

# **DOUBLE VISION® DECORATIVE FIREBOX**

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## **INSTALLATION & OPERATING MANUAL**

The Double Vision gas firebox is approved to be installed as a zero clearance firebox and is designed to operate on Natural Gas and Propane (LPG) gases ONLY. Approval Number GMK10099.

VERSION 27

## WARRANTY INFORMATION

The benefits provided to you under the following warranty are in addition to any other rights and remedies available to you under the law.

### 1. Warranty

If:

- (a) during the first 15 years from the date of purchase (Firebox Warranty Period), there is a defect in the firebox of the Gas Burner; or
- (b) during the first 2 years from the date of purchase (Parts Warranty Period), there is a defect in the gas valves or other parts of the Gas Burner,  
due to improper workmanship or material, Glen Dimplex will replace or repair the Gas Burner without charge. Any replacement product is warranted only for the time remaining on the original Firebox Warranty Period or the Parts Warranty Period as relevant.

### 2. Registration

You must register to receive the benefit of this warranty by completing the warranty registration on our website ([www.realflame.com.au](http://www.realflame.com.au)) or completing and mailing the attached registration card within 30 days of purchase of your Gas Burner (or, if the Gas Burner is fitted to a new home, within 30 days of the date of settlement of purchase of such new home).

### 3. Exclusions

Glen Dimplex is not obliged to replace or repair the Gas Burner under clause 1 if:

- (a) it has been improperly stored, installed, connected, used, operated or repaired, or damaged, abused, tampered with, altered (without our written approval), or not maintained in strict accordance with our installation and operating instructions; or
- (b) it has been installed in an outdoor setting.

### 4. Limit of Liability

The warranty provided under this warranty is limited to replacement or repair of the Gas Burner only, at our option. To the extent permitted by law, Glen Dimplex excludes liability for consequential loss or any other loss or damage caused to property or persons arising from any cause whatsoever, and damage arising from normal wear and tear.

### 5. Claiming under the Warranty

In order to claim under this warranty you must, within the Firebox Warranty Period or the Parts Warranty Period (as relevant), contact Glen Dimplex, providing the original proof of purchase and the details below:

Supplier Name \_\_\_\_\_

Date Of Purchase / settlement of property if new home \_\_\_\_\_

Model / Serial Number \_\_\_\_\_

This warranty does not cover the cost of claiming under the warranty or transporting the Real Flame Gas Burner to and from the supplier.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

If you would like to speak to someone about your Gas Burner or claiming under this warranty, please contact the Service Warranty Desk on 1300 554 155.

Glen Dimplex Australia Pty Ltd ACN 69 118 275 460  
Head Office: 1340 Ferntree Gully Road, Scoresby 3179  
Telephone: (03) 8706 2000 Facsimile: (03) 876 2001

## INSTALLATION NOTICE

- The installation of this appliance is only to be carried out by an authorised person in accordance with the Manufacturer's Instructions, local gas fitting regulations, AS5601-2004 installation code for gas burning appliances and any other relevant statutory regulations.
- In all cases the installation of this appliance shall meet the requirements as set out in AS5601-2004.
- Not intended for use as fireplace insert.

■ **NOTE:** The Double Vision Modular fire is primarily a decorative appliance and is not certified as a space heater.

■ **NOTE:** A slight smell may be apparent for the first few hours of use. This is due to the heat resistant paint curing. It is recommended to open windows in the room for the first lighting of the fire. In some instances a slight discolouration may occur inside the firebox. This is a normal condition and is not covered by warranty.

## IMPORTANT SAFETY NOTICES

- DO NOT PLACE ARTICLES ON OR AGAINST THIS APPLIANCE.
- DO NOT USE OR STORE FLAMMABLE MATERIAL NEAR THE APPLIANCE.
- DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILST IT IS IN OPERATION.
- CARE MUST BE TAKEN TO ENSURE THAT ANY RETURN AIR REGISTER OR EXHAUST SYSTEM DOES NOT ADVERSLEY AFFECT THE OPERATION OF THE APPLIANCE OR DRAUGHT OF CHIMNEY OR FLUE.
- DO NOT MODIFY THIS APPLIANCE.
- THIS APPLIANCE IS DESIGNED TO OPERATE WITH LUMINOUS FLAMES. THIS MAY EXHIBIT SLIGHT CARBON DEPOSITS.

## WARNING

This firebox has a naked flame, care should be taken when it is operating if children or the infirm are in close proximity. A safety screen is recommended if constant supervision is not possible. It is recommended that a secondary guard complying with AS-NZS2286 be installed.

The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## SERVICING

It is recommended you service your gas fire every 2 years as a minimum.

## VENTILATION REQUIREMENTS

MODEL	SIZE	EFFECTIVE VENTILATION
Double Vision	850	40,000 sq mm

**THIS IS PRIMARILY A DECORATIVE APPLIANCE AND IS NOT CERTIFIED AS A SPACE HEATER.**

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## DATA PLATE (Affixed to the base of the unit for reference to gas pressure & consumption)

### Double Vision and Double Vision Signature

Fitted with 540 Double Vision burner

Gas	Injector Size (mm)	TPP	N.G.C. (Mj/hr)
Natural Gas	2 x 2.80	0.87 kPa	54
ULPG	2 x 1.35	2.64 kPa	43

### Double Vision and Double Vision Signature

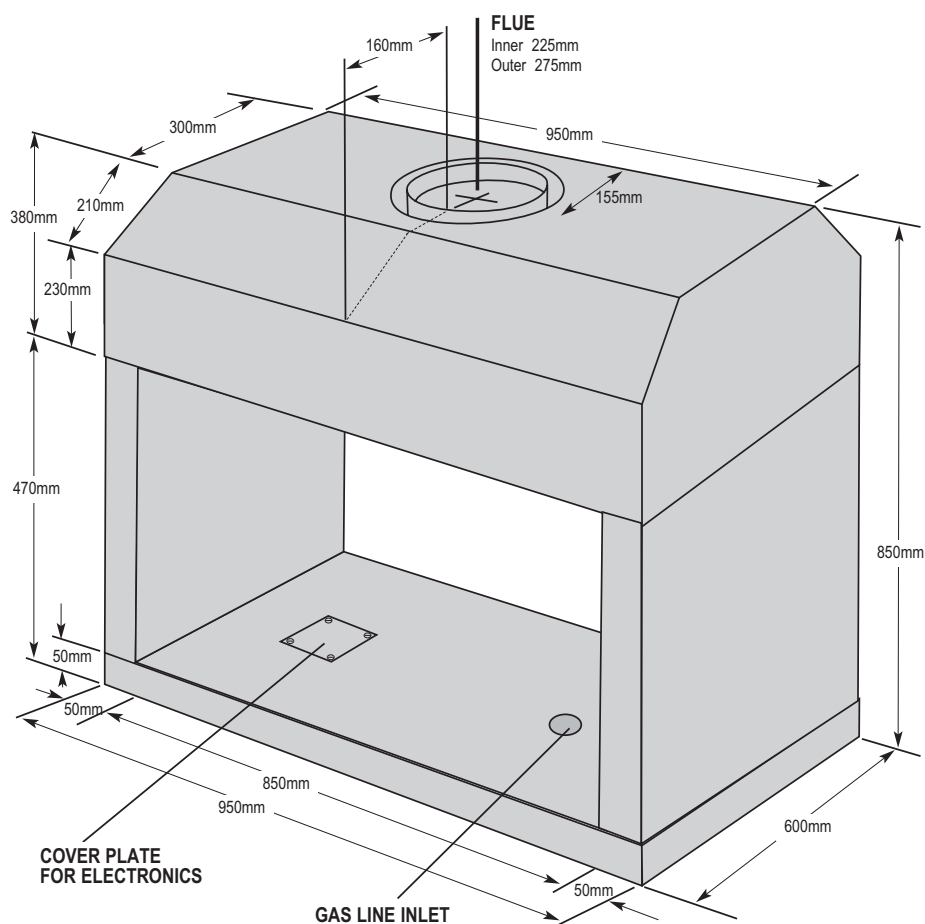
Fitted with 540 Double Vision Pattern burner

Gas	Injector Size (mm)	TPP	N.G.C. (Mj/hr)
Natural Gas	2 x 2.80	0.87 kPa	54
ULPG	2 x 1.35	2.64 kPa	43

