when the fireplace is in operation.** Figure 78. The pilot flame has three distinct flames, one engulfing the sensor, one engulfing the thermocouple, and the other reaching to the main burner.

BURNER

Inspect area around the injector. Remove any lint or foreign material with a brush or vacuum.

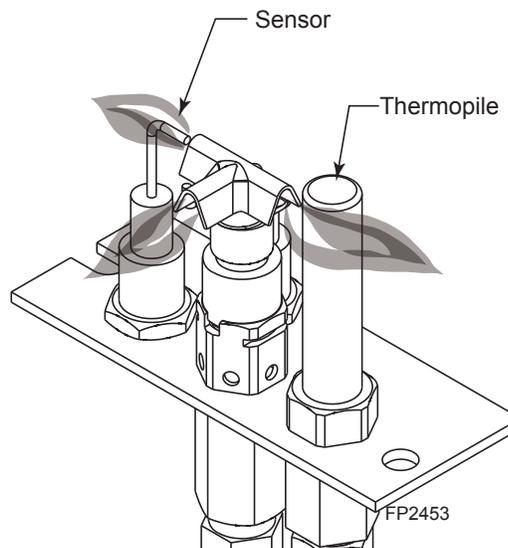


Figure 78 - Pilot Flame

BURNER FLAME

The flames from the burner should be visually checked as soon as the heater is installed and periodically during normal operation. In normal operation, at full rate, and after operating for about 15 to 30 minutes, the flame should be yellow. Figure 79

If the flame is blue and candle-like in appearance, adjust glass or add more glass over ports.

NOTE: The type of installation, vent system configuration, and wind effects may cause the flame patterns to vary.



Figure 79 - Burner Flame Appearance

VENT SYSTEM

The fireplace and venting system should be inspected before initial use and at least annually by a qualified field service person. Inspect the external vent cap on a regular basis to make sure that no debris is interfering with the airflow. Inspect entire venting system to ensure proper function.

GLASS DOOR

Thoroughly clean the inside of the glass door after using the fireplace for two hours. Periodically clean the glass door as necessary.

When cleaning the glass, remember:

- **Do not remove the glass when hot.** Allow glass to cool before removal.
- NEVER use abrasive materials.
- Keep children and pets a safe distance away.
- Never operate the fireplace without the glass door properly secured.
- Never operate the fireplace if the glass is broken.
- Replace any glass that is chipped, cracked, or broken. Replacement glass door assemblies **MUST** be supplied by the fireplace manufacturer – **No substitute materials may be used.**
- Handle glass door with care to avoid striking or scratching it on hard objects.

