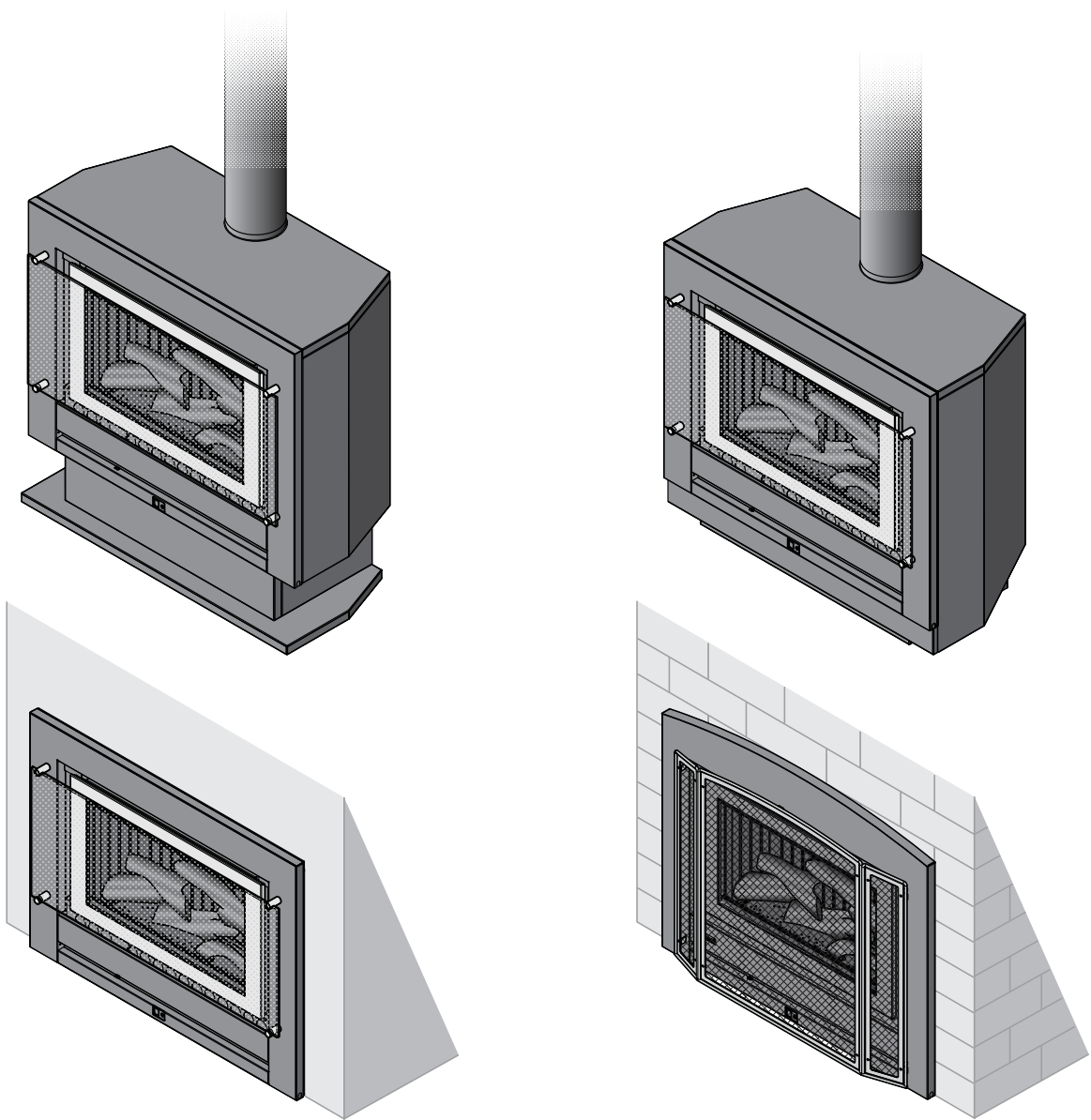


# Rinnai

## SAPPHIRE GAS LOG FLAME FIRE Operation / Installation Manual

MODELS: RIB2312N & RIB2312L



### This appliance shall be installed in accordance with:

- Manufacturer's Installation Instructions
  - Current AS/NZS 5601 AS/NZS 3000
  - Local Regulations and Municipal Building Codes including local OH&S requirements
- This appliance must be installed, maintained and removed only by an Authorised Person.  
For continued safety of this appliance it must be installed and maintained in accordance with the manufacturers instructions.



N10378



The Australian  
Gas Association  
All Rinnai gas products  
are A.G.A. certified.

**Congratulations on the purchase of your Rinnai Sapphire gas log flamefire.  
We trust you will have many years of comfort and enjoyment from your appliance.**

**BEFORE PROCEEDING WITH THE OPERATION OR INSTALLATION OF YOUR NEW HEATER  
PLEASE READ THIS MANUAL THOROUGHLY AND GAIN A FULL UNDERSTANDING OF THE  
REQUIREMENTS, FEATURES AND OPERATION OF YOUR NEW APPLIANCE.**

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# BEFORE YOU START

## INSTALLATION REQUIREMENTS

This heater must be installed only by an authorised person. The installation must conform to local regulations. The installation must also comply with the instructions supplied by Rinnai. Service and removal must be carried out only by an authorised person.

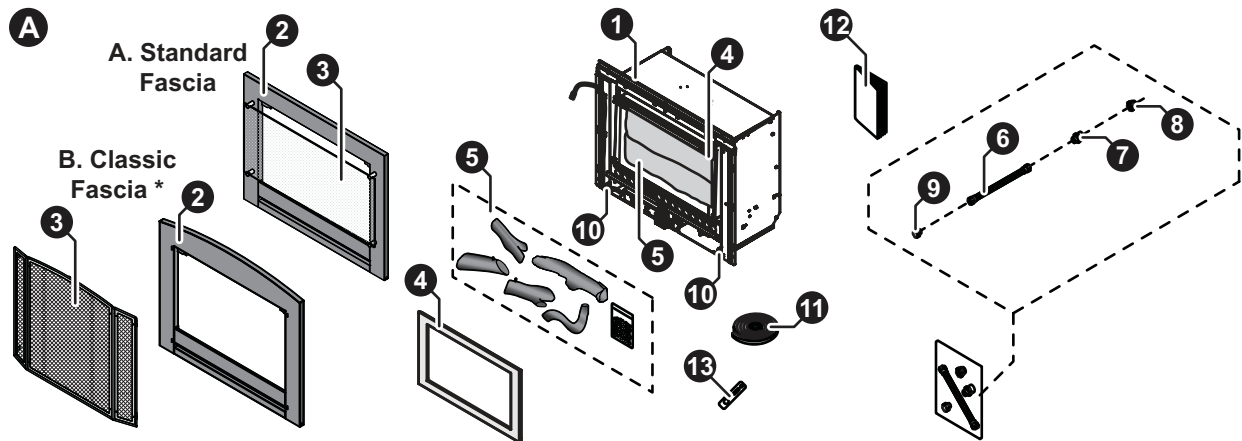
## CERTIFICATION

The Rinnai Sapphire® has been certified by the Australian Gas Association. The AGA Certification Number is shown on the appliance dataplate. No parts or functions should be modified or permanently removed from the heater. Please keep these instructions in a safe place for future reference.

## CARTON CONTENTS / ITEM CHECKLIST

The components for Sapphire heater are supplied in separate cartons, the following tables list which components are in each carton. Ensure that the components listed for the installation method being installed are present before proceeding with the installation.

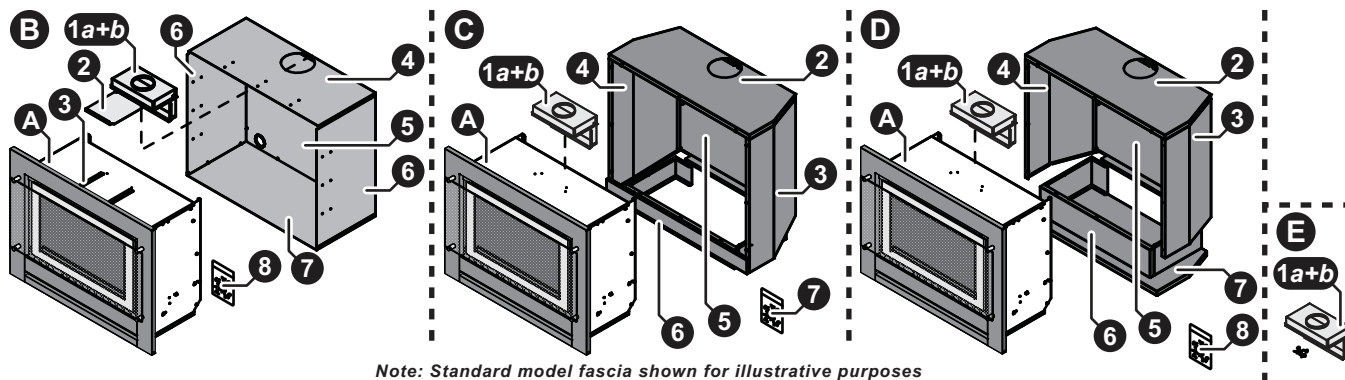
**IMPORTANT** The Engine and Fascia are packed into two separate cartons and are required for all installation types. Masonry installations may require a flexiliner flue to be installed, refer to "FLUEING" on page 26 for details.



Component Descriptions		Carton Contents	
		Engine	Fascia
* The Classic fascia / Mesh dress guard is suitable for Masonry and Zero Clearance - Inbuilt Installation ONLY! It can NOT be used on a Console or Plinth installation.			
<b>A Engine and Fascia - Masonry Installations (x2 Cartons)</b>			
1	Rinnai Sapphire Engine.	●	
2	A. Fascia (Standard Model) / B. Fascia (Classic Model)*.		●
3	A. Glass dress guard (Standard Model) / B. Mesh dress guard (Classic Model)*.		●
4	Inner metal surround.		●
5	Artificial log set / burn media, Satchel burner granules (shipped inside engine).	●	
6	Semi rigid stainless steel gas pipe with 5/8" connections (x1).	●	
7	½" BSP - 5/8" UNF flared brass adaptors (x1).	●	
8	½" BSP Flared nut (x1).	●	
9	5/8" UNF Plug (x1).	●	
10	Fascia attachment screws (2 x 8g black, pre-fitted in tabs of heater engine).	●	
11	Adhesive backed foam sealing strip.	●	
12	Operation and Installation manual.	●	
13	Remote Control Infra Red (IR)	●	



# BEFORE YOU START



Note: Standard model fascia shown for illustrative purposes

Component Descriptions	Carton Contents						
	Engine	Fascia	Zero Clearance Box	Console	Plinth	Remote Control	Spigot Adaptor
<p>* The Classic fascia / Mesh dress guard is suitable for Masonry and Zero Clearance - Inbuilt Installation ONLY! It can NOT be used on a Console or Plinth installation.</p>							
<b>B Zero Clearance - Inbuilt Installation (x3 Cartons)</b>							
<b>A</b> See Engine and Fascia (Masonry Installations) contents on previous page.	●	●					
<b>1</b> Two piece Spigot Adaptor <b>a</b> Top Half and <b>b</b> Bottom Half.			●				
<b>2</b> Spigot guide panel.			●				
<b>3</b> Spigot guide rails (x2).			●				
<b>4</b> Zero Clearance - Top panel.			●				
<b>5</b> Zero Clearance - Rear panel.			●				
<b>6</b> Zero Clearance - Left and Right side panels.			●				
<b>7</b> Base panel.			●				
<b>8</b> Packet assembly screws (x27), grommets (x2) and rivets (x2).			●				
<b>C Console Installation - Freestanding Installation (x3 Cartons)</b>							
<b>A</b> See Engine and Fascia (Masonry Installations) contents on previous page.	●	●					
<b>1</b> Two piece Spigot Adaptor <b>a</b> Top Half and <b>b</b> Bottom Half.				●			
<b>2</b> Console Installation - Top panel.				●			
<b>3</b> Console Installation - Left side panel.				●			
<b>4</b> Console Installation - Right side panel.				●			
<b>5</b> Console Installation - Rear panel.				●			
<b>6</b> Console Installation - Pillar.				●			
<b>7</b> Packet assembly screws 35 x 8g and 7 x M5.				●			
<b>D Plinth Installation - Freestanding Installation (x3 Cartons)</b>							
<b>A</b> See Engine and Fascia (Masonry Installations) contents on previous page.	●	●					
<b>1</b> Two piece Spigot Adaptor <b>a</b> Top Half and <b>b</b> Bottom Half.					●		
<b>2</b> Plinth Installation - Top panel.					●		
<b>3</b> Plinth Installation - Left side panel.					●		
<b>4</b> Plinth Installation - Right side panel.					●		
<b>5</b> Plinth Installation - Rear panel.					●		
<b>6</b> Plinth Installation - Pillar assembly.					●		
<b>7</b> Plinth Installation - Base panel.					●		
<b>8</b> Packet assembly screws 35 x 8g (only 29 needed for installation) and 7 x M5.					●		
<b>E Optional Two Piece Spigot Adaptor (x1 Carton)</b>							
<b>1</b> Two piece Spigot Adaptor <b>a</b> Top Half, <b>b</b> Bottom Half and assembly screws (x4)							●