## DOUBLE VISION FIREBOX

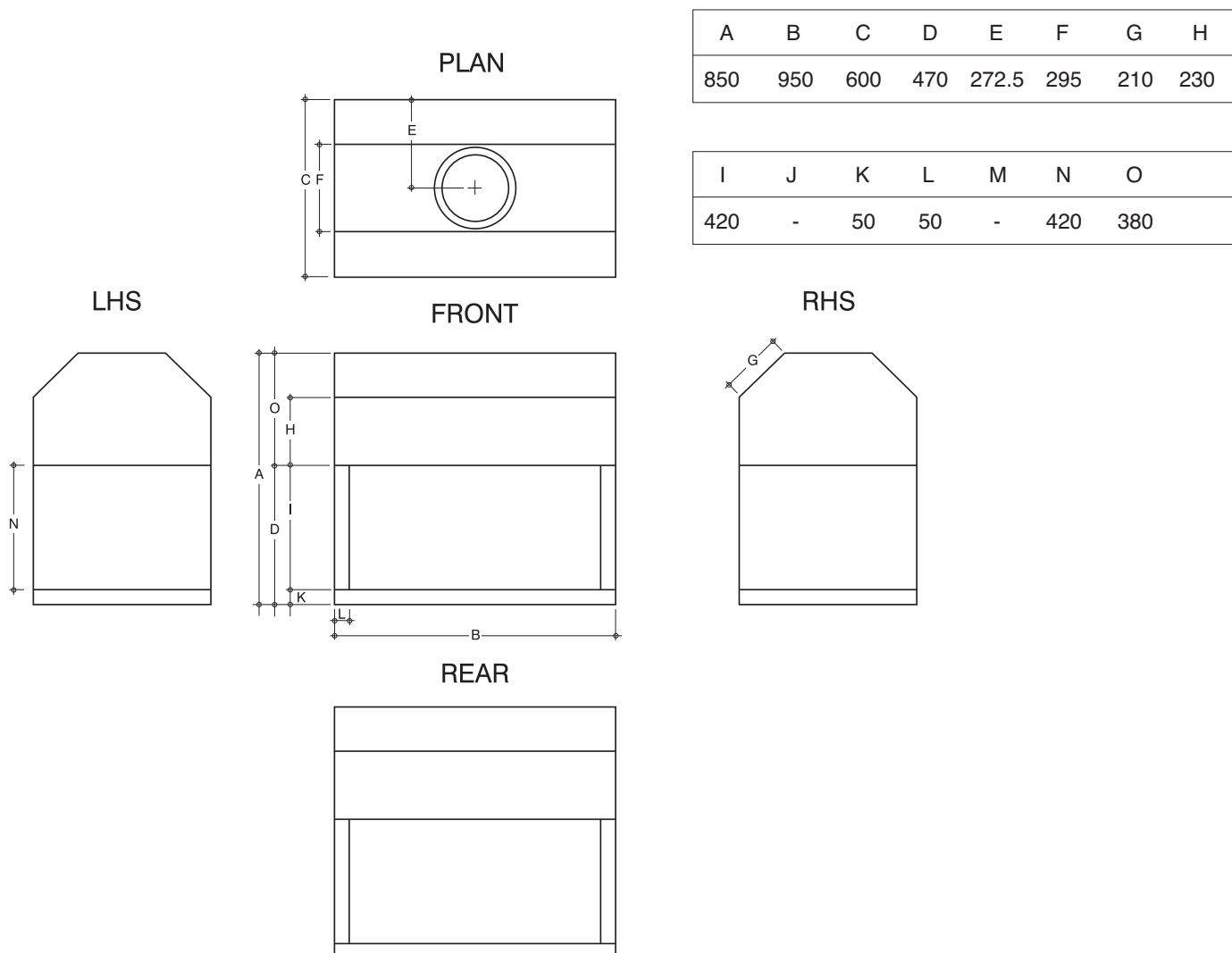
- The Double Vision is designed to be installed into a new frame out as shown on page 6.
- The fire can be installed at ground level or raised to what ever height is required providing the flue length is 2.7 meters or more.
- The firebox can sit directly onto a wooden surface.
- The Double Vision requires twin skin flue with an AGA approved cowl
- The control valve on the Double Vision is a millivolt system and as such, no electrical work is required

### Overall Dimensions (in mm)

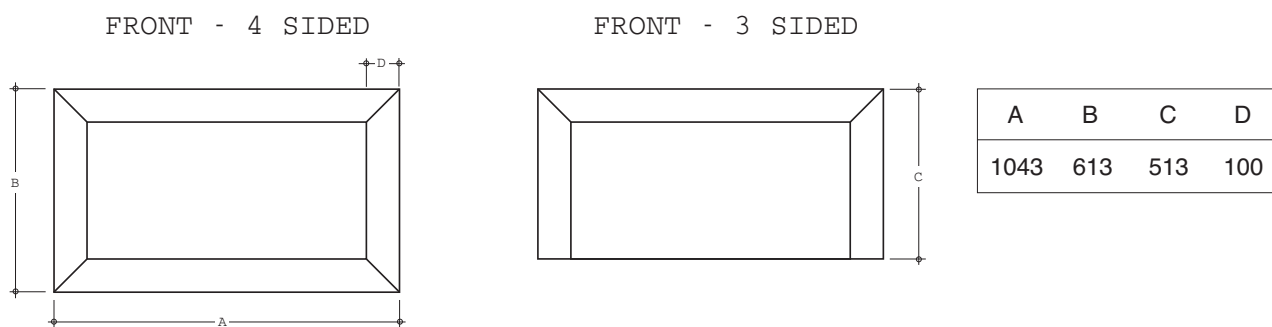


MODEL	Inner	Outer
850	225mm	275mm

## DIMENSIONS

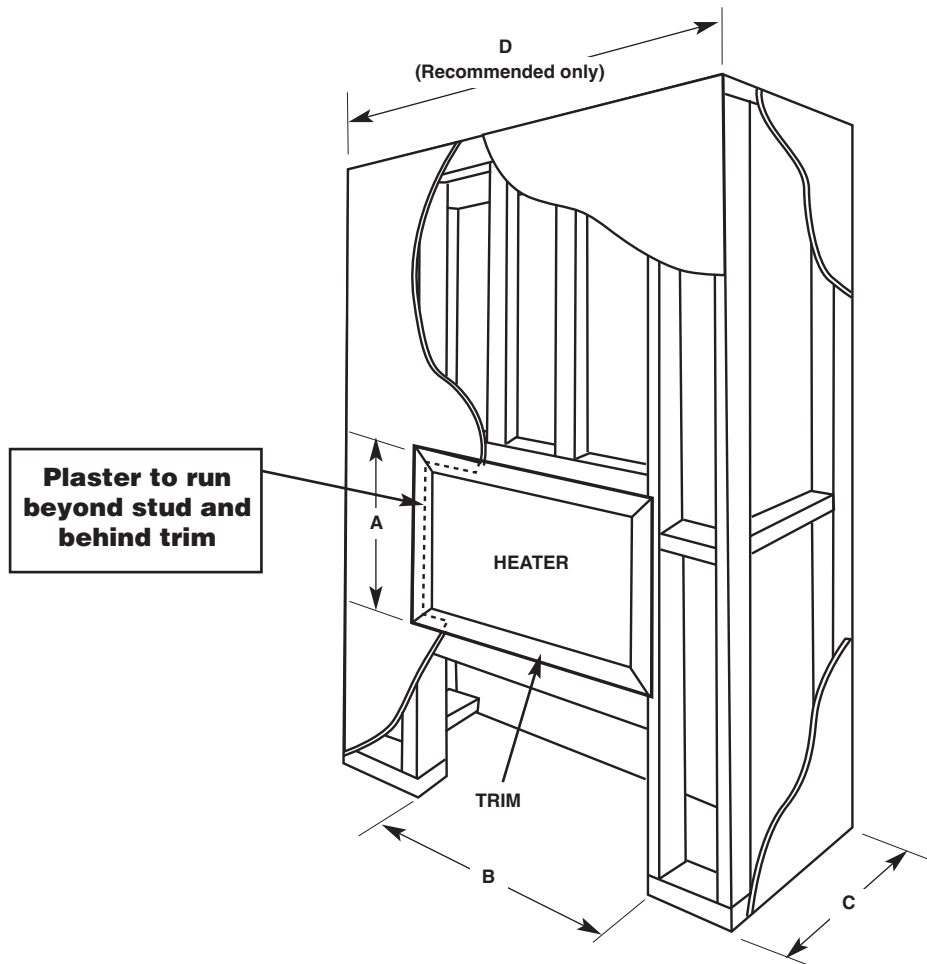


## Trim



# DOUBLE VISION FIREBOX

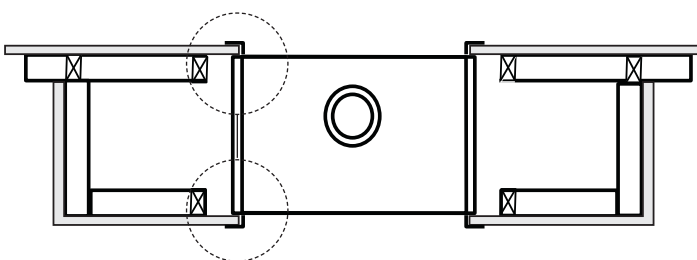
## Double Vision Zero Clearance Timber Frame Installation



**Frameout Dimensions (in mm)**

A	B	C	D
950	1000	600	2100

**PLAN**



**NOTE**

Plasterboard to run beyond stud as shown.

If unit requires trim only, frameout remains the same.

**CLEARANCES FROM COMBUSTIBLES**

Floor	0 mm
Sides	25 mm
Top	100 mm
Flue Outer	25 mm



# DOUBLE VISION FIREBOX

## Double Vision Inbuilt Installation Procedure

- TICK BOXES ☐ Check frame out has been constructed correctly and has not been plastered.
- ☐ Check frame out and structure above is clear of any structures that may impede the flue run.

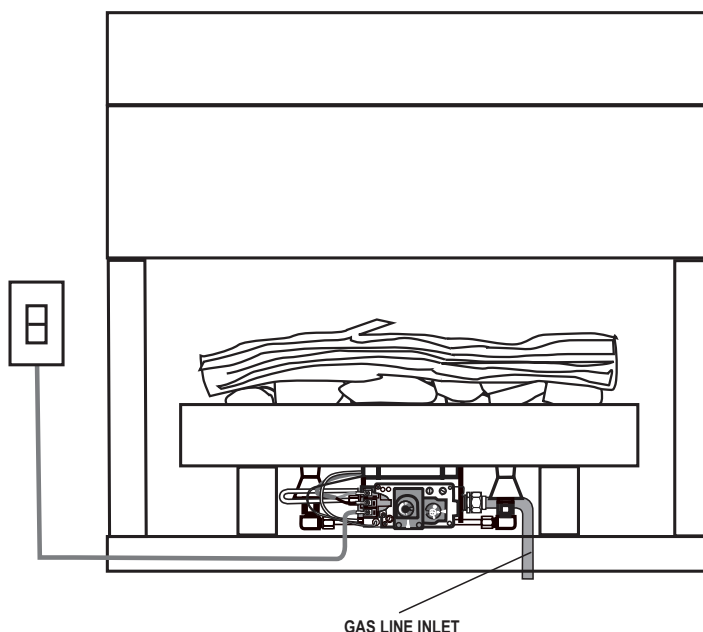
- Ensure an adequately sized gas connection is available within the frame out, a 15mm gas copper pipe is to be provided into the firebox. An access hole is provided in the base of the firebox. A 500mm tail is required into the firebox to allow for connection to the burner.
- Position the unit ensuring the millivolt loom and gas pipe are accessible.
- Connect the twin skin flue (or Optional Power Flue if supplied).
- Install an AGA approved 225mm gas cowl ensuring the termination meets all relevant code requirements.
- Place the burner in the double sided firebox.
- Connect the gas line to the burner connection using the 15mm flared copper union (supplied).
- Connect the two core wiring terminals to the millivolt system as shown below.

