

City of Portland, Maine - Building or Use Permit Application

Permit No: 05-0035
 Issue Date: JAN 2005
 CBL: 510 A024001

Location of Construction: 71 Allison Ave	Owner Name: Mack Francis X & Lucy A Jts	Owner Address: 71 Allison Ave	Phone:
Business Name:	Contractor Name: Frost N Flame	Contractor Address: 629 Main St. Portland	Phone:
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R-2

Past Use: Single Family Home	Proposed Use: Single Family Home / install a direct vent heater on 1st flr	Permit Fee: \$57.00	Cost of Work: \$3,638.00	CEO District: 5
Proposed Project Description: install a direct vent heater on 1st flr		FIRE DEPT: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied Signature: <i>[Signature]</i>		INSPECTION: Use Group <i>U</i> Type: <i>Heating</i> <i>State Cops Pays</i> Signature: <i>[Signature]</i>

Action: Approved Approved w/Conditions Denied
 Signature: _____ Date: _____

Permit Taken By: Idobson	Date Applied For: 01/10/2005	Zoning Approval	
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Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> >ate: _____	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date: _____	Historic Preservation <input type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied >ate: _____
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CERTIFICATION

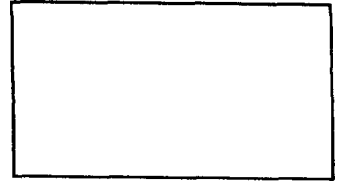
I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition,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

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



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



To the **INSPECTOR OF BUILDINGS, PORTLAND, ME.**

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

Location / CBL 370 A 24
Name and address of owner of appliance 73 Allison Ave Use of Building Residential Date 1/5/05
Lucy Mack 73 Allison Ave Portland Me 04103

Installer's name and address Rob St Pierre
Frost N Flame 629 Main St Gorham Me Telephone 856 7000

Location of appliance:

- Basement
- Floor
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: DURTORP

U.L. Approved Yes No

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

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
- Solid Fuel # _____
- Oil # _____
- Gas # PNTS126
- Other _____

Type of Chimney:

- Masonry Lined
Factory built _____
- Metal
Factory Built U.L. Listing # _____
- Direct Vent
Type Simpson UL# _____

Type of Fuel Tank

- Oil
- Gas LP

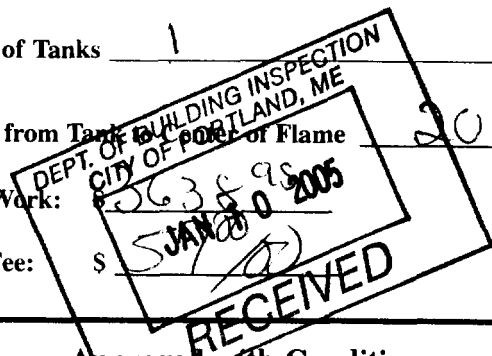
Size of Tank 100 gal

Number of Tanks 1

Distance from Tank or Flame 20 feet.

Cost of Work: 20638.95

Permit Fee: \$ _____



Approved

Approved with Conditions

Fire: _____

Ele.: _____

Bldg.: _____

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer

Rob St Pierre

White - Inspection

Yellow - File

Pink - Applicant's

Gold - Assessor's Copy

City of Portland, Maine - Building or Use Permit

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

Permit No: 05-0035	Date Applied For: 01/10/2005	CBL: 370 A024001
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Business Name:	Contractor Name: Frost N Flame	Contractor Address: 629 Main St. Portland	Phone:
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

	Proposed Project Description: install a direct vent heater on 1st flr
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Dept: Zoning **Status:** Approved **Reviewer:** Tammy Munson **Approval Date:** 01/14/2005
Note: **Ok to Issue:**

Dept: Building **Status:** Approved with Conditions **Reviewer:** Tammy Munson **Approval Date:** 01/14/2005
Note: **Ok to Issue:**
1) The installation must comply with the State of Maine Gas Regulations.

MAJESTIC VERMONT *Castings*

INSTALLER/CONSUMER SAFETY INFORMATION

PLEASE READ THIS MANUAL
BEFORE INSTALLING AND
USING APPLIANCE

WARNING!

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

FOR YOUR SAFETY

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

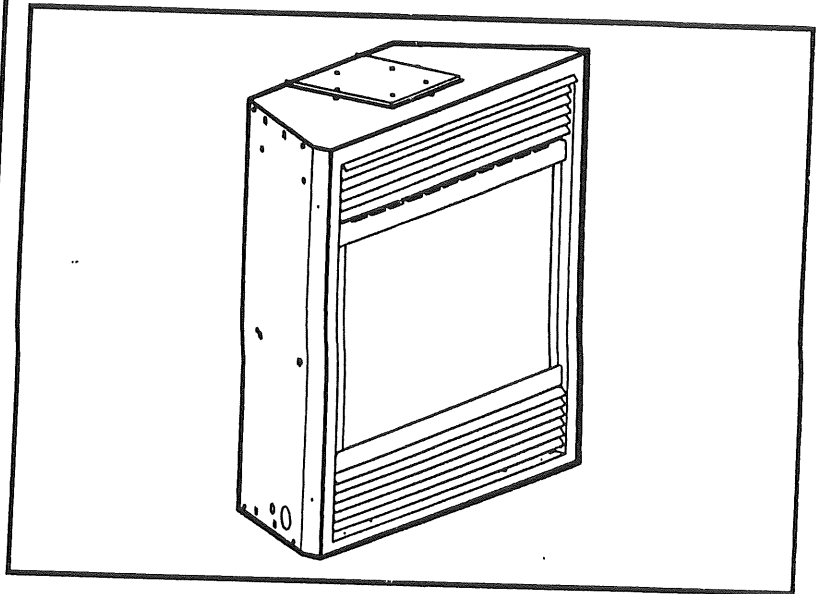
WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electric switch;
do not use any phone in your
building.
- Immediately call your gas
supplier from your neighbor's
phone. Follow the gas suppliers
instructions.
- If you cannot reach your gas
supplier call the fire department.

DO NOT STORE OR USE
GASOLINE OR OTHER FLAM-
MABLE VAPORS AND LIQUIDS
IN THE VICINITY OF THIS OR
ANY OTHER APPLIANCE.

Direct Vent

Models: DVRT36
DVRT39
DVRT43



Homeowner's Installation &
Operating Manual



Vermont Castings, Majestic Products

410 Admiral Blvd. • Mississauga, Ontario, Canada L5T 2N6 • 905-670-7777
www.majesticproducts.com • www.vermontcastings.com

INSTALLER: DO NOT DISCARD THIS MANUAL - LEAVE FOR HOMEOWNER

10002428 11/03 Rev. 5

Installation & Operating Instructions

This gas appliance should be installed by a qualified installer in accordance with local building codes and with current CSA-B149.1 Installation codes for Gas Burning Appliances and Equipment. If the unit is being installed in a mobile home, the installation should comply with the current CAN/ CSA Z240.4 code. For U.S.A. Installations follow local codes and/ or the current National Fuel Gas Code, ANSI Z223.1/NFPA 54.

FOR SAFE INSTALLATION AND OPERATION, NOTE THE FOLLOWING:

1. This fireplace gives off high temperatures and should be located out of high traffic areas and away from furniture and draperies.
2. Children and adults should be alerted to the hazards of the high surface temperatures of this fireplace and should stay away to avoid burns or ignition of clothing.
3. Children should be carefully supervised when in the same room as your fireplace.
4. Under no circumstances should this fireplace be modified. Parts removed for servicing should be replaced prior to operating this fireplace again.
5. Installation and any repairs to this fireplace must be performed by a qualified installer, service agency or gas supplier. A professional service person should be contacted to inspect this fireplace annually. Make it a practice to have all of your gas fireplaces checked annually. More frequent cleaning may be required due to excess lint and dust from carpeting, bedding material, etc.
6. Control compartments, burners and air passages in this fireplace should be kept clean and free of dust and lint. Make sure the gas valve and pilot light are turned off before you attempt to clean this fireplace.
7. The venting system (chimney) of this fireplace should be checked at least once a year and if needed your venting system should be cleaned.
8. Keep the area around your fireplace clear of combustible materials, gasoline and other flammable vapor and liquids. This fireplace should not be used as a drying rack for clothing, nor should Christmas stockings or decorations be hung in the area of it.
9. Under no circumstances should any solid fuels (wood, coal, paper or cardboard etc.) be used in this fireplace.
10. The flow of combustion and ventilation air must not be obstructed in any way.
11. When fireplace is installed directly on carpeting, vinyl tile or any combustible material other than wood, this fireplace must be installed on a metal or wood panel extending the full width and depth of the fireplace.
12. This fireplace requires adequate ventilation and combustion air to operate properly.
13. This fireplace must not be connected to a chimney flue serving a separate solid fuel burning fireplace.
14. When the fireplace is not in use it is recommended that the gas valve be left in the "OFF" position.