# INSTALLATION RECORD

## INSTALLERS / GAS FITTERS DETAILS

Installers Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

### Company Contact Details

Telephone: \_\_\_\_\_

Mobile Phone: \_\_\_\_\_

Certificate of Compliance / Certification Number: \_\_\_\_\_

Authorised Persons - Licence Number: \_\_\_\_\_

Installers Signature: \_\_\_\_\_

Installation Date: \_\_\_\_\_

## APPLIANCE DETAILS

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Installation Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**THIS APPLIANCE MUST BE INSTALLED, SERVICED  
AND REPAIRED ONLY BY AN AUTHORISED PERSON.**



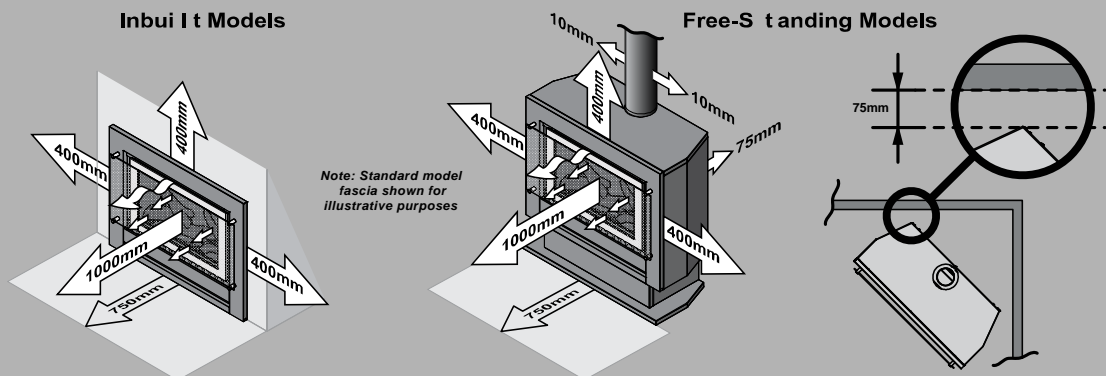
**The glass dress guard supplied with this appliance must not be  
permanently removed as it fulfils an operational safety function.  
Additional dress guards including free standing types may be  
used in conjunction with, but not replace, the dress guard  
supplied with this appliance.**



# SAFETY

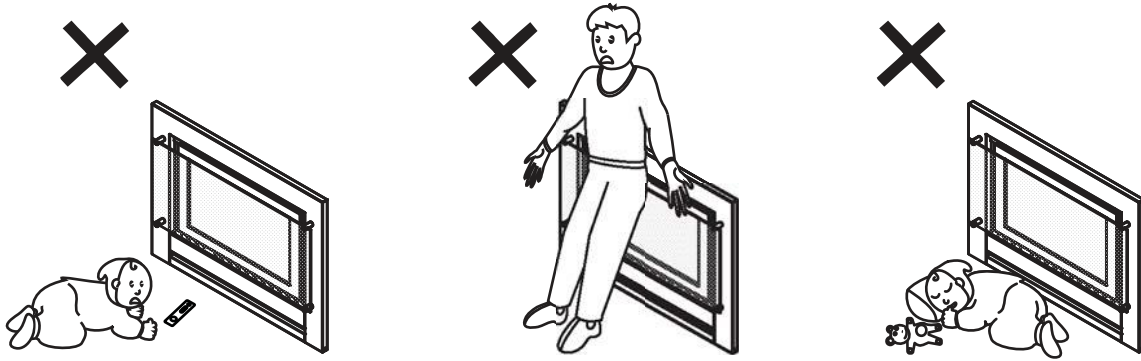


- Failure to comply with these instructions could result in a fire or explosion, which could cause serious injury, death or property damage.
- Improper installation, adjustments, service or maintenance can cause serious injury, death or property damage. Such work must be performed only by an authorised person.
- The appliance must be installed in accordance with the local gas and electrical authority regulations.
- Flue terminal must always vent directly to outdoors.
- DO NOT extend the flue vertically or horizontally in ways other than prescribed in the appliance manufacturers' installation instructions.
- For information on gas consumption, see data plate on the appliance.
- This appliance must not be installed where curtains or other combustible materials could come into contact with it. In some cases curtains may need restraining.
- **WARNING:** This heater MUST NOT be used if either of the glass panels are damaged.
- When considering installation ensure minimum clearances as follows are adhered to:



- Heat radiating from the front of this heater may over time affect the appearance of some materials used for flooring such as carpet, vinyl, cork or timber. This effect may be amplified if the air in the room contains cooking vapours or cigarette smoke. To avoid this possibility, it is recommended that a mat or similar protective sheet be placed in front of the appliance, extending at least 750 mm in front of the dress guard.
- This 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.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young Children must be supervised when in the vicinity of this heater while it is in operation.
- The Dress Guard MUST be fitted to this appliance to reduce the risk injury from serious burns and no part of it should be permanently removed.
- For protection of young children or the infirm a secondary guard is required.
- If the supply cord is damaged or requires replacing, it must be replaced by the manufacturer or the manufacturer's agent or similarly qualified person in order to avoid a hazard.
- The heater must not be located immediately below a power socket outlet.
- Not to be connected to a LP Gas Cylinder located Indoors.
- A dedicated 230 V earthed 10 Amp power point must be used with this appliance.
- DO NOT modify this appliance. Modifying from original specifications may create a dangerous situation and will void your warranty.
- Only the flue components specified by Rinnai must be used.
- Unpack the heater and check for damage. DO NOT INSTALL A DAMAGED HEATER. If the heater is damaged, contact your supplier for advice.
- Before installing the heater, check the label for the correct gas type (refer rating plate, inside the appliance).
- Refer to local gas authority for confirmation of the gas type if you are in doubt.

# SAFETY

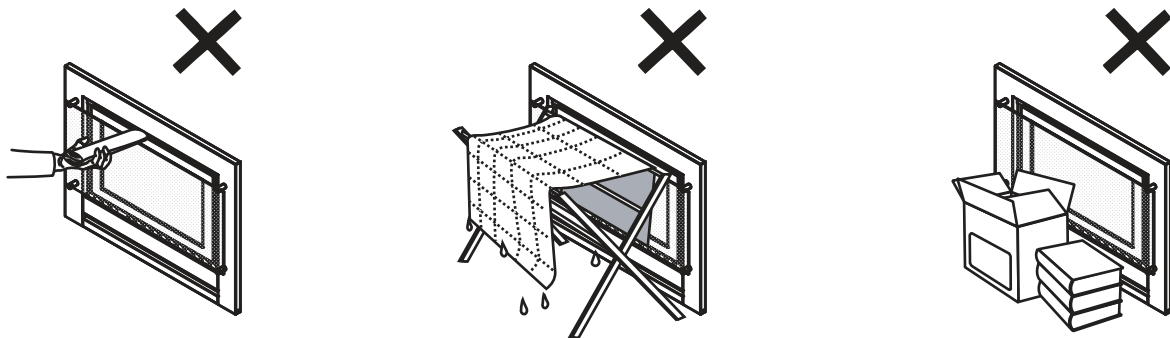


*Note: Standard model fascia shown for illustrative purposes*

The appliance is not intended for use by young children or infirm persons without supervision. Young children should always be supervised to ensure that they **DO NOT** play with the appliance.

**DO NOT** sit or lean against the heater.

**DO NOT** allow children or elderly persons to sleep in the warm air discharge from the heater.

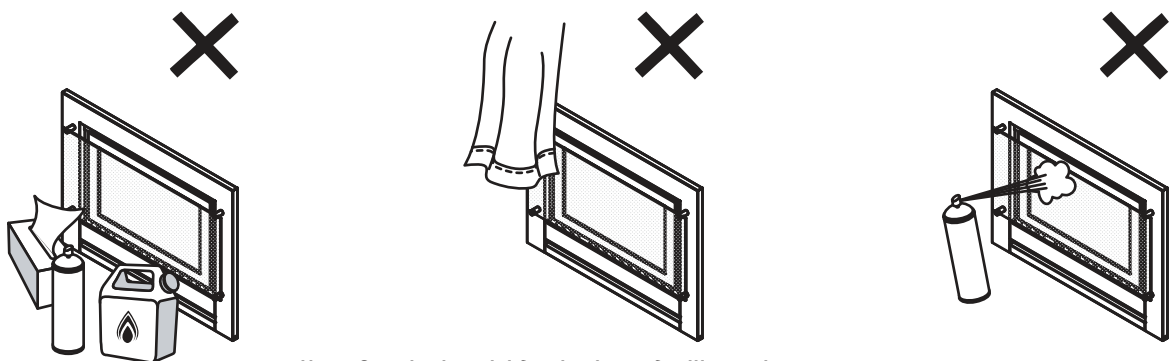


*Note: Standard model fascia shown for illustrative purposes*

**DO NOT** post or allow children to post articles into the louvres of the heater.

**DO NOT** cover or place articles on this heater.

**DO NOT** place articles in front of the louvres.



*Note: Standard model fascia shown for illustrative purposes*

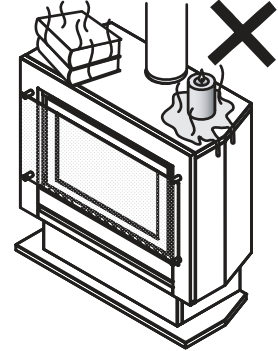
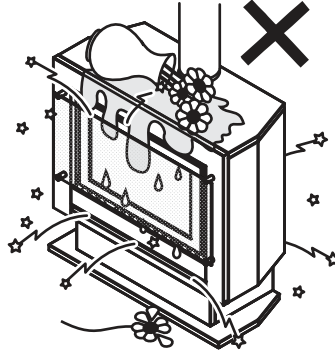
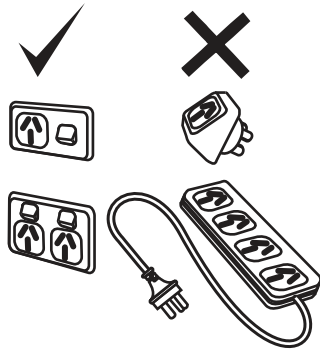
**DO NOT** operate / install this heater in areas where painting is taking place, or in places such as hairdressing salons, where there may be fluff and dust, and where aerosols are used.

**DO NOT** place articles on or against this appliance.

**DO NOT** use or store flammable materials in or near this appliance. Keep flammable materials away from heater. Combustible materials **MUST NOT** be placed where the heater could ignite them.

**DO NOT** spray aerosols in the vicinity of this appliance while it is in operation. Most aerosols contain flammable substances which can be a heater hazard if used near this heater when it is in use.

# SAFETY



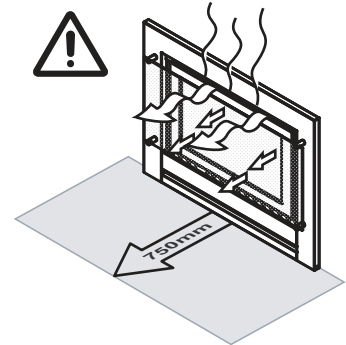
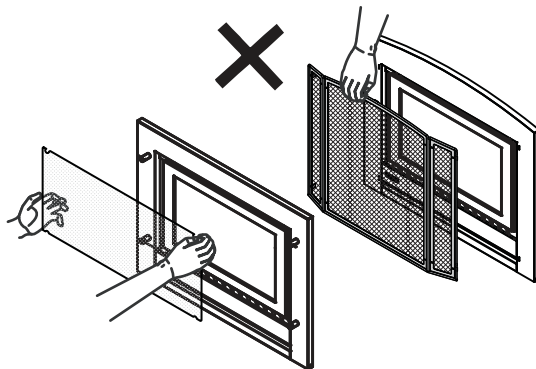
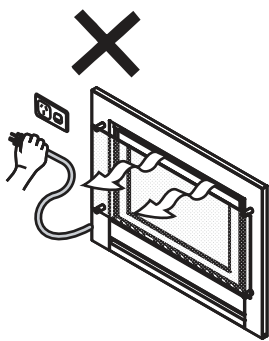
A dedicated 230V earthed 10 Amp power point must be used with this appliance.

**DO NOT** use power boards or double adaptors to operate this appliance. The heater **MUST NOT** be located below a power socket-outlet.

**DO NOT** place containers of liquid on top of the heater. Water spillage can cause extensive damage to the appliance and create an electrocution hazard.

**DO NOT** place articles on or against this appliance.

**DO NOT CONNECT TO AN LPG GAS CYLINDER INDOORS.**



Turn the heater 'OFF' after use.