Note: The valve is pre wired and completely self contained to generate its own power. **DO NOT connect any external power to it.**

**Note: Do not locate the switch further than 6 meters from the firebox.**

- Screw the four burner legs to the base of the firebox in the holes provided.
- Place the burner surround over the burner.
- Place the coals (or optional pebbles) randomly on the ceramic blanket. If coals and logs option is supplied, place logs on top of coals randomly.

**IMPORTANT! Only ceramics supplied by Real Flame are to be used.**



## LIGHTING PILOT AND MAIN BURNER

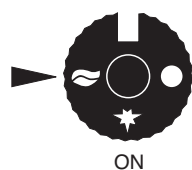
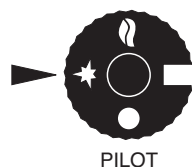
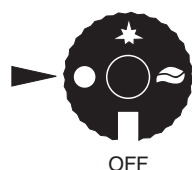
Before lighting the pilot make sure that the gas line is connected.

### FOR YOUR SAFETY READ BEFORE LIGHTING

- The Double Vision has a pilot which must be lit using the piezo ignition. When lighting the pilot follow the instructions exactly.
- Before lighting the pilot, check for gas leaks.
- Use only your hand to push in and turn the gas control knob, never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempt to repair may result in a fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and any gas control that has been under water.

### LIGHTING INSTRUCTIONS

Visit [www.realflame.com.au](http://www.realflame.com.au) to view a video instruction.



1. STOP! Read the safety information.
  2. Push in gas control knob and turn to "PILOT"
  3. NOTE: Control knob cannot be turned from "OFF" to "PILOT" unless the knob is pushed in slightly. Do not force.
  4. Light pilot burner following steps below.
  5. When the control knob is set at pilot, push it all the way in and hold it in. Immediately light the pilot using the piezo igniter. Red igniter button may need to be pressed rapidly several times. Once the pilot has lit keep holding the control knob in for about 45 seconds. Release the knob and it will "pop" back out, the pilot should remain lit. If pilot goes out repeat steps 1 to 5
  6. Turn gas control knob to the "ON" position
  7. Turn the switch on to ignite the burner. The switch is supplied with the unit and should be installed within 6m of the fire.
    - After lighting the pilot, if the control knob does not "pop" out when released, stop and immediately call your service technician.
    - If the pilot will not stay lit after several tries turn the gas control knob to "OFF" and call your service technician.
- N.B: WHEN THE CONTROL KNOB IS TURNED TO THE "OFF" POSITION IT WILL TAKE APPROXIMATELY 60 SECONDS FOR THE VALVE TO RELEASE AND ALLOW YOU TO MOVE THE KNOB. DO NOT FORCE THE KNOB.

### TO TURN OFF GAS TO APPLIANCE

- A. Turn switch to "OFF" position.
- B. Push in gas control knob slightly and turn to the off position.

## TESTS TO BE CARRIED OUT BY INSTALLER

1. Carry out a smoke test to ensure the fireplace is drawing.
2. Test that the Test Point Pressures are correctly set. Refer to Data Plate on page 5 for correct setting.
3. Check that there are no gas leaks from any of the fittings.
4. Explain to the customer how the unit operates and how to turn it on and off.

## FAILURE PROCEDURE

**If when the control knob is turned to the “ON” position and the wall switch is turned to the “ON” position, the fire fails to ignite, check the following:**

1. The pilot is burning.
2. Ensure that the wiring terminals on the control valve are not loose.
3. Test that the inlet and working pressures are both correct.

# MAINTENANCE

The appliance should be thoroughly inspected before initial use and at least annually by a qualified service technician. If any abnormal condition is observed the home owner must contact a qualified service technician.

**IMPORTANT: TURN OFF GAS BEFORE SERVICING THE APPLIANCE.**

# MAINTENANCE SCHEDULE

Annually (Before Winter Season)

Maintenance Task	Accomplishing Person	Procedure
Inspection/Cleaning burner, logs and controls.	Qualified Service Technician	Inspect valve and ensure that it is operating correctly. Check piping for leaks. Vacuum the control compartment, fireplace logs and burner area.
Check Flame pattern and flame heights.	Qualified Service Technician	Ensure that the flame pattern is consistent and not impinged by the logs.
Inspecting/Cleaning Pilot and Burner	Qualified Service Technician	Remove any surface build up on pilot and burner assembly. Wipe the pilot nozzle, ignitor/flame rod and hood. Ensure the pilot flame engulfs the Thermocouple and Thermopile.

## TROUBLESHOOTING THE MILLIVOLT GAS SYSTEM CONTROL

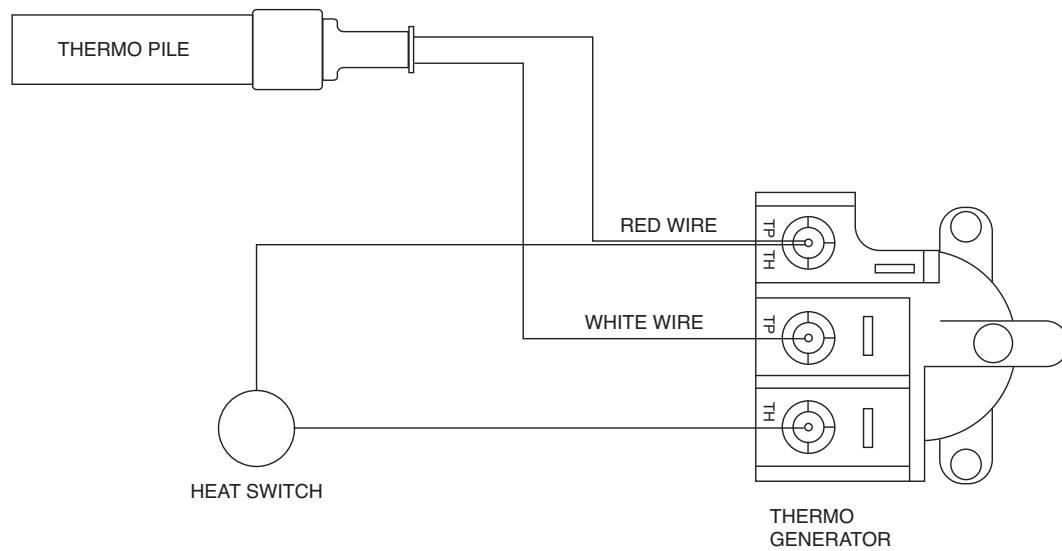
### IMPORTANT

- Valve system troubleshooting should only be carried out by a qualified service technician.
- If supply cord is damaged or the unit needs repairing, it shall be repaired by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard.