Proposition 65 Warning: Fuels used in gas, wood-burning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.
California Health & Safety Code Sec. 25249.6

This appliance may be installed in an aftermarket permanently located, manufactured home or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

The DVRT36RMH has been approved for mobile home installations.

IMPORTANT:

PLEASE REVIEW THE FOLLOWING CAREFULLY

Remove any plastic from trim parts before turning the fireplace "ON".

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.

It is not unusual for your Vermont Castings, Majestic Products gas fireplace to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.

Please ensure that your room is well ventilated - open all windows.

It is recommended that you burn your fireplace for at least ten (10) hours the first time you use it. If the optional fan kit has been installed, place the fan switch in the "OFF" position during this time.

Locating the Fireplace

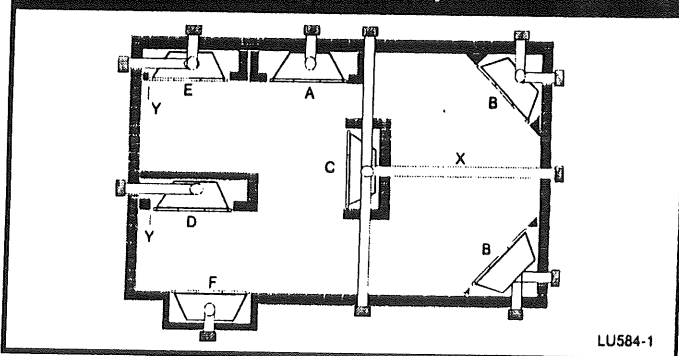


Fig. 1 Locating the Gas Fireplace.

- | | | |
|---------------------|-------------------------|-----------------------|
| A) Flat on wall | B) Cross corner | C) Island** |
| D) Room divider*/** | E) Flat on wall corner* | F) Chase installation |
| | | Y) 6 in. minimum |

Notes (Fig. 1):

* When you install your Vermont Castings, Majestic Products fireplace in (D) Room divider or (E) Flat on wall corner positions, a minimum of (Y), 6 in. (153 mm) clearance must be maintained from the perpendicular wall and the front of the fireplace.

**Island (C) and Room Divider (D) installation is possible if the horizontal portion of the vent system (X) does not exceed 20 ft. (610 cm). See details in Venting Section.

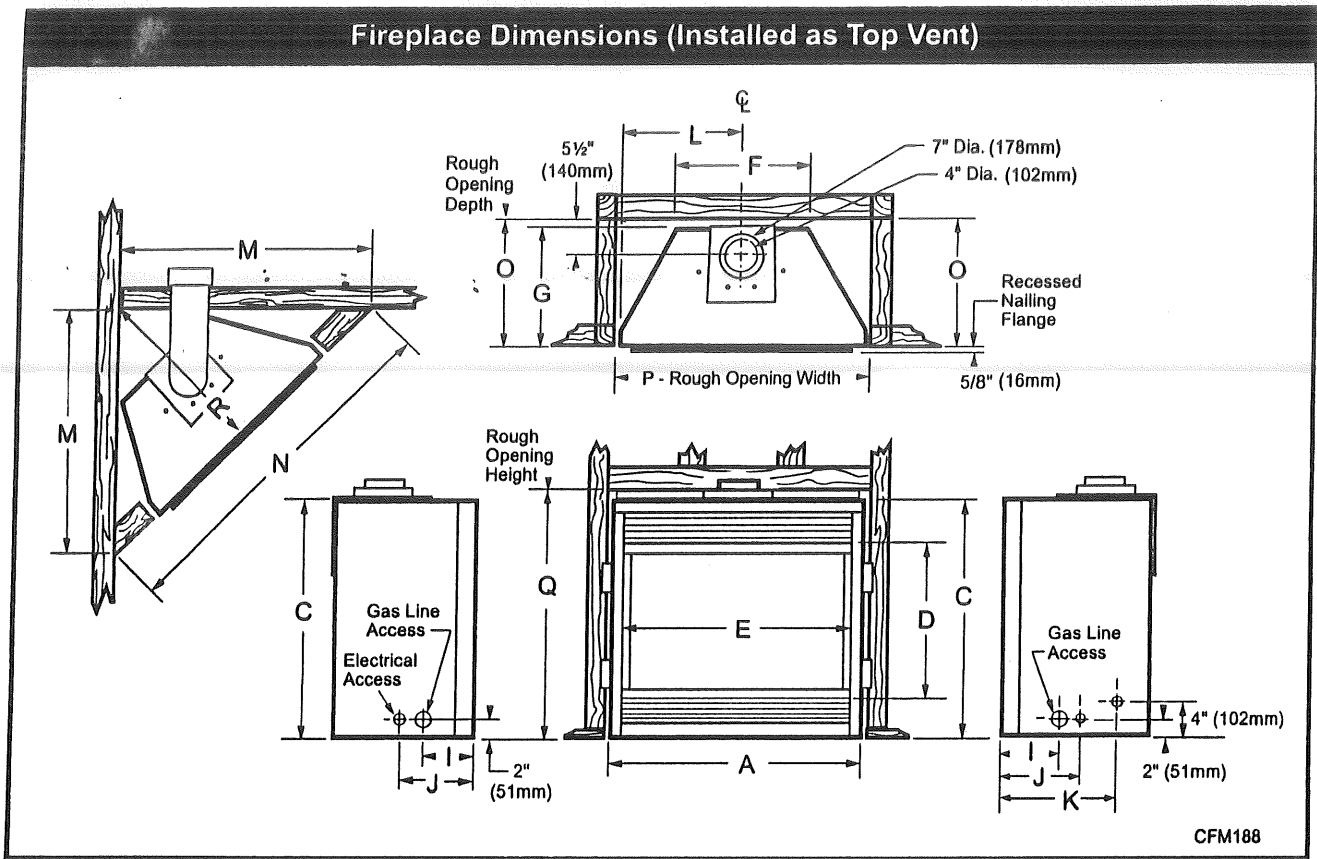


Fig. 2 Fireplace specifications and framing dimensions.

Ref.	DVRT36	DVRT39	DVRT43
A	36" (914mm)	39" (991mm)	43" (1092mm)
B	37 1/4" (946mm)	37 1/4" (946mm)	40" (1016mm)
C	34 1/4" (870mm)	34 1/4" (870mm)	37" (940mm)
D	21" (533mm)	21" (533mm)	23 1/2" (597mm)
E	32 7/8" (835mm)	35 7/8" (911mm)	39 7/8" (1012mm)
F	20" (508mm)	24 3/8" (619mm)	31" (787mm)
G	14 1/4" (362mm)	15 3/4" (400mm)	16 1/4" (412mm)
H	6" (152mm)	6" (152mm)	6" (152mm)
I	5 1/2" (140mm)	5 1/2" (140mm)	5 1/2" (140mm)
J	7 3/4" (197mm)	8 1/2" (216mm)	8 1/2" (216mm)
K	10 3/4" (273mm)	12 1/2" (318mm)	12 1/2" (318mm)
L	18" (457mm)	19 1/2" (495mm)	21 1/2" (546mm)
Framing Dimensions			
M	36" (914mm)	40" (1016mm)	44" (1118mm)
N	51" (1295mm)	56" (1422mm)	62 1/4" (1581mm)
O	14 1/2" (368mm)	16 1/2" (419mm)	16 1/2" (419mm)
P	36 1/2" (927mm)	39 1/2" (1003mm)	43 1/2" (1105mm)
Q	35" (889mm)	35" (889mm)	37 3/4" (959mm)
R	25 1/2" (648mm)	28" (711mm)	36 1/8" (918mm)

