



Direct Vent Gas Fireplace Heaters

Model 534AN (Natural Gas)

Model 534AP (Propane)



Installation and Owner's Manual

*Please read this manual before installing and operating this heater
This manual should remain with the homeowner*

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

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

-WHAT TO DO IF YOU SMELL GAS

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

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

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

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

This appliance is a domestic room heating appliance. It must not be used for any other purpose such as drying clothes etc.

This appliance is suitable for installation in a bedroom or bed sitting room.

CONTENTS

1. SAFETY INFORMATION	3
2. OPTIONS	4
2.1. Appliance styles	4
2.2. Optional outer trims	4
2.3. Additional optional features	4
2.4. Venting options	4
3. GENERAL	6
3.1. Approvals & codes	6
3.2. Ratings	6
3.3. Wall Thickness	6
4. LOCATION	7
4.1. Framing	7
4.2. Rear Vent Connection, Flat on Wall	7
4.3. Rear Vent Connection, Flat on Wall with Snorkel Termination	7
4.4. Rear Vent Connection, Vertical Vent Rise with Horizontal Rear Termination	8
4.5. Rear Vent Connection, Vertical Vent Rise with Horizontal Snorkel Termination	8
4.6. Corner Location, Rear Vent Connection, Horizontal Vent Run Only	9
4.7. Corner Location, Rear Vent Connection, Vertical Rise, Horizontal Termination	9
4.8. Rear Vent Connection, Vertical Rise, Through the Roof Termination	9
4.9. Rear Vent Connection, Vertical Rise with Offset, Through the Roof Termination	10
4.10. Top Vent Connection, Horizontal Rear Termination	11
4.11. Top Vent Connection, Horizontal side termination	12
4.12. Top Vent Connection, Horizontal Side or Rear Snorkel Termination	12
4.13. Top Vent Connection, Corner Location, Horizontal Termination, 45° Pipe Run	12
4.14. Top Vent Connection, Through the Roof Termination *	13
4.15. Top Vent Connection, Offset and Through the Roof Termination *	13
4.16. Vent Location	14
5. SUPPLY GAS	15
6. PACK CONTENTS	15
7. APPLIANCE PREPARATION	17
7.1. Window Removal	17
7.2. Ignition Spark Check	17
7.3. Flame Control Motor Check	17
7.4. Rear Vent Outlet positioning	18
7.5. # 817VAK Pipe Adapter Fitting	18
7.6. Top Heat Shield & Stand-off Fitting	19
7.7. Support Angle Fitting	19
7.8. Attaching Air Restrictors	20
7.9. Attaching Rear Ceramic Support	21
7.10. Attaching to the Framing	21
8. INSTALLATIONS WITH HORIZONTAL TERMINATION – INSTALLING TO WALL	22
8.1. Flat On Wall Installations With Valor #551DVK Terminal	22
8.2. Wall Opening	23
8.3. Valor Terminal #551DVK - Preparing Wall Plates	23
8.4. Dura-vent Terminals – Installing to wall	23
9. INSTALLATIONS WITH THROUGH THE ROOF VERTICAL TERMINATION	24
10. SWITCH FITTING	25
10.1. For wall switch as only active switch	25
10.2. For active remote control with or without active wall switch	25
11. GAS SUPPLY INSTALLATION & AERATION SETTING	26
11.1. Gas Supply Installation	26
11.2. Aeration Setting Check	26
12. CERAMIC FUEL BED INSTALLATION	27
12.1. Ceramic Walls Installation	27
12.2. Ceramic Logs Installation	27
13. WINDOW REFITTING & CHECKING	28
14. OPERATION CHECKS	28
15. FRONT INSTALLATION	29
15.1. Additional Optional 3 or 4 Sided Trims	29
15.2. #601SFB Standard Metal Front	29
15.3. #602CFB Cast Iron Front	29

1. SAFETY INFORMATION

WARNING: Do not operate the appliance with the glass front removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.

(The whole window unit may be temporarily removed by the owner for cleaning the interior of the firebox, etc.)

Only the authorized Valor replacement window unit listed in the repair parts booklet must be fitted - never use substitutes.

If the glass is damaged, search inside and adjacent to the appliance for any glass fragments.

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 temperatures and should stay away to avoid burns or clothing ignition.

Young children should be carefully 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.

This appliance must be installed and repaired by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance are kept clean.

Keep curtains, clothing, furniture and other flammable materials a safe distance from all parts of the appliance and its vent system.

Keep the appliance area well clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Never attempt to burn paper or any other material in the appliance.

The venting terminal must not be recessed into a wall or siding.

The vent terminal on the outside wall must be kept free from obstructions. No objects should be placed within 2 feet (60cm) of the vent terminal. The terminal is hot during operation and requires a guard if it is accessible to any person. An approved Valor guard is available from your dealer.

During extreme weather conditions ensure that the vent outlet is free from ice and snow before attempting to light.

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

NOTE

When operating your new fireplace for the first time, some vapors may be released due to the burning of curing compounds used in the manufacture of the appliance. They may cause a slight odor and could cause the flames to be the full height of the fire box, or even slightly higher, for the first few hours of operation. It is also possible that these vapors could set off any smoke detection alarms in the immediate vicinity. These vapors are quite normal on new appliances and are totally harmless but you may wish to open windows into the room to reduce the vapor/odor build up. After a few hours use the vapors will have disappeared and the flames will be at their normal height.

During the first hour of use, the ceramic firebox walls may go a smoky color. This is not soot. It is a temporary effect lasting only while the ceramic material becomes stabilized. The walls will revert to their initial color after your fire has been used for one or two hours.

2. OPTIONS

Heater engine unit #534EAN is used with all natural gas installations.

Heater engine unit #534EAP is used with all propane installations.

2.1. Appliance styles

Standard metal front. Black – **Kit #601SFB**

Cast iron front. Black – **Kit #602CFB.**

One of the above kits must be used with each installation.

2.2. Optional outer trims

3 sided Black – **Kit #603FSK**

3 sided Champagne – **Kit# 604FSK**

4 sided Black – **Kit #605FSK**

4 sided Champagne – **Kit# 606FSK**

2.3. Additional optional features

Remote control unit Hand operated control for flame & heat adjustment. It may be fitted before the fireplace is installed or retrofitted at a later date - **Kit #553RCK.**

Circulating fan Having variable speed and temperature control, it is designed to boost the natural convection process through the appliance. It may be fitted before the fireplace is installed or retrofitted at a later date – **Kit #555CFK.**

Wall switch extension Optional 10ft. long wire kit that enables the switch to be sited on a wall further away from the appliance than the standard switch. The standard switch has 4ft. of wire.

Natural Gas Conversion kit **Kit #609WEK** For conversion from propane to natural gas – **Kit #607NGK.** Intended primarily for post installation conversion in areas where natural gas was not available at the time of initial installation.

2.4. Venting options

2.4.1. Direct vent installations

One or more of the accessories listed below must be used for each installation. See the “Location” section of this manual.

<u>Kit#</u>	
551DVK	Valor horizontal terminal kit provides up to 26” (66cm) horizontal run. Complete with wall plates and clearance shield approved for a maximum 14” (36cm) combustible wall.
817VAK	Adapter for Dura-vent pipes
984	Dura-vent DV GS horizontal square terminal cap
942	Dura-vent DV GS wall thimble kit
945B	45° Dura-vent DV GS elbow
990B	90° Dura-vent DV GS elbow
908B	6” Dura-vent DV GS pipe length
907B	9” Dura-vent DV GS pipe length
906B	12” Dura-vent DV GS pipe length
904B	24” Dura-vent DV GS pipe length
903B	36” Dura-vent DV GS pipe length
902B	48” Dura-vent DV GS pipe length
911B	Adjustable 11”-14 ⁵ / ₈ ” Dura-vent DV GS pipe length
981	Dura-vent DV GS snorkel termination unit – 36” rise
982	Dura-vent DV GS snorkel termination unit – 14” rise
991	Dura-vent DV GS high wind vertical termination cap
940	Dura-vent DV GS round ceiling support
941	Dura-vent DV GS cathedral ceiling support box
963	Dura-vent DV GS ceiling firestop
943	Dura-vent DV GS adjustable roof flashing. Roof pitch 0/12 – 6/12
943S	Dura-vent DV GS steep roof flashing. Roof pitch 7/12 – 12/12
953	Dura-vent DV GS storm collar
988	Dura-vent DV GS wall strap
835TG	Terminal Guard

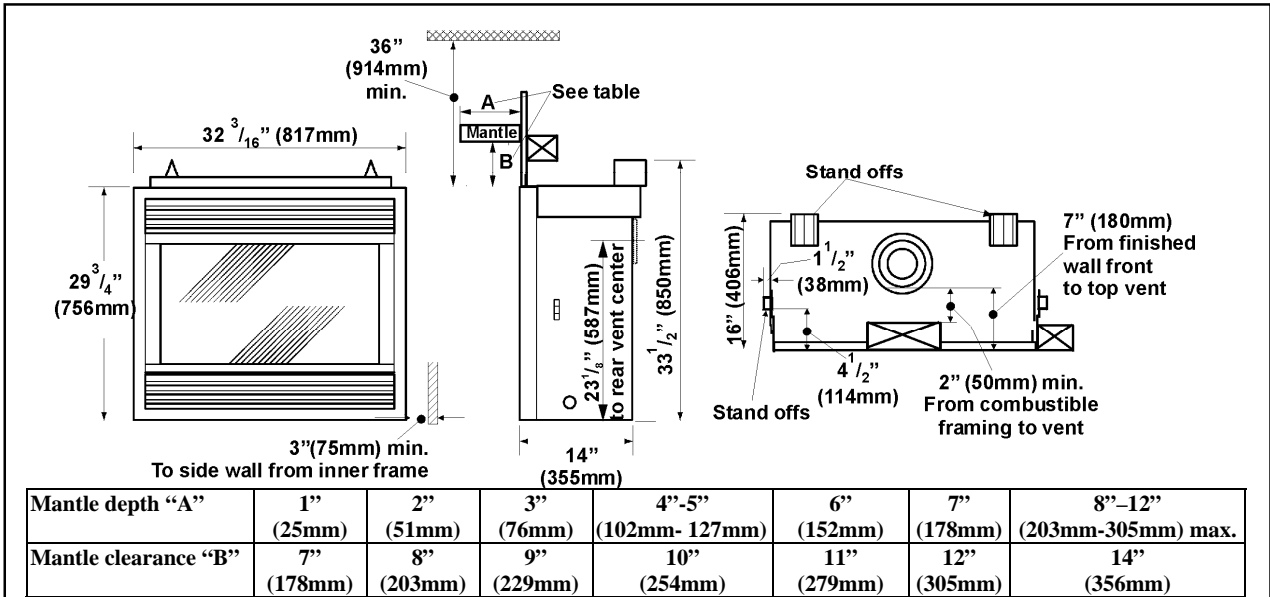


Figure 1 Major dimensions & clearances without optional trims (Shown with #601SFB Front)

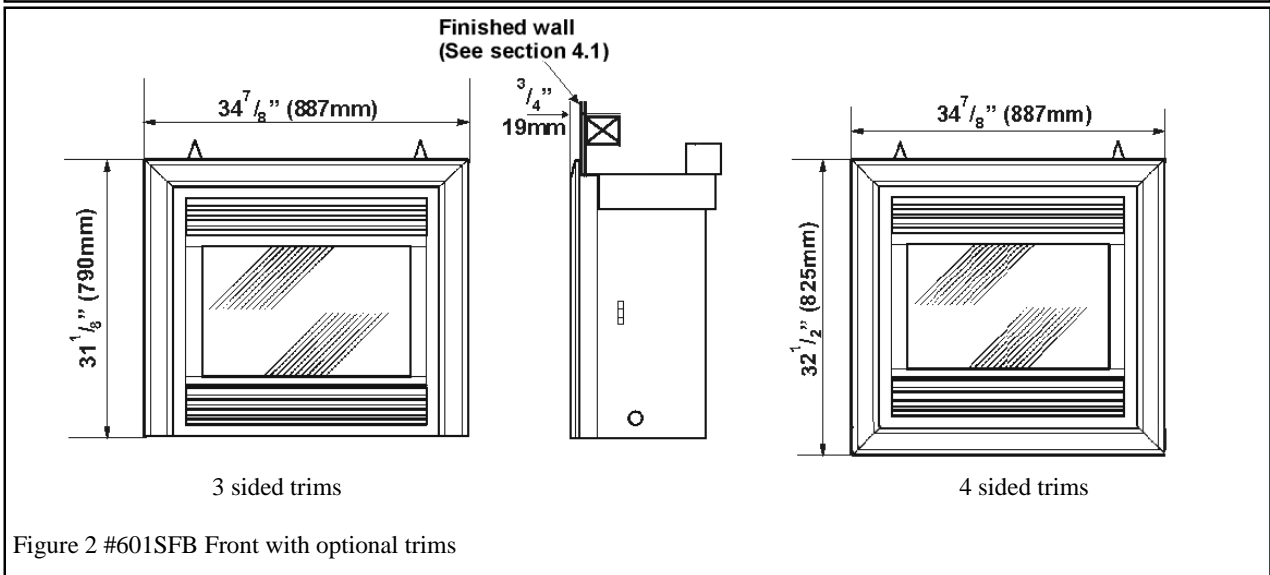


Figure 2 #601SFB Front with optional trims

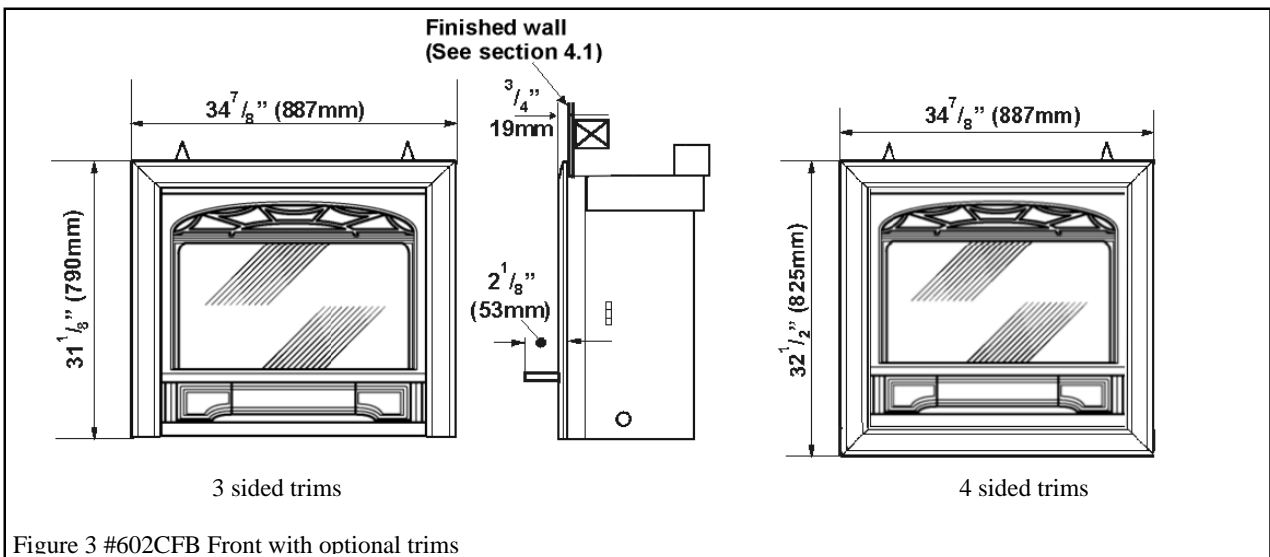


Figure 3 #602CFB Front with optional trims

3. GENERAL

3.1. Approvals & codes

These appliances are certified by C.S.A. for use in Canada and the USA. These appliances are for installation directly venting through an outside wall or through the roof.