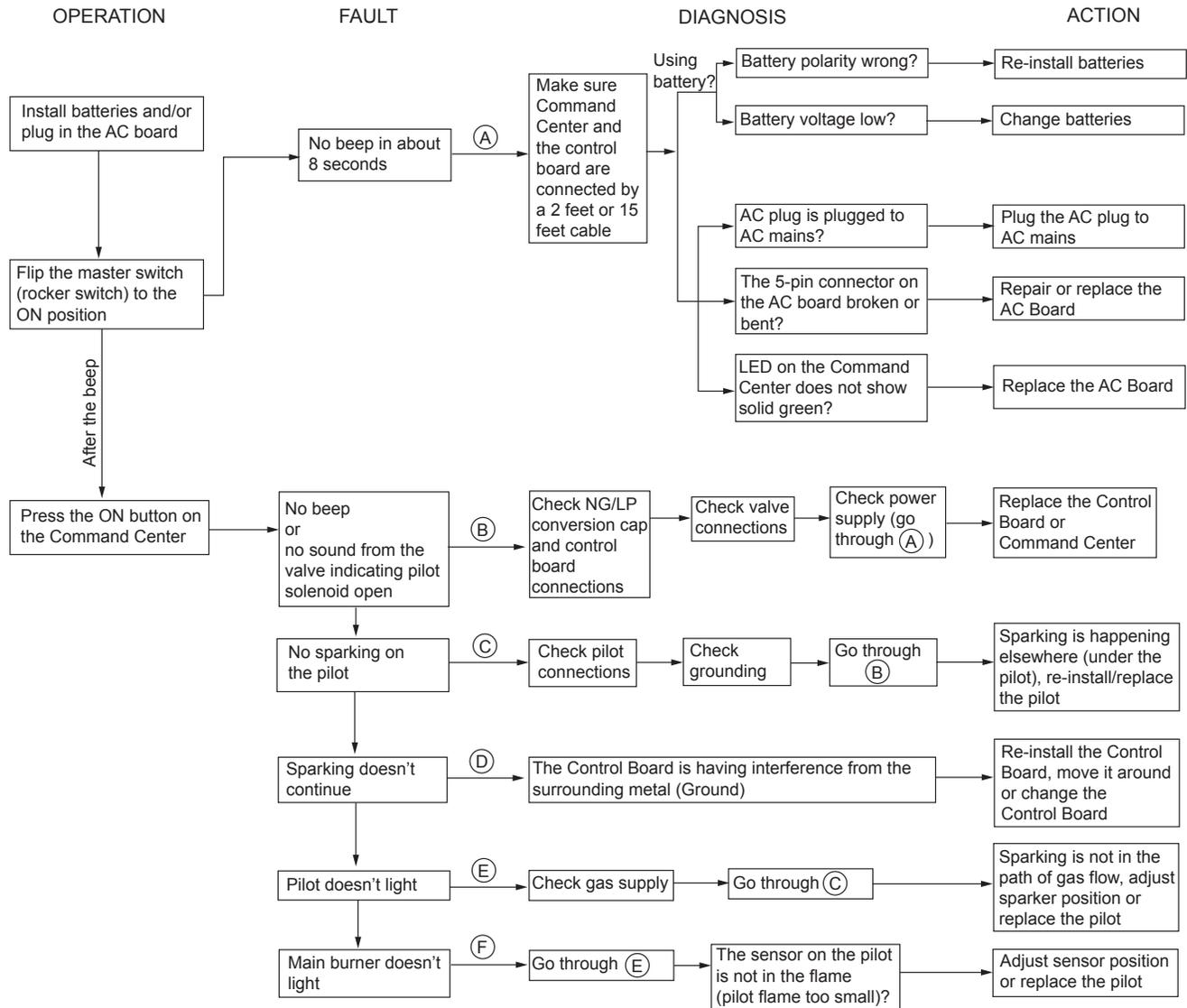
To clean glass door, follow “Glass Removal” procedure outlined in the *Final Installation* section. Film deposit on the inside of the glass should be cleaned off using a nontoxic, non-corrosive, non-abrasive, mild-cleaning solution. Simply apply an adequate amount to the glass and wipe off with a damp cloth. After all maintenance has been completed, re-install glass door.

STONES