Clearance to Combustibles

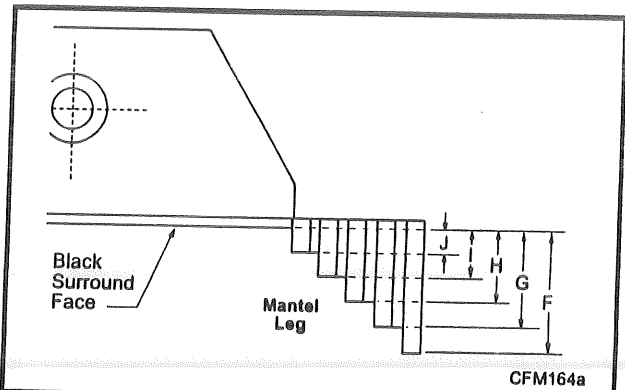
Appliance	
Top	0" (0mm)
Bottom	0" (0mm)
Side	0" (0mm)
Back	0" (0mm)
Venting	
Concentric sections of DV Vent	1" (25mm)
Non-concentric sections of DV Vent	
Sides and bottom	1" (25mm)
Top	2" (51mm)

Mantels

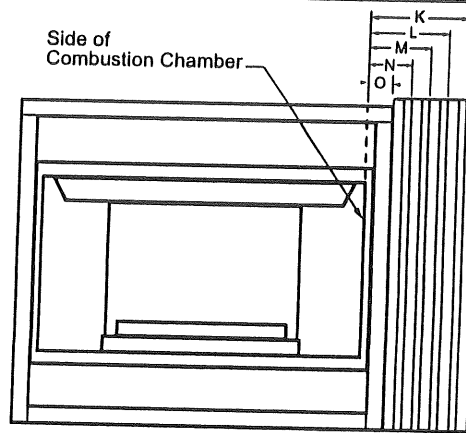
The height a combustible mantel is fitted above the fireplace is dependent on the depth of the mantel. This also applies to the distance between the mantel leg (if fitted) and the fireplace.

Refer to Figures 4a and 4b and the Mantel Charts below them for correct mounting heights and widths.

- The distances and reference points are not affected by the fitting of a bay window front trim kit.
- Noncombustible mantels and legs may be installed at any height and width around the appliance.
- When using paint or lacquer to finish the mantel, it must be heat-resistant to prevent discoloration.



CFM164a



CFM170

Ref.	Mantel Leg Depth	Ref.	Mantel Leg from Side of Comb. Opening
F	10" (254mm)	K	11½" (292mm)
G	8" (203mm)	L	9½" (241mm)
H	6" (152mm)	M	7½" (191mm)
I	4" (101mm)	N	5½" (140mm)
J	2" (51mm)	O	3½" (89mm)

Fig. 4b Combustible mantel leg minimum installation.

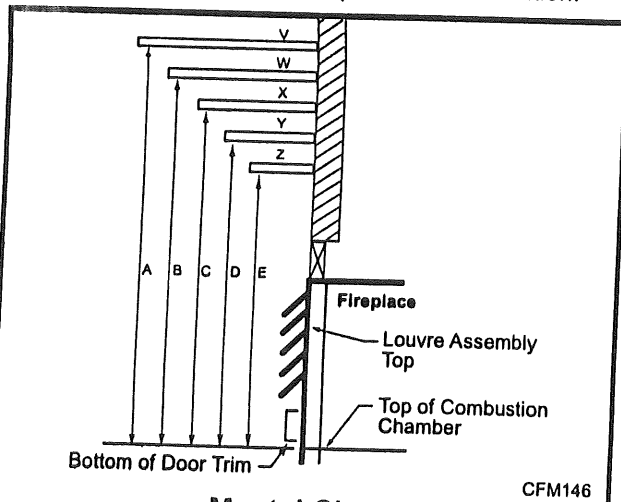
Hearth

Although a hearth is not mandatory, one is recommended for aesthetic purposes. A noncombustible hearth which projects out 12" (305mm) or more from the front of the fireplace is recommended.

Cold Climate Installation Recommendation:



When installing this unit against a noninsulated exterior wall or chase, it is mandatory that the outer walls be insulated to conform to applicable insulation codes.



CFM146

Mantel Chart

Ref.	Mantel Shelf or Breast Plate Depth	Ref.	Mantel from Top of Comb. Chamber
V	10" (254mm)	A	19" (483mm)
W	8" (203mm)	B	17" (432mm)
X	6" (152mm)	C	15" (381mm)
Y	4" (101mm)	D	13" (330mm)
Z	2" (51mm)	E	11" (279mm)

Fig. 4a Combustible mantel leg minimum installation.

Framing & Finishing



Check the fireplace to make sure it is leveled and properly positioned.

1. Choose the unit location.
2. Place the unit into position and secure it to the floor with 1½" (38mm) screws or nails. Holes for securing the unit to floor are located behind the access door grille on the left and right sides of the unit.
3. Frame in the fireplace with a header across the top. It is important to allow for the finished wall face when setting the depth of the frame.
4. Attach the fireplace to the frame using the adjustable frame drywall strips (located behind the access door for shipping). Preset the depth to suit the facing material of the wall. The strips are adjustable to 1/2" (13mm), 5/8" (16mm) or 3/4" (19mm). (Fig. 5)
5. Screw through the slotted holes in the drywall strip and into predrilled holes in fireplace side. Measure from face of fireplace to the face of the drywall strip to confirm the final depth.

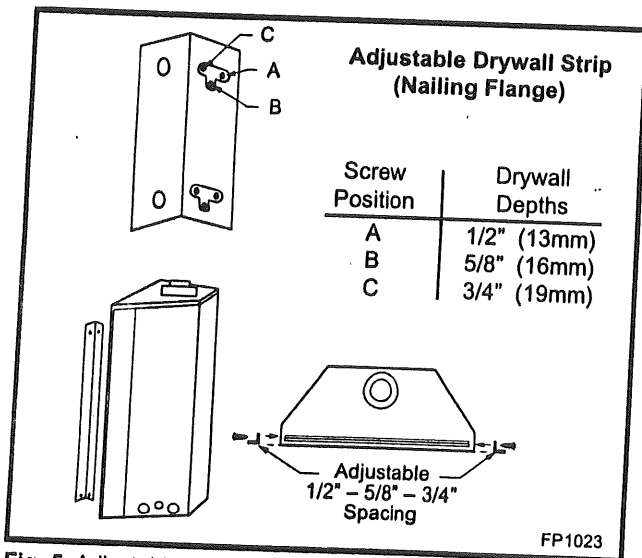


Fig. 5 Adjustable drywall strip (nailing flanges).

Final Finishing

Noncombustible materials such as brick or tile may be extended over the edges of the face of the appliance. **DO NOT cover the window frame assembly, any vent, louvre assembly top or louvre assembly bottom.**

If a Trim Kit is to be installed on the fireplace, the brick or tile will have to be installed flush with the edges of the appliance.

Gas Specifications

Model	Fuel	Gas Control	Max. Input BTU/h	Min. Input BTU/h
DVRT36RN	Nat	Millivolt	25,000	17,500
DVRT36RP	Prop	Millivolt	25,000	18,750
DVRT36EN	Nat	24V Hi/Lo	25,000	17,500
DVRT36EP	Prop	24V Hi/Lo	25,000	18,750
DVRT36RFN	Nat	Comfort Control	25,000	17,500
DVRT36RFP	Prop	Comfort Control	25,000	18,750
DVRT36RMH	Nat/Prop	Millivolt	25,000	17,500
DVRT39RN	Nat	Millivolt	30,000	21,000
DVRT39RP	Prop	Millivolt	30,000	22,500
DVRT39EN	Nat	24V Hi/Lo	30,000	21,000
DVRT39EP	Prop	24V Hi/Lo	30,000	22,500
DVRT43RN	Nat	Millivolt	33,000	23,100
DVRT43RP	Prop	Millivolt	33,000	24,750
DVRT43EN	Nat	24V Hi/Lo	33,000	23,100
DVRT43EP	Prop	24V Hi/Lo	33,000	24,750

Gas Inlet and Manifold Pressures

	Natural	LP (Propane)
Inlet Minimum	5.5" w.c.	11.0" w.c.
Inlet Maximum	14.0" w.c.	14.0" w.c.
Manifold Pressure	3.5" w.c.	10.0" w.c.