Model 534AN is for use with natural gas.

Model 534AP is for use with propane. It can be converted for use with natural gas with kit #607NGK.

These appliances comply with *CGA P.4.1, Testing method for measuring annual fireplace efficiencies.*

The installation must conform with local codes or, in the absence of local codes with the *National Fuel Gas Code, ANSI Z223.1* or the *Canadian installation code CAN/CGA-149*. Only qualified licensed or trained personnel should install these appliances.

These appliances, 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*.

3.2. Ratings

Model	534AN	534AP
Gas	Natural	Propane
Altitude (Ft)	0-4500 ¹	
Input Max. (Btu/h)	24,000	24,000
Input Min (Btu/h)	6,500	13,000
Manifold pressure (in.w.c.)	3.8-4.2	9.3-9.7
Min. Supply pressure (in. w.c.)	5.0	11.0
Max. Supply pressure (in. w.c.)	10.5	14.0

¹Tested to *CAN/CGA - 2.17 Gas fired appliances for use at high altitudes*. In the USA, installations may require deration over 2000ft - Check local codes.

3.3. Wall Thickness

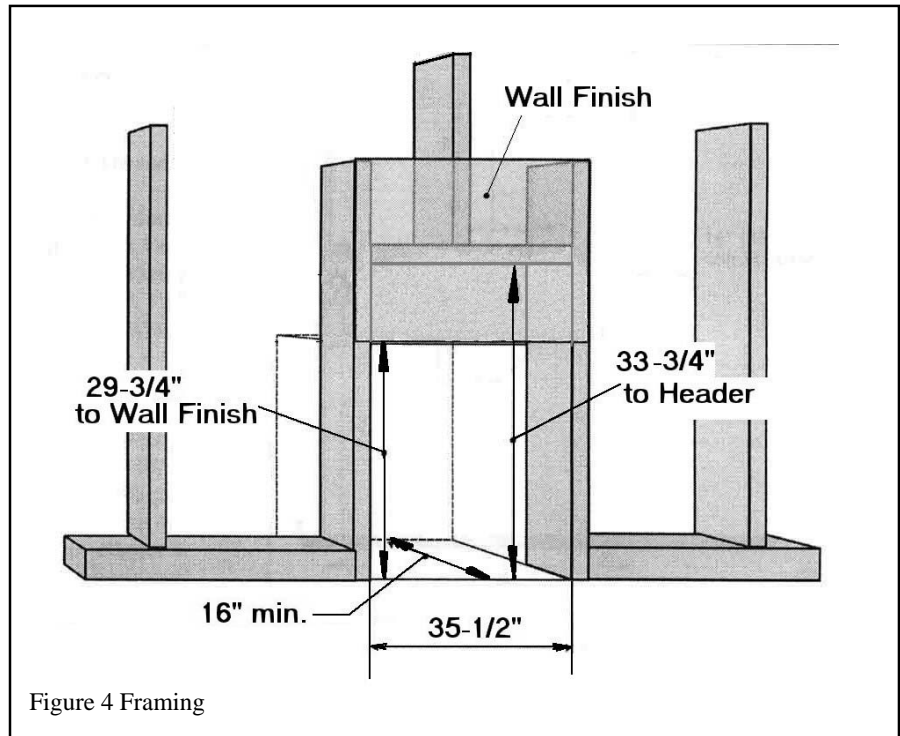
The vent system (when horizontally terminated) is approved to pass through a combustible wall up to 14" (36cm) thick. A non-combustible wall can be any thickness up to the maximum horizontal run of vent pipe allowed for the particular installation – See section 4.

4. LOCATION

4.1. Framing

The framing dimensions are shown in figure 4.

- A non-combustible hearth is not necessary in front of this appliance.
- All combustible materials must be outside the dimensions shown in figure 4.



4.2. Rear Vent Connection. Flat on Wall

See figure 5.

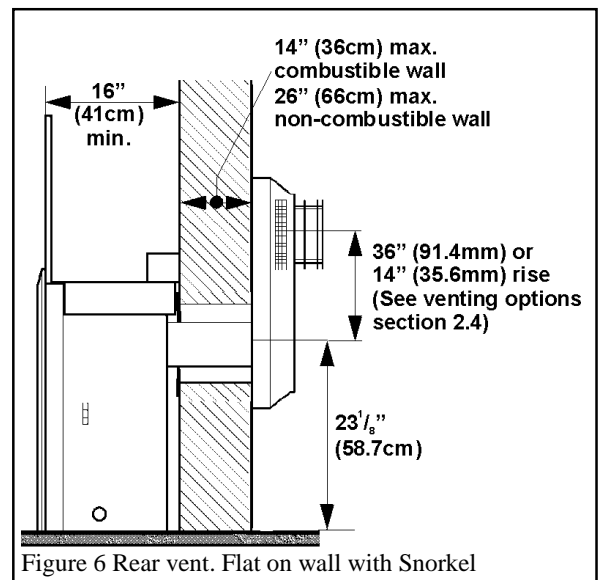
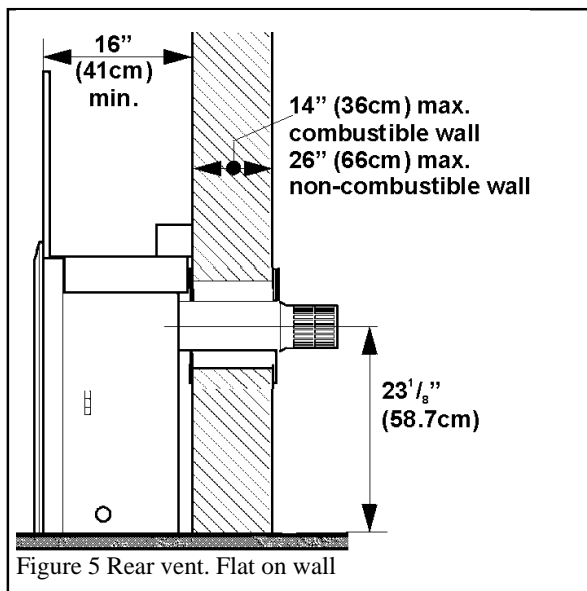
Requires standard vent kit #551DVK only.

The horizontal vent run can not be extended by the use of any vent accessory pipes.

4.3. Rear Vent Connection. Flat on Wall with Snorkel Termination

See figure 6.

For use on horizontal installations where the outside ground level is too close to the standard terminal. Adapter #817VAK, a Dura-vent pipe length and snorkel termination #981 or #982 will be required (See venting options section of this manual).



4.4. Rear Vent Connection, Vertical Vent Rise with Horizontal Rear Termination

See figure 7.

Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories.

Adapter #817VAK, two 90° vent elbows #990B and Dura-vent pipe lengths will be required.

(See venting options section of this manual).

The location requirements are shown in the table and graph below and figure 7.

	Minimum	Maximum
A: From floor to top of vent duct	4ft 3½” (131cm)	9ft 3½” (283cm)
B: Frame front face to outside wall	-	12ft 5½” (380cm)
C: Frame front face to inside wall	2ft 5½” (75cm)	-
D: Vertical pipe run between elbows	12” (30.5cm)	6ft (183cm)
E₁+E₂: Total horizontal pipe run including terminal pipe but excluding adapter and elbows	-	10ft (305cm) with no elbows in horizontal run

F: Clearance to combustible materials above horizontal pipe run inside building (Outside wall shields/thimbles)

1” (12.7cm)	-
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G: Clearance to combustible materials below horizontal pipe run

1 5/16” (3.3cm)	-
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H: Clearance to combustible materials all round vertical pipe run and at sides of horizontal pipe run

2” (5.1cm)	-
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For installations with a horizontal rear termination, the combination of horizontal and vertical vent pipes must be within the allowed area shown in Graph 1. A minimum vertical pipe run of 12” is necessary.

Example a: If a vertical rise of 3ft is required, the horizontal run must not be more than 7ft 9”.

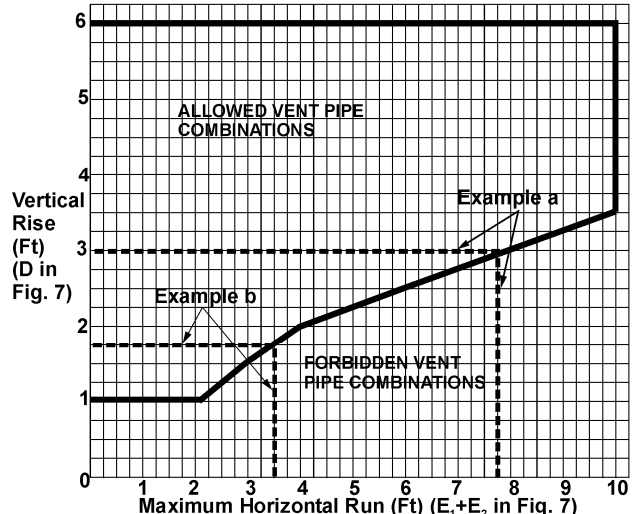
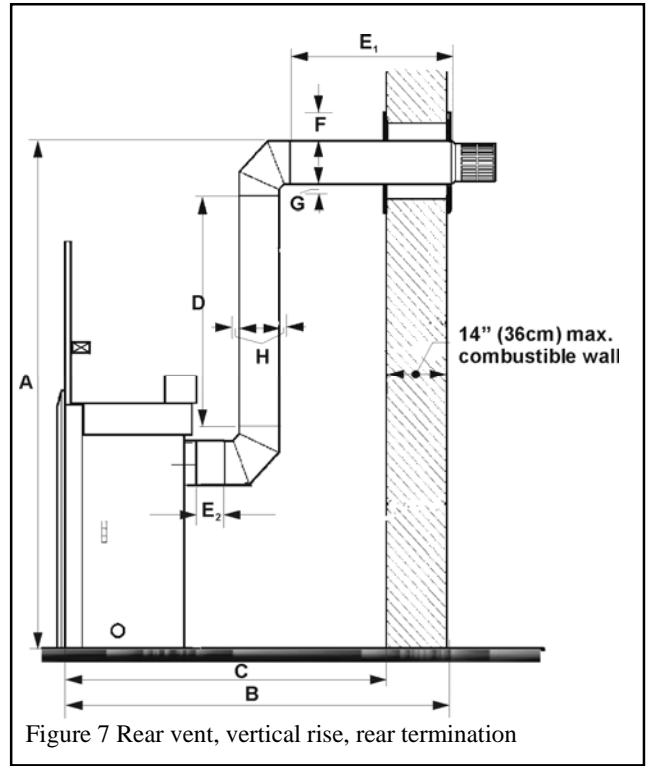
Example b: If a horizontal run of 3ft 6” is required, the vertical run must be at least 1ft 9”.

If the horizontal pipe run is redirected using a further 90°elbow, the maximum total horizontal run allowed is reduced by 3ft. to 7ft. Redirection using 45° elbows reduces the maximum total horizontal run by 18” per elbow.

4.5. Rear Vent Connection, Vertical Vent Rise with Horizontal Snorkel Termination

For “semi-basement” situations where a snorkel accessory alone does not raise the termination sufficiently above ground level. The dimensional requirements in section 4.4, figure 7 and graph 1 apply.

Adapter #817VAK, two 90° vent elbows #990B, Dura-vent pipe lengths and a Dura-vent snorkel termination will be required. #942 Dura-vent thimble kit may also be necessary. (See venting options section of this manual)



Graph 1

4.6. Corner Location, Rear Vent Connection, Horizontal Vent Run Only

See figure 8.

Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories. Adapter #817VAK and 45° Dura-vent elbow # 945B will be required. (See venting options section of this manual.)

4.7. Corner Location, Rear Vent Connection, Vertical Rise, Horizontal Termination

See figure 9.

Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories. Adapter #817VAK, two 90° Dura-vent elbows #990B and Dura-vent pipe lengths will be required. (See venting options section of this manual).

All the vent pipe dimensional limits are as section 4.4.

4.8. Rear Vent Connection, Vertical Rise, Through the Roof Termination

See figure 10.

Adapter #817VAK, one 90° vent elbow #990B, Dura-vent pipe lengths, a vertical vent terminal and roof flashing will be required. Various other ceiling or roof items may be necessary depending on the particular installation (See venting options section of this manual).

Note

1. The distance from the roof to the lowest terminal discharge opening depends on the roof pitch and must be in accordance with the Dura-vent instructions supplied with the termination unit.
2. The venting system for these appliances is considered to be a *Special Venting System*. The rule in the Installation Code CAN/CGA-B149 requiring a minimum vent height of 2ft above any portion of a building within 10ft does not, therefore, apply.