**DO NOT** unplug the heater while it is in operation or while the fan is still cycling.

**DO NOT** remove the Dress Guard. The dress guard is fitted to this appliance to reduce the risk of fire or injury from burns and no part of it should be permanently removed. For protection of children or the infirm, a secondary guard is recommended.

Heat emanating from the front of the appliance may over time affect the appearance of some materials used for flooring such as carpet, vinyl, cork or timber. This affect may be amplified if the air in the room contains cooking vapours or cigarette smoke. To avoid this possibility, it is recommended that a mat be placed in front of the appliance, extending at least 750 mm in front of the heater.

When the heater is operated for the first time or after long periods of non use a slight odour may be emitted, this is normal. However if odours persist switch 'OFF' the appliance and contact Rinnai.

## SAFETY DEVICES

**Over Heat Switches:** When the heater gets too hot during operation (for example when air outlet louvres are blocked) these devices turn the gas off automatically and allow the heater to restart when cooled down.

**Electrical Fuse:** The electrical circuits are protected by a fuse.

**Flame Failure Sensing System:** This device automatically cuts off the gas supply to the heater in the event of a flame failure.

**Power Failure:** In the event of a power failure or power cut, the gas valves will automatically close.

# ABOUT YOUR HEATER

## GENERAL DESCRIPTION

Your Sapphire is a burning log effect, gas space heating appliance with natural draft combustion system, intended for use with Natural Gas, Propane and ULPG. The Burning log effect is achieved using one single main burner with strategically placed, 'life like', imitation logs and granules. Temperature control is achieved by pressing the up or down marked arrows on the manual control switch or via a cordless wall mounted remote control.

This heater has an electronic ignition with intermittent pilot. The pilot is only on when the heater is in operation.

Burner, logs and granules are contained in a glass fronted, sealed burner box.

Combustion air is drawn from the room. Combustion product is exhausted via the flue discharge vent when installed in a masonry chimney or when installed in a zero clearance box or as a stand alone unit through a 100mmØ x 150mmØ twin skinned flue to the outside of the house.

This appliance is modular and primarily consists of an 'Engine' that is utilized in any of the 3 configuration types as listed below.

### 1. **Fireplace / Masonry installation - Engine:**

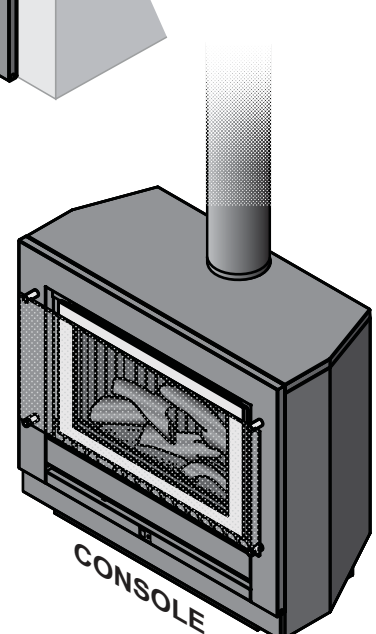
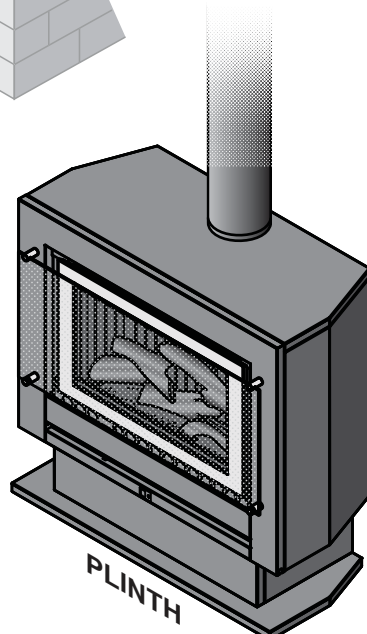
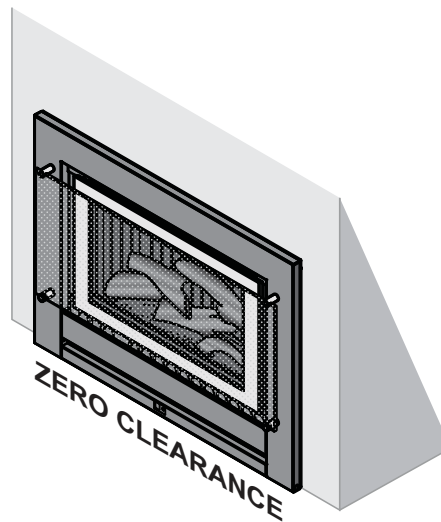
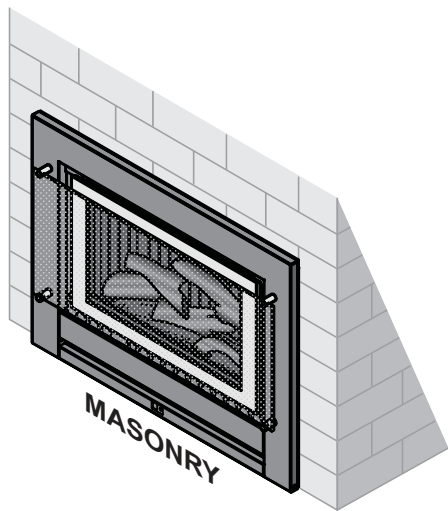
The appliance is directly mounted into an existing masonry fire place or a non-combustible/masonry enclosure that has a chimney. When installed correctly the appliance is a flush to wall mount.

### 2. **Zero Clearance installation:**

The Appliance is fitted within a sheet metal Zero Clearance Box Assembly that has been installed into a wall or other suitable structure. Materials need not be non-combustible. When installed correctly the appliance is a flush to wall mount.

### 3. **Freestanding Plinth or Console appliance:**

The appliance is housed in a decorative fabricated sheet metal box that is intended to be freestanding and not inbuilt.



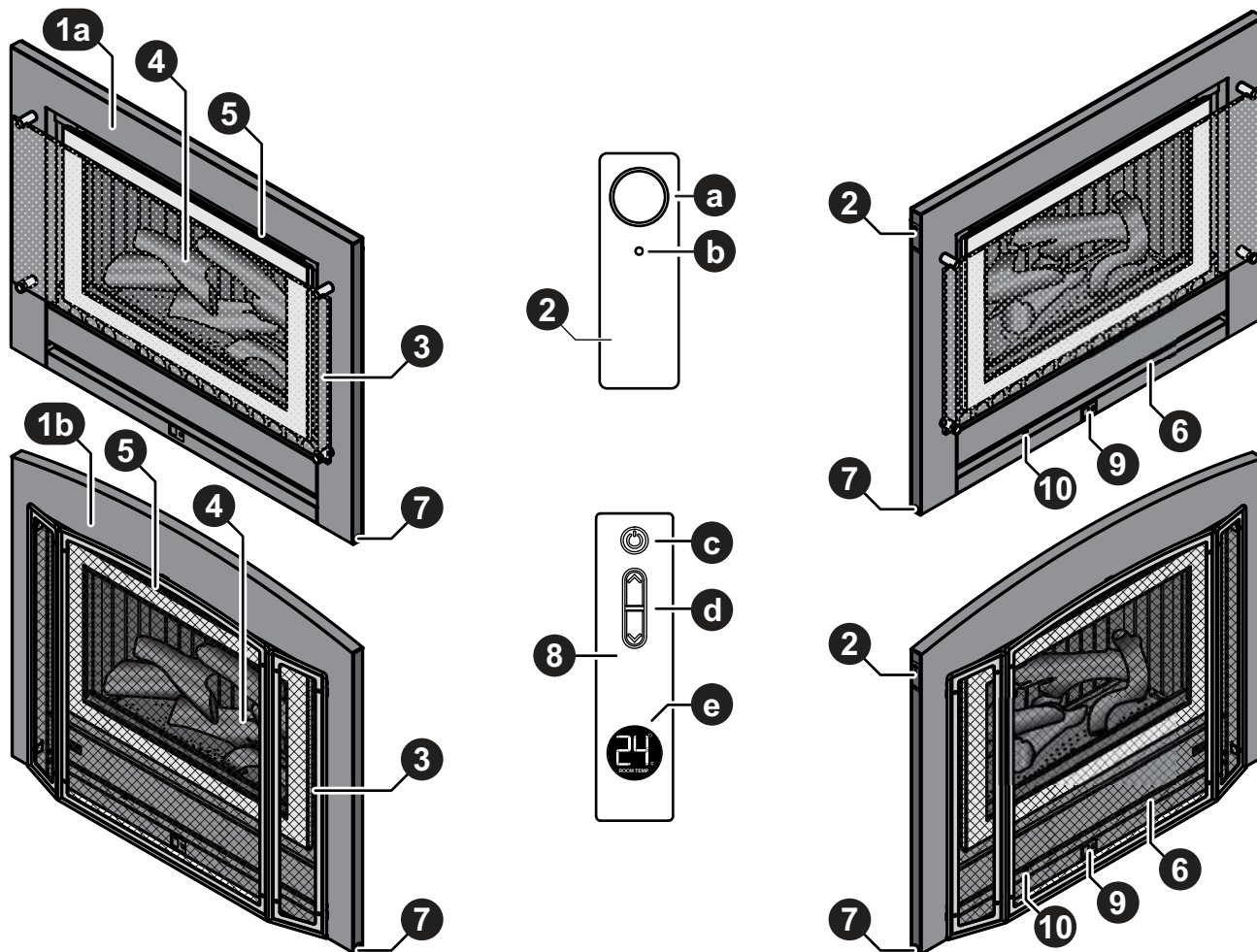
*Note: Standard model fascia shown for illustrative purposes.*

*The Classic model fascia is only available for inbuilt or masonry installations*



# ABOUT YOUR HEATER

## DESIGN FEATURES



- 1a** Rinnai Sapphire Heater - Standard fascia model
- 1b** Rinnai Sapphire Heater - Classic fascia model (Masonry and Inbuilt installations only)
- 2** Appliance push button control panel
  - a** ON / OFF button
  - b** Standby Indicator (Red)
- 3** Glass dress guard (standard model) / Mesh dress guard (classic model)
- 4** Flame window - artificial log set and burn media
- 5** Warm air discharge vent
- 6** Return air vent
- 7** Alternative power cable outlet location on front panel can be left or right handed
- 8** Remote (IR) control
  - c** Standby / ON button
  - d** Flame Up / Down buttons
  - e** Room temperature display (displays the current temperature of the room in which the control is located)
- 9** Remote (IR) control receiver window
- 10** Viewing window cut outs for error code display (This is located behind the fascia, see page 16 for details)

# CONTROL PANEL OPERATION

## TO TURN YOUR HEATER ON



**BEFORE PROCEEDING ENSURE THE GAS AND ELECTRICITY ARE TURNED ON.**

When the heater is in the OFF condition (the power supply connected and switched ON but the heater turned OFF) the Red Power Indicator **b** will be extinguished. This is normal.

Access the 'Push Button Control Panel' **1**. This is located on the top left hand side of the appliance.

**Step 1.** Press the ON / OFF button **a** once. You will be able to hear the ignition sparking.

**Step 2.** The sparking ignition stops when the pilot flame has been established.

The main burner then ignites off the pilot flame and is automatically preset to Stage 5 - High Flame.



### FLAME HEIGHT AND FAN SPEED

The relationship between flame height and fan speed is factory preset and cannot be adjusted.

Refer to "REMOTE CONTROL OPERATION" on the next page for Flame / Fan options.

Flame Height	1	2	3	4	5
Fan Speed <i>(2 speed only)</i>	Low	Low	Low	High	High

## TO TURN YOUR HEATER OFF

To turn the heater 'OFF' press the 'ON'/'OFF' button **a** once, when the heater is in the off state the Red Power Indicator **b** will be extinguished.

## INTERRUPTION TO ELECTRICITY OR GAS SUPPLY DURING OPERATION

Interruption to the power or gas supply will turn your heater off and a restart will be required. This is a safety feature designed to ensure that un-attended starts do not occur after power or gas interruptions.

## RESTART PROCEDURE AFTER INTERRUPTION TO ELECTRICITY SUPPLY

To restart your heater once power has been restored follow the steps for "TO TURN YOUR HEATER ON" as above.