DVRT36/ DVRT36RMH/ DVRT39/ DVRT43 Certified To

ANSI Z21.88-2002/ CSA 2.33-2002
Vented Gas Fireplace Heaters

High Elevations

Input ratings are shown in BTU per hour (BTU/h) 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, installations 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 installations at elevations above 4,500 feet (1,370 m).

Termination Clearances

Termination clearances for buildings with combustible and noncombustible exteriors.

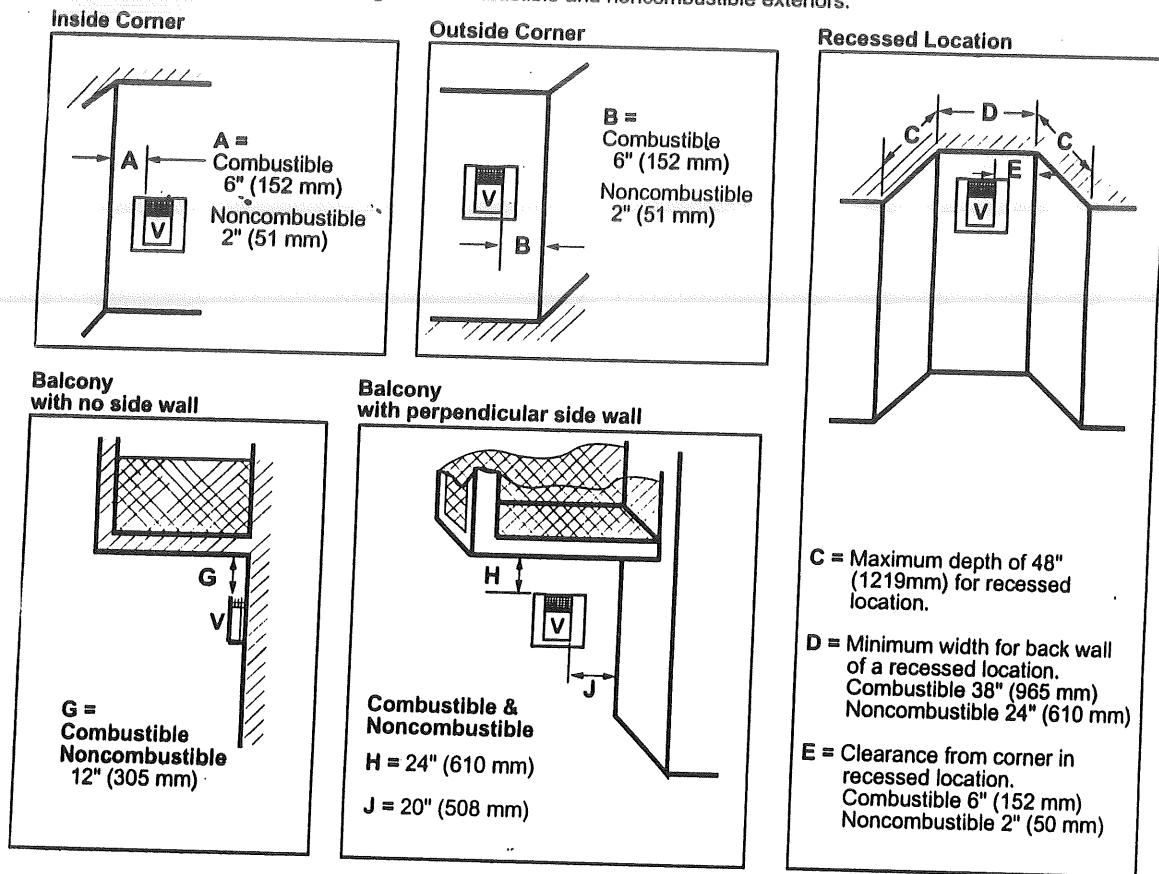


Fig. 15 Termination clearances.

CFM115

General Information for Connecting Vent Pipes

Crimped End Pipes

Before joining elbows and pipes, apply a bead of high temperature sealant to the crimped end of the elbow or pipe.

Join the pipes using a 2" (51mm) overlap and secure the joints with three (3) sheet metal screws. (Fig. 16) Wipe off excess sealant.

Canadian Installations:

The venting system must be installed in accordance with the current CSA-B149.1 installation code.

USA Installations:

The venting system must conform to local codes and/or the current National Fuel Code ANSI Z223.1/NFPA 54.

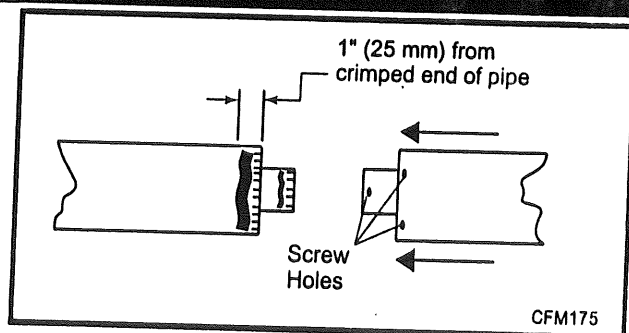
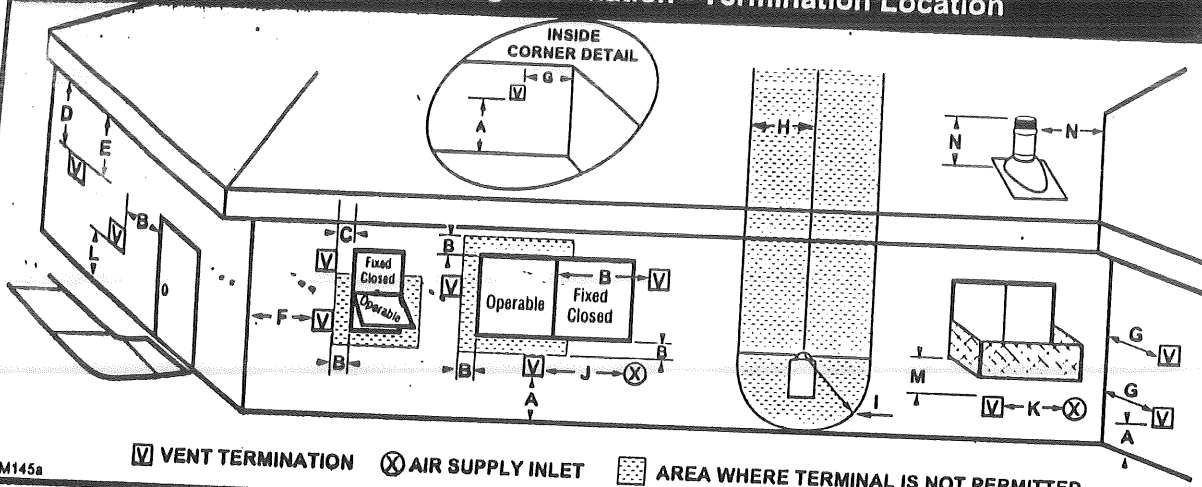


Fig. 16 Apply a bead of high temperature sealant.

CFM175

Only venting components manufactured by Vermont Castings, Majestic Products may be used in Direct Vent systems.