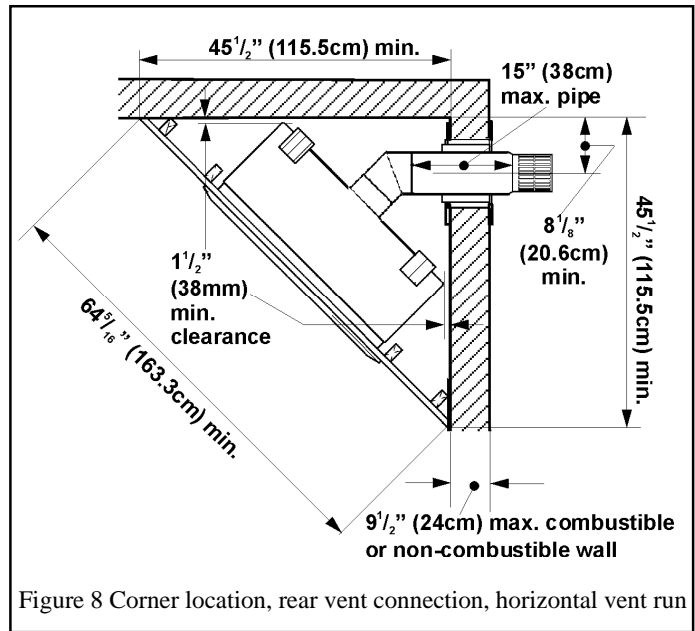


Figure 8 Corner location, rear vent connection, horizontal vent run

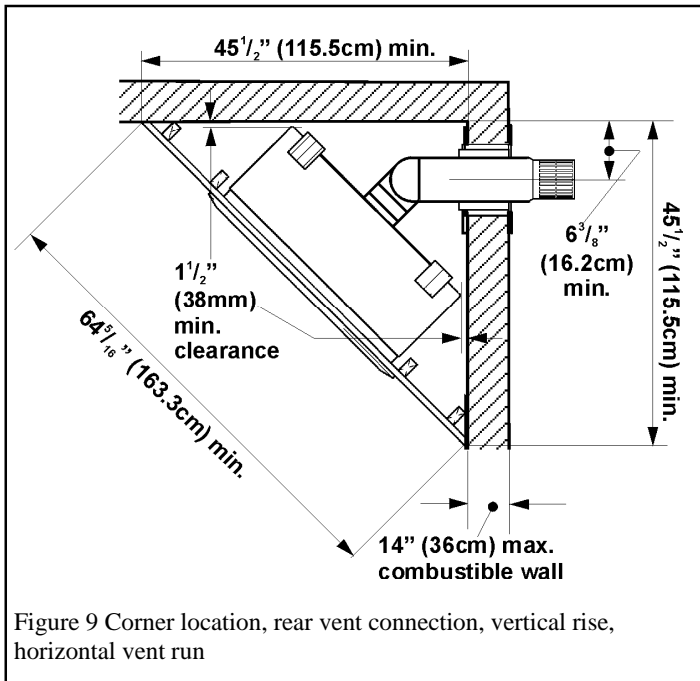


Figure 9 Corner location, rear vent connection, vertical rise, horizontal vent run

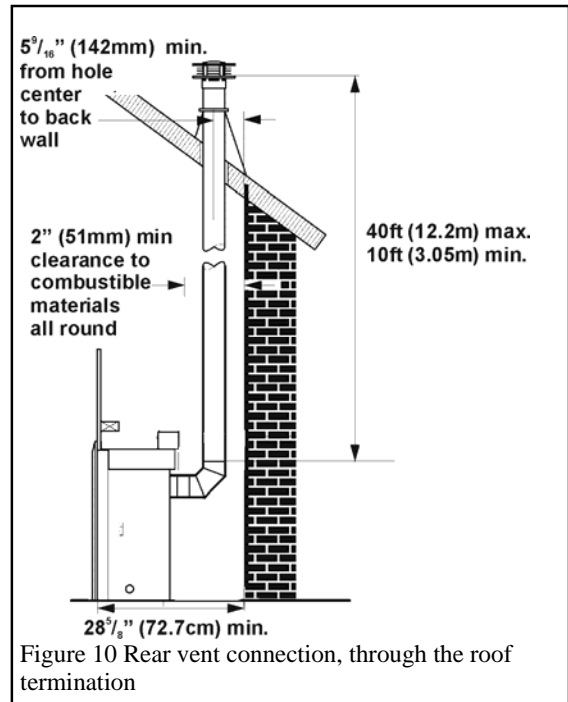


Figure 10 Rear vent connection, through the roof termination

4.9. Rear Vent Connection, Vertical Rise with Offset, Through the Roof Termination

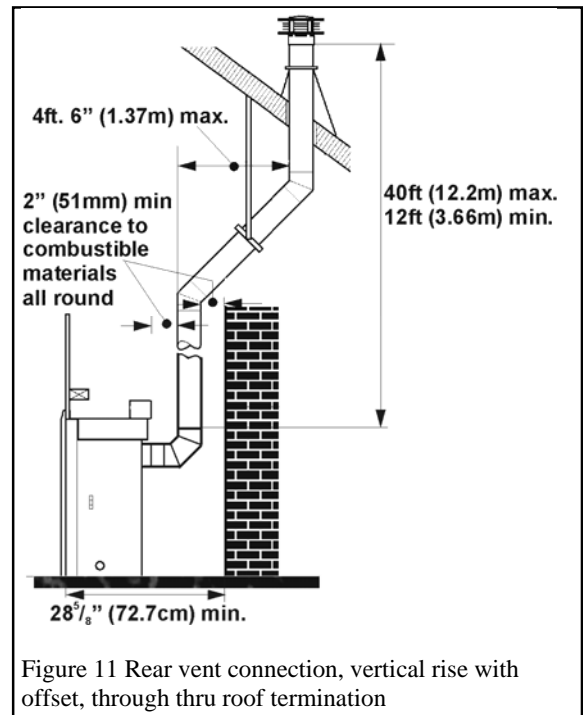
See figure 11.

For situations where offset is necessary in an attic to avoid obstructions or allow useful space.

Adapter #817VAK, one 90° vent elbow #990B, two 45° vent elbows #945B, Dura-vent pipe lengths, a vertical vent terminal and roof flashing will be required. Various other ceiling or roof items may be necessary depending on the particular installation (See venting options section of this manual).

Note

1. The distance from the roof to the lowest terminal discharge opening depends on the roof pitch and must be in accordance with the Dura-vent instructions supplied with the termination unit.
2. The venting system for these appliances is considered to be a **Special Venting System**. The rule in the Installation Code CAN/CGA-B149 requiring a minimum vent height of 2ft above any portion of a building within 10ft does not, therefore, apply.



4.10. Top Vent Connection, Horizontal Rear

Termination

See figure 12.
 Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories.
 Adapter #817VAK, one 90° vent elbow #990B and Dura-vent pipe lengths will be required.
 (See venting options section of this manual).
 The location requirements are shown in the table and graph below and figure 12.

	Minimum	Maximum
A: From floor to top of vent duct	3ft 7 ⁹ / ₁₆ " (111cm)	9ft 1 ⁹ / ₁₆ " (278cm)
B: Frame front face to outside wall	-	11ft 4" (345cm)
C: Frame front face to inside wall	16" (75cm)	-
D: Vertical pipe run between elbows	6" (15.2cm)	6ft (183cm)
E: Total horizontal pipe run from elbow (including terminal pipe)	-	10ft (305cm) with no elbows in horizontal run
F: Clearance to combustible materials above horizontal pipe run inside building (Outside wall shields/thimbles)	1" (12.7cm)	-
G: Clearance to combustible materials below horizontal pipe run	1 ⁵ / ₁₆ " (3.3cm)	-
H: Clearance to combustible materials all round vertical pipe run and at sides of horizontal pipe run	2" (5.1cm)	-

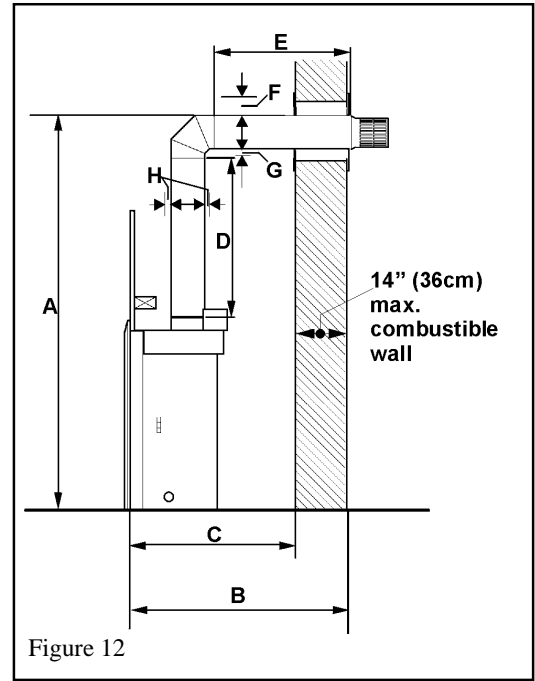
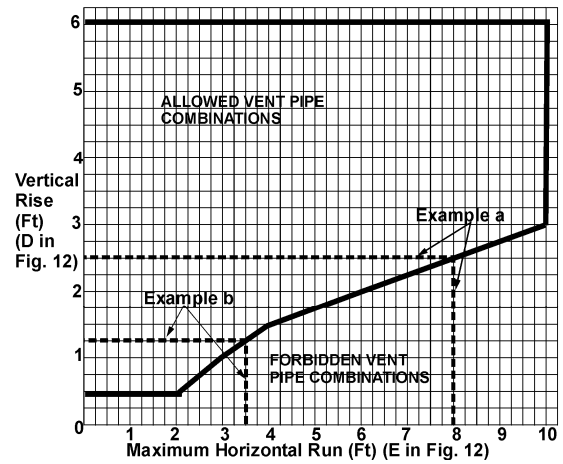


Figure 12



Graph 2

For installations with a horizontal rear termination, the combination of horizontal and vertical vent pipes must be within the allowed area shown in Graph 2. A minimum vertical pipe run of 6" is necessary.

Example a: If a vertical rise of 2ft 6" is required, the horizontal run must not be more than 8ft".

Example b: If a horizontal run of 3ft 6" is required, the vertical run must be at least 1ft 3".



The horizontal vent pipe run may be redirected by using elbows up to a total of 180° but the maximum horizontal run (E in figure 5 & graph 1) is reduced by 18" for every 45°. For example if two 90° elbows are used as in figure 13 the maximum horizontal run is reduced by 3ft per elbow –
 Total reduction = 6ft.

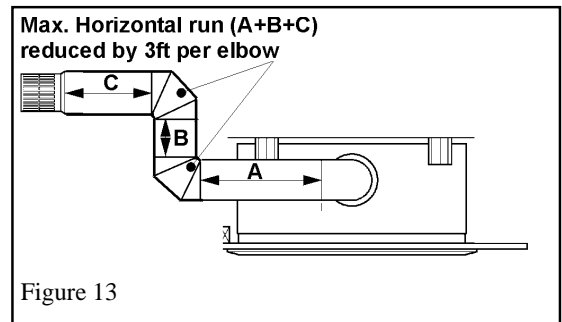


Figure 13

4.11. Top Vent Connection, Horizontal side termination

The vent pipe dimensional requirements in section 4.10 apply.

The minimum floor location is shown in figure 14.

Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories.

Adapter #817VAK, one 90° vent elbow #990B and Dura-vent pipe lengths will be required.

(See venting options section of this manual).

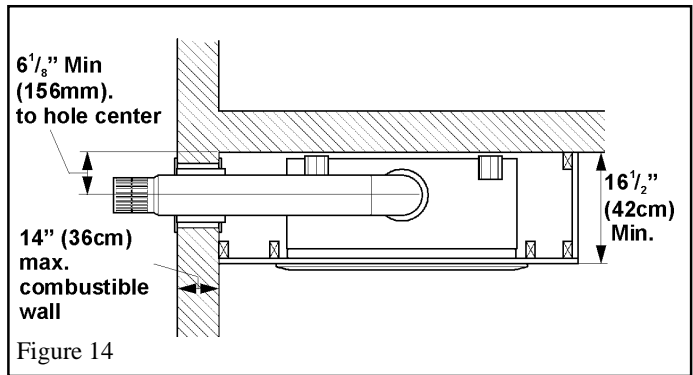


Figure 14

4.12. Top Vent Connection, Horizontal Side or Rear Snorkel Termination

Side or Rear Snorkel Termination

The dimensional requirements in sections 4.10 and 4.11 apply.

Adapter #817VAK, one 90° vent elbow #990B, a Dura-vent snorkel termination and Dura-vent pipe lengths will be required.

#942 Dura-vent thimble kit may also be necessary.

(See venting section of this manual).

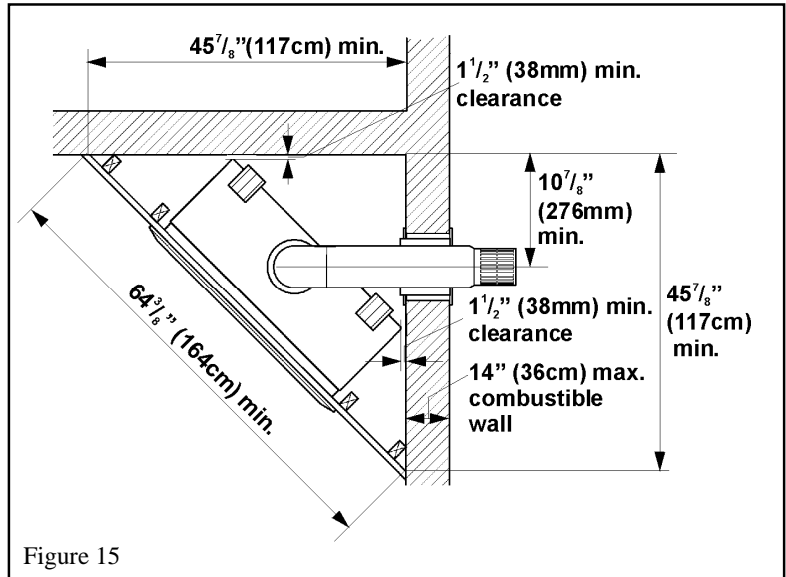


Figure 15

4.13. Top Vent Connection, Corner Location, Horizontal Termination, 45° Pipe Run

The vent pipe dimensional requirements in section 4.10 apply.

The minimum corner location is shown in fig. 15.

Can be used with either #551DVK standard vent kit or #984 Dura-vent terminal cap and accessories.

Adapter #817VAK, one 90° vent elbow #990B and Dura-vent pipe lengths will be required. (See venting section of this manual).

4.14. Top Vent Connection, Through the Roof

Termination*

See figure 16.

Adapter #817VAK, Dura-vent pipe lengths, a vertical vent terminal and roof flashing will be required. Various other ceiling or roof items may be necessary depending on the particular installation (See venting options section of this manual).