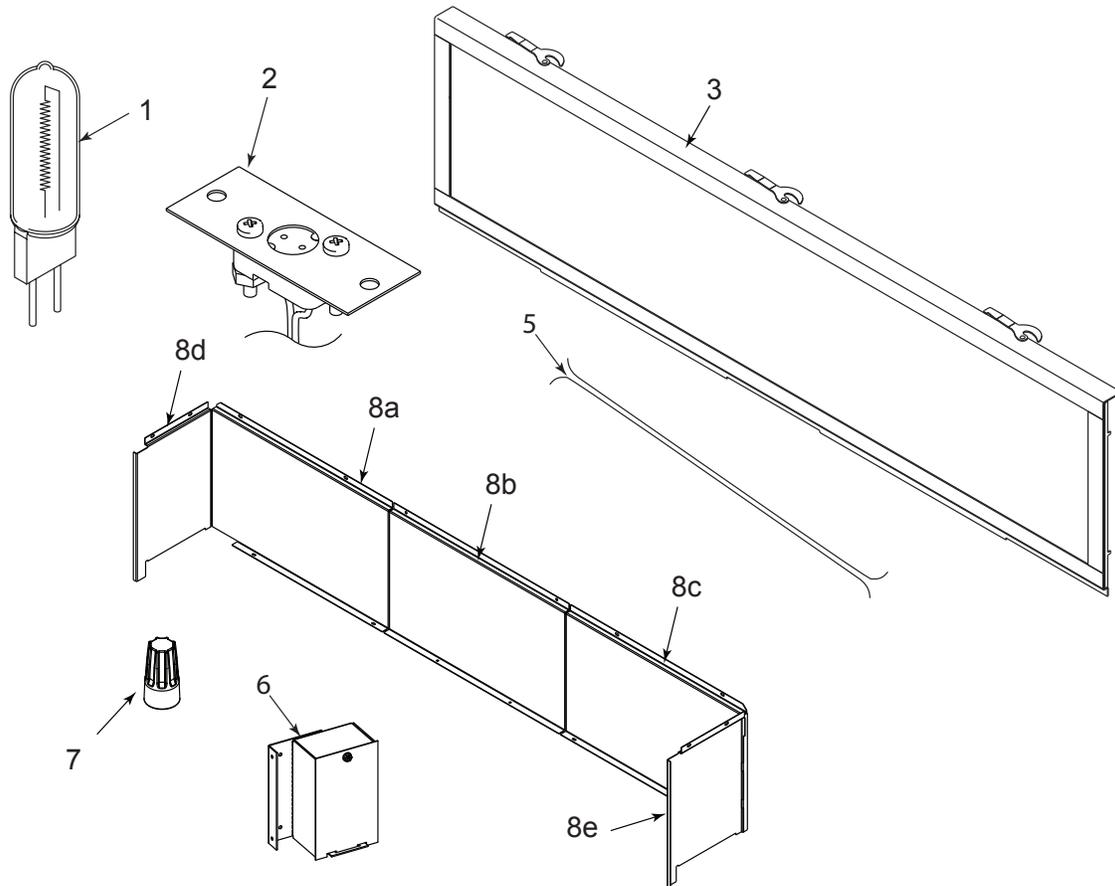
If stones must be removed for cleaning, handle carefully by holding gently at each end. Gloves are recommended to prevent skin irritation from ceramic fibers. If skin becomes irritated, wash gently with soap and water. Vacuum surface of stones with brush attachment or brush logs with a soft bristly (i.e. clean, dry paintbrush). To place stones in the fireplace, refer to Stone Placement section on *Page 30*.