General Venting Information - Termination Location



CFM145a

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

	Canadian Installations ¹	US Installations ²
A = Clearance above grade, veranda, porch, deck, or balcony	12" (30cm)	12" (30cm)
B = Clearance to window or door that may be opened	6" (15cm) for appliances < 10,000 Btuh (3kW), 12" (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36" (91cm) for appliances > 100,000 Btuh (30kW)	6" (15cm) for appliances < 10,000 Btuh (3kW), 9" (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12" (30cm) for appliances > 50,000 Btuh (15kW)
C = Clearance to permanently closed window	12" (305mm) recommended to prevent window condensation	12" (305mm) recommended to prevent window condensation
D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (610mm) from the center line of the terminal	18" (458mm)	18" (458mm)
E = Clearance to unventilated soffit	12" (305mm)	12" (305mm)
F = Clearance to outside corner	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' (91cm) within a height of 15' above the meter/regulator assembly	3' (91cm) within a height of 15' above the meter/regulator assy
I = Clearance to service regulator vent outlet	3' (91cm)	3' (91cm)
J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliances	6" (15cm) for appliances < 10,000 Btuh (3kW), 12" (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36" (91cm) for appliances > 100,000 Btuh (30kW)	6" (15cm) for appliances < 10,000 Btuh (3kW), 9" (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12" (30cm) for appliances > 50,000 Btuh (15kW)
K = Clearance to a mechanical air supply inlet	6' (1.83m)	3' (91cm) above if within 10' (3m) horizontally
L = Clearance above paved sidewalk or paved driveway located on public property	7' (2.13m)†	7' (2.13m)†
M = Clearance under veranda, porch, deck or balcony	12" (30cm)‡	12" (30cm)‡
N = Clearance above a roof shall extend a minimum of 24" (610mm) above the highest point when it passes through the roof surface, and any other obstruction within a horizontal distance of 18" (450mm).		

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 Vermont Castings, Majestic Products Direct Vent Fireplaces are certified as part of the appliance, with clearances tested and approved by the listing agency.

Fig. 14 Vent termination clearances.

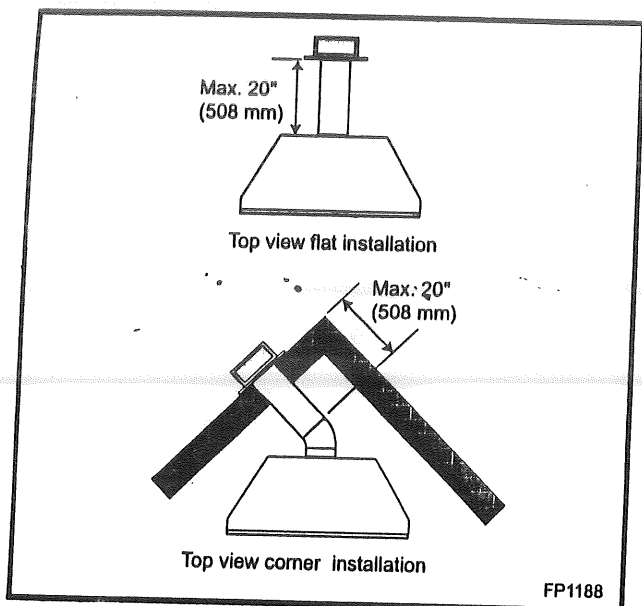


Fig. 19 Rear vent application, maximum horizontal distance.

Rear Wall Vent Installation

Step 1

Locate and cut the vent opening in the wall.

For combustible walls, first frame in opening. (Fig. 20)

Combustible Walls: Cut a 10 $\frac{3}{8}$ " H x 9 $\frac{3}{8}$ " W (265 x 240mm) hole through the exterior wall and frame as shown.

Noncombustible Walls: Hole opening should be 7 $\frac{1}{2}$ " (190mm) in diameter.



Zero clearance sleeve is required only for combustible walls.

Step 2

Measure wall thickness and cut zero clearance sleeve parts to proper length (maximum 12" / 305mm). Assemble sleeve to its maximum opening (10 $\frac{3}{8}$ " x 9 $\frac{3}{8}$ ") (265 x 240mm), and attach to firestop with #8 sheet metal screws (supplied). Install firestop assembly. (Fig. 21)

Step 3

Measure the horizontal length requirement for the venting including a 2" (51mm) overlap; i.e., from the elbow to the outside wall face plus 2" (51mm). (Fig. 19)

Step 4

Install the 4" (102mm) vent to the appliance collar and secure with 3 sheet metal screws. Install the 7" (175mm) vent pipe to the appliance collar and secure with 3 sheet metal screws. If a 45° elbow is being

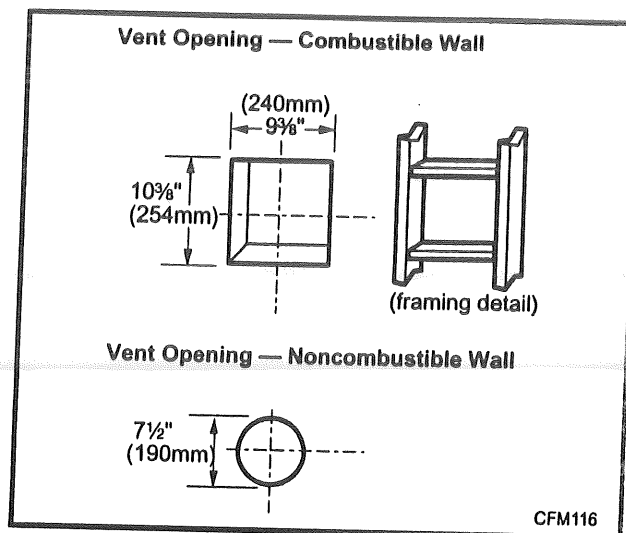


Fig. 20 Vent opening, side wall.

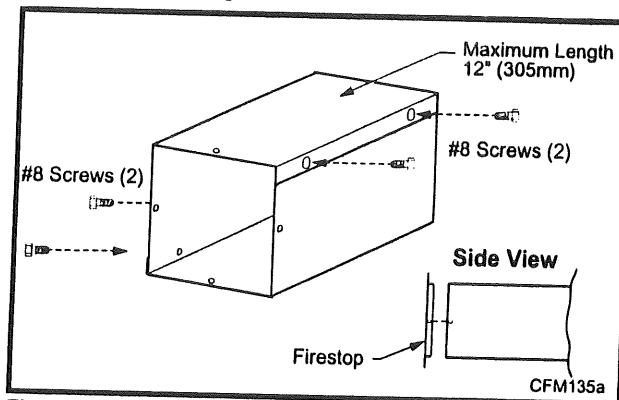


Fig. 21 Adjustable zero clearance sleeve

used, attach the elbow to the appliance with sealant in the same manner then attach the venting to the elbow. It is not necessary to seal the 45° elbow to the starter pipe or termination in the straight out and 45° installation in Figure 19.



It is critical that there is no downward slope away from the appliance when connecting the vent or elbow.

Step 5

Guide the venting through the vent hole as you place the appliance in its installed position. Guide the 4" (102mm) and 7" (175mm) collars of the vent termination into the outer ends of the venting. Do not force the termination. If the vent pipes do not align with the termination, remove and realign the venting at the appliance flue collars. (Fig. 22) Attach the termination to the wall as outlined in the instruction sheet supplied with the termination.

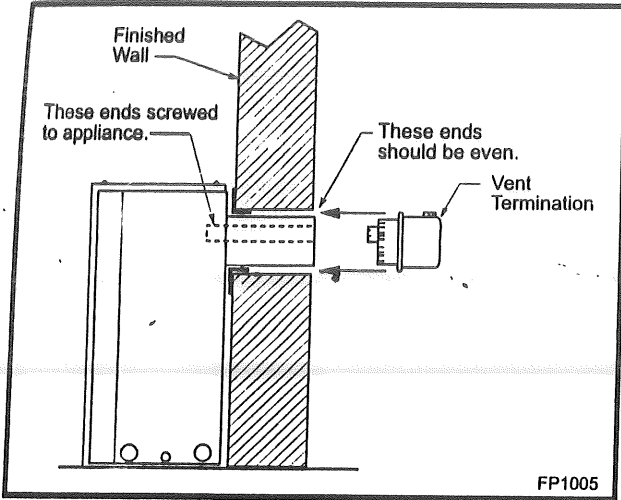


Fig. 22 Flat to the wall installation.

Vertical Sidewall Application

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

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

Minimum clearance between vent pipes and combustible materials is 1" (25mm) on top, bottom and sides unless otherwise noted.

When vent termination exits through foundations less than 20" (508mm) below siding outcrop, the vent pipe must flush up with the siding.

It is best to position the fireplace so the number of offsets and horizontal vent length are minimized.

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 outer wall.

Horizontal plane means no vertical rise exists on this portion of the vent assembly.