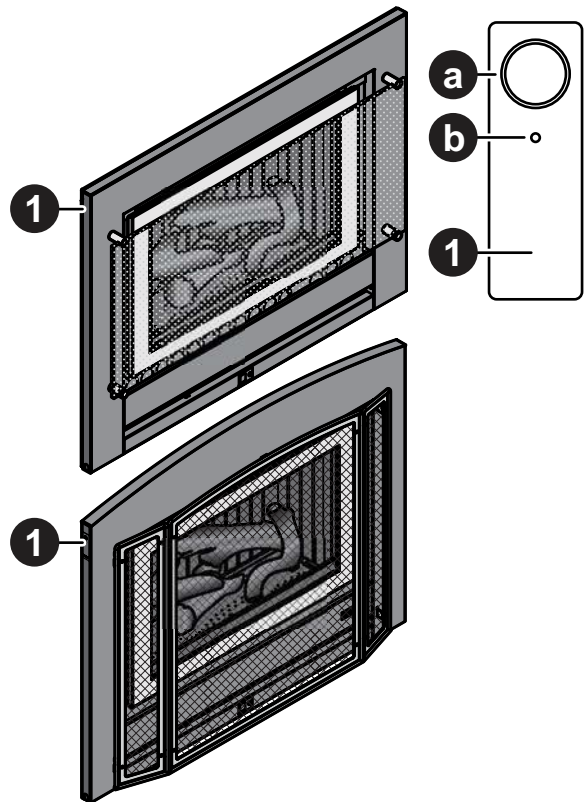
## FULL CONTROL AND PARTIAL CONTROL

Full operation of the heater is only possible by using the remote control. In the event of a misplaced or broken remote control or if the batteries for the remote control are flat, this appliance may still be operated in a limited capacity by using the power ON/OFF button **a** of the 'Push Button Control Panel' **1** located on the top left hand side of the appliance.

The heater will automatically modulate between flame settings to maintain the default set temperature of 22°C.



**No control of the flame or heat output is possible via the appliance ON/OFF button.**





# REMOTE CONTROL OPERATION



For the remote control to be able to function, the appliance ON/OFF button **a** must be in the "ON" position. Using the remote control to turn off the heater will place the heater into STANDBY mode, when in this mode the Red Power Indicator **b** will be on. This is normal.



**WARNING KEEP BATTERIES OUT OF REACH OF CHILDREN.**

- Swallowing may lead to serious injury in as little as 2 hours or death, due to chemical burns and potential perforation of the oesophagus.
- If you suspect your child has swallowed or inserted a button battery immediately call the 24-hour Poisons Information Centre on **13 11 26** for fast, expert advice.
- Examine devices and make sure the battery compartment is correctly secured, e.g. that the screws or other mechanical fasteners are tight. **DO NOT** use if compartment is not secure.



- Dispose of used button batteries immediately and safely. Flat batteries can still be dangerous and may be a choking hazard.
- Inform others about the risk associated with button batteries and how to keep their children safe.
- Remove the batteries if the remote is not going to be use for prolonged periods. This will help prevent damage from leaking batteries. If leakage has occurred and corrosion is evident the remote will need to be replaced.
- Leaking chemicals are toxic and **MUST NOT** be touched or ingested.
- NEVER** mix old and new batteries.
- DO NOT** immerse the remote control in any liquid, this will damage the remote control, rendering it inoperable and voiding its warranty.

## BATTERIES AND ACTIVATING THE REMOTE CONTROL

- 2 x Button Batteries are supplied with the remote control.
- Remove the plastic tab to activate.
- This remote control uses 2 x Lithium CR2450 or equivalent batteries.
- The appliance will flash and emit 'Beeps' to confirm the setting has been received from the remote control unit; this indicates your remote control is now working.

## BUTTON FUNCTIONS, DISPLAY & OPERATION

This remote control, **8** selects flame height and fan speed in five levels.

The STANDBY / ON button **c** switches the heater between the STANDBY and ON modes.

**Flame height may only be adjusted after at least 30 seconds of operation.**

The UP / DOWN buttons **d** control the height of the flame and heat output.

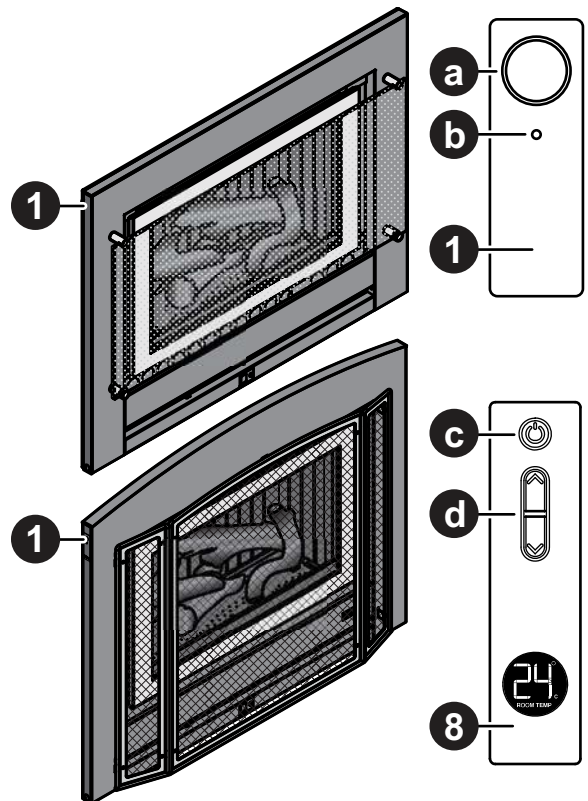
The relationship between flame height and fan speed is factory preset and cannot be adjusted, there are five flame / fan settings as listed below.

Flame Height	1	2	3	4	5
Fan Speed <i>(2 speed only)</i>	Low	Low	Low	High	High



On initial start-up the appliance default flame height setting is setting 5 - High. Use the UP / DOWN buttons **d** to control the height of the flame / heat output.

The remote control temperature sensor (located base of the controller) reads the temperature of where control is currently located, this temperature reading is refreshed once a minute.



The degrees Celsius room temperature display **e** has a motion activated back light which will remain illuminated for approximately 5 seconds after a movement is sensed or when a button is pressed. Frequent illumination of the back light greatly reduces the remote controls operational battery life, ensure that unnecessary illumination of the display is avoided.

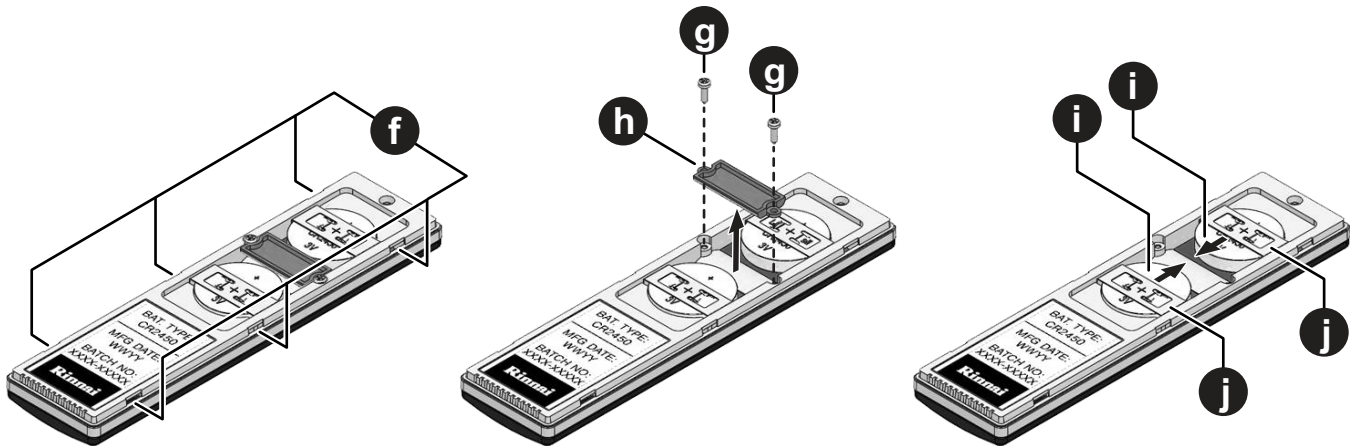
# REMOTE CONTROL OPERATION

## REPLACING THE CR2450 BUTTON BATTERIES



When this low power symbol appears the batteries are near to being fully discharged and are unable to power the remote control properly. Replacement of batteries is now required.

1. Using a suitable lever remove the back cover by carefully prying off the back cover at the 6 prying points **f**.

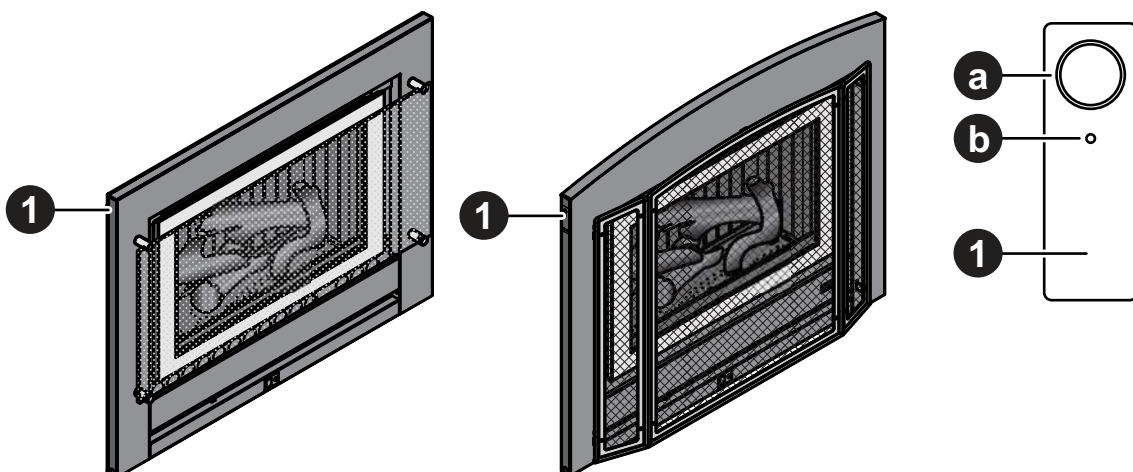


*Note: Remote control is shown with back cover removed for illustrative purposes*

2. Remove the two bridge retaining screws, **g** using a small (No.0) Phillips head screw driver or equivalent.
3. Remove the bridge **h**.
4. Remove the old batteries **i** by carefully sliding them out from under the retainers **j**, and into the space that was created when the bridge **h** was removed in step 3.
5. Insert two new batteries **i** (CR2450), ensuring the positive “+” terminals are facing up.
6. Reassemble the bridge in reverse order as per steps 2 & 3 above.
7. Re-attach the rear cover by carefully clipping it back into place.

## LOST, MISPLACED OR BROKEN REMOTE CONTROL

In the event of a lost, misplaced or broken remote control the appliance may still be operated in a limited capacity. By using the manual control panel, **1** power ON/OFF button **a**, located on the top left hand side of the heater.



The heater will automatically modulate between flame settings to maintain the default set temperature of 22°C.



**No control of the flame or heat output is possible via the appliance ON/OFF button.**

# CARE AND MAINTENANCE

Your heater needs very little maintenance, but the following information will help you to keep it looking good and working efficiently.



- DO NOT attempt to clean the heater while the appliance is hot or operating.**
- All parts of the heater can be cleaned using a soft, damp cloth.**
- DO NOT use solvents or abrasives to clean any parts.**
- DO NOT spray aerosols in the vicinity of the heater whilst in operation.**
- DO NOT place articles on or against this heater.**
- DO NOT use or store flammable materials in or near this appliance.**

## SERVICE

Rinnai recommend that this appliance and installation be inspected and serviced every 2 years or more frequently.

If the power supply cord or any other component of the heater are damaged, they must be replaced by Rinnai or a suitably qualified person.

Any service or repair work should only be carried out only by an authorised person. Rinnai has service and spare parts departments nationally. See back cover for contact details.



**Service calls for general cleaning, maintenance and wear and tear are not necessarily covered under the warranty. Service calls of this nature may be chargeable.**

**Faults caused by insufficient gas supply, gas quality, installation errors or operation errors are not covered by the Rinnai warranty. Refer to separate Warranty Booklet for details or go online at [www.rinnai.com.au/support-resources/warranty-registration/](http://www.rinnai.com.au/support-resources/warranty-registration/)**

## TROUBLE SHOOTING

### General Operation Characteristics



**Before asking for a service call please check the following table as these characteristics are part of the normal operation of the appliance and do not indicate a fault.**

CHARACTERISTIC	→	EXPLANATION
<b>At ignition:</b>		
Warm air does not start when the burner lights.	→	The fan is started automatically after a short delay. This is to allow the heat exchanger to warm up, helping to avoid cold draughts.  This is normal operation.
Smoke or strange smells are produced on the first start up after installation.	→	This is caused by grease, oil or dust on the heat exchanger.  This is to be expected and will cease after a short time.
Sharp clicking noises at ignition, or when the unit thermostat modulates to a lower or higher setting, or shuts down.	→	This is simply expansion and contraction noise from the heat exchanger.  This is a normal operation sound.
<b>During combustion:</b>		
Dull clunking noise when the thermostat operates.	→	This is the sound of the solenoid gas valves opening and closing to regulate the gas flow.  These are normal operation noises.
<b>When the appliance is turned off:</b>		
Convection fan continues to run after turning 'OFF'.	→	This is to remove residual heat from the heat exchanger and stops once the appliance cools sufficiently.