4.15. Top Vent Connection, Offset and

Through the Roof Termination*

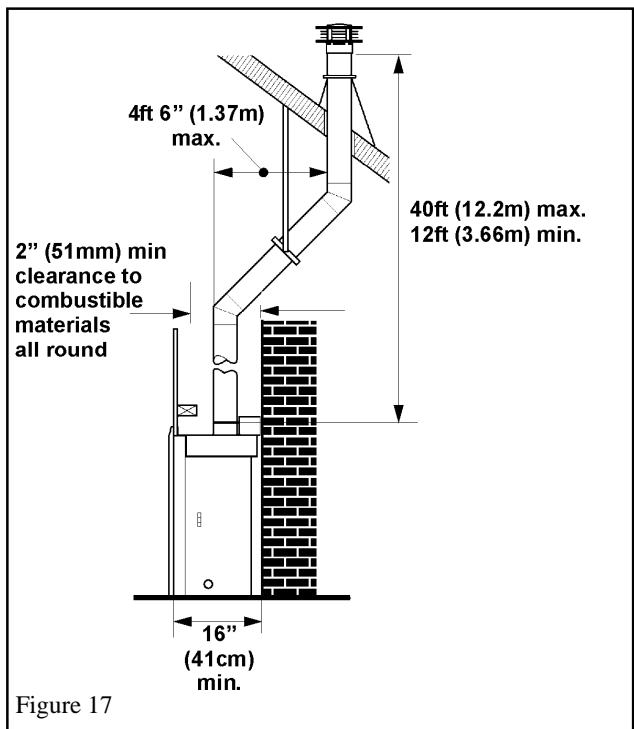
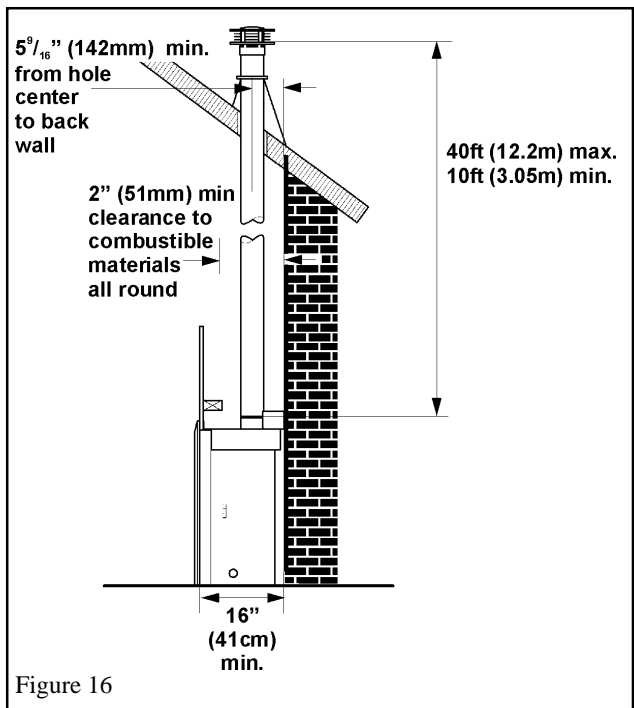
See figure 17.

For situations where offset is necessary in an attic to avoid obstructions or allow useful space.

Adapter #817VAK, two 45° vent elbows #945B, wall straps, a vertical vent terminal, roof flashing and Dura-vent pipe lengths will be required. Various other ceiling or roof items may be necessary depending on the particular installation (See venting options section of this manual).

*Note

1. The distance from the roof to the lowest terminal discharge opening depends on the roof pitch and must be in accordance with the Dura-vent instructions supplied with the termination unit.
2. The venting system for these appliances is considered to be a *Special Venting System*. The rule in the Installation Code CAN/CGA-B149 requiring a minimum vent height of 2ft above any portion of a building within 10ft does not, therefore, apply.



4.16. Vent Location

- The vent terminal must be located on an outside wall or through the roof.
- This direct vent appliance is designed to operate when an undisturbed airflow hits the outside vent terminal from any direction.
- The minimum clearances from this terminal that must be maintained when located on an outside wall are shown in figure 18. Any reduction in these clearances could result in a disruption of the airflow or a safety hazard. Local codes or regulations may require greater clearances.
- The vent terminal must not be recessed into a wall or siding.
- The vent terminal should be positioned where it will not be covered by any snowdrifts.

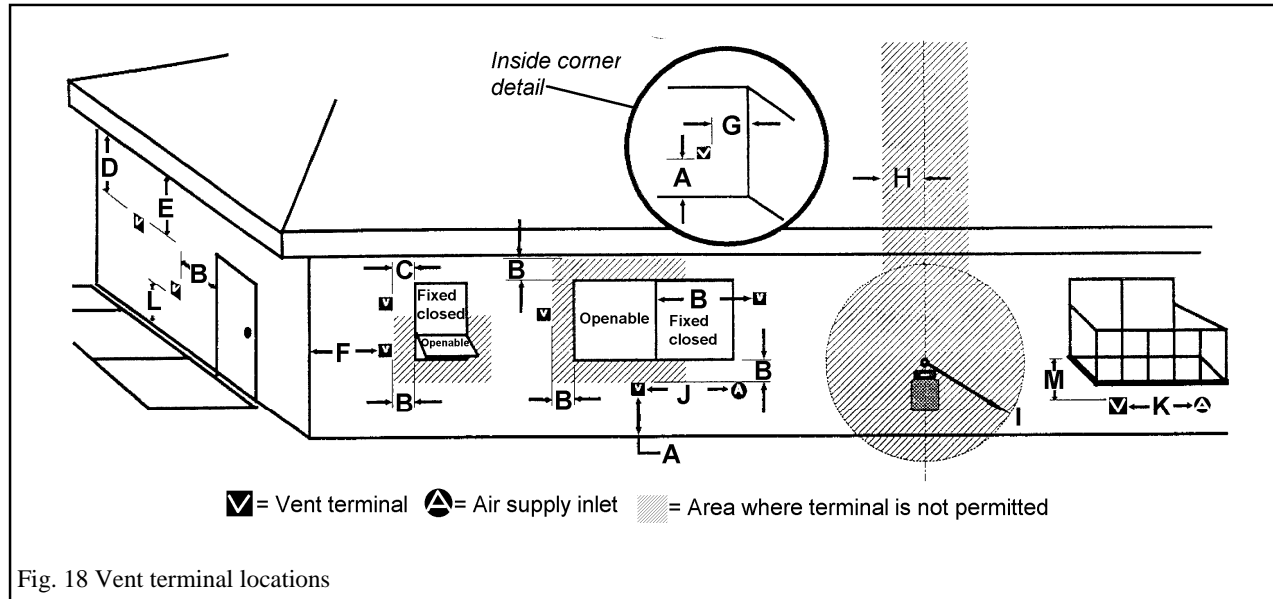


Fig. 18 Vent terminal locations

KEY	VENT TERMINAL LOCATIONS - MINIMUM DISTANCES <i>See figure 18</i>	MINIMUM CLEARANCE	
		Ins	Cms
A	Clearance above grade, verandah, porch, deck or balcony	12	30
B	Clearance to window or door that may be opened	12	30
C	Clearance to permanently closed window (recommended to prevent condensation on window)	12	30
D	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal	18	46
E	Clearance to unventilated soffit	12	30
F	Clearance to outside corner	12	30
G	Clearance to inside corner	12	30
H	Horizontal clearance to center-line of meter/regulator assembly located below the terminal	36	90
I	Clearance to service regulator vent outlet	72	180
J	Clearance to non-mechanical air supply inlet to the building or the combustion air inlet to any other appliance	12	30
K	Clearance to a mechanical air supply inlet	72	180
L	Clearance above paved sidewalk or a paved driveway located on public property. <i>Note: A vent must not terminate directly above a sidewalk or paved driveway, which is located between two single family dwellings and serves both dwellings.</i>	84	210
M	Clearance under a verandah, porch, deck or balcony <i>Only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor.</i>	12	30

Note: Local codes and regulations may require different clearances.

5. SUPPLY GAS

Heater engine unit #534EAN is used with all natural gas installations.

Heater engine unit #534EAP is used with all propane installations.

The supply pressure must be between the limits shown in section 3.2 of this manual.

The supply connection is $\frac{3}{8}$ " NPT.

The opening for the gas supply line is at the rear left corner of the appliance.

6. PACK CONTENTS

See figure 19

#534EAN or #534EAP Engine unit

- 1 Appliance engine unit fitted with window
- 1 Ceramic ash bed
- 5 Ceramic logs
- 1 Firebox ceramic rear wall
- 2 Firebox ceramic side walls
- 1 Wall switch & plate (wired)
- 1 Wire harness
- 1 Battery holder
- 4 1.5V AA batteries
- 1 Port cover
- 2 Frame side fixing brackets
- 1 Ash bed rear support
- 2 Restrictor plates type "A"
- 2 Restrictor plates type "B"
- 2 Restrictor plates type "C"
- 1 Gas inlet pipe connection adapter
- 1 Top heat shield panel with blanking plate
- 1 Frame top support angle
- 2 Stand-off brackets
- 2 Screws for wall switch plate
- 4 Screws for frame side fixing brackets
- 2 Screws for top heat shield panel
- 3 Screws for frame top support angle
- 6 Screws for stand-off brackets
- 2 Screws for vent fixing
- 4 Woodscrews for fixing appliance to studding

#601SFB Standard metal front (Alternative)

- 1 Upper louver unit
- 1 Lower louver unit
- 2 Side channels
- 2 Hinge studs
- 2 Hinge spacers
- 2 Magnet counterplates

#602CFB Cast iron front (Alternative)

- 1 Top casting unit
- 1 Bottom casting unit

#553RCK Remote control unit (Additional option)

- 1 Receiver unit
- 1 Remote control hand unit
- 1 9V Battery

#609WEK Wall switch extension wires (Additional option)

- 1 10ft long extension wire harness

#551DVK Standard horizontal through-the-wall vent kit (Alternative to Dura-vent unit)

- 1 Vent pipe & terminal unit
- 2 Wall plates
- 2 Wall shields (Supplied flat)
- 12 Thread cutting screws
- 1 Styrofoam cutting support do-nut
- 8 Wood screws
- 8 Wall plugs

#555CFK Circulating fan kit (Additional option)

Details are with the kit

#603FSK Black or #604 Champagne Additional optional 3 sided trims

- 1 Top trim
- 2 Side trims
- 2 Trim fixing brackets
- 2 Corner connection plates
- 8 Grub screws for corner connections
- 10 Screws for side trims & engine attachment

#605FSK Black or #606FSK Champagne Additional optional 4 sided trims

- 2 Top & bottom trims
- 2 Side trims
- 2 Trim fixing brackets
- 4 Corner connection plates
- 16 Grub screws for corner connections
- 10 Screws for side trims & engine attachment

Take care when removing the contents from the packaging to prevent damage. Check that all the contents are in the packs and are undamaged.

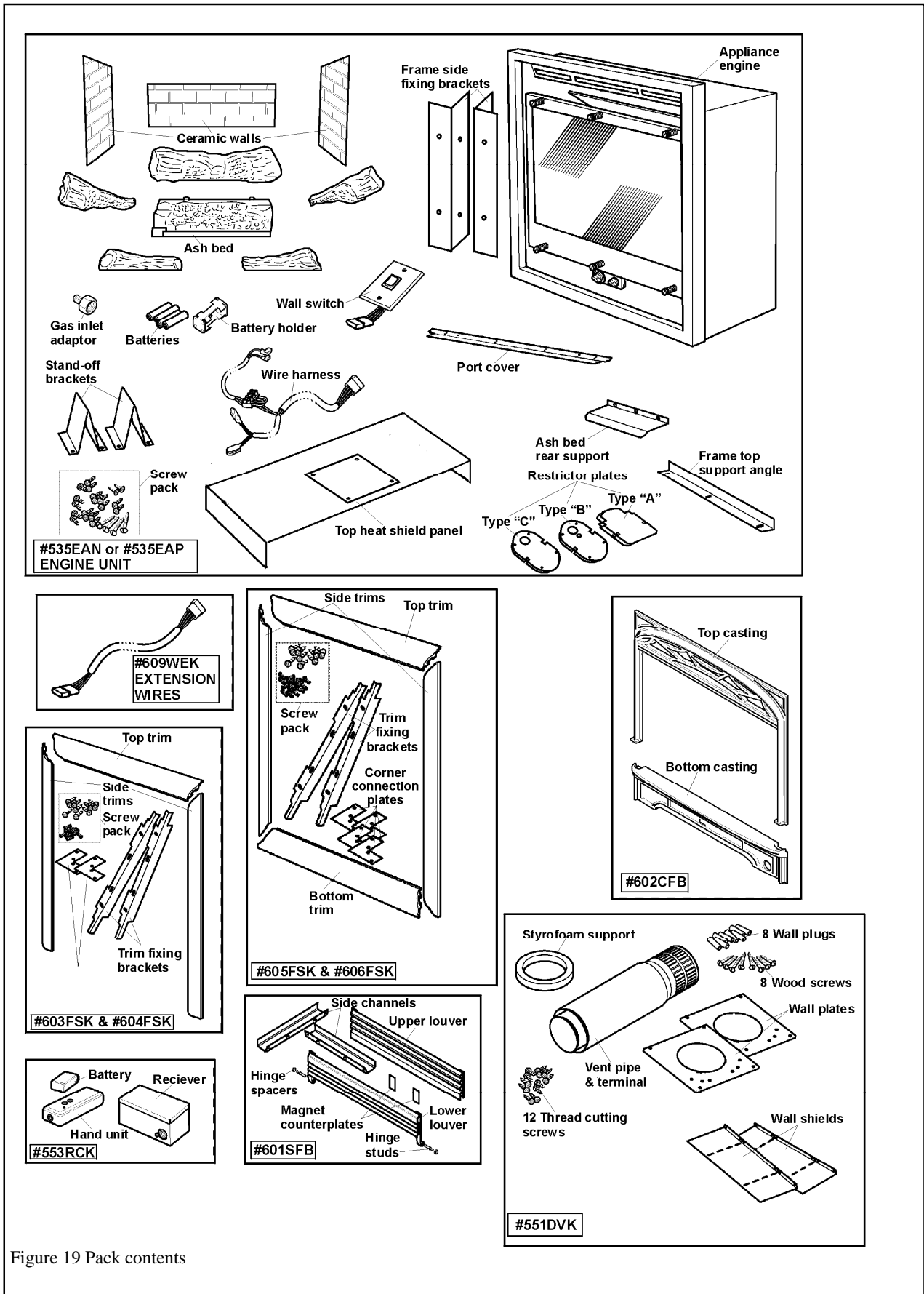


Figure 19 Pack contents

7. APPLIANCE PREPARATION

7.1. Window Removal

See figure 20.