When installing the appliance as a rear vent unit, the 90° or 45° transition elbow attached directly to the rear of the unit is NOT INCLUDED in the following criteria and calculations, and unless specifically mentioned, are to be ignored when calculating venting layouts.

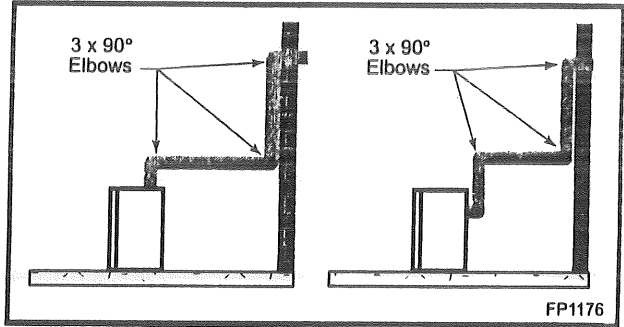


Fig. 23 Maximum three (3) 90° elbows per installation.

- The maximum number of 90° elbows per side wall installation is three (3). (Fig. 23)
- If a 90° elbow is fitted directly on top of the fireplace flange, the maximum horizontal vent run before the termination or a vertical rise is 36 in. (914mm). (Fig. 24)

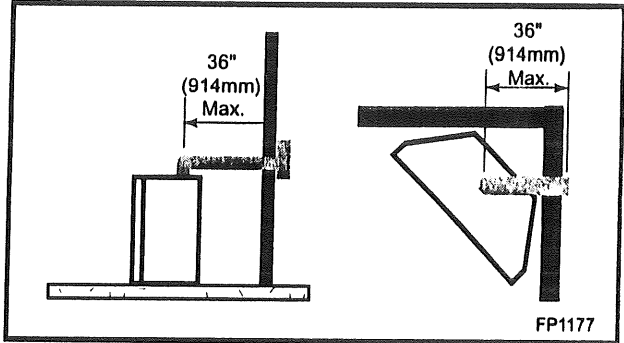


Fig. 24 Maximum horizontal run with no rise.

- If a 90° elbow is used in the horizontal vent run (level height maintained), the horizontal vent length is reduced by 36" (914 mm). (Fig. 25a and Fig. 25b) This does not apply if the 90° elbow is used to increase or redirect a vertical rise. (Fig. 25b)

Example: According to the Vent Graph (Page 14), the maximum horizontal vent length in a system with a 7.5' (2.3m) vertical rise is 20' (6m) and if a 90° elbow is required in the horizontal vent it must be reduced to 17' (5.2m).

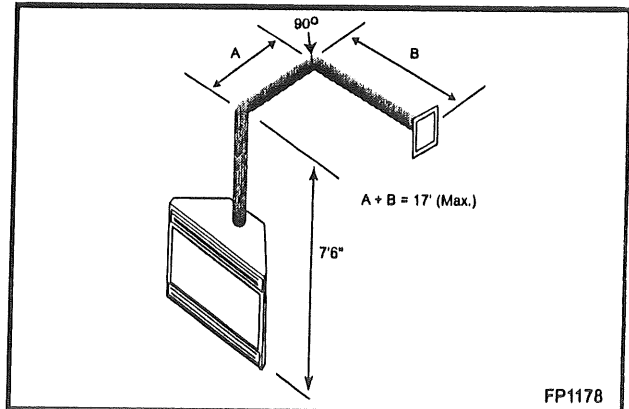


Fig. 25a Horizontal run reduction.

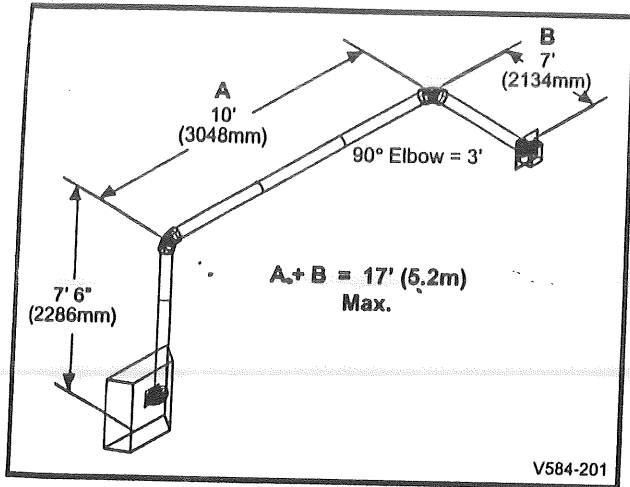


Fig. 25b Maximum vent run with elbows.

In Fig. 25a and Fig. 25b, Dim. A plus Dim. B must not be greater than 17' (5.2m).

- The maximum number of 45° elbows permitted per side wall installation is two (2). These elbows can be installed in either the vertical or horizontal run.
- For each 45° elbow installed in the horizontal run, the length of the horizontal run **MUST** be reduced by 18" (45cm). 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°. (Fig. 26)

Example:

- Elbow 1 = 90°
- Elbow 2 = 45°
- Elbow 3 = 45°
- Elbow 4 = 90°

Total angular variation = 270°

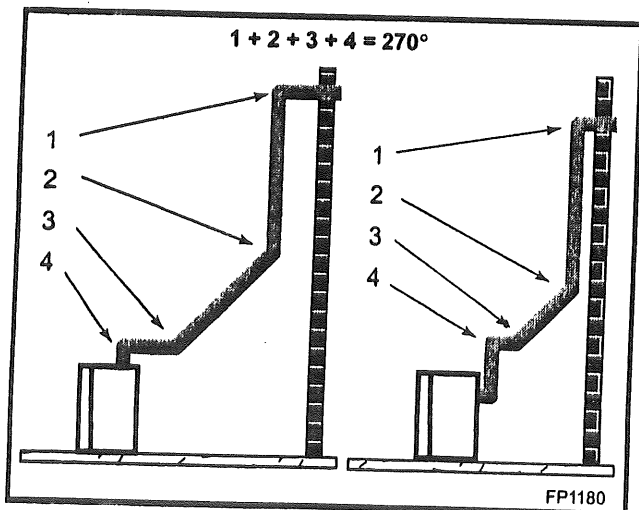


Fig. 26 Maximum elbow usage.

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.

For combustible walls, first frame in opening. (Fig. 27)

Combustible Walls: Cut a 9 3/8" H x 9 3/8" W (240 x 240mm) hole through the exterior wall and frame as shown.

Noncombustible Walls: Hole opening must be 7 1/2" (190mm) in diameter.

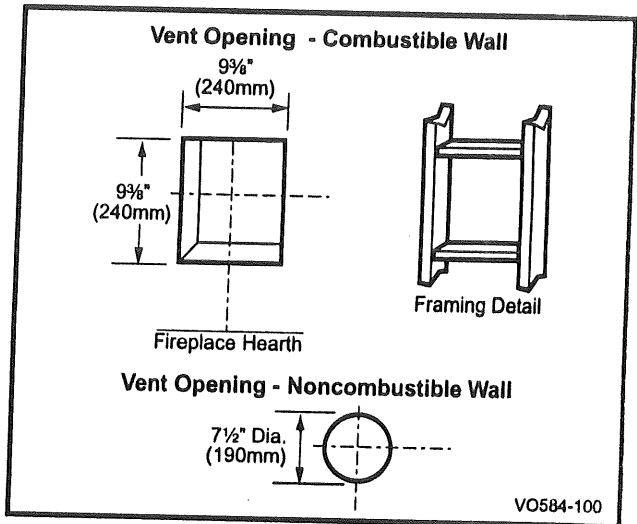


Fig. 27 Locate vent opening on wall.

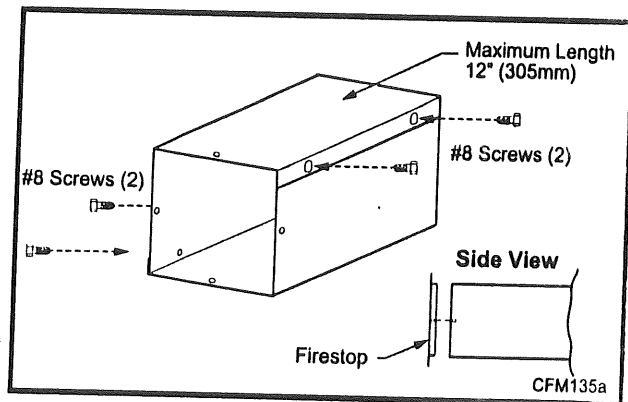


Fig. 28 Adjustable zero clearance sleeve.