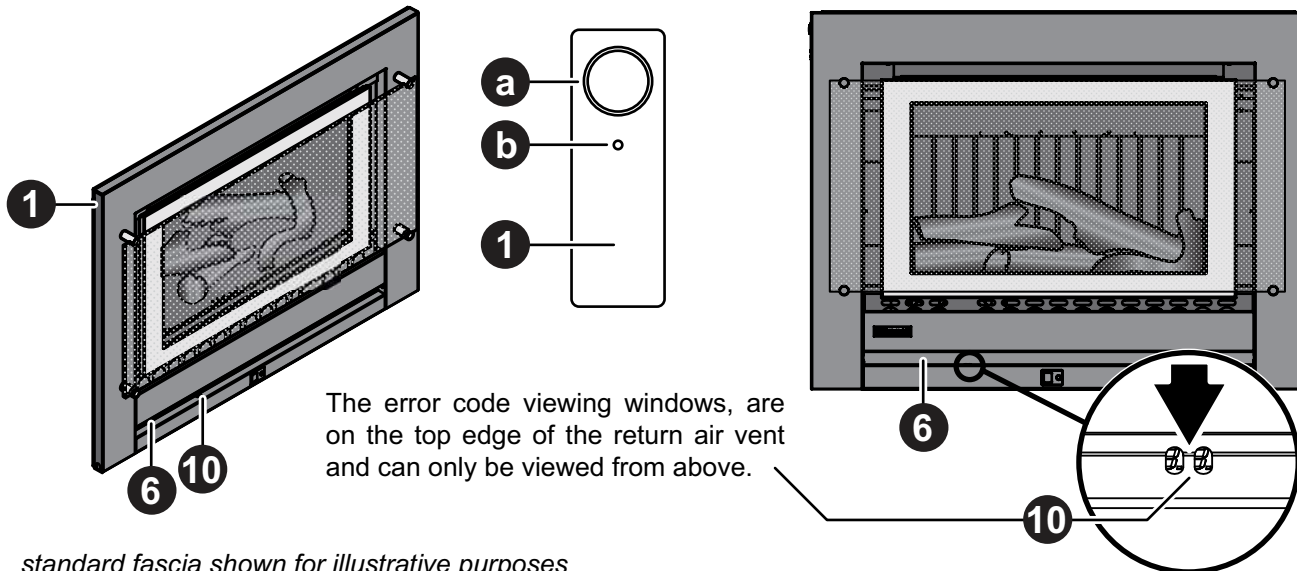
# CARE AND MAINTENANCE

## ERROR CODES



In all cases, you may be able to clear the Error Message simply by turning the heater 'OFF', then 'ON' again. If the Error Message still remains or returns on the next operation, contact Rinnai or your nearest service agent and arrange for a service call.

Your Rinnai appliance is also fitted with self diagnostic electronics that monitor the appliance during start-up and operation.



The error code viewing windows, are on the top edge of the return air vent and can only be viewed from above.

*standard fascia shown for illustrative purposes*

Should a fault occur the appliance will then shut down, the fault that has caused the shut down will be indicated by a pair of flashing digits in the error display window cut outs **10**, which is located behind the fascia and can be viewed by looking down through the upper edge of the return air vent **6**.

Refer to the table below for probable cause and the suggested remedy.

Code	Probable Cause	Suggested Remedy
00	Mains power failure	Interruption to the power or gas supply will turn your heater off and a restart will be required. This is a safety feature designed to ensure that un-attended starts do not occur after power or gas interruptions.  Access the 'Push Button Control Panel' <b>1</b> . This is located on the front of the heater at the lower right hand corner.  Press ON / OFF button <b>a</b> twice, after which you will be able to hear the ignition sparking and the heater will restart and return to normal operation, after 30 seconds of operation the remote control may then be used to select the desired flame height and fan speed.
11	Ignition failure	Check gas supply is turned on, switch the heater to Standby and then On again. <b>If the error persists a service call will be required.</b>
12	Incomplete combustion	Check gas supply is turned on, switch the heater to Standby and then On again. <b>If the error persists contact Rinnai.</b>
14	Inlet Blockage / Overheat	Clean inlets, <b>if the error persists a service call will be required.</b>
16	Room overheat	Lower room temp to below 40°C.
31	Room temperature sensor faulty	A service call will be required.
32	Overheat temperature sensor faulty	A service call will be required.
33	Overheat temperature sensor faulty	A service call will be required.
53	Spark sensor faulty	A service call will be required.
61	Combustion fan motor faulty	A service call will be required.
71	Solenoids faulty	A service call will be required.
72	Flame detection circuit fault	A service call will be required.
73	Communication error	A service call will be required.

# CARE AND MAINTENANCE

## TROUBLE SHOOTING CHECKLIST

Use the following chart to help determine whether a service call is required, however if you are unsure about the way your heater is operating, contact Rinnai or your local agent.

Probable Cause ↓	Fault Condition →							Simplest Possible Remedy ↓	
	Burners fail to ignite	Smell of gas	Fan Not Working	Minor soot deposits	Severe sooting	Glass, Condensating	Glass, Streaky lines		*Remote not working
Not plugged in or turned off	●		●						Plug in power cord and turn power 'ON'.
Mains power failure	●		●						Re-ignition, when power restored.
(Initial Install) Air in gas pipe	●								Installer to purge air from gas supply.
Air in hose	●								Repeat Ignition procedure.
Ignition failure	●								Repeat Ignition procedure.
Flat battery for remote control *	●							●	Replace remote control battery.
Gas supply turned off	●								Turn gas supply on at the meter or cylinder.
Gas escape		●							Isolate gas supply, call Rinnai.
Inadequate flue system	●				●				Call Rinnai.
Insufficient gas pressure	●				●				Call Rinnai.
Log Misalignment					●				Call Rinnai.
Normal operation				●				●	No action is required.
Normal operation			●						Fan not working - fan automatically comes on after 4 minutes not heat switch activated.
Normal operation						●			Allow heater to warm up.
Heat switch not activated			●						Allow heater to run on high for 4 minutes.
Possible fan fault			●						Call Rinnai.
Controller display blank	●							●	Replace batteries.
Control Panel Operation **	●							●	Refer to page 12 for solution.
Controller Not Synchronised								●	Refer to page 14 for solution.

\* Only applicable when optional remote control is used.

\*\* Only applicable if the remote control is programmed.

## ABNORMAL FLAME PATTERN

Each Rinnai Flame Fire heater has a distinct flame pattern. The flame should look the same every time you start your heater, after an initial warm up period of approximately 15 minutes.

Abnormal flame performance and/or pattern can indicate a problem with your heater, such as blocked gas injectors, incorrectly installed / inadequate flue system or the artificial logs/burn media may have shifted from when the heater was first installed.

There are some warning signs that could indicate a problem. If any of the signs below occur, please contact Rinnai.

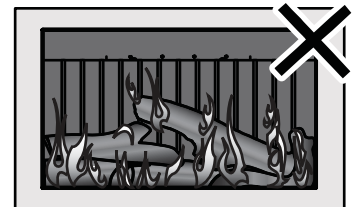
### Key signs of Abnormal flame performance:

- Appliance turns 'OFF' soon after start up and does not relight.
- Flame appears overly orange-yellow.
- Flame appears either very short or very long.
- Flame only burns part way across the burner.
- Severe soot building up on the inside of the glass and logs.
- Continuous unusual smell from the appliance.

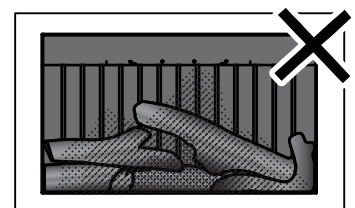
Continued difficulty or delay in establishing a flame.



NORMAL FLAME PATTERN



ABNORMAL FLAME PATTERN  
CANDLING FLAMES



SOOT BUILD UP



**Be advised that appliances incorporating a live fuel effect, and designed to operate with luminous flames, may exhibit slight carbon deposition, this is normal operation.**

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# SPECIFICATIONS

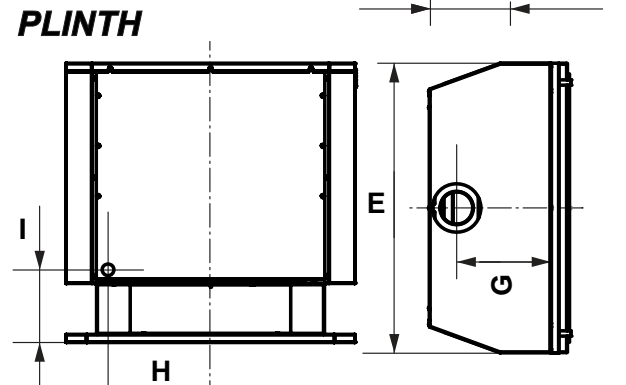
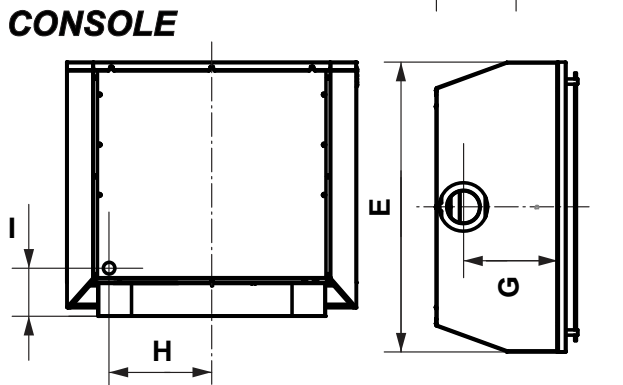
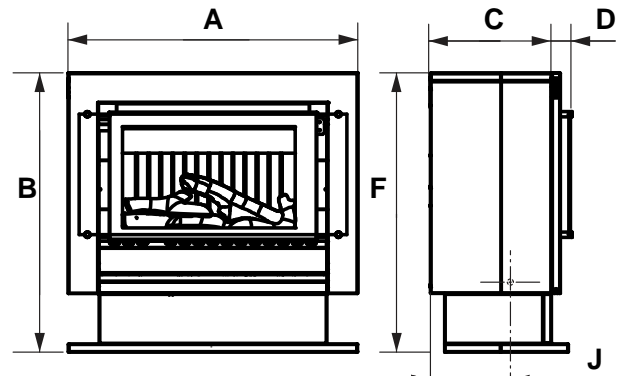
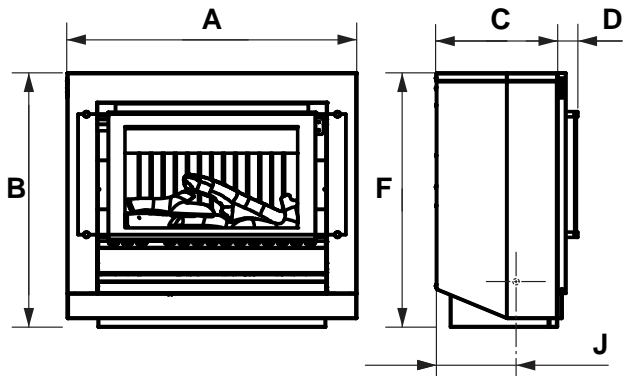
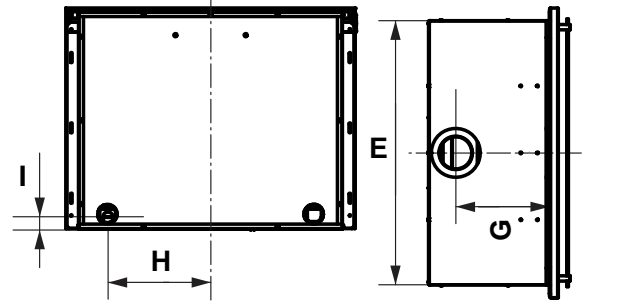
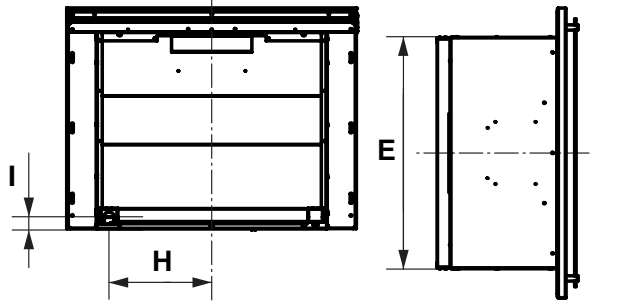
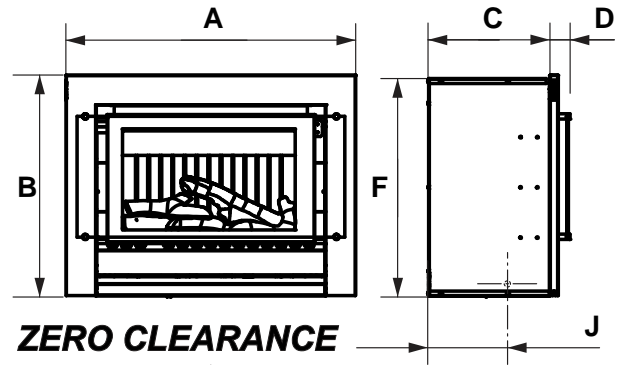
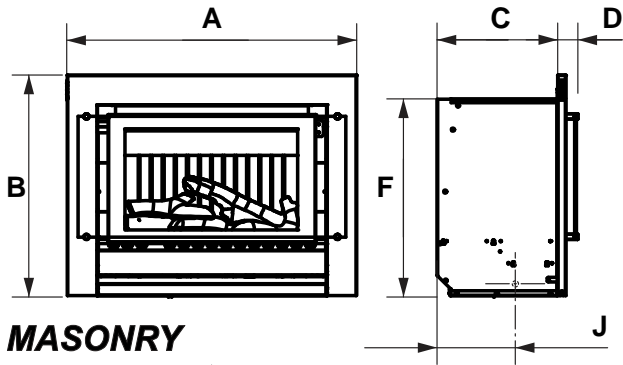
Model	RIB2312
Model Name	Sapphire Gas Log Flame Fire
Features	Inbuilt or Freestanding Gas Space Heater Burning log effect Glass front Convection Fan, top warm air outlet Glass dress guard (standard model) Mesh dress guard (classic model)
Data Plate	Located on the lower RHS of the base panel in front of the gas control.
Input	14 - 30 MJ/h
Output (High)	*6.7 kW
Injectors	Refer to the data plate on the appliance
Efficiency	80% (on high)
Heating Area	**95 m <sup>2</sup> (Cool Climate Zone)
Note: * Will vary according to gas type and flue configuration ** Will vary depending on geographical location	
Installation Types	Inbuilt Masonry, Inbuilt Zero Clearance and Freestanding options
Combustion Method	Bunsen type burner
Flue - Masonry (if required)	FlexiLiner diameter. 100 mm
Flue - Freestanding & Zero Clearance	Twin skinned diameter. 100mm x diameter. 150mm outer
Convection Fan	Double drum. 160mm x 180mm - 2 speed - Centrifugal
Gas connection	1/2" BSPT Male brass fitting
Gas type	NG, Propane Universal LPG
Electrical	The heater engine is fitted with a 1.5 m power cord and three pin plug which exits the appliance from the rear panel at the lower left
Ignition	230 Volt AC 50 Hz high voltage electronic spark ignition
Power Consumption	Less than 50W Normal Operation. Less than 3W on Standby 1500 mm cord is supplied with a 3 pin plug
Safety Devices	Overheat Switch Electrical Fuse Flame Failure Sensing System (FFD) Power Failure Protection Gas Lock-out (1 minute after attempted restart)
Flame Settings	Five different flame settings
Glass - Primary	Ceramic Glass
Glass - Secondary	Tempered Glass
Glass seal material	Woven fibreglass chord - Hytex® 1000 by mid Mountain USA
Weight (Engine Only)	60 Kg - "uncrated" - no Flue
Operation	Push button control panel Infra Red Control
Noise Level	37 - 45 dB(A)