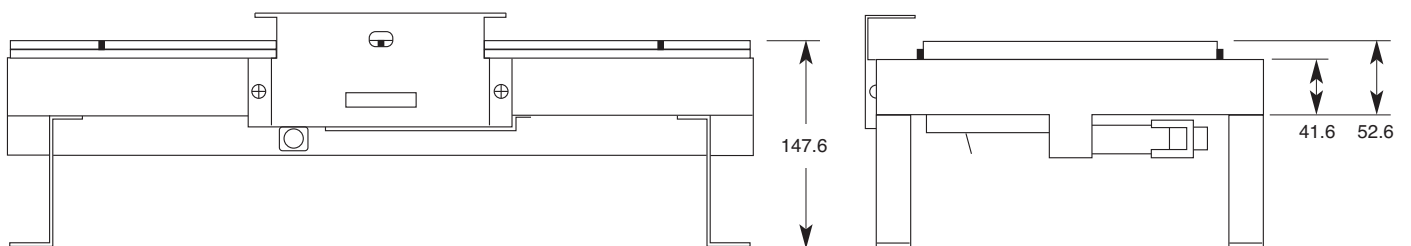
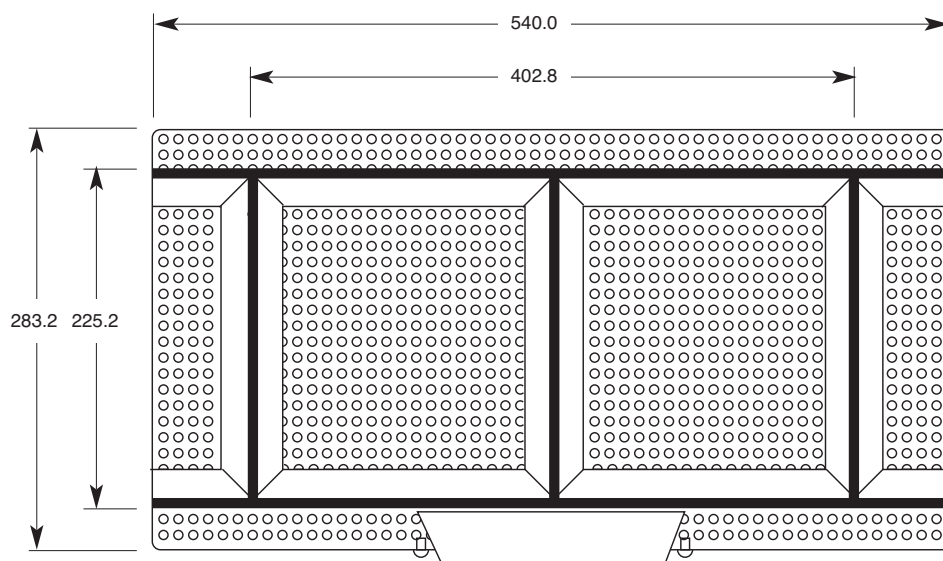
Symptom	Possible Cause	Corrective Action
<b>Spark ignitor will not light pilot after repeated triggering of igniter button</b>	A. Defective ignitor	Check for spark at electrode and pilot. If no spark and electrode wire is properly connected, replace ignitor
	B. Defective or misaligned electrode at pilot (spark at electrode).	Using a match, light the pilot. If pilot lights, turn off pilot and trigger the igniter button again. If pilot lights, an improper gas mixture caused the bad lighting and a longer purge period is recommended. If pilot will not light - check gap at electrode and pilot - should be 1/8" to have a strong spark. If gap measures 1/8", replace pilot.
	C. Gas supply pressure errant.	Check inlet gas pressure. It should be : • 0.87 kpa for Natural Gas • 2.64 kpa for L.P.G. Refer Data information plate.
	D. Pilot orifice plugged.	Clean or replace pilot orifice.
<b>Pilot will not stay lit after carefully following the lighting instruction</b>	A. Defective pilot generator (thermocouple)	Check pilot flame, it must impinge on thermocouple. Clean and/or adjust pilot for maximum flame impingement on the thermocouple. Ensure that the connection between the valve and the thermocouple is tight and secure.
<b>Pilot burning, no gas to burner, valve knob "ON", Wall switch "ON"</b>	A. Wall switch or wires defective.	Check wall switch and wires for proper connections. Jumper wires across terminals at wall switch, if burner comes on, replace defective wall switch. If okay, jumper across wall switch wires at valve, if burner comes on wires are faulty or connections are bad.
	B. Thermopile may not be generating sufficient millivoltage.	Check thermopile with millivolt meter. Take reading at thermopile terminals of gas valve. Should read 325 millivolts minimum with optional wall switch "OFF". Replace faulty thermopile if reading is below specified minimum.
	C. Blocked burner orifice.	Check burner orifice for blockage and remove.
<b>Frequent pilot/burner outage</b>	A. Pilot flame may be too low or blowing (High) causing the pilot/valve safety to drop out.	Clean and/or adjust pilot flame for maximum flame impingement on thermocouple.

## SERVICE

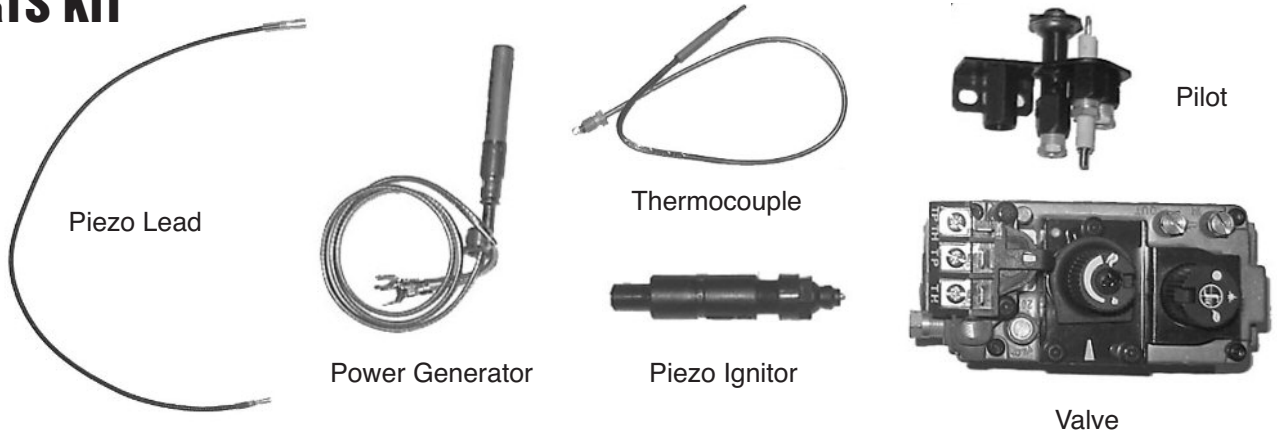
### Igniter



### Burner



## PARTS KIT

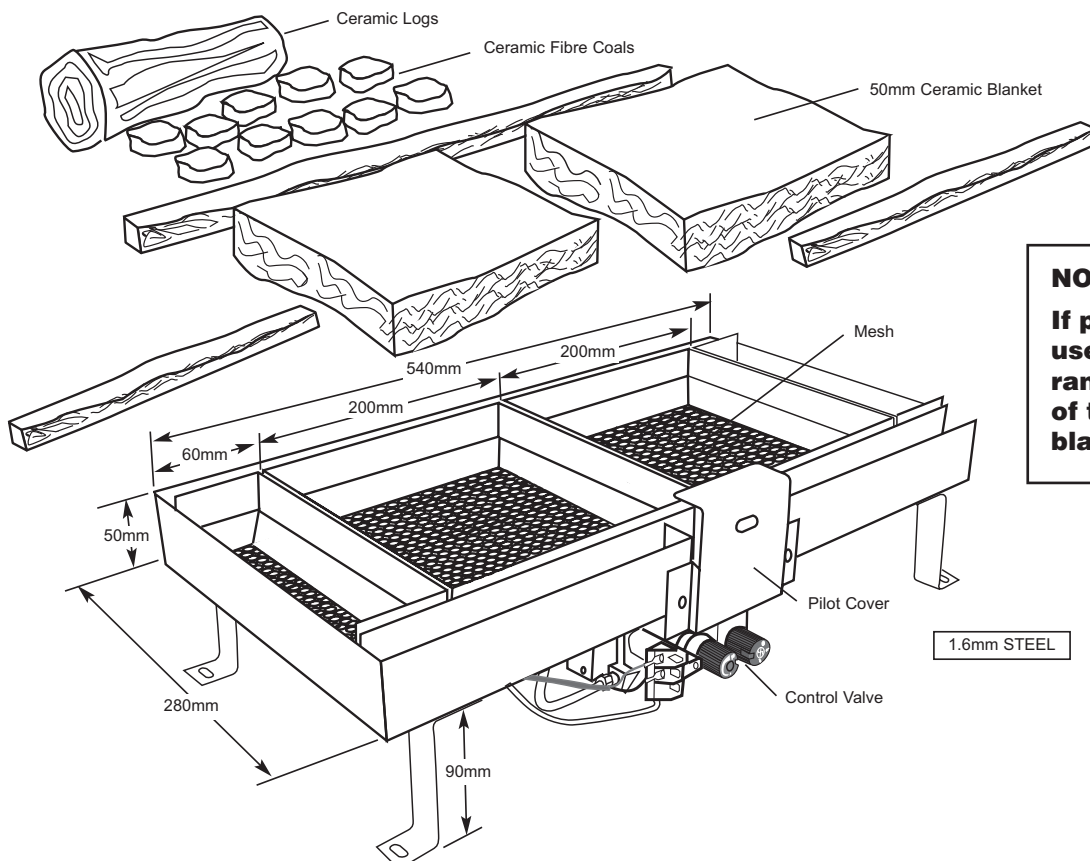


## GAS CONTROL ASSEMBLY

PART	PART No.	AGA Approval
SIT 820 NOVA Mv	0820332-NAT GAS	4032
SIT 820 NOVA Mv	0820331-LPG	4032
SIT THERMOCOUPLE	200261	4032
SIT PILOT ASSEMBLY	190610	4032
SIT THERMAL GENERATOR	240002	4032
PIEZO WITH LEAD	28510	4032
PIEZO IGNITOR PUSH BUTTON	73953	4032
PIEZO BRACKET	978099	4032

All spare parts listed are available from the manufacturer.

## BURNER ASSEMBLY



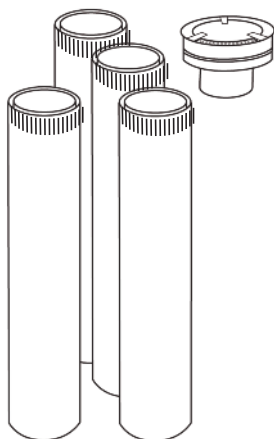
### NOTE:

If pebbles are used, lay them randomly on top of the ceramic blankets.

## FLUE REQUIREMENTS

### Natural Draught

The standard natural draught flue kit consists of 4 x 900mm lengths of 225/275 twin skin flue and an AGA approved cowl.