Zero clearance sleeve is required only for combustible walls.

If installing a snorkel, a minimum 24" (610mm) vertical rise is necessary. The maximum horizontal run with the 24" (610mm) vertical pipe is 36" (915mm). This measurement is taken from the collar of the fireplace (or transition elbow) to the face of the exterior wall. Refer to the Sidewall Venting Graph for extended horizontal run if the vertical exceeds 24" (610mm).

1. Establish vent hole through the wall. (Page 17, Fig. 27)
2. Remove soil to a depth of approximately 16" (406mm) below base of snorkel. Install drain pipe. Install window well (not supplied). Refill hole with 12" (305mm) of coarse gravel, leaving a clearance of approximately 4" (102mm) below snorkel. (Fig. 31)
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 4" and 7" snorkel collars.
6. Slide the snorkel into the vent pipes and secure to the wall.
7. Level the soil so as to maintain a 4" (102mm) clearance below snorkel. (Fig. 31)

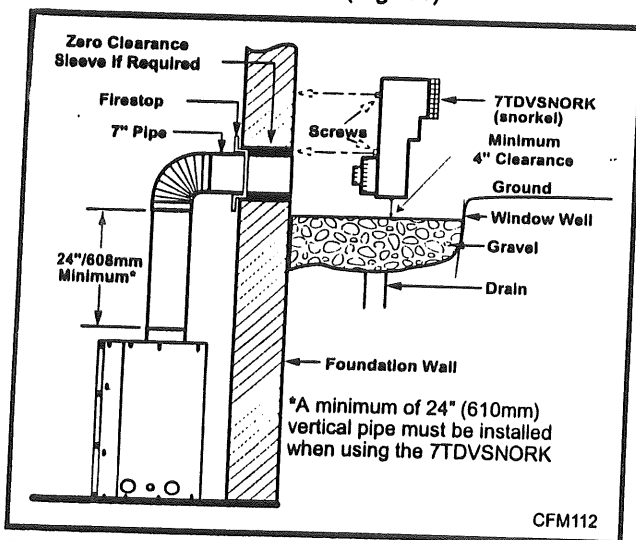


Fig. 31 Below grade installation.



Do not backfill around snorkel.

A clearance of at least 4" (102mm) must be maintained between the snorkel and the soil.

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. For a recessed foundation wall, it is necessary to extend vent pipes out as far as the protruding wall face. (Fig. 32)

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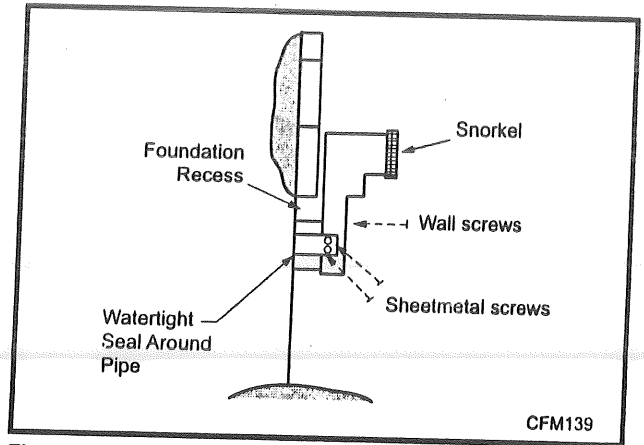


Fig. 32 Snorkel installation, recessed foundation.

Vertical Through-the-Roof Application

This Gas Fireplace has been approved for:

- Vertical installations up to 40' (12m) in height. Up to a 10' (3m) horizontal vent run can be installed within the vent system using a maximum of two 90° elbows. (Fig. 33)

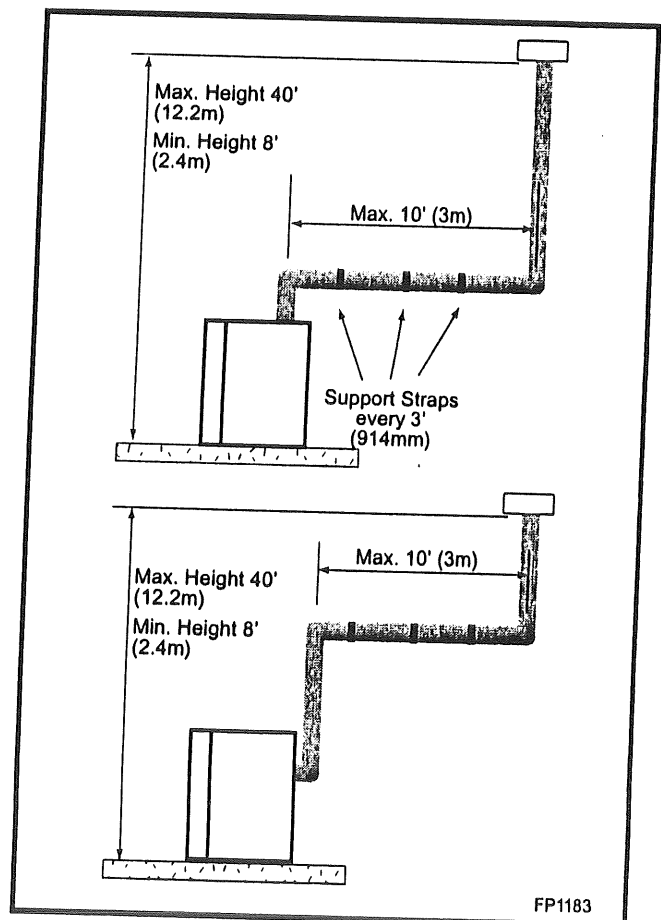


Fig. 33 Support straps for horizontal runs.

- Up to two (2) 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" (450mm).

Example: Maximum horizontal length

No elbows	=	10' (3m)
1 x 45° elbows	=	8.5' (2.6m)
2 x 45° elbows	=	7' (2.1m)

- A minimum of an 8' (2.5m) vertical rise is required.
- Two (2) sets of 45° elbows offsets may be used within the vertical sections. From 0 to a maximum of 8' (2.5m) of vent pipe can be used between elbows. (Fig. 34)
- 7DVCS supports offsets. (Fig. 34) This application requires you to first determine the roof pitch and use the appropriate starter kit. See Venting Components List.
- The maximum angular variation allowed in the system is 270°. (Fig. 34)
- Minimum height of the vent above the highest point of penetration through the roof is 2' (610mm). (Fig. 37) See Note 2 on Page 12.

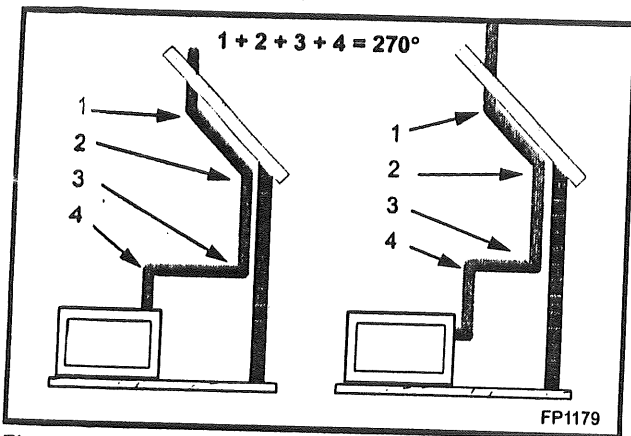


Fig. 34 Maximum elbow usage.