NOTE: Do not use fluids to clean ceramic fiber stones.

SIGNATURE COMMAND SYSTEM

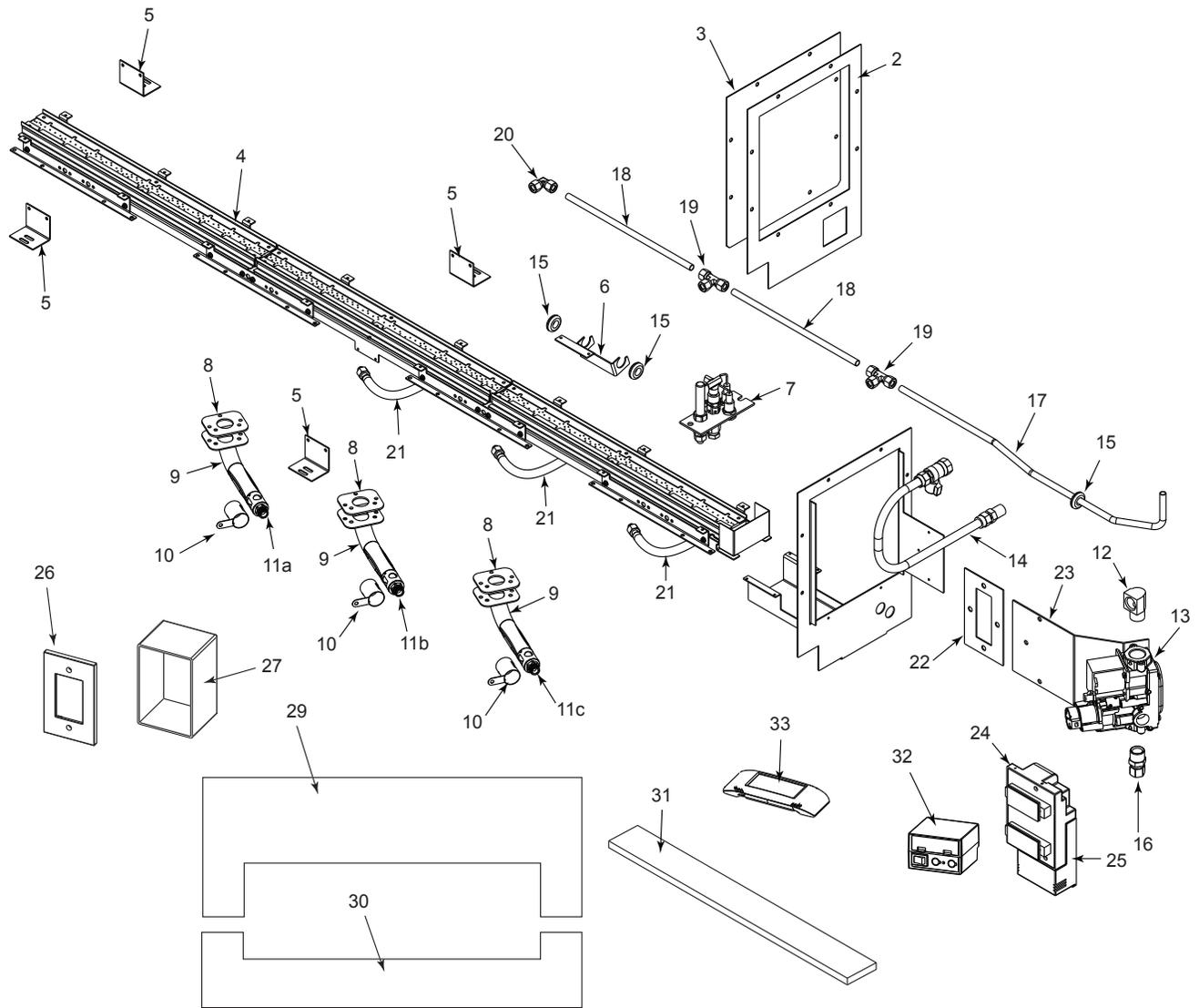


FIREBOX COMPONENTS AND ACCESSORIES



Ref.	Description	Qty.	VWDV70
1.	Bulb (35 Watt)	8	78D0007
2.	Bulb Socket	8	73D4521K
3.	Glass Frame Assembly	1	20303344
4.	Junction Box Assembly (not shown)	1	26D2128
5.	Wire (Lighting)	1	20303729
6.	Lightwire Junction Box w/Cover	2	20303352
7.	Wire Nut	10	20302355
Accessories / Field Installed			
8.	Porcelain Panel Kit Black (complete)	1	VWDV70PB
8a.	Porcelain Panel Black - Rear Left	1	20303704
8b.	Porcelain Panel Black - Rear Middle	1	20303705
8c.	Porcelain Panel Black - Rear Right	1	20303706
8d.	Porcelain Panel Black - Left	1	20303703
8e.	Porcelain Panel Black - Right	1	20303702
8.	Porcelain Panel Kit Bronze (complete)	1	VWDV70PBZ
8a.	Porcelain Panel Bronze - Rear Left	1	20303709
8b.	Porcelain Panel Bronze - Rear Middle	1	20303710
8c.	Porcelain Panel Bronze - Rear Right	1	20303711
8d.	Porcelain Panel Bronze - Left	1	20303708
8e.	Porcelain Panel Bronze - Right	1	20303707
9.	Log Set (not shown)	1	LKW70
10.	Trim Kit (not shown)	1	VWDV70TKB

SIGNATURE COMMAND SYSTEM & ENGINE



SIGNATURE COMMAND SYSTEM & ENGINE

Item	Description	Qty.	VWDV70NTSC
1.	Base Engine	1	20302845K
2.	Gasket, Engine Base	1	20302866
3.	Gasket, Access Panel	1	20302867
4.	Assy, Burner	1	20303226
5.	Support, Burner	4	20303233
6.	Bracket, Tube Support	1	20303730
7.	Pilot Assy	1	80D0006
8.	Venturi, Gasket	3	45D0032
9.	Venturi w/Screw, No air shutter	3	69D1026
10.	Air Shutter	3	69D1027
11a.	Injector #44	1	20303805
11b.	Injector #43	1	20303806
11c.	Injector #45	1	20303804
12.	Elbow - Street 3/8" x 3/8" 90°	1	0069882
13.	Valve	1	80D0001
14.	Flexline, 18" w/Shutoff Valve	1	69D0030
15.	Grommet	4	73D0189
16.	Fitting 3/8 NPT x 3/8 Brass Male	1	025660
17.	Tube, Valve to T	1	20302884K
18.	Tube, Straight	2	20302885K
19.	Brass Tee, 3/8" Comp.	2	20303648
20.	Brass 90° Elbow, 3/8" Comp.	1	20301832
21.	Flexline, 3/8" Comp.	3	20303323
22.	Gasket, Valve Bracket	1	20302462
23.	Bracket, Valve	1	20302967K
24.	Control Board NG	1	80D0018
25.	AC Module SCS	1	80D0004
26.	Wall Cover for C/C	1	80D0022
27.	Wall Junction Box	1	20H2080
28.	Cable, Wall Switch, 15 ft. (not shown)	1	80D0011
29.	Top Noncombustible Board	1	20303649
30.	Bottom Noncombustible Board	1	20303651
31.	Hearth Glass	3	20302895
32.	Command Center	1	80D1005
33.	Remote Transmitter	1	TSFSC