- Turn the top three spring loaded window bolts through 90° to release the window from the firebox.
- Remove the bottom three spring-loaded window bolts.
- Detach the chain from the top right corner of the window.
- Carefully lift the window away. Keep the window and bolts in a safe place.

7.2. Ignition Spark Check

The pilot burner and electrode unit is at the left end of the burner.

Push in the lighting knob and turn counter-clockwise through the "IGN" position to "PILOT". A spark should flash across from the pilot electrode to the pilot burner shield. See figure 21.

7.3. Flame Control Motor Check

See figure 22.

- Fit the battery holder to the **black** connector pad.
- Fit the four batteries into the holder.
- Fit the two "L" terminals to the tabs at the left side of the control unit
- Connect the switch unit to the wire harness.
- Operate the switch. Pressing one side of the switch should cause the flame control knob to rotate counterclockwise. Pressing the other side should cause clockwise rotation.
- Disconnect after checking.

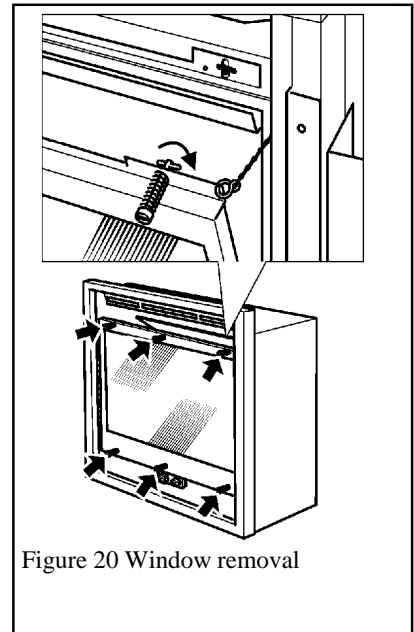


Figure 20 Window removal

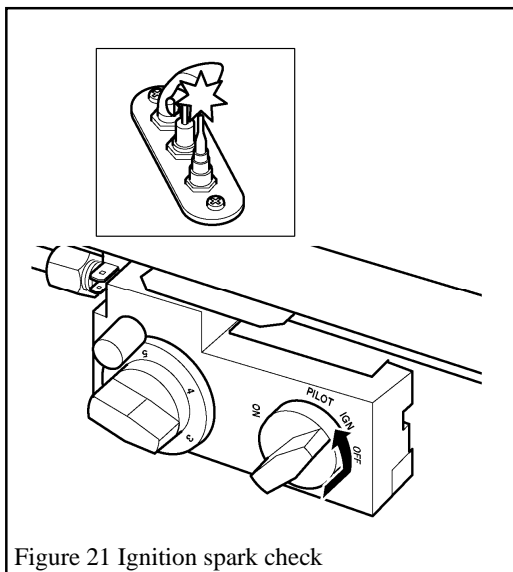


Figure 21 Ignition spark check

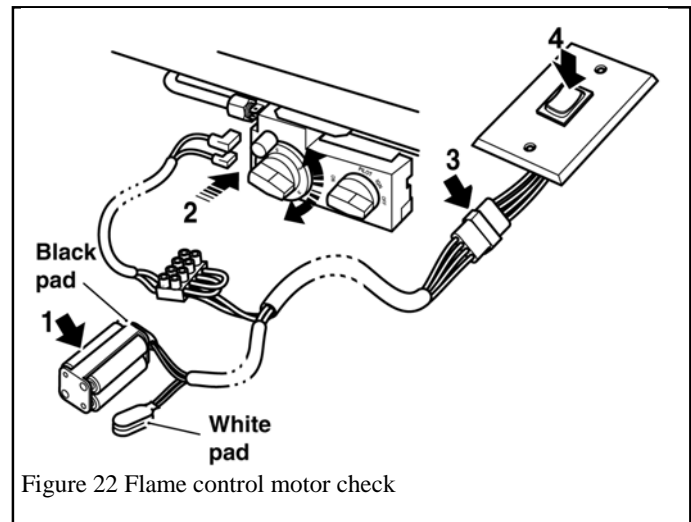


Figure 22 Flame control motor check

7.4. **Rear Vent Outlet positioning**

If installing with top vent outlet ignore this stage

See figure 23

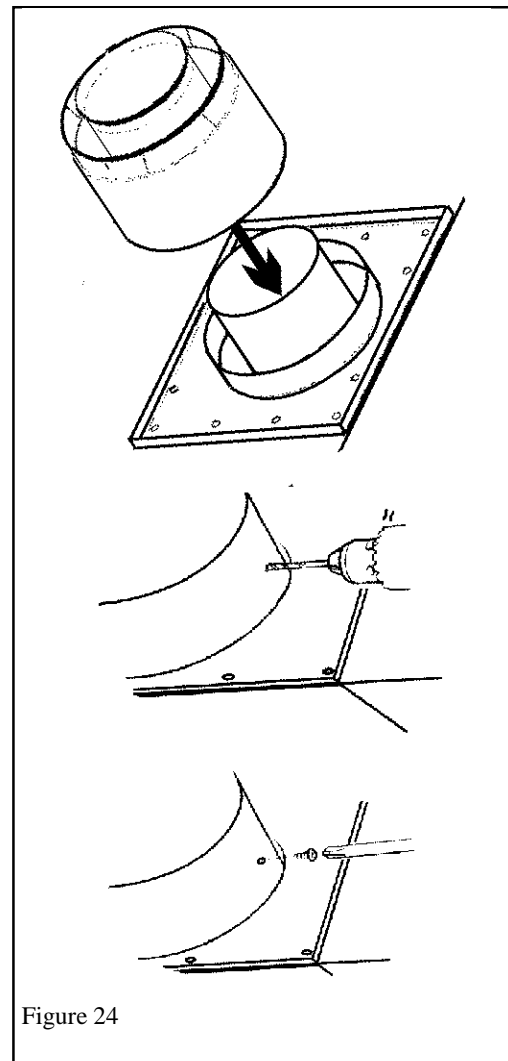
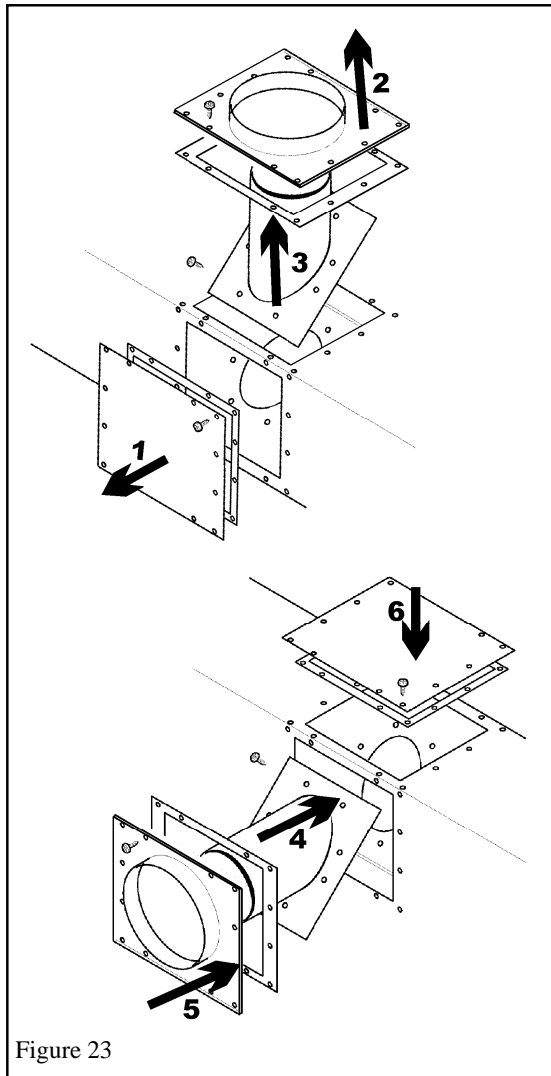
1. Remove the rear outlet cover plate and seal by unscrewing 12 screws. Keep the seal and plate for fitting to the top.
2. Remove the top outer vent collar and seal by unscrewing 12 screws.
3. Remove the top inner vent collar and seal by unscrewing 8 screws.
4. Locate the inner collar and seal inside the rear outlet opening. Secure the inner collar with 8 screws.
5. Fit the outer collar over inner collar. Loosely fit the 12 screws. Place the Dura-vent adapter #817VAK or Valor terminal unit #551DVK over the collars to check alignment. Tighten the 12 screws to secure the outer collar.
6. Fit the cover plate and seal (Removed from the rear) to the top vent opening with 12 screws.

7.5. **# 817VAK Pipe Adapter Fitting**

If installing flat on wall with Valor terminal unit #551DVK ignore this stage.

See figure 24.

1. Fit the Dura-vent adapter #817VAK over the appliance vent collars pushing on firmly.
2. For rear vent outlet connection, align the adapter so that the seam on horizontal Dura-vent pipes is not at the bottom – Check by temporarily fitting a Dura-vent pipe.
3. Drill through the adapter outer tube and appliance outer collar for #6 screws. See figure 40. *Make sure that the drill does not penetrate the inner tubes.*
4. Secure the adapter to the outer collar with two #6 thread cutting screws supplied.



7.6. Top Heat Shield & Stand-off Fitting

See figures 25 & 26.

1. **If installing appliance with top vent outlet** remove the plate covering the vent hole in the top heat shield by unscrewing four screws. **If installing with rear vent outlet, the plate must remain covering the hole.**
2. Remove the screws at the top rear corner of the case sides.
3. If top vent outlet, locate the heat shield over the vent pipe adapter.
4. Support the front of the shield on the two angle supports.
5. Secure the shield to the case sides by refitting the two screws at the top rear corners and by two screws from the pack fitted near the front.
6. Bend the two top rear stand-offs and fit to the heat shield with three screws each – see figure 26.

7.7. Support Angle Fitting

See figure 27

The distance from the wall angles to the front face of the heater case is adjustable between $\frac{3}{8}$ " (10mm) and $1\frac{3}{16}$ " (30mm) to allow for a range of wall finish material thicknesses (e.g. tile etc).

1. Fit the top angle support to the case top with three screws.
2. Fit the two side angle supports with two screws each. Fit the screws from inside the heater case.

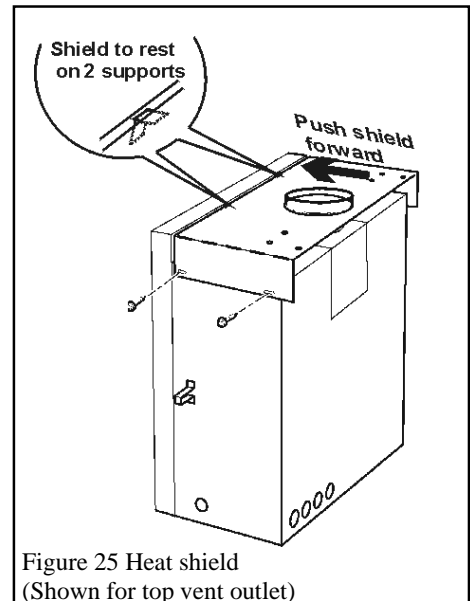


Figure 25 Heat shield
(Shown for top vent outlet)

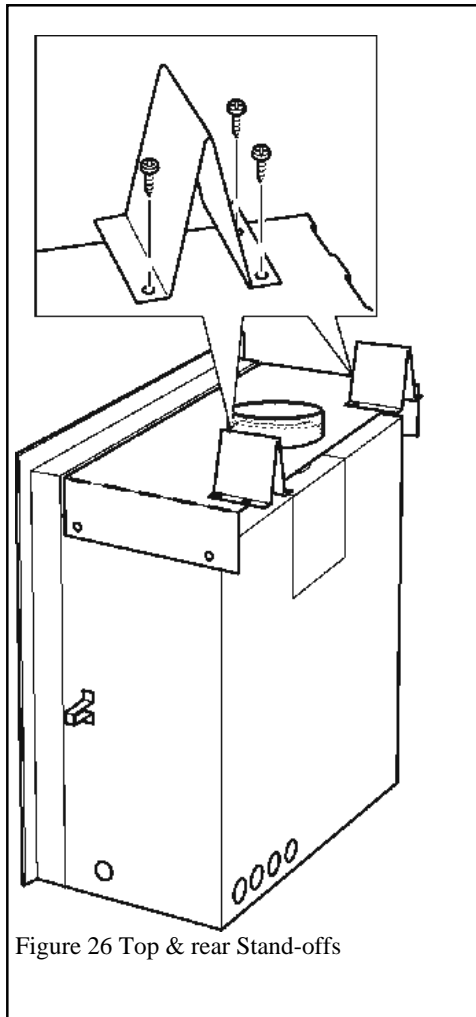


Figure 26 Top & rear Stand-offs

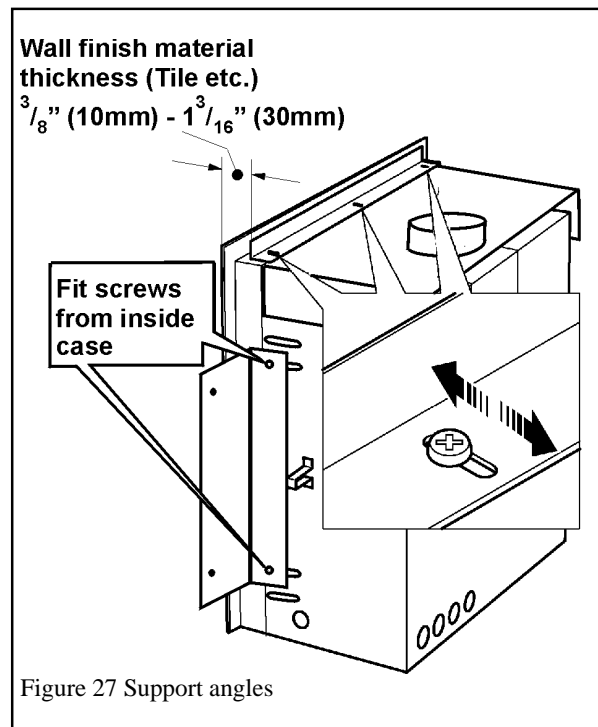


Figure 27 Support angles

7.8. Attaching Air Restrictors

No restrictors are required for appliances, which only have a horizontal vent, run. If installing an appliance which has rear vent outlet connection and no vertical vent pipe rise, ignore this stage.