Vertical Through-the-Roof Installation

1. Locate your fireplace.
2. Plumb to center of the 4" flue collar from ceiling above and mark position.
3. Cut opening equal to 9½" x 9½" (240 x 240mm).
4. Proceed to plumb for additional openings through the roof. In all cases, the opening must provide a minimum of 1" (25mm) clearance to the vent pipe; i.e., the hole must be at least 9½" x 9½" (240 x 240mm).
5. Place fireplace into position.
6. Place firestop(s) #7DVFS or Attic Insulation Shield #7DVAIS into position and secure. (Fig. 35)

7. Install roof support and roof flashing, making sure the upper flange is below the shingles. (Fig. 36)
8. Install appropriate pipe sections until the venting is above the flashing. (Fig. 38)
9. Install storm collar and seal around the pipe.
10. Add additional vent lengths for proper height. (Fig. 37)
11. Apply high temperature sealant to 4" and 7" collars of vertical vent termination and install.



If there is a room above ceiling level, fire stop spacer must be installed on both the bottom and the top side of the ceiling joists. If an attic is above ceiling level a 7DVAIS (Attic Insulation Shield) must be installed.

The enlarged ends of the vent section always face downward.

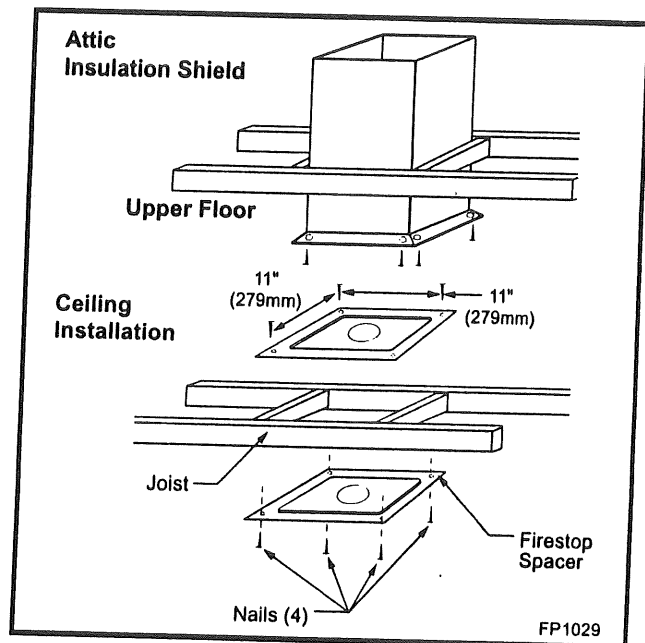


Fig. 35 Attic insulation shield and firestop spacer.

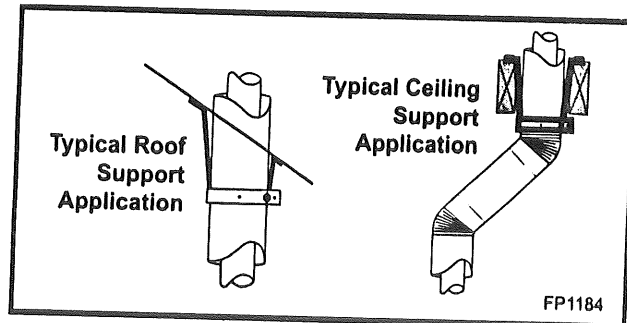


Fig. 36 Venting supports.

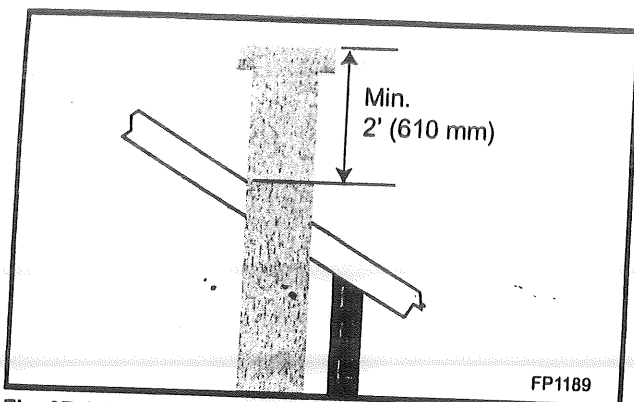


Fig. 37 Minimum termination to roof clearance.

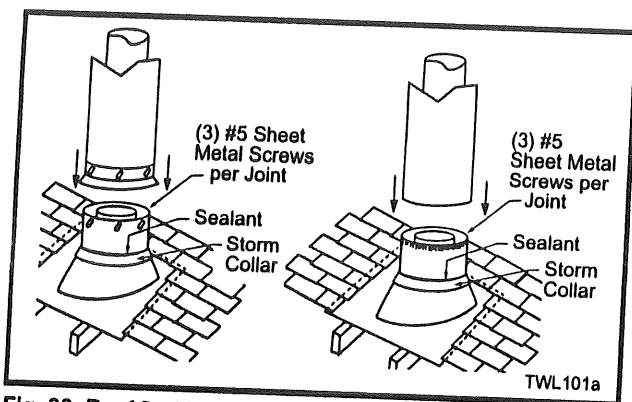


Fig. 38 Roof flashing.

Gravity Ducting System



The Gravity Ducting System is only applicable if installing the DVRT43 Direct Vent Fireplace.

Installation of the DVRT43 fireplace provides an opportunity to heat either rooms on an upper level or adjacent rooms on the same level without the use of a blower. However, with the internal blower installed, there will be some increase in warm air movement to rooms serviced by the gravity duct. (Fig. 39 and Fig. 40)

1. Plan the gravity duct run first. Use the following graph (Fig. 39) to ensure that the installation meets the recommendations. There is a maximum number of three (3) elbows in a run, however, the run must never go in a downward direction, as this can trap heat in the gravity vent system. Be aware when designing the ducting system that elbows will restrict airflow. Minimize the use of elbows in any installation.
2. It is recommended that the gravity ducting system be installed so that the grilles exit at the same vertical level. If the gravity venting system is installed so the ducting exits at different levels, a chimney effect may occur, resulting in uneven heat distribution.



Do not discharge directly into a wall or inside an enclosure.

3. Materials needed for the gravity ducting installation:
 - (2) 5" dia. duct to grille connector boots
 - (2) Wall Outlet grilles
 - 5" dia. rigid ("C" vent) or 5" dia. flexible metal ducting
 - 5" dia. elbows (maximum of 3 per run)
 4. Remove the gravity duct plugs from the top of the DVRT43 by taking out the two (2) screws around the perimeter of each plug, then removing the plugs from the fireplace.
- NOTE: Do not remove the center screw from the plugs.**
5. Install 5" rigid (C-Vent) or flexible metal ducting on the DVRT43 and run the ducting, observing the limitations shown in the graph. Be aware that flexible ducting is more restrictive to air flow than rigid ducting.
 6. Secure all joints with three (3) sheet metal screws. Seal all joints with foil-faced aluminium tape to prevent heat loss and maintain maximum air flow.
 7. Ensure the following clearances are maintained when installing the DVRT43 Gravity Ducting System.

Clearance to Combustibles

Clearance between ducting and combustibles = 1" (25mm)

Clearance between grille adapter and combustibles = 0" (0mm)



Never allow a downward slope in any section of the ducting.

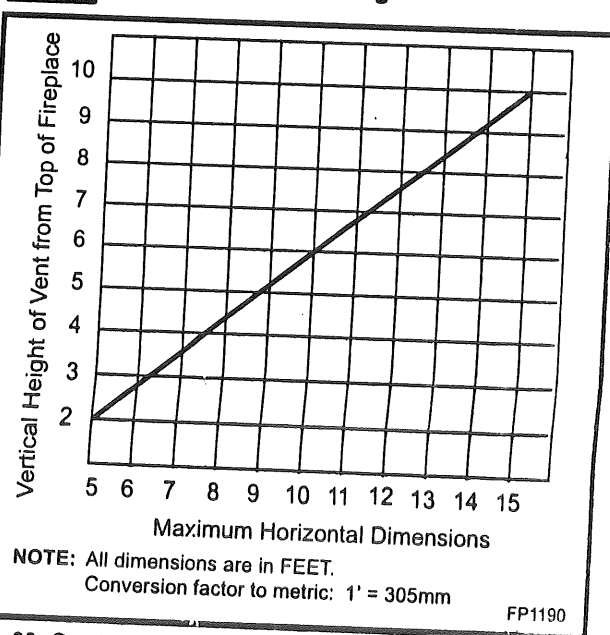


Fig. 39 Gravity vent diagram.