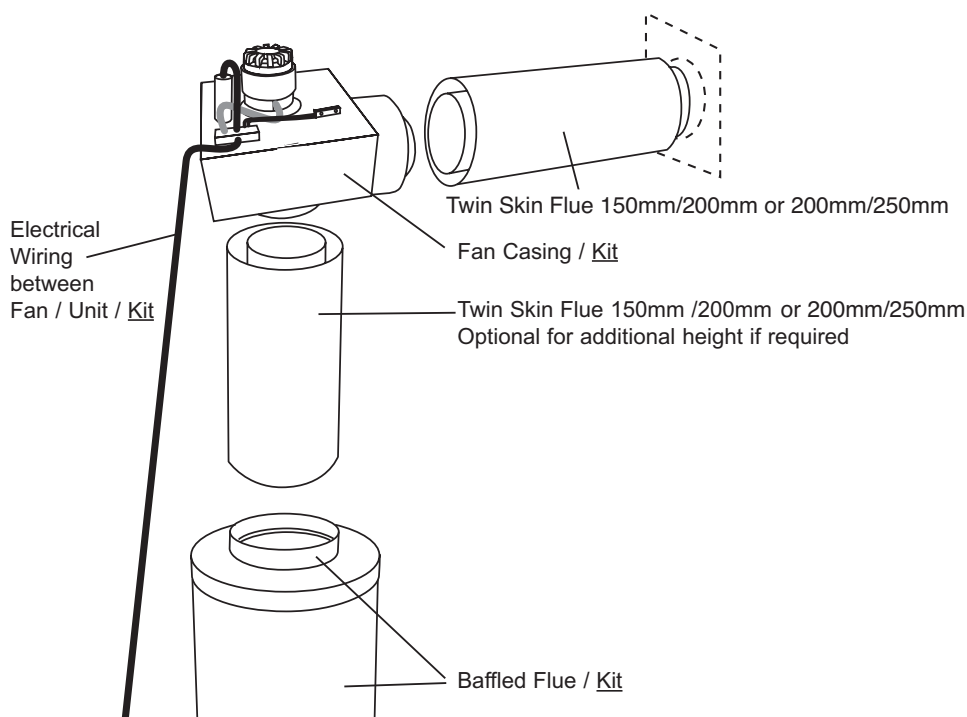
3.6m Flue Kit  
complete with cowl

## FLUE REQUIREMENTS

### Power Flue Kit (Optional – refer to pages 16 to 28 for details)

The standard Power Flue Kit consists of ;

- 1 x Power Flue Fan
- 1 x Power Flue Motor
- 1 x Control Module
- 1 x Electronic Ignition Pack
- 1 x Baffle
- 1 x Pressure Differential Switch
- 1 x Loom
- 1 x Termination Cowl (horizontal or vertical)





# INTRODUCTION - THE POWER FLUE SYSTEM

## POWER FLUE DESIGN

A 'flue' using a fan to remove or assist in removing combustion products from an appliance, is known as a 'power flue'.

A power flue application can be used to enable a client to have a decorative fire with a horizontal flue run or a vertical flue run where flue space is inadequate for the normal flue.

WHERE FITTED A POWERFLUE SYSTEM MUST BE DESIGNED AND INSTALLED TO MEET GAS INSTALLATION CODES AS5601.1.2013 CLAUSE H2 - POWER FLUE DESIGN.

Where the powerflue option described in this manual is installed, it represents a Power Flue installed in accordance with AS/NZS 5601.1 Paragraph H2. The powerflue system when installed to the instructions is designed to comply with the requirements of AS/NZS5601.

The powerflue must be installed and commissioned by the installer in accordance with Paragraph H2.2.7 AS/NZS 5601.1.

# INSTALLATION INSTRUCTIONS

## VENTILATION REQUIREMENTS

A requirement of the gas installation code AS/NZS5601.1-2013 is that ventilation is required as per the manufacturers instructions. Clause 6.10.9.5 of AS/NZS5601.1-2013 sets out the ventilation requirements.

### Ventilation requirements of models installed with Power Flue

MODELS	Ventilation Sq mm
Double Vision, Hot Box and all Heatseekers	18,000
Pure Vision, Simplicity, Elegance, Signature, Hybrid 850, 1000 & 1500 Sizes	18,000
Pure Vision, Simplicity, Elegance, Signature, Hybrid 1800 & 3300 Sizes	32,000

## ACCESS TO POWER FLUE MOTOR

Access must be provided to the flue motor, this access MUST be at least 400mm x 400mm. There MUST be a minimum clearance of 250mm between the top of the motor and any fixed object i.e. ceiling or stud work. This is so the top of the fan box can be removed.

## WIRING OF THE POWER FLUE

All wiring for the power flue is carried out at the factory and plug connectors are fitted for easy installation. The power supply for the power flue is via a 3-pin plug at the rear of the firebox that can be plugged into a power socket within the cavity.

## ISOLATION SWITCH

If the power point is within a cavity an isolation switch accessible from outside the cavity must be provided.

## WIRING CLEARANCES

Wiring must at all times have a clearance of at least 150mm from the flue.

## FAN FAILURE SENSING DEVICE

All Real Flame Power Flue systems are fitted with a sensing device within the unit to ensure that, in the event of flow failure, the safety shut off valve within the module will go into lockout and shut off the gas supply to the unit. The device should ALWAYS be in the vertical position. Refer to the pressure differential switch on page 11.

## 'LOCKOUT'

'Lockout' is the term used when the module in the unit senses a fault. When a fault is detected by the module it will shut off the gas and go into lockout. If this occurs contact the manufacturer.

## INSTALLATION INSTRUCTIONS (continued)

### LOCATION OF FLUE TERMINAL FOR POWER FLUE

Listed below are the minimum clearances required for fan-assisted terminations:

1. Below eaves, balconies and other projections. ....200mm
- 1a. Below eaves, balconies and other projections for a 1500 & 1800 model .....300mm
2. From the ground, above a balcony or other surface.....300mm
3. From a return wall or external corner.....300mm
4. From a Gas meter.....1000mm
5. From an electricity meter or fuse box. ....500mm
6. From a drainpipe or soil pipe. ....75mm
7. Horizontally from any building structure or obstruction facing a terminal. ....500mm
8. From any other flue terminal. Cowl, or combustion air intake. ....300mm
9. Horizontally from any openable window, door, non-mechanical air inlet,  
or any other opening into a building with the exception of sub floor ventilation.....300mm
10. From a mechanical air inlet including a spa blower.....1000mm
11. Vertically below an openable window, non-mechanical air inlet,  
or any other opening into a building with the exception sub floor ventilation.....500mm

### ELECTRICAL

**SHOULD THE SUPPLY FLEX AT THE BACK OF THE FIREBOX BE DAMAGED, A SPECIALLY PREPARED FLEX IS REQUIRED. FOR REPLACEMENT CONTACT THE MANUFACTURER.**

**THE ON/OFF WALL SWITCH MUST NEVER BE ATTACHED TO A METAL FRAME.**

### WARNING

**Whenever servicing the power flue system, always turn off the electrical power supply and close the manual gas control valve.**

#### IMPORTANT INFORMATION

In addition to the instructions in this manual all national, state and local regulations must be adhered to. These include but are not limited to:

- Australian Standards AS3000 - Electrical Installation.
- Australian Standards AS/NZS5601.1-2013 - Gas Installation.
- Local Gas and Electrical Authority Regulations.
- Municipal Building Codes.

The power flue should be serviced every 12 months by an authorised technician. If repairs are needed an authorised technician must carry them out.

### FITTING THE MOTOR

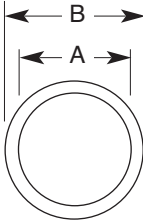
The Power Flue motor is fitted with two sets of spigots. The set on the base of the Power Flue box sit on top of the vertical flue and the set mounted on the side plate connect to the horizontal flue.

The 1800 and 3300 units have a power flue motor with a 200mm spigot and a twin spigot of 200mm and 250mm.

## INSTALLATION INSTRUCTIONS (continued)

### FLUE SIZE

The flue size for each model is different. Please refer to the table below.



MODELS	A mm	B mm
Double Vision, Hot Box and all Heatseekers	150	200
Pure Vision, Simplicity, Elegance, Signature, Hybrid 850, 1000 & 1500 Sizes	150	200
Pure Vision, Simplicity, Elegance, Signature, Hybrid 1800 & 3300 Sizes	200	250

**NOTE:** Ensure all power flue inner and outer flue lengths are sealed at joins.

### HORIZONTAL FLUE RUN

The maximum length of horizontal flue run is to be 13.5 metres with a maximum of four (4) bends; these bends can be 45° or 90°. **The horizontal flue run is to have a grade downwards from the motor to the termination.**

### VERTICAL FLUE RUN (see page 8)

The minimum vertical flue run is 900mm from the top of the firebox (1500mm from the floor). If a longer vertical run is required twin skin flue 150mm & 200mm can be added between the muffler top and the fan. The flue can be cut to the required height. For 1800 and 3300 units 200mm/250mm flue is required.

### FLUE CLEARANCES

All flue clearances are as per the requirements listed in the heater specifications.

### TERMINATION

The termination to be used for all horizontal installations is to be either a small flush cowl or if used as a service access panel, a large flush cowl is required. For vertical termination a vertical approved cowl must be used. An external motor can be used as an option on horizontal and vertical terminations.

## INSTALLATION OF POWER FLUE KIT

### POWER FLUE MUFFLER

The power flue muffler has a spigot at each end. The end that attaches to the firebox has a spigot equivalent to the inner flue spigot diameter of the firebox, the top of the muffler has a 150mm spigot which the motor fits to, or the 150/200 twin skin flue if required. The flow arrow on the muffler is to be pointing up. If a 1800 or 3300 unit is used the flue is 200mm/250mm.

### WIRING (see wiring diagram pages 17 & 18)

A 3 metre lead is supplied with the power flue, this lead has a different connection on each end, one end is plugged into the connection on the left hand side of the firebox and the other end is to be plugged into the fan. The wire coming from the rear of the firebox with the standard 3-pin plug attached is to be plugged into a power point. A single gang wall switch is also supplied attached to the 3 metres of lead; this wall switch is to be attached at a location accessible to the client. No other wiring is required.