There are three types of restrictor supplied with each #534 engine unit. They are identified in figure 28.

Type “A” is for horizontal vent termination. Types “B” & “C” are for through-the-roof termination.

The restrictors cover part of the openings in the firebox rear wall ports – See figure 29. The correct restrictors to be fitted for each type of installation are shown in the table below.

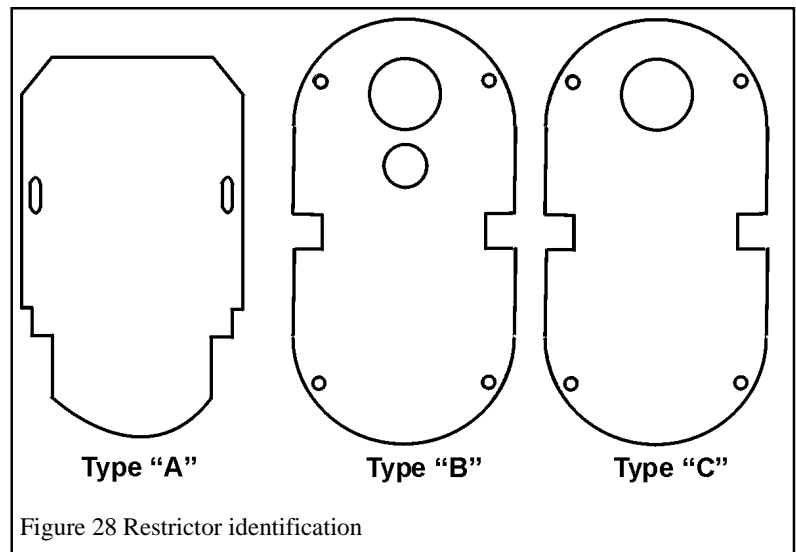


Figure 28 Restrictor identification

Vent terminal	Appliance vent outlet	Vertical vent pipe run	Use restrictor type	Port opening set at
Horizontal through wall	Top	Less than 3ft (91cm)	A	Maximum
		From 3ft (91cm) to 6ft (183cm)	A	Minimum
	Rear	Less than 3ft 6" (107cm)	A	Maximum
		From 3ft 6" (107cm) to 6ft (183cm)	A	Minimum
Vertical through roof	Top or rear	Less than 20ft (6.1m)	B	Not applicable
		From 20ft (6.1m) to 40ft (12.2m)	C	

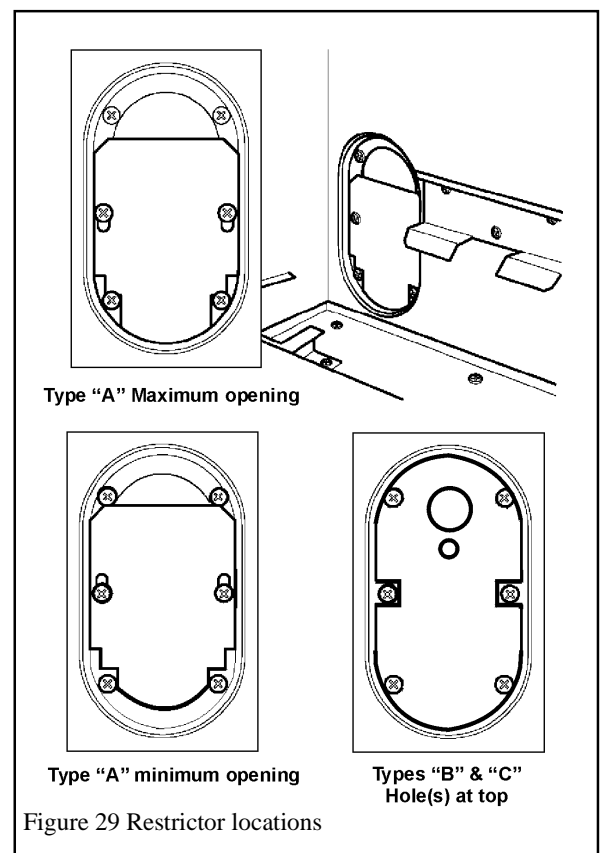


Figure 29 Restrictor locations

To fit type “A” restrictors remove the center screws from the rear ports and fit the restrictors using these screws. To set the restrictors at maximum port opening, slacken the bottom screws in the ports, slide the restrictors down as far as possible and tighten the screws over the restrictors.

To set the restrictors at minimum port opening, slide the restrictors up as far as possible and tighten the screws.

To fit types “B” or “C” restrictors remove the top and bottom screws from the rear ports and fit the restrictors using these screws.

7.9. Attaching Rear Ceramic Support

Fit the rear ceramic support to the firebox back panel with three screws. See figure 30.

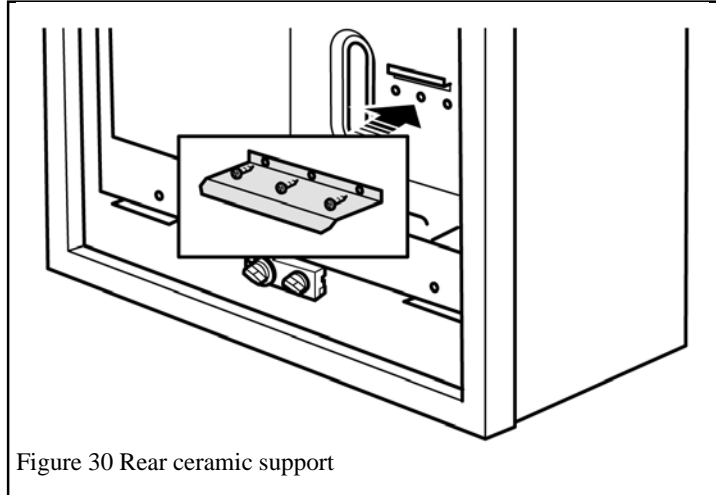


Figure 30 Rear ceramic support

7.10. Attaching to the Framing

1. Place the heater in position in the framing.
2. Secure the side support angles to the side studding through two holes each side with the woodscrews supplied. The top support angle should abut the wall finish but is not fixed to the framing.
3. Check the wall finish requirements with the homeowner. If necessary, adjust the position of the heater so that the distance from the front of the heater case to the angles is suitable for the thickness of the wall finish (e.g. tile, etc.) – see

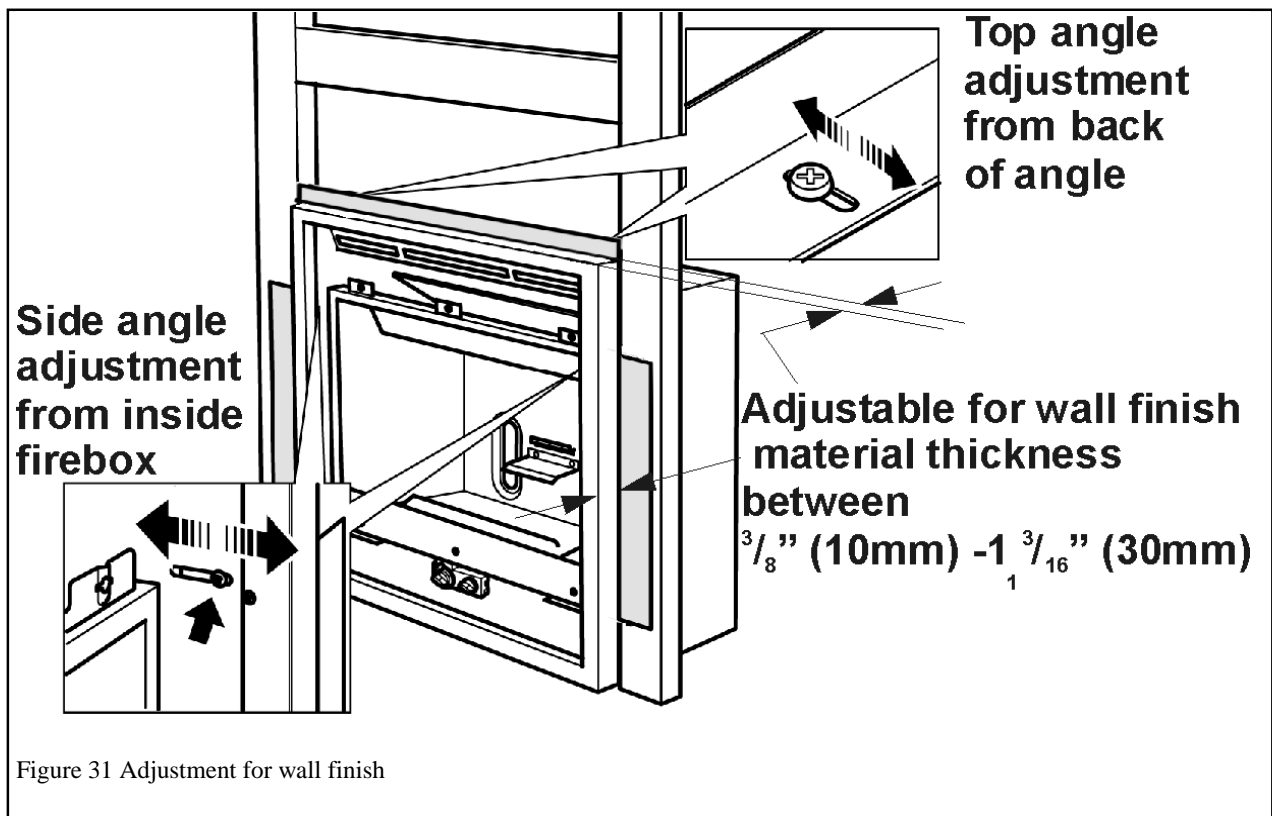


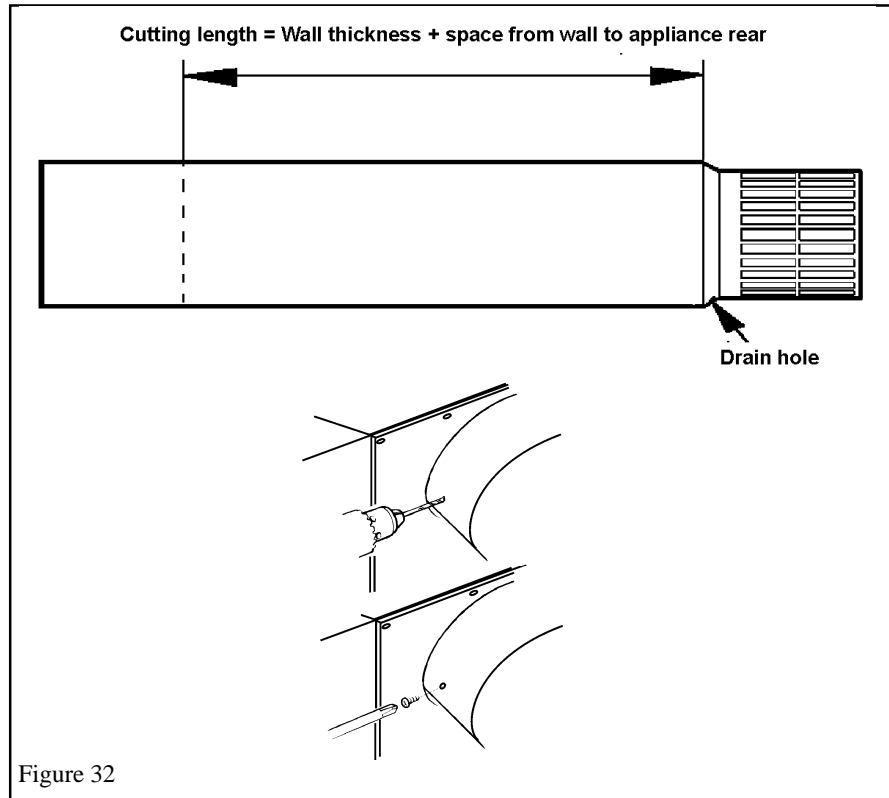
Figure 31 Adjustment for wall finish

8. INSTALLATIONS WITH HORIZONTAL TERMINATION – INSTALLING TO WALL

See section 4 for full range of horizontal termination applications.

8.1. Flat On Wall Installations With Valor #551DVK Terminal

1. Cut the vent terminal pipe unit to size. See figure 32.
Important! The drain hole must be clearly outside the wall.
 - a) Measure the wall thickness.
 - b) Add distance from case rear to wall.
 - c) Measure this total length along the vent unit from where the termination cap joins the main terminal pipes. Mark the unit.
 - d) Insert the Styrofoam support ring and push it as close as possible to the marked position.
 - e) Cut the vent tubes squarely to length.
 - f) **Make sure that all Styrofoam is removed from the vent unit after cutting.**
2. Free the appliance from the frame studding by removing the four screws inside the firebox securing the side angles (See figure 31). Slide the appliance forward to allow the terminal to be fitted.
3. Fit the vent unit fully over the appliance inlet and outlet collars pushing on firmly. Make sure that the drain hole is at the bottom – the seam will be through the notch in the wall plates – See figure 35.
4. Drill through the terminal outer tube and appliance outer collar for #6 screws. See figure 32. **Make sure that the drill does not penetrate the inner tubes.**
5. Secure the terminal to the outer collar with two #6 thread cutting screws supplied (Fig. 32).



8.2. Wall Opening

- Where applicable, fit all the required Dura-vent DV GS pipes and elbows up to the wall. See the Dura-vent instructions supplied with the sections.
- Check the wall opening position.
- Make Wall Opening.

If the wall is constructed of solid non-combustible materials and has no combustible surface cladding (including wood) inside or outside then the wall plates or Dura-vent thimbles will not be required.

If the wall has combustible material, mark the wall for a 10"x10" square. If the wall is totally non-combustible (e.g. masonry block or concrete) mark for a 7" circular hole. In both cases, the center of the hole should line up with the centerline of the horizontal vent.

8.3. Valor Terminal #551DVK - Preparing Wall Plates

The wall plates are not used for 7" hole in non-combustible walls.

1. Bend the wall shields and screw to the inside of the wall plates with 6 thread cutting screws per plate. See figure 33.
2. Bend the inner wall plate tab as shown in figure 34 so that the seam on the terminal tube will pass clearly through the plate with the wall shield at the top. Place the inner wall plate over the terminal unit.
3. Slide the appliance/terminal into the wall. Make sure that the drain hole is at the bottom – the seam will be through the notch in the wall plates – See figure 35.
4. Slide the inner wall plate up to the wall. Mark the four holes for the wall screws. Slide the plate away.
5. Drill and plug the wall.
6. Screw the plate to the wall with 4 screws provided.
7. Bend the outer wall plate tab as shown in figure 34.
8. Place the outer wall plate over the terminal unit. Slide the wall plate up to the wall. Mark the four holes for the wall screws. Slide the plate away.
9. Drill and plug the wall.
10. Screw the plate to the wall with 4 screws provided. See figure 35.
11. If the appliance was freed from the frame studding, refit with the four screws inside the firebox securing the side angles. Position the appliance so that it is suitable for the wall finish (See figure 31).