**Refer to appliance data plate for Gas Type, Gas Rates, Injector Sizes and Burner Pressures.**



# DIMENSIONS



*Note: Standard model fascia shown for illustrative purposes*

MODEL		External Dimensions - Flue Centre							Gas Connection		
		A	B	C	D	E	F	G	H	I	J
Masonry	Standard	865mm	660mm	359mm	62mm	691mm	589mm	-	305mm	45mm	235mm
	Classic	865mm	701mm	359mm	76mm	691mm	589mm	-	305mm	45mm	235mm
Zero Clearance	Standard	865mm	660mm	363mm	62mm	795mm	650mm	280mm	305mm	45mm	240mm
	Classic	865mm	701mm	363mm	76mm	795mm	650mm	280mm	305mm	45mm	240mm
Console		865mm	760mm	363mm	62mm	865mm	760mm	280mm	305mm	144mm	235mm
Plinth		865mm	837mm	363mm	62mm	865mm	837mm	280mm	305mm	219mm	235mm



# HEATER LOCATION

## GENERAL LOCATION INFORMATION

- When positioning the heater, the main variables governing the location are Flueing and Warm Air Distribution.
- This heater must not be installed where curtains or other combustible materials could come into contact with it. In some cases curtains may need restraining. Refer to page 5 and page 6 for additional safety consideration.
- Mantles and surrounds can be added to compliment the design provided that they conform to the clearances shown in the diagrams below.
- The minimum clearance from the edge of the appliance is 400 mm. The depth of the mantle/surrounds at the minimum clearance may not exceed 150 mm.
- An additional 100 mm of clearance is required for every extra 50 mm of mantle depth, i.e. for a 200 mm deep mantle the clearance is 500 mm (as shown below).
- Ensure that the area in which the appliance is installed has adequate fixed ventilation, this fixed ventilation must be provided as detailed in AS/NZS 5601.1.



**Combustion product spillage testing must be conducted during appliance commissioning. This testing may show a need for additional fixed ventilation.**

**The glass dress guard supplied with this appliance must not be permanently removed as it fulfils an operational safety function. Additional dress guards including free standing types may be used in conjunction with, but not replace the dress guard supplied with this appliance.**

## TV AND ORNAMENTATION WARNING



### INSTALLATION OF TV OR ORNAMENTATION ABOVE THE HEATER

The installation of electrical appliances above and in the vicinity of the heater such as, but not limited to, Plasma TV, LCD TV, Home Theatre Screens, Speakers, etc must comply with their manufacturers' instructions.

It is the responsibility of the installer/end-user to check the manufacturers installation instructions of these items and to ensure the location or recess is suitable.

This caution also extends to, but is not limited to, ornaments such as: Paintings, Prints, Photographs, Tapestries, Mirrors, Stuffed Animals, etc.

Please note the recommended clearances as per the diagram above. The temperature of the wall surface directly above the appliance may be elevated and may discolour paint finishes or distort vinyl wall coverings. For durability of surfaces you should contact the relevant manufacturer for their specification.



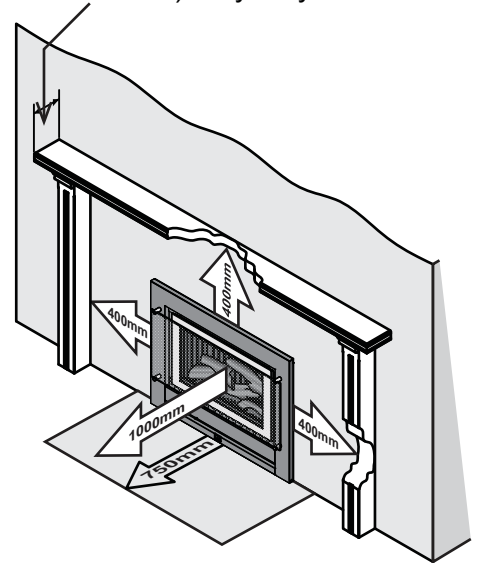
Use either a shelf or mantle below the TV or ornament or alternately you can construct a recess to mount TV or ornament in.



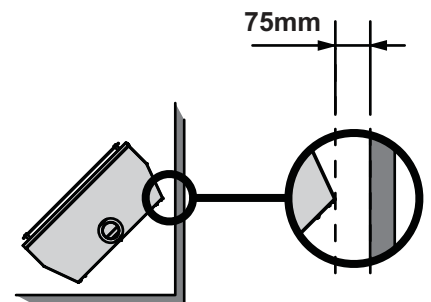
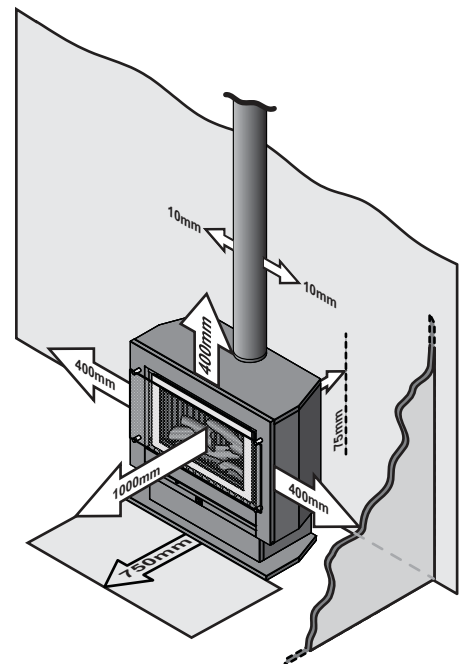
Rinnai does not take any responsibility for any damage occurring to any items installed above and in the vicinity of this appliance.

## INBUILT MODELS

Maximum mantle depth (at 400mm) may only be 150mm



## FREE-STANDING MODELS



# HEATER LOCATION

## ENCLOSURE REQUIREMENTS

### Masonry Fireplace

The appliance must be positioned within the fireplace on a flat level surface.

If the appliance is elevated from the ground within the structure, a base must be constructed using suitable material with supporting joists capable of supporting a minimum of 1.5 times the weight of the appliance.

### Zero Clearance In-built installation

Framework of the installation must conform to local building codes. Non-combustible materials need not be used.

If the appliance is elevated from the ground within the structure, a base must be constructed using suitable material with supporting joists capable of supporting a minimum of 1.5 times the weight of the appliance.

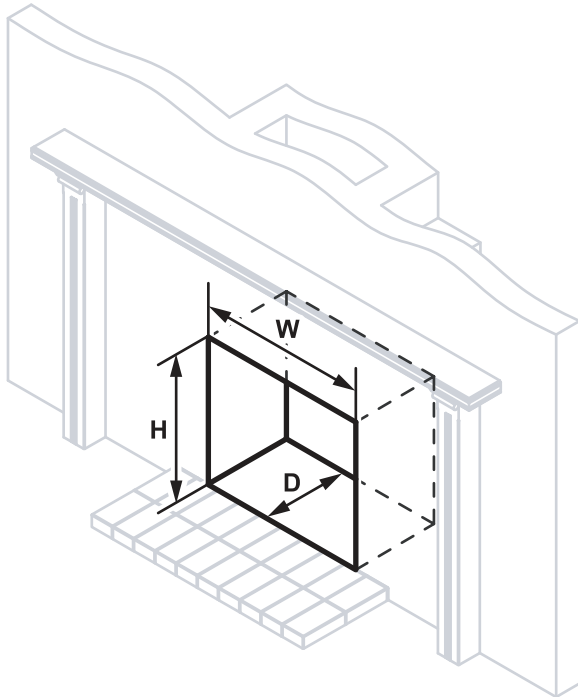


**AS/NZS 5601 "GAS INSTALLATIONS" requires that flue components be supported independently of the appliance.**

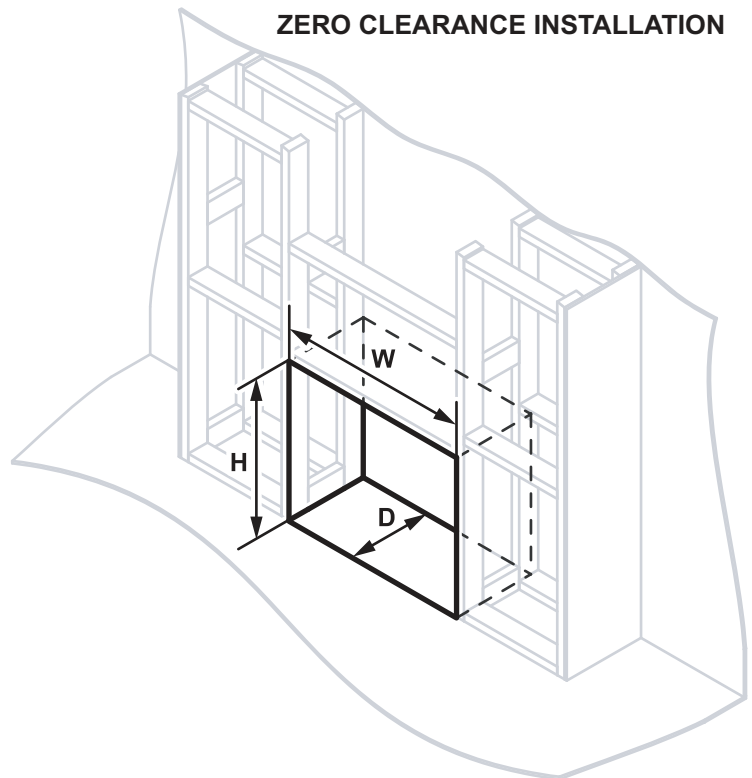
## ENCLOSURE DIMENSIONS

Enclosure dimensions are shown below. The enclosure dimensions specified are critical to the successful installation of this appliance and must be strictly adhered to.

### MASONRY INSTALLATION



### ZERO CLEARANCE INSTALLATION



All dimensions are minimums and are in mm			
MODEL	Height (H)	Width (W)	Depth (D)
Masonry	600	695	370
Zero Clearance	650	800	420 (read caution below)



For clarity the consumer piping gas supply, electrical connections and some construction details have been omitted. Refer to "GAS SUPPLY" on page 23 and "ELECTRICAL SUPPLY" on page 24 for details.