### SERVICING OF THE POWER FLUE MOTOR

The Real Flame Power Flue motor is designed so as to make servicing the motor a simple task. The power lead connected to the motor is to be disconnected (unplugged) and the screws are to be undone, the fan motor will then lift out for servicing. The fan Motor box connected to the flue does not have to be disconnected from the flue.

## COMMISSIONING THE POWER FLUE SYSTEM

THE INSTALLER MUST COMMISSION THE POWERFLUE SYSTEM AS PER CLAUSE H2.2.7 (AS5601.1.2013)

The correct CO<sub>2</sub> concentration shall be established by adjustment of dampers and checked by flue gas analysis. A check that the controls are operating in the manner specified shall be carried out.

The check shall include a simulation of fan failure.

Commissioning the powerflue systed is an additional requirement to commissioning the appliance. The appliance must also be commissioned as per AS5601.1.2013.

### Sizing of the fan

In order to select a suitable fan, it is necessary to determine the volume and temperature of the flue gases. Before this can be done the percentage of CO<sub>2</sub> in the flue gases shall be decided.

If discharge is at a low level, 1% CO<sub>2</sub> may be used in the design formula. For other situations, values between 4% and 8% may be used. These values will give flue gas temperatures of 140°C and 220°C respectively.

For appliances with modulating burners, the CO<sub>2</sub> concentration in the flue shall be considered when the appliance is operating at normal rate, i.e. 8% CO<sub>2</sub> in the combustion chamber.

The quantity of flue gases to be handled by the fan may be determined by the following simplified formula, which is sufficiently accurate for most flue gases currently distributed. A suitable fan may then be selected.

$$Q = \frac{T}{R}$$

Where Q = volume of flue gases, litres per second

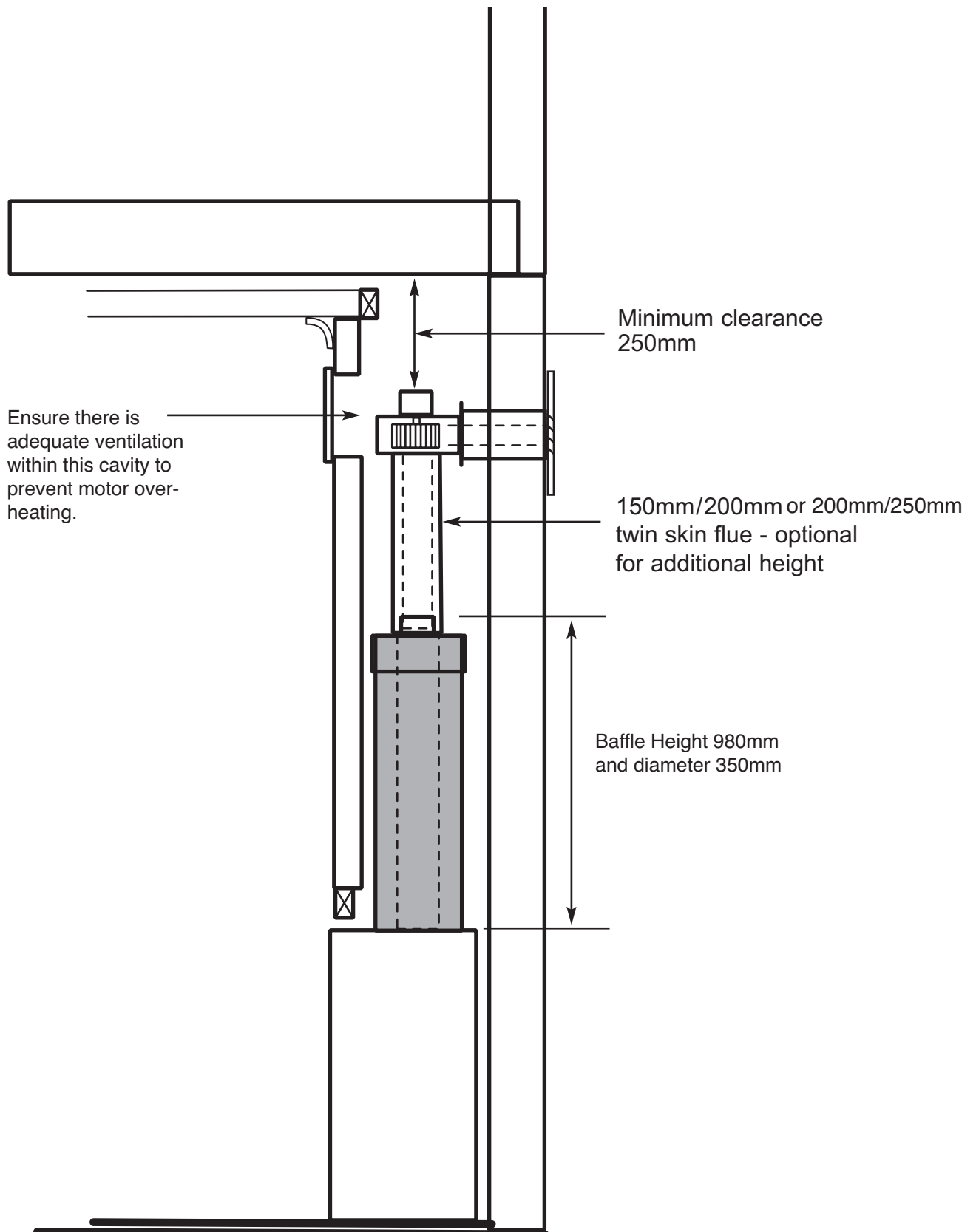
T = total gas consumption of appliances connected to flue megajoules per hour

R = desired % CO<sub>2</sub> concentration by volume in the flue gases at the discharge point

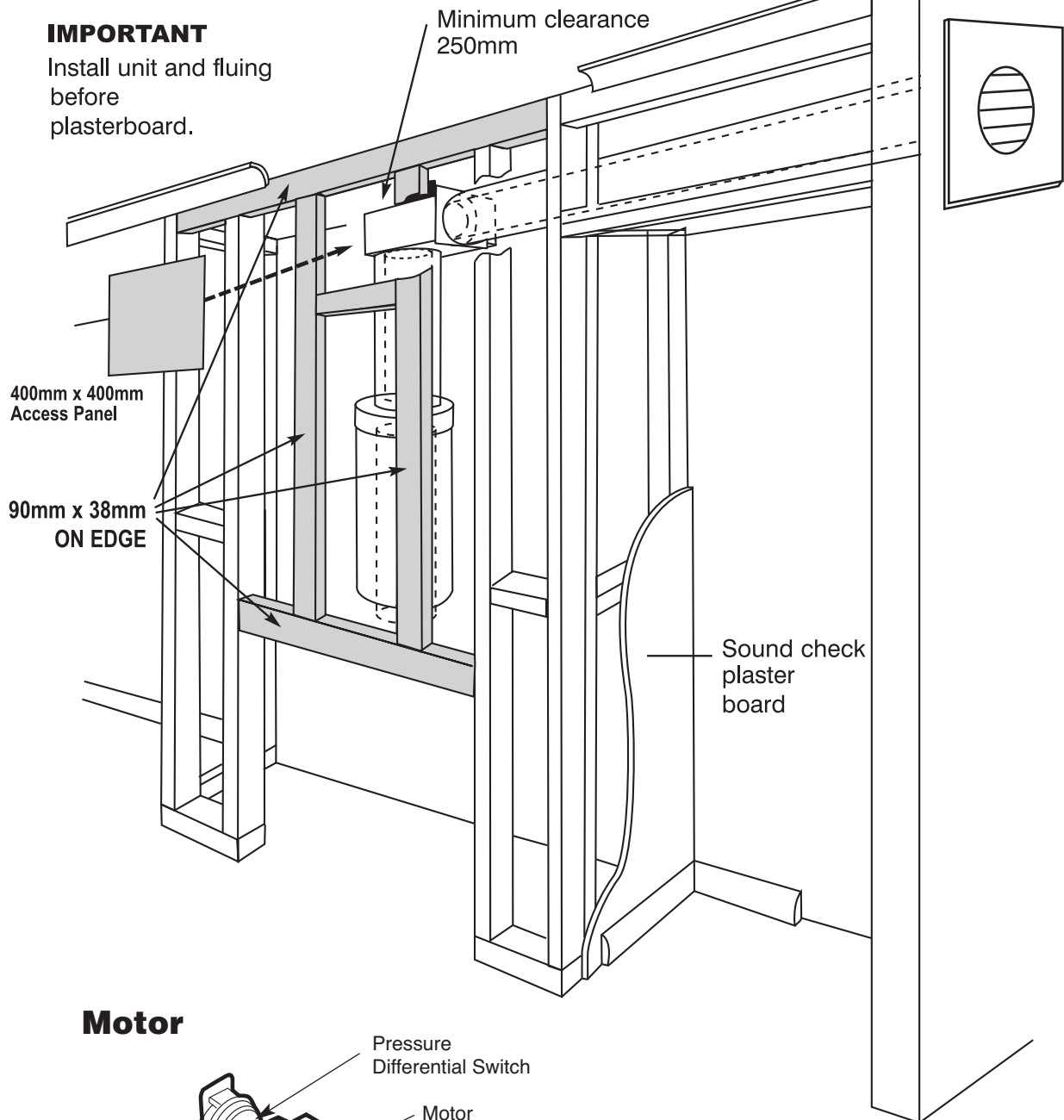
### FLUE GASES - RELATIONSHIP BETWEEN % CO<sub>2</sub> VOLUME FLOW RATE & % EXCESS AIR

CO <sub>2</sub> %	Volume Flow Rate L/s/MJ/h	Excess Air %
10	0.10	33
9	0.11	50
8	0.13	67
7	0.14	90
6.7	0.15	100
6	0.17	120
5	0.20	170
4.4	0.23	200
4	0.25	230
3.3	0.30	300
3	0.33	400
2.2	0.45	500
2	0.50	500
1.7	0.60	700
1.2	0.80	1000
1.0	1.00	1200
0.8	1.20	1500
0.6	1.60	2000
0.5	2.00	2600