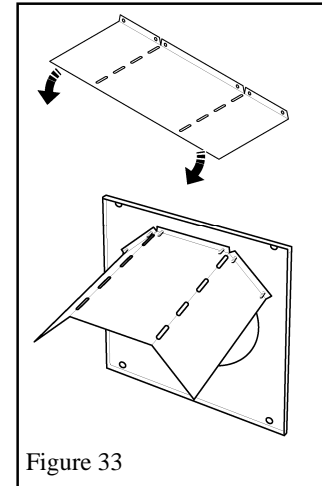


Figure 33

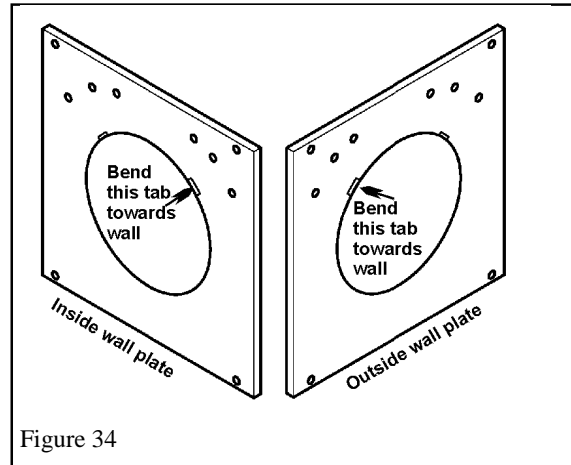


Figure 34

8.4. Dura-vent Terminals – Installing to wall

Unless the wall is totally non-combustible, fit Dura-vent wall thimbles #942.

Install as detailed in the Dura-vent instructions supplied with the pipes.

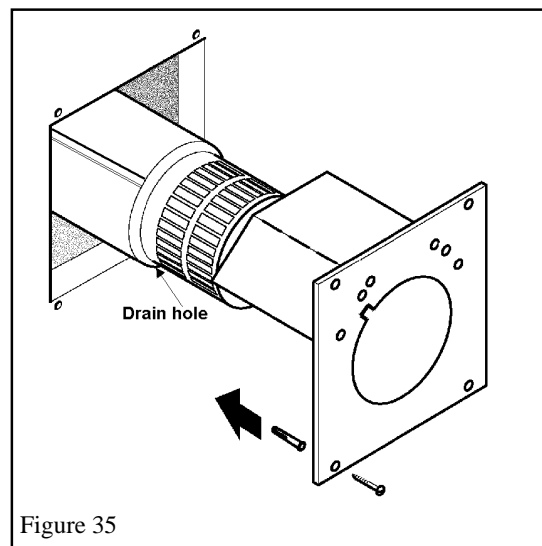


Figure 35

9. INSTALLATIONS WITH THROUGH THE ROOF VERTICAL TERMINATION

- Check the roof pitch to determine which roof flashing will be needed - see vent accessories section 2.4.
- The distance from the roof to the lowest terminal discharge opening (“H” in figure 36) depends on the roof pitch and must be in accordance with the Dura-vent instructions supplied with the termination unit.

*Note: The venting system for these appliances is considered to be a **Special Venting System**. The rule in the Installation Code requiring a minimum vent height of 2ft above any portion of a building within 10ft does not therefore apply.*

- The minimum clearances to combustibles all round the vent pipes must be in accordance with the dimensions shown in section 4 of this manual.
- Drop a plumb from the ceiling to the center of the appliance vent opening. Mark the position on the ceiling. Drill a small hole at the marked position.
- Determine the position where the vent will pass through the roof. If directly above the position where it penetrates the ceiling, drop a plumb from the roof to the small hole in the ceiling and mark the roof at this spot. If rafters or other obstructions will prevent a vertical exit or if clear attic space is desired, the roof outlet can be offset using 45° elbows - see fig. 36.

Drill a small hole at the marked position.

- A ceiling firestop must be installed at the second floor and higher floors.
A ceiling support should be used below the flat ceiling.
To install the firestop & support cut and frame a 10” (254mm) square hole centered on the small hole previously drilled - see fig. 37.

- Fit vent accessory elbows and pipe lengths as required up through ceiling support boxes and firestops. If installation includes offset, support the offsetting pipes every 3 feet (1m) with wall straps (fig. 36).
- Cut a hole in the roof centered on the small hole. The hole must allow for the minimum clearances to combustibles - see section 4.
- Fit pipe lengths through the roof. Fit roof flashing securing it with roofing nails.
- Fit storm collar and termination cap.

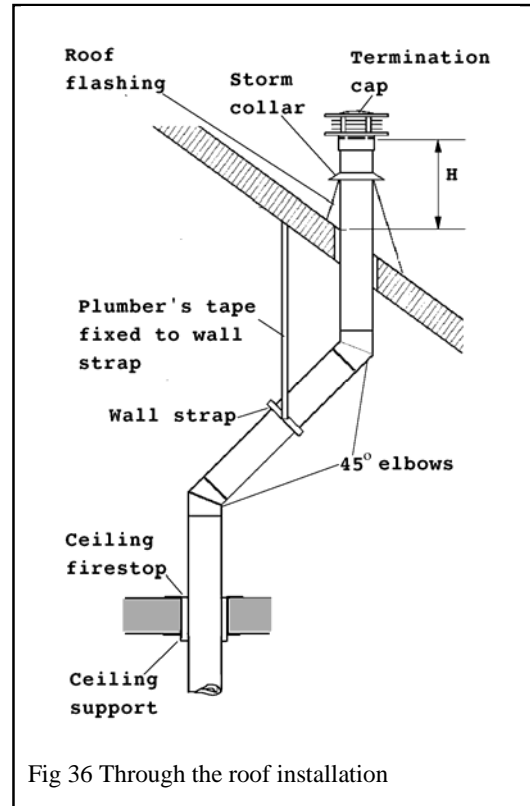


Fig 36 Through the roof installation

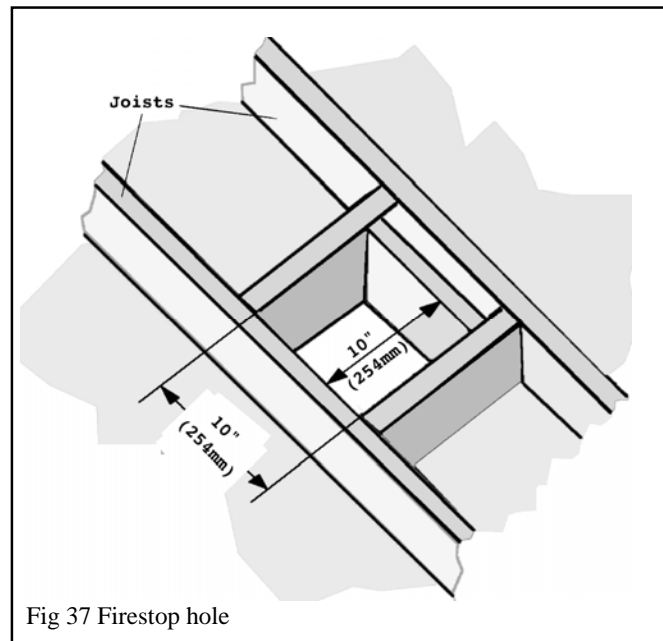


Fig 37 Firestop hole

10. SWITCH FITTING

10.1. For wall switch as only active switch

See figures 38, 39 & 40.

1. Feed the switch wires from inside the appliance case through the opening at the bottom right side of the heater case.
2. Route round the back of the valve and connect the two "L" terminals to the tabs at the left side of the control unit. See figure 38.
3. Connect the battery holder to the **black** connection pad.
4. If using the switch extension wires, connect the extension to the wire harness.
5. Fit the four 1.5 V batteries. Place the battery holder on the "Velcro" pad in front of the battery shield. See figure 39.
6. A standard wall switch box should be secured in the framing to accommodate the wall switch. If the required location is over 4ft away from the appliance, an optional #609WEK unit will be required.
7. When fitting the wall plate to the wall box, attach the way up shown in figure 40 so that pressing the upper half of the switch increases the flames.

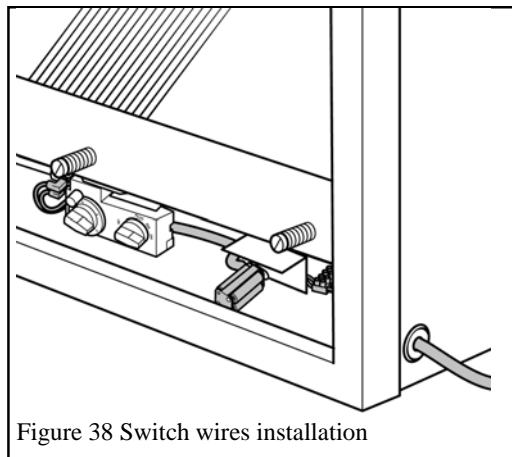


Figure 38 Switch wires installation

10.2. For active remote control with or without active wall switch

Caution! Don't connect the batteries in the remote control receiver until the wires are connected to the burner control unit. A short circuit could result in destruction of the electrical components.

1. Feed the switch wires from inside the appliance case through the opening at the bottom right side of the heater case.
2. Cut off the "L" terminals from the switch wires **on the remote control receiver** and remove insulation from approximately ¼" at ends of wires. See figure 41.
3. Securely connect the wires to the terminal block. Connect the black wire to the terminal opposite the brown wire. Connect the wire with the white stripe to the terminal opposite the yellow wire. See figure 42.
4. Route the harness wires with the "L" terminals round the back of the valve and connect to the tabs at the left side of the control unit.
5. Remove the remote control receiver lid. Remove the cover from the **white** connection pad. Fit this connection pad to the remote control receiver terminals. See figure 43.
6. Fit the **black** connection pad to the battery holder. Fit four 1.5V batteries. See figure 43.
7. Place the batteries and connection pad in the receiver box and replace the lid.
8. Fit the 9V battery to the handset transmitter.
9. Place the remote control receiver on the "Velcro" pad in front of the battery shield. See figure 44.
10. If using the switch extension wires, connect the extension to the wire harness.
11. If using the wall switch, attach the wall plate the way up shown in figure 40 so that pressing the upper half of the switch increases the flames.

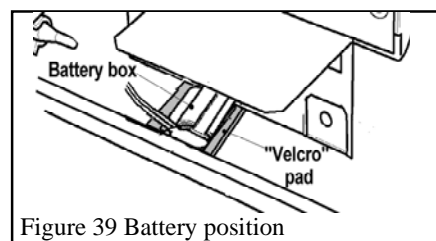


Figure 39 Battery position

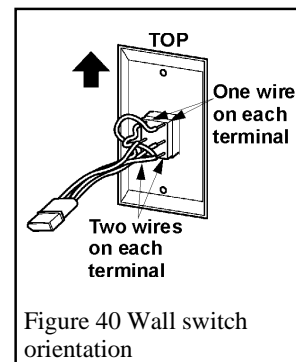


Figure 40 Wall switch orientation

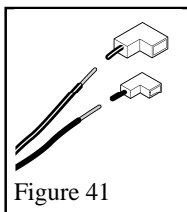


Figure 41

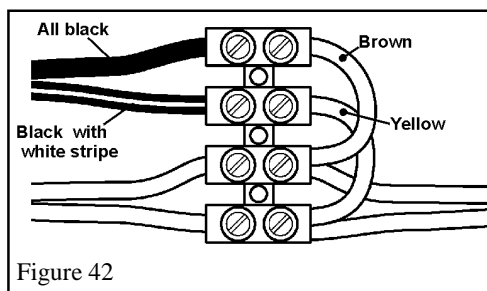


Figure 42

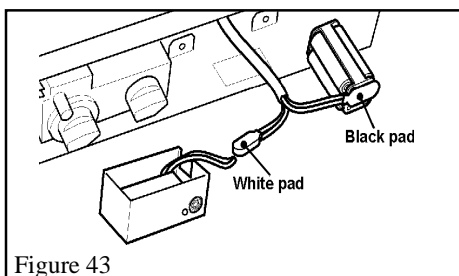


Figure 43

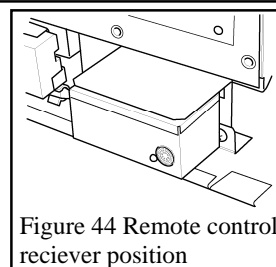


Figure 44 Remote control receiver position

11. GAS SUPPLY INSTALLATION & AERATION SETTING

11.1. Gas Supply Installation

- The gas supply pipe should enter the appliance case through the opening at the rear left side. The supply pipe should be connected to the appliance gas inlet pipe situated at the left side of the control unit. Supply line connection to the inlet pipe is $\frac{3}{8}$ "NPT.

If the circulating fan is to be installed, be aware that the supply pipe run inside the case should be at the same height as the appliance inlet pipe in order to clear the fan. If intending to fit an internal isolating valve, check that it will be clear of the fan.

- Use only new black iron or steel pipes or copper tubing if acceptable - check local codes. **Note that in USA copper tubing must be internally tinned for protection against sulfur compounds.**
- Unions in gas lines should be of ground joint type.
- The gas supply line must be sized and installed to provide a supply of gas sufficient to meet the maximum demand of the appliance without undue loss of pressure.
- Sealant used must be resistant to the action of all gas constituents including LP gas. Sealant should be applied lightly to male threads to ensure excess sealant does not enter gas lines.
- The supply line should include a manual shut-off valve to allow the appliance to be disconnected for servicing.
- A plugged $\frac{1}{8}$ "NPT tapping must be installed in the line. The tapping must be accessible for test gauge connection and be immediately upstream of the gas supply connection to the appliance.
- Pressure test the supply line for leaks.
 - The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of $\frac{1}{2}$ psig (3.5kPa).
 - The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than $\frac{1}{2}$ psig (3.5kPa).
 - Failure to either disconnect or isolate the appliance during pressure testing may result in regulator or valve damage. Consult your dealer in this case.
- The minimum supply pressure is given in section 3 of this manual.
- All piping and connections must be tested for leaks after installation or servicing. All leaks must be corrected immediately.
- When testing for leaks:
 - Make sure that the appliance is turned off.
 - Open the manual shut-off valve.
 - Test for leaks by applying a liquid detergent or soap solution to all joints. Bubbles forming indicate a gas leak. **Never use an open flame to check for leaks.**
 - Correct any leak detected immediately.
- The pressure test tapping locations are shown in figure 45. A built-in non-adjustable regulator controls the burner manifold pressure. The correct pressure range is shown in the table in section 3 of this manual. The pressure check should be made with the burner alight and the thermostat at its highest setting. See lighting instruction section for full operating details.