Fuel Conversion Kit

Natural Gas to LP 20303736K

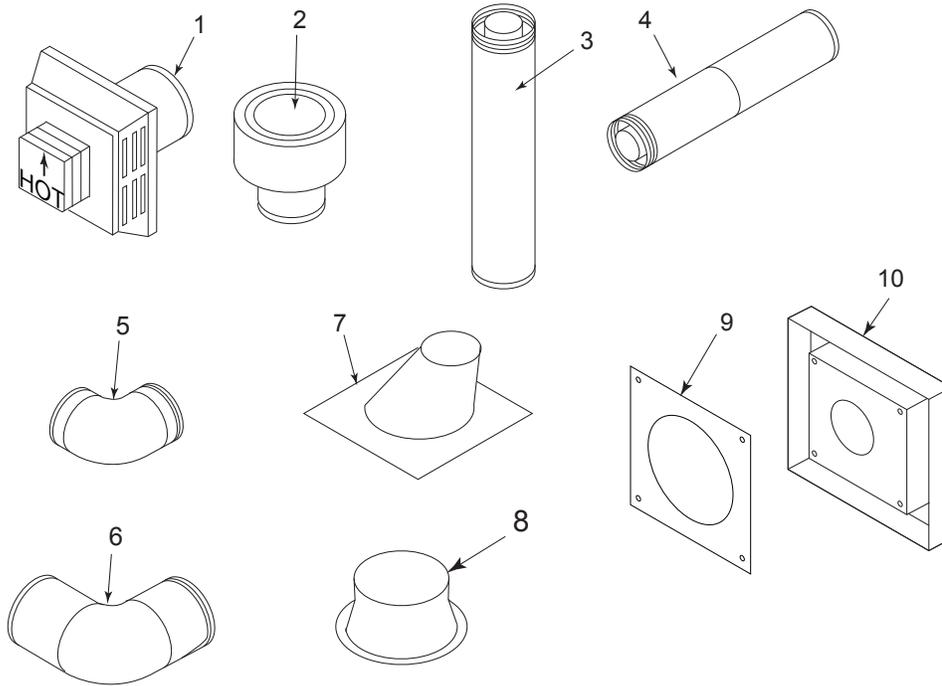
GLASS

Ref.	Description	Qty.	Part No.
1.	Glass Set, Onyx	3	GKO
2.	Glass Set, Diamond	3	GKD

STONES

1.	Stone M Black	6	20303041K
2.	Stone M Sand	6	20303042K
3.	Stone M White	6	20303043K
4.	Stone M Dark Gray	6	20303044K
5.	Stone White	4	78D0136K
6.	Stone Sand	4	78D0140K
7.	Stone Dark Gray	4	78D0138K
8.	Stone Brown	4	78D0139K
9.	4-Stone Assembly	1	20303995K
10.	Stone L Black	1	20303037K
11.	Stone L Sand	1	20303038K
12.	Stone L White	1	20303039K
13.	Stone L Dark Gray	1	20303040K

VENT COMPONENTS FOR 5" X 8"



VENTING COMPONENTS

VWDV70 Series Gas Fireplace

Item	Qty./ Box	Description	Current Simpson Duravent or MHSC Part no.	Old Simpson Duravent or MHSC Part no.	Selkirk Part no.	Metal-Fab Part no.
1	1	Horizontal Termination Cap w/Built-In Vinyl Siding Standoff Heat Deflector, Firestop and Adjustable Pipe 11" to 14 ⁵ / ₈ "		BHR58TK9		--
1	1	Horizontal Termination Cap Built-In Vinyl Siding Standoff, Heat Deflector, Firestop, 90° Elbow and Adjustable Pipe 11" to 14 ⁵ / ₈ "		BHS58TK		--
1	1	Horizontal Termination Cap w/Built-In Vinyl Siding Standoff, Heat Deflector, Firestop, Flexible Pipe 20" to 48", Adapter		BHSF58TK		--
1	8	Horizontal Termination w/ 1" Firestop		BHR58T/8		
1	1	Horizontal High Wind Termination Cap	58DVA-HC	1285	5DT-HC	--
1	1	Horizontal Termination Cap				5DHT
2	1	Vertical Termination	58DVA-VC	1280	5DT-VC	5DVT
3	4	6" Pipe Length	58DVA-06	1208	5DT-06	5D6
3	4	9" Pipe Length	58DVA-09	1207	5DT-09	
3	4	12" Pipe Length	58DVA-12	1206	5DT-12	5D12
3	4	24" Pipe Length	58DVA-24	1204	5DT-24	5D24
3	4	36" Pipe Length	58DVA-36	1203	5DT-36	5D36
3	4	48" Pipe Length	58DVA-48	1202	5DT-48	5D48
4	4	8 ¹ / ₂ " Pipe Extension	58DVA-08A	--	5DT-AJ	
4	4	16" Pipe Extension	58DVA-16A	--	--	
5	4	45° Elbow	58DVA-E45	1245	5DT-EL45	5D456
5	4	45° Swivel Elbow	--	--	5DT-EL45	
6	4	90° Elbow	58DVA-E90	1290	5DT-EL90S	5D906
6	4	90° Swivel Elbow	--	1290G	5DT-EL90S	
7	6	Flashing, 0/12 to 6/12 Roof Pitch	58DVA-F6	1243	5DT-AF6	5DF
7		Steep Roof Flashing	58DVA-F12	1243S	--	
8	6	Storm Collar	58DVA-SC	1253	5DT-SC	5DSC
9	4	Firestop	58DVA-FS	1263	5DT-FS	5DFS
9		1" Firestop	58DVA-FS	--		
10	1	Vinyl Siding Standoff	58DVA-VSS	1250	5DT-VS	5DVS
11		Attic Insulation Shield (not shown)	58DVA-IS	--	--	
12	8	Flex Adapter Starter (not shown)	DVFF8A/8	--	--	