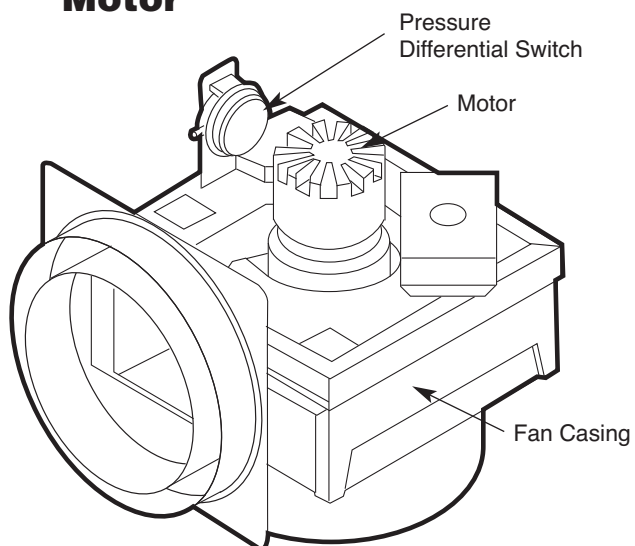
## POWER FLUE MOTOR CLEARANCE



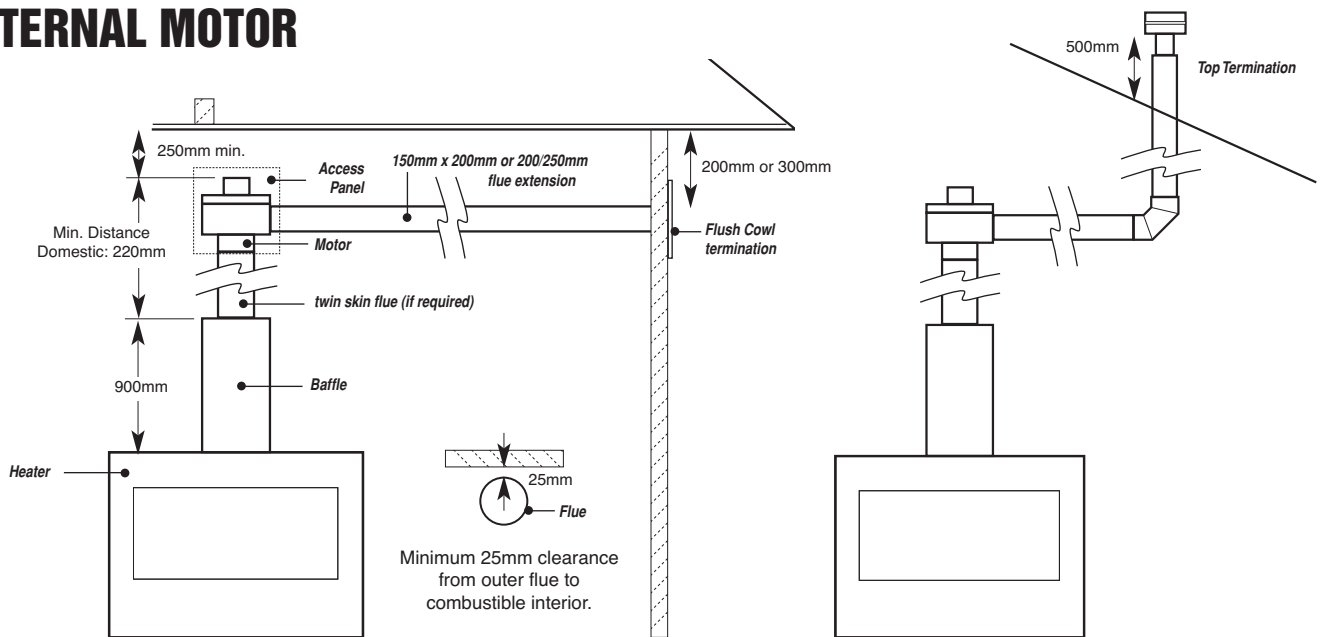
## TYPICAL POWER FLUE FRAMEOUT



### Motor



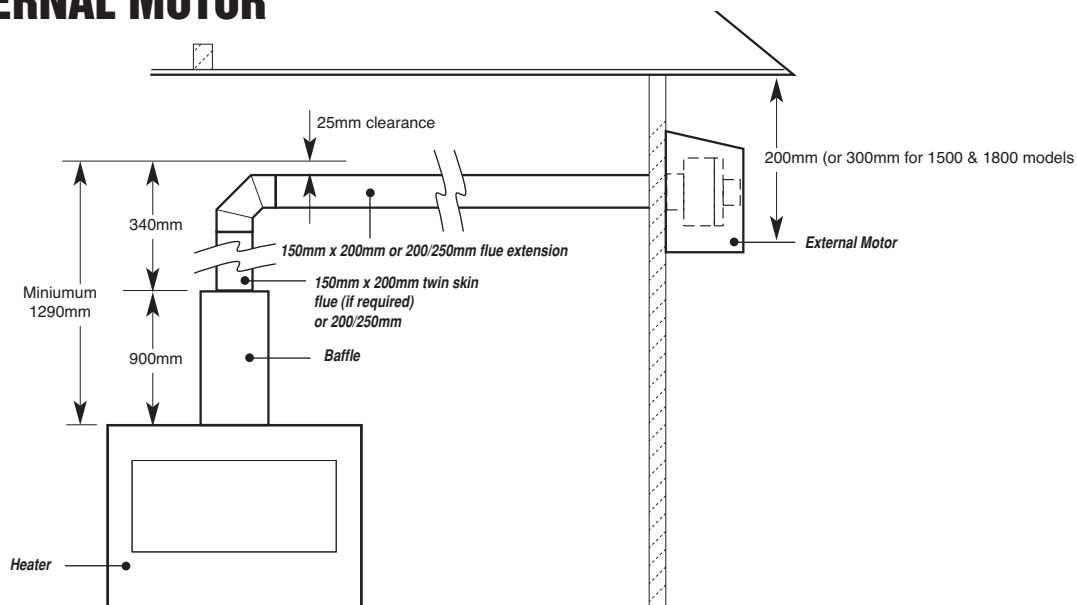
## INTERNAL MOTOR



### NOTE:

1. Maximum of 4 elbows, 45° or 90°.
2. Allow 400mm x 400mm access panel for service of motor.

## EXTERNAL MOTOR

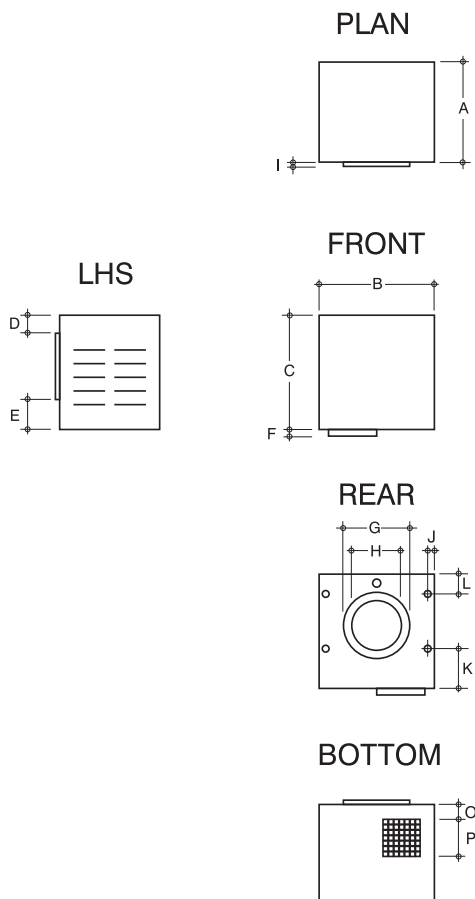


### NOTE:

1. Maximum of 4 elbows, 45° or 90°.

## DIMENSIONS

### External Flue Motor

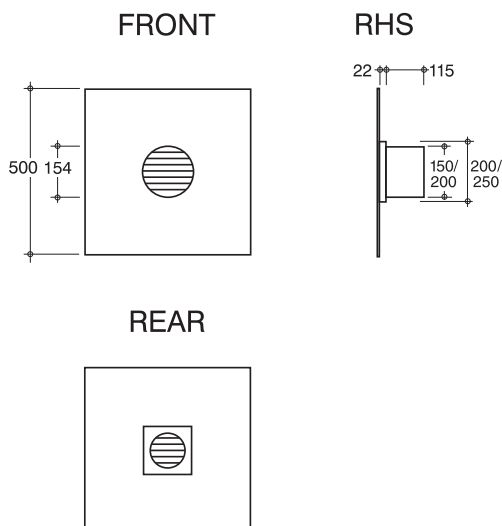


A	B	C	D	E	F	G	H
302	348	345	55/5	90/40	20	200/250	150/200

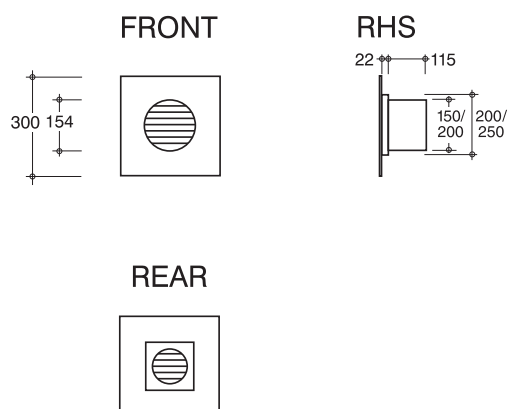
I	J	K	L	M	N	O	P
13	20	120	60	105	75	45	112