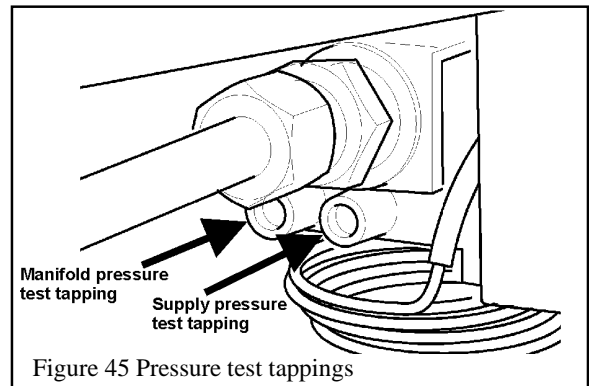


Figure 45 Pressure test tappings

11.2. Aeration Setting Check

Aeration is factory set.

The setting is non-adjustable for LP appliances.

For natural gas appliances, the shutter is factory set at an aeration gap that will give optimum performance for the vast majority of installations. However, in a few unusual installations performance may be improved by adjusting the aeration. The need for adjustment should be determined by operating the appliance with the ceramic fuel effects and window installed. See the "Final checks" section in this manual for adjustment details. Adjust the aeration by slackening the aeration plate screw and sliding the plate. In an extreme circumstance, the plate can be totally removed. See figure 46.

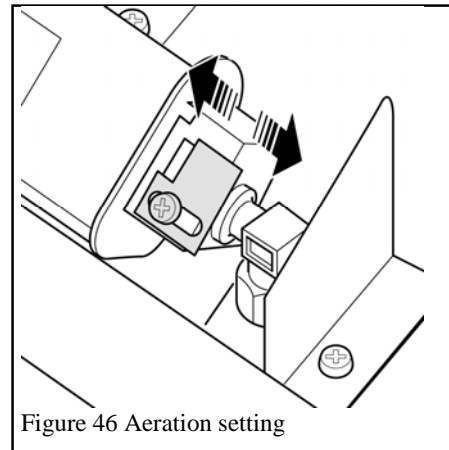


Figure 46 Aeration setting

12. CERAMIC FUEL BED INSTALLATION

12.1. Ceramic Walls Installation

1. Locate the ceramic rear wall in the channel at back of the firebox and flat against the back of the firebox. See figure 47.
2. Locate the side walls against the sides of the firebox. Make sure that they are behind the raised edges of the burner module base at the back corners. See figure 48.
3. Remove two screws from under the top front of the firebox. Using these screws fit the port cover. See figure 49.

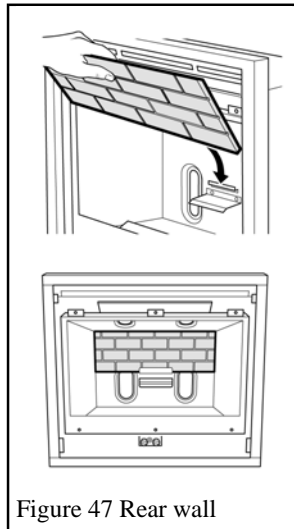


Figure 47 Rear wall

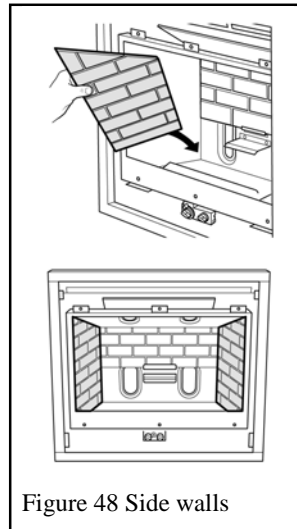


Figure 48 Side walls

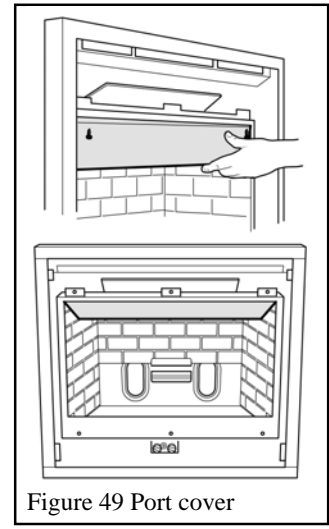


Figure 49 Port cover

12.2. Ceramic Logs Installation

1. Place the ash bed in position. The projections at the front of the ash bed locate against the sloping metal stops immediately behind the burner. See figure 50.
2. Place the rear log in position locating the two top projections in the ash bed into the holes in the rear log. See figure 51.
3. Place the two front logs at the front of the firebox as shown in figure 52.
4. Identify the right side center log. It is thinner than the left side log. Place the right side center log in position locating the thick part on the right side of the ash bed with its "nose" resting at the center of the ash bed as shown in figure 53.
5. Place the left side center log in position locating the thick part on the left side of the ash bed with its "nose" resting on top of the right center log. See figure 54.

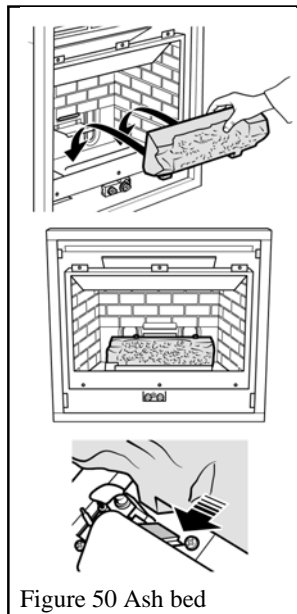


Figure 50 Ash bed

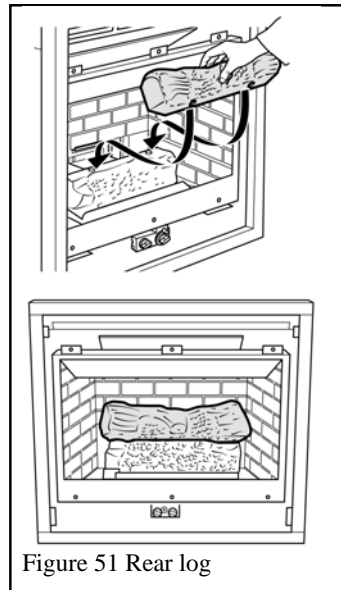


Figure 51 Rear log

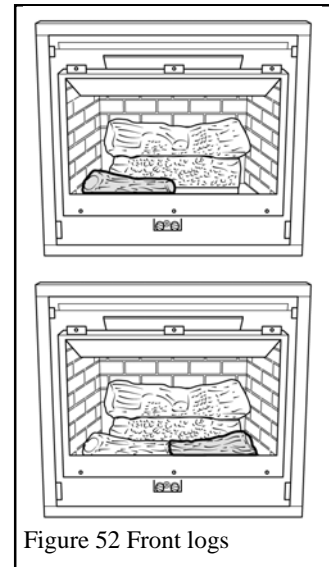


Figure 52 Front logs



Figure 53 Right center log

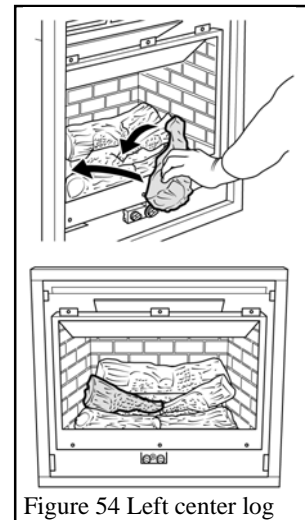


Figure 54 Left center log

13. WINDOW REFITTING & CHECKING

1. Refit the window with the bottom three bolts. The bolts should be screwed in securely.
2. Refit the chain to the top right corner of the window.
3. Refit the top three bolts securing by turning them through 90°.
4. Pull the top of the window forward and release to check that it opens slightly and returns in the event of a delayed ignition explosion. See figure 55.
5. Similarly check the bottom of the window by pulling it forward and releasing. See figure 55.

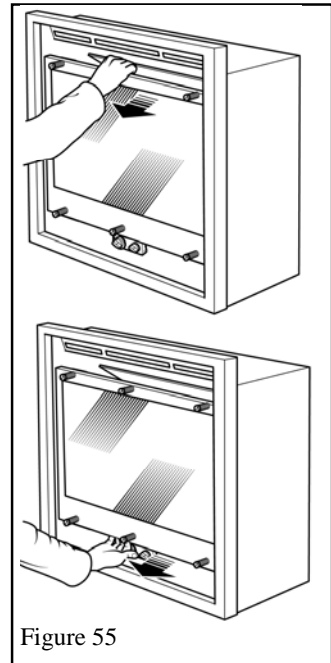


Figure 55

14. OPERATION CHECKS

- Check ignition, pilot stability, burner flames and the full range of the thermostat settings using the rotary switch inside the appliance and all other controls (wall switch, remote hand unit). See owner's lighting instructions further on in this manual for full details.

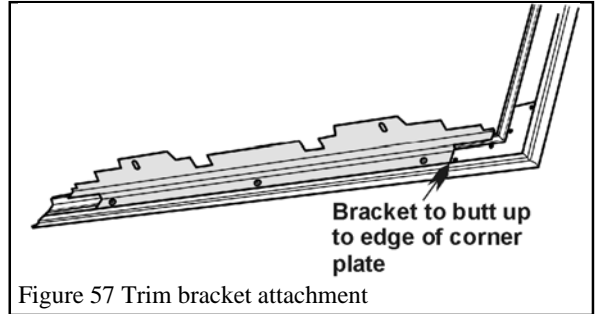
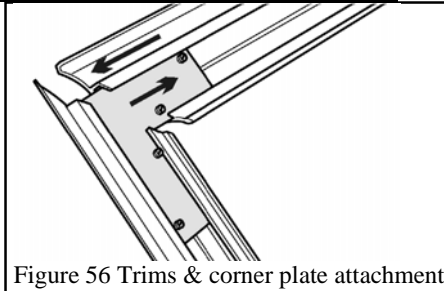
- Aeration adjustment

As described in section 11, for natural gas appliances, the burner aeration is adjustable. For the vast majority of installations, no adjustment will be necessary. However, in a very few instances, performance may be improved by sliding the shutter to adjust the aeration by (See figure 46). Evaluate the aeration only after the unit has warmed up – approximately 15 minutes. Increasing aeration will cause the flame to appear more transparent and blue making the ceramic fuel effects glow more. Decreasing aeration will cause the flames to appear more yellow or orange making the fuel effects glow less. ***Too little aeration may result in black carbon forming and dropping into the firebox.***

15.FRONT INSTALLATION

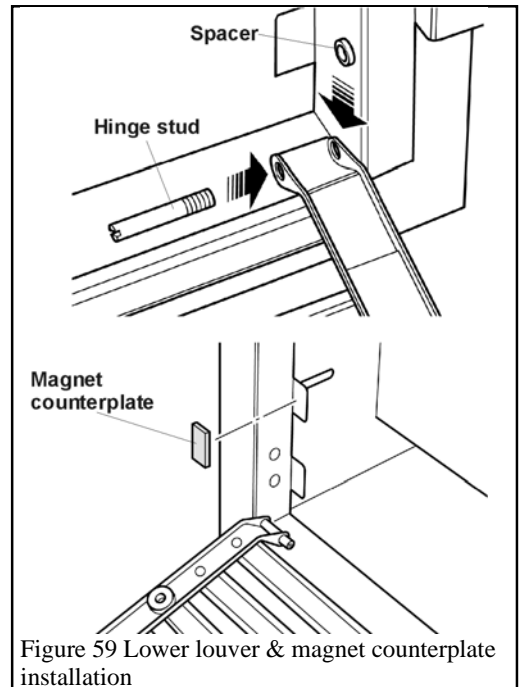
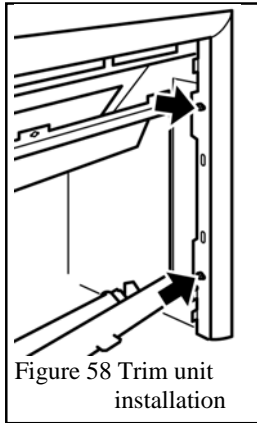
15.1. Additional Optional 3 or 4 Sided Trims

- Slide a corner connection plate into the channels in the top trim and a side trim. Butt the two trims together. Fit four grub screws and



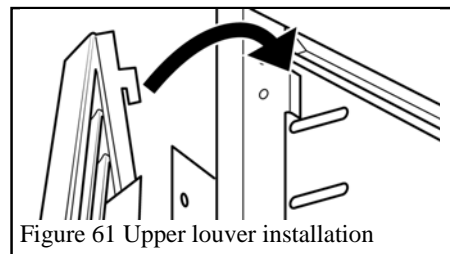
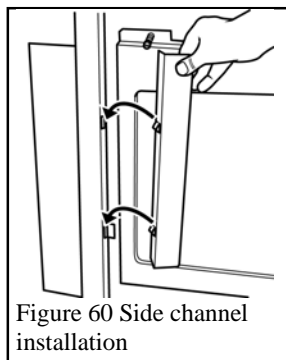
tighten to secure the trims and corner plate. See figure 56.

- Repeat for the other corner(s).
- Attach the two trim fixing brackets to the side trims with three screws each side. The brackets must butt up to the edges of the corner connection plates. See figure 57.
- Attach the complete trim unit to the firebox with four screws as shown in figure 58.



15.2. #601SFB Standard Metal Front

- Fit the lower louver unit using the hinge studs and hinge spacers as shown in figure 59.
- Fix the two adhesive backed magnet counterplates to the tabs at the firebox sides which line up with the magnets on the lower louver. See figure 59.
- Fit the two side channels by hooking into the openings at the sides of the firebox as shown in figure 60.
- Attach the upper louver by hooking over the tabs near the top of the firebox sides. See figure 61.



15.3. #602CFB Cast Iron Front

- Attach the bottom casting unit by hooking over the lower tabs at the firebox sides. See figure 62.
- Attach the top casting unit by hooking over the four tabs at the firebox sides as shown in figure 63.