When preparing a cavity / frame for a zero clearance installation the total cavity depth **MUST** also include the thickness of the external cladding, as the zero clearance box **MUST BE** installed flush with the cladding surface. Failure to do this will cause misalignment of the flue systems.

# HEATER ENGINE - GENERAL INSTALLATION

## GAS SUPPLY



Gas pipe sizing must consider the gas input to this appliance as well as all other gas appliances in the premises. The gas meter and regulator must be specified for the total gas rate. A suitable sizing chart such as the one in AS/NZS 5601 should be used.



Confirm correct gas type (see labels located on top or rear panels). Refer to local gas authority for confirmation of gas type if you are in doubt.

### Installation of consumer piping

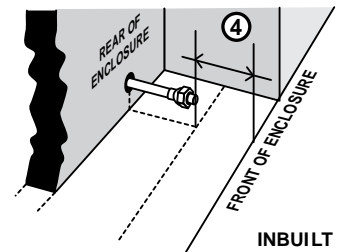
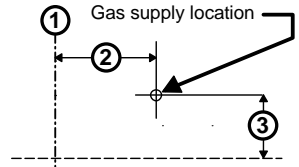
The gas supply (consumer piping), termination is inside the heater and enters through the rear of the appliance. Refer to the dimensional drawings on page 20 for appliance gas inlet location and other relevant dimensions.

Mark off the location for the vertical centre line ① of the heater enclosure (inbuilt installations) or heater (freestanding installations).

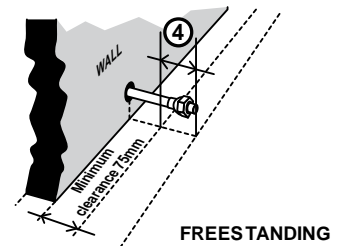
To the right of the vertical centre line ①, mark off both the vertical ② and horizontal ③ location for the gas supply penetration (consumer piping). For measurements refer to the Gas Supply Dimension Table below.

**Inbuilt Models:** The length of the gas supply (consumer piping) termination ④ is measured from the front of the enclosure.

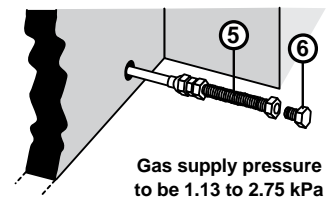
**Freestanding Models:** The length of the gas supply (consumer piping) termination ④ is measured from the back of the heater plus 95mm.



INBUILT



FREESTANDING



Gas supply pressure to be 1.13 to 2.75 kPa



For freestanding models the minimum clearance of 75mm from the wall must be observed.

At the minimum clearance the total length of the consumer pipe is 170mm (75mm + 95mm)

### Gas Supply Dimension Table

	Inbuilt		Freestanding	
	Masonry	Zero Clearance	Console	Plinth
②	305mm to right of appliance centre-line	305mm to right of appliance centre-line	305mm to right of appliance centre-line	305mm to right of appliance centre-line
③	45mm from base of enclosure	45mm from base of enclosure	144mm from floor level	219mm from floor level
④	Consumer piping to be terminated 265mm from the front of enclosure	Consumer piping to be terminated 265mm from the front of enclosure	Consumer piping to be terminated at wall clearance plus 95mm	Consumer piping to be terminated at wall clearance plus 95mm

Once the consumer piping has been terminated to the above requirements the supplied flexible gas connection ⑤ may then be fitted.

### Purging Gas Supply

Foreign materials and debris such as swarf, filings, etc. **MUST BE** purged/ removed from the gas supply, failure to do so may cause damage to the gas control valve causing it to malfunction.

### Leak Testing The Connection

With the supplied plug ⑥ inserted into the end of the flexible gas connection leak test all joints.



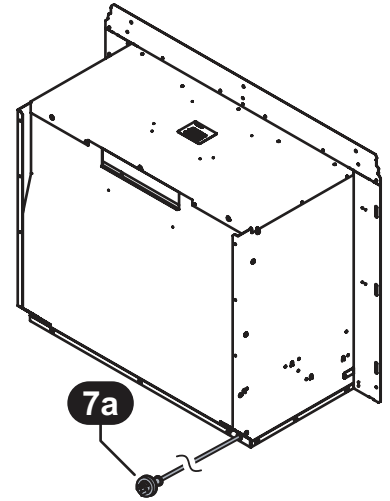
Use a soapy solution to test all gas connections. If a leak is present bubbles will form at the leak point. When finished remove any residue with a rag. Prevent any soapy solution from coming in contact with electrical components.

# HEATER ENGINE - GENERAL INSTALLATION

## ELECTRICAL SUPPLY

If a power point is used it **MUST BE** 230 V, rated at 10A and **MUST BE** earthed. This power point **MUST NOT** be located above the heater. Alternatively the appliance can be direct wired if the power supply is to be concealed.

The heater engine is fitted with a 1.5 m power cord and three pin plug **7a** which exits the appliance from the rear panel at the lower left.



## Direct Wired Installations

Alternatively the appliance can be direct wired if the power supply is to be concealed.

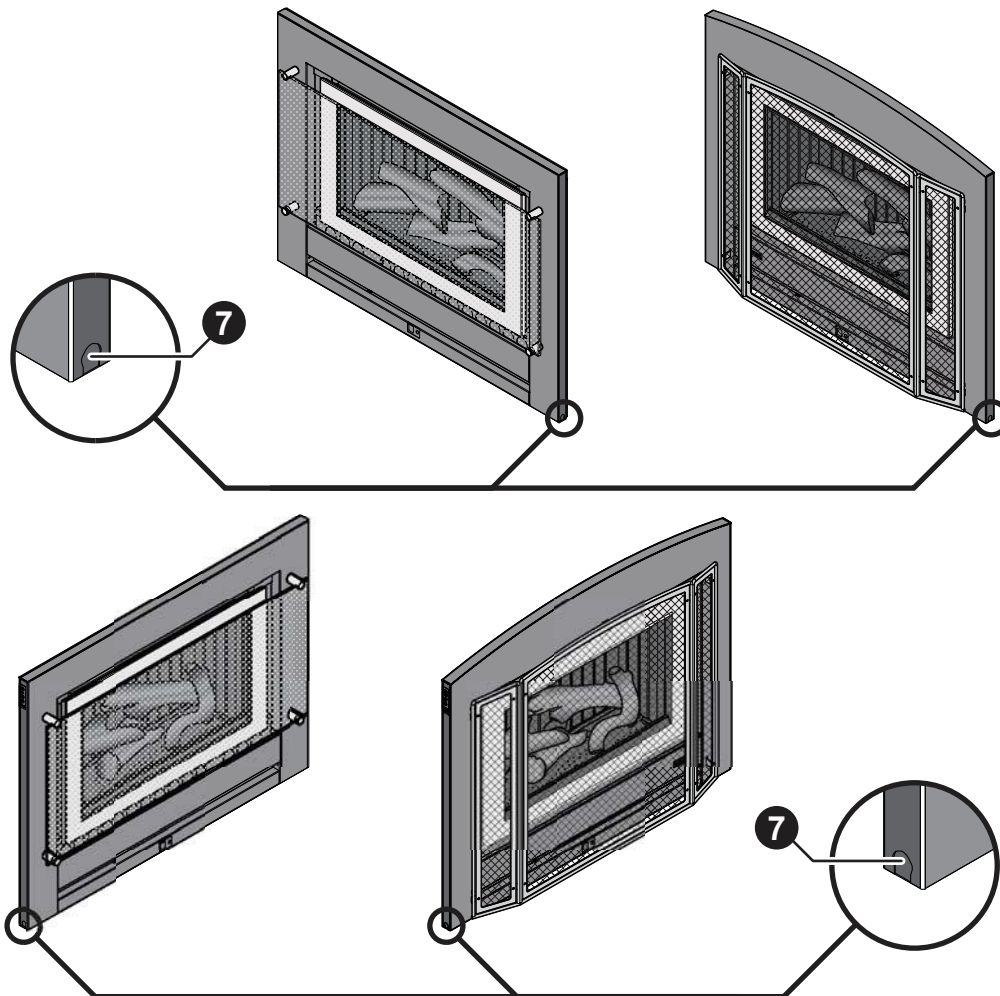


**A qualified electrician will need to be consulted where a direct wired installation is required. Any such installation must comply with the requirements of AS/NZS 5601, AS/NZS 3000 and any other relevant local regulations.**

## Using Existing Externally Mounted Power Points on Inbuilt Installations

If you already have an existing wall plug located outside of the intended fireplace or enclosure you may redirect the power cord and plug assembly through the front panel. With Fascia assembly removed, simply redirect the cord and plug assembly with grommet from the rear of the unit, underneath the fire-box to the front of the unit, (either left or right).

Carefully remove the pre-punched sheet metal 'knock-out' section located in the lower left or right edge **7** of the Fascia Assembly. Refit the cord and plug assembly to the Fascia assembly ensuring the grommet is fitted to the sheet metal. Excess cord may be left in the cavity below the fire box. **DO NOT** coil excess cord.



# FLUEING

## FLUE TERMINAL LOCATION

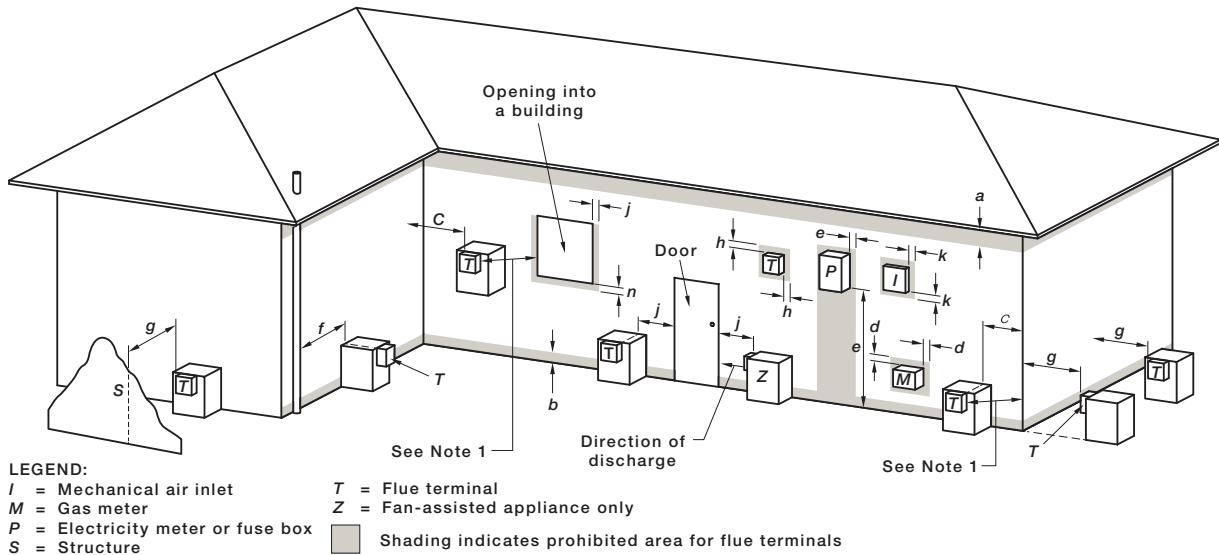


Ensure that the location of the flue terminal can comply with the requirements of AS/NZS 5601 - Fig. 6.2 which is reproduced in part below.

AS/NZ 5601 was current at the time of printing but may have been superseded. It is the installer's responsibility to ensure that requirements of the current version of AS/NZS 5601 are met.

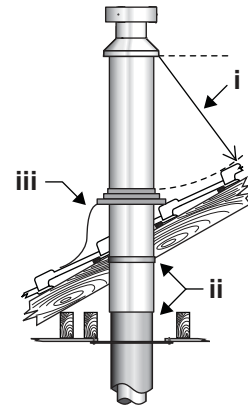
The flue system must be fully assembled and secured in place before the heater is installed into the enclosure.

Refer to separate Flueing Installation Manual for Rinnai Flamefire heaters.



**LEGEND:**  
 I = Mechanical air inlet  
 M = Gas meter  
 P = Electricity meter or fuse box  
 S = Structure  
 T = Flue terminal  
 Z = Fan-assisted appliance only  
 Shading indicates prohibited area for flue terminals

Ref.	Item	Min. Clearances (mm)
		Natural Draught
	Below eaves, balconies and other projections:	
a	• Appliances up to 50 MJ/h input	300
	• Appliances over 50 MJ/h input	500
b	From the ground, above a balcony or other surface *	300
c	Front a return wall or external corner *	500
d	From a gas meter (M) (see 5.11.5.9 for vent terminal location of regulator) (see Table 6.6 for New Zealand requirements)	1000
e	From an electricity meter or fuse box (P) †	500
f	From a drain pipe or soil pipe	150
g	Horizontally from any building structure* = or obstruction facing a terminal	500
h	From any other flue terminal, cowl, or combustion air intake †	500
	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	• Appliances up to 150 MJ/h input *	500
j	• Appliances over 150 MJ/h input up to 200 MJ/h input *	1500
	• Appliances over 200 MJ/h input up to 250 MJ/h input *	1500
	• Appliances over 250 MJ/h input *	1500
	• All fan-assisted flue appliances, in the direction of discharge	-
k	From a mechanical air inlet, including a spa blower	1500
	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	• Space heaters up to 50 MJ/hr input	150
n	• Other appliances up to 50 MJ/hr input	500
	• Appliances over 50 MJ/h input and up to 150 MJ/h input	1000
	• Appliances over 150 MJ/h input	1500



i Minimum clearance 500mm to nearest part of roof  
 ii Minimum clearance 25mm to any combustible materials  
 iii Decktite or lead collar flashing

\* - unless appliance is certified for closer installation

† - Prohibited area below electricity meter or fuse box extends to ground level.

**NOTES:**

- Where dimensions c, j or k cannot be achieved an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to comply.
- See Clause 6.9.4 for restrictions on a flue terminal under a covered area.
- See Figure J3 for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.
- For appliances not addressed above acceptance should be obtained from the Technical Regulator.

FIGURE 6.2 (in-part) MINIMUM CLEARANCES REQUIRED FOR FAN-ASSISTED FLUE TERMINALS, ROOM-SEALED APPLIANCE TERMINALS AND OPENINGS OF OUTDOOR APPLIANCES



The flue terminal should be positioned away flammable materials.

# FLUEING

## FLUE INSTALLATION OPTIONS



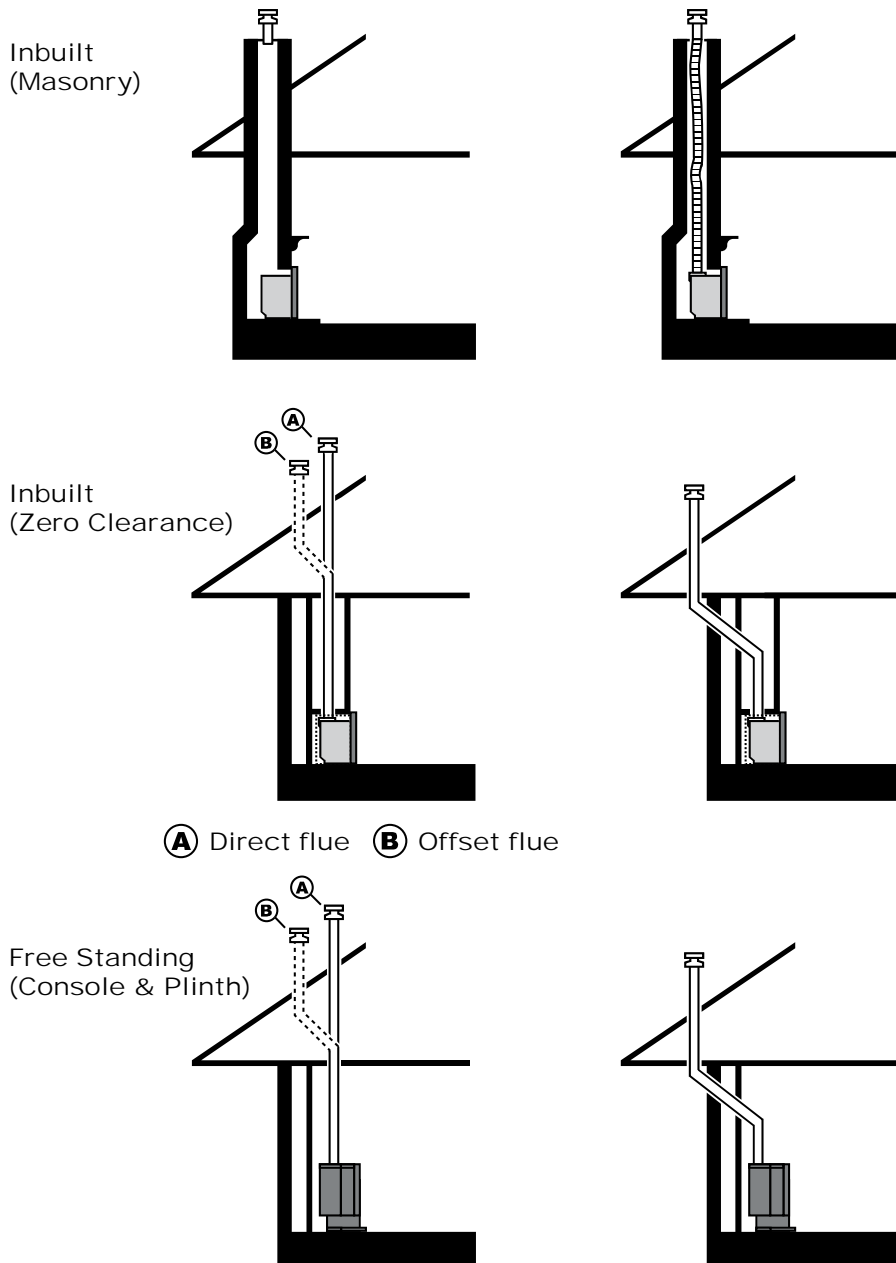
The following diagrams illustrate the flue installation options that are available for the Sapphire flame. Only the genuine Rinnai Flamefire (FLF) flue is certified as part of the Rinnai Sapphire space heaters.

Only an authorised person must install, service and remove the Rinnai Sapphire space heater and flue system.

Only the flue system components described in the 'Flueing Installation Manual For Rinnai Flamefire Heaters' that is provided with the flue kit must be used.

Components that are not described in that manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.

Rinnai appliance warranty conditions may be voided if non Rinnai flue components are fitted.



Install the Rinnai rigid flue system components in accordance with the 'Flueing Installation Manual For Rinnai Flamefire Heaters' that are provided with the flue kit.



For masonry installation details refer to "FLUEING" on page 26.



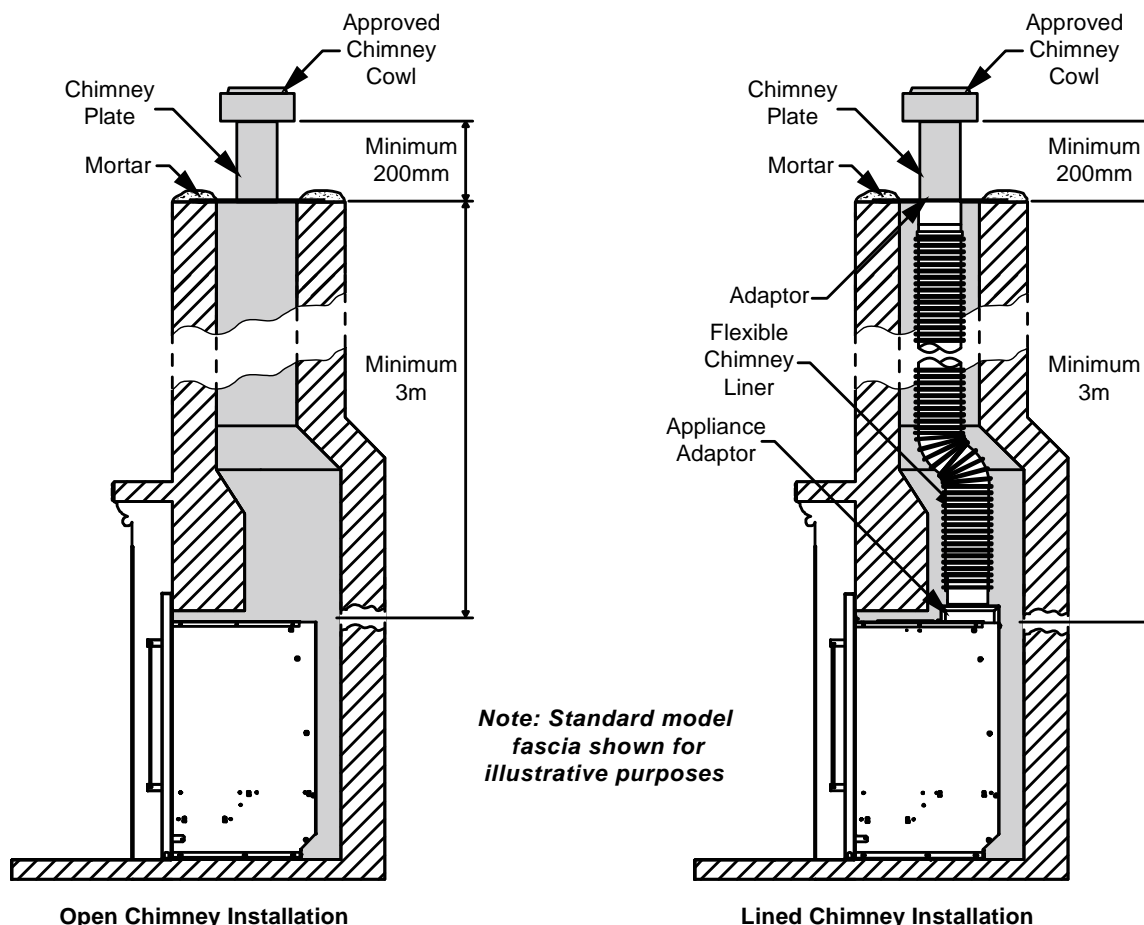
# FLUEING

## MASONRY FLUE INSTALLATION

Two masonry flue installation options available. These are Open Chimney and Lined Chimney.

An 'Open Chimney' installation uses the natural draft properties of a sound chimney along with the addition of an approved chimney plate and cowl to provide the flueing for the heater.

A 'Lined Chimney' installation is used when the existing chimney condition is inadequate for an Open Chimney installation and uses a Rinnai Flexiliner (flexible) flue system, chimney plate and cowl to provide the flueing for the heater.



## OPEN INSTALLATION METHOD

The chimney must be physically checked first and must meet the following set criteria along with local regulations. Failure to meet these criteria will not only void the product warranty but may affect the performance of the heater and may void the warranty.

### Chimney Criteria For Open Installation

- All loose/broken bricks must be replaced or repaired ensuring the chimney is of sound construction and does not leak in accordance with AS/NZS 5601.
- Any under floor air supply to the fireplace must be completely sealed off to prevent secondary air draw.
- Total chimney height **MUST NOT** be less than 3 metres and flue cowl must terminate above the chimney in accordance with AS/NZS 5601.
- The chimney must be swept clean and be free of soot and creosote that may have built up if previously used for a solid fuel fire.
- The hearth surface must be flat and level to support the entire heater. If the heater is not properly supported noise and vibration may result.



**In a masonry fireplace, use a slurry of sand and cement to level the base as required.**

# HEATER ENGINE INSTALLATION

## MASONRY INSTALLATION



Read this manual thoroughly and gain a full understanding of the requirements before undertaking installation.

Ensure gas supply to heater is turned off for the first stages of this instruction.

- |  |  |
|--|--|
| Step 1. Prepare Site - p.28                  | Step 6. Prepare Gas Supply - p.29                  |
| Step 2. Unpack The Heater Engine - p.28      | Step 7. Insert Heater Engine Into Fireplace - p.29 |
| Step 3. Preparing Heater Engine - p.28       | Step 8. Securing The Heater Engine - p.29          |
| Step 4. Positioning the Heater Engine - p.29 | Step 9. Connect Gas, Go to page 37                 |
| Step 5. Connect Electrical Supply - p.29     |  |

### Step 1. Prepare Site



Ensure the intended enclosure meets the requirements of the dimensions as stipulated in “ENCLOSURE REQUIREMENTS” on page 22 and that gas and electrical supplies have been prepared in accordance with the dimensions stipulated in “GAS SUPPLY” on page 23 and “ELECTRICAL SUPPLY” on page 24.

### Step 2. Unpack The Heater Engine

The heater engine is supplied in one carton, check to ensure you have all contents as listed on “BEFORE YOU START” on page 4 at the start of this manual before proceeding.

Carefully remove carton by removing the straps and lifting the carton off the appliance. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



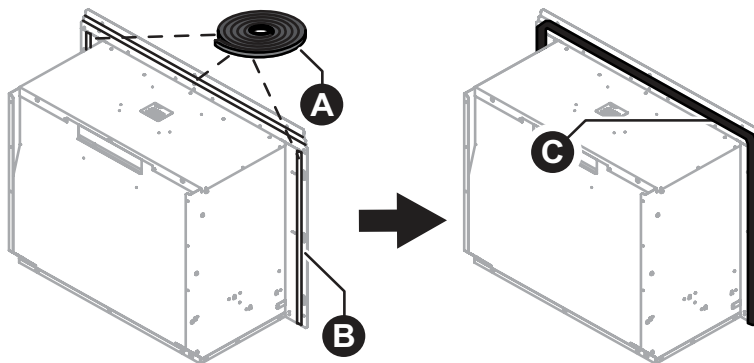
Retain the cardboard carton