NOTE: Vertical Termination 1283 must not be used with this unit.

For more information about, or instructions for, the venting components referenced above, please contact the component manufacturer:

Selkirk Corporation: www.selkirkcorp.com or 800-992-8368

Simpson Duravent: www.duravent.com or 800-835-4429

Metal-Fab, Inc.: www.metal-fabinc.com or 316-943-2351

Requirements for the Commonwealth of Massachusetts

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

Note Regarding Vented Products

Flex line installation must not exceed 36 inches and must have a T shutoff valve.

Any residence with a direct vent product must have a CO detector installed in the residence.

Installation of the fireplace or vented gas log in the State of Massachusetts requires the damper to be permanently removed or welded in the fully open position.

In addition, neither a naturally vented gas log nor a vent-free product may be installed in a bedroom or bathroom in the State of Massachusetts.

All gas fitting and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.

For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

Approved Carbon Monoxide Detectors

Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and ANSI/UL 2034 listed and IAS certified.

Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, **“GAS VENT DIRECTLY BELOW, KEEP CLEAR OF ALL OBSTRUCTIONS”**.

Inspection

The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

MANUFACTURER REQUIREMENTS

Gas Equipment Venting System Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

Gas Equipment Venting System NOT Provided

When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:

- The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and
- The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

LIMITED LIFETIME WARRANTY

LIFETIME WARRANTY

The following components are warranted for the lifetime of the product, subject to proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate, Steel Burners, Glass (thermal breakage only), Ceramic Fiber Logs and Refractory Brick. Coverage is provided only to the original purchaser and is nontransferable. MHSC will also pay for reasonable labor costs associated with repairing or replacing the component described above for up to five (5) years. Labor rates will be determined by MHSC's published labor rates in effect at the time labor is performed.

BASIC WARRANTY

MHSC warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by MHSC in the appliance are found to be defective in materials or workmanship, MHSC will, at its option, replace or repair the defective components at no charge to the original owner. MHSC will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

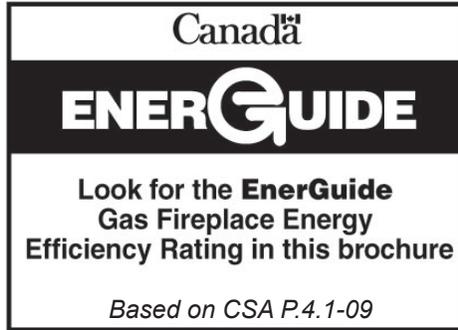
This Limited Lifetime Warranty will be void if the appliance is not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alterations, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by a Vermont Castings Authorized Dealer.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. MHSC does not assume for it any other obligations or liabilities in connection with sale or use of the appliance. In states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in the Limited Lifetime Warranty.

MHSC reserves the right to investigate any and all the claims against the Limited Lifetime Warranty and decide upon method of settlement.

IF WARRANTY SERVICE IS NEEDED...

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your MHSC product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.



Efficiency Ratings		
Model	EnerGuide Ratings Fireplace Efficiency (%)	DOE (AFUE %)
VWDV70NTSC	79.3	71.4
VWDV70PTSC	79.8*	77.5*

*After conversion to LP.

MHSC

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