MODELS	H mm	G mm
Double Vision, Hot Box and all Heatseekers	150	200
Pure Vision, Simplicity, Elegance, Signature, Hybrid 850, 1000 & 1500 Sizes	150	200
Pure Vision, Simplicity, Elegance, Signature, Hybrid 1800 & 3300 Sizes	200	250

### Power Flue Flush Termination 500 x 500



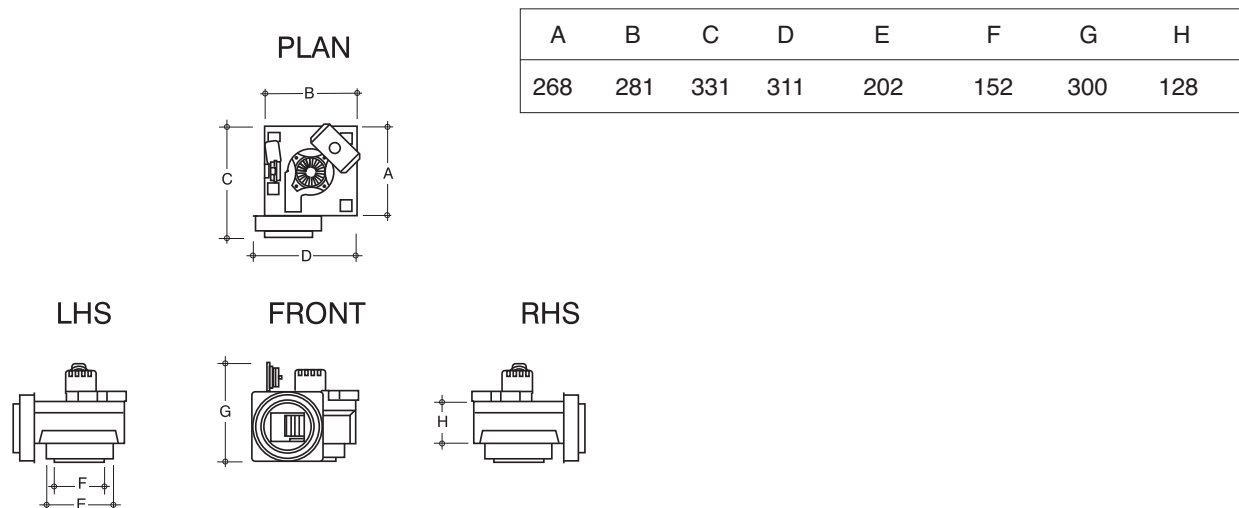
### Power Flue Flush Termination 300 x 300



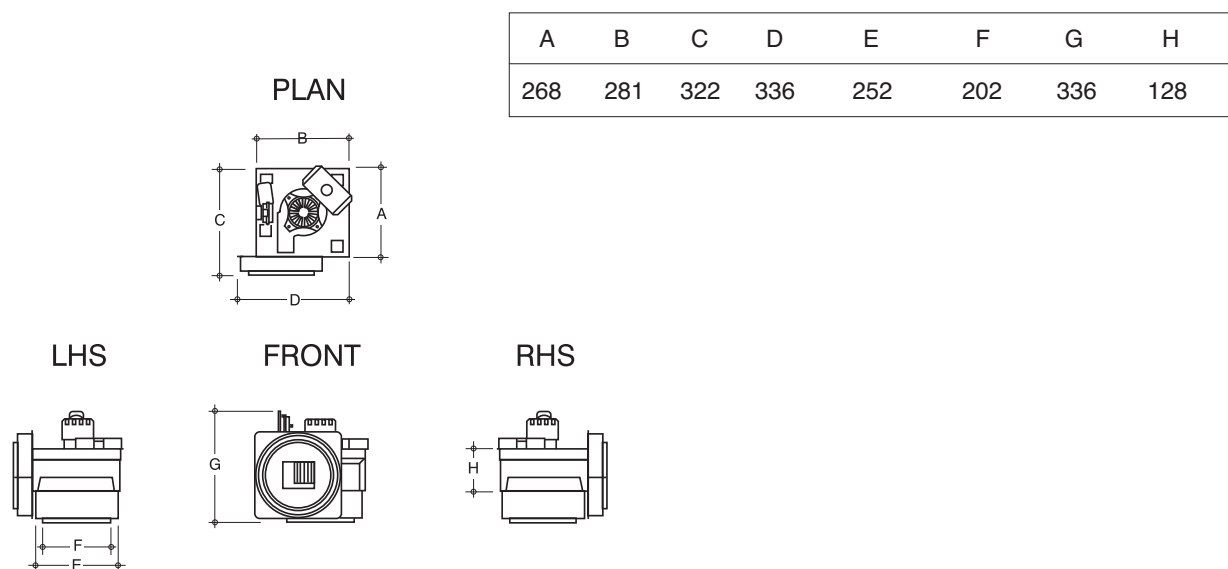


## DIMENSIONS

### Internal Power Flue Motor



### Internal Power Flue Motor 200/250



## TROUBLE SHOOTING FOR ELECTRONIC IGNITION AND POWER FLUE SYSTEM.

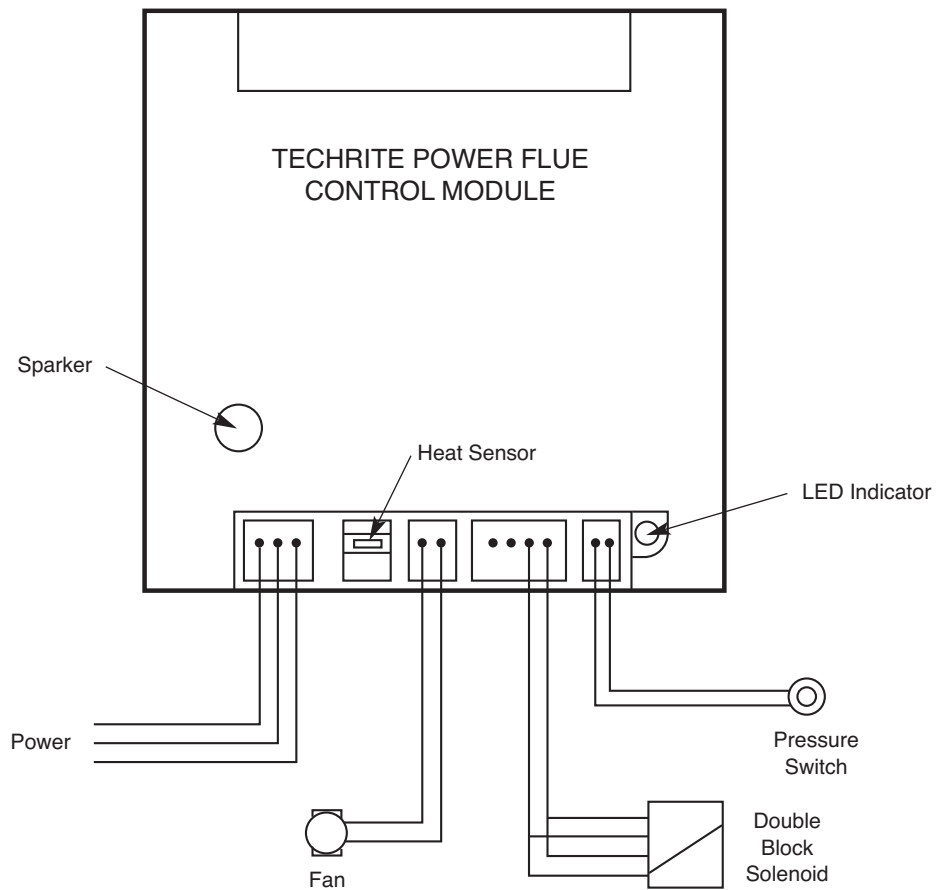
Symptom	Possible Cause	Corrective Action
Fire turned on and nothing happens	No Power to Module	Connect Power
Fire turned on and motor starts but there is no spark	Pressure switch not operating	Check pressure switch
Fire sparks when turned on but will not ignite	A. No Gas	Connect Gas.
	B. Sparker is to far from metal	Adjust sparker so it cross lights to metal.
	C. Pressure switch (Power Flue) is not operating correctly.	Remove fan from housing and check that small tube supplying air to pressure switch has not moved or been damaged.
	C. Valve solenoids are faulty	Check solenoids
Fire ignites and then shuts down within a couple of seconds	D. Solenoid wires to module not connected correctly	Check that the four pin plug from the valve has been connected correctly
	A. Something is touching the heat sensor	Ensure that nothing is touching the sensor which is located behind the cover plate at front of burner.
Fire ignites and shuts down after several minutes	B. The power polarity is reversed	Check polarity
	A. Insufficient air for burner to operate correctly	Check that the unit has correct ventilation as per Installation manual.
	B. Pressure switch not operating correctly	Check air supply tube to pressure switch.

## **TROUBLE SHOOTING FOR ELECTRONIC IGNITION AND POWER FLUE SYSTEM.** (continued)

The power flue and electronic control box have a red LED light that indicates the possible cause of a problem, the LED light will flash in different sequences for different problems, the most common are:-

Long Flash	Short Flash	
1	0	Normal Running State.
1	1	Flame Failure.
1	2	Waiting for pressure switch ON
1	3	Waiting for pressure switch OFF
2	1	Maximum retries exceeded

## POWER FLUE WIRING DIAGRAM



### NOTE

For C Bus and/or fresh air damper interlock systems, please contact us for wiring diagrams and relevant system instructions at [info@realflame.com.au](mailto:info@realflame.com.au)









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[www.realflame.com.au](http://www.realflame.com.au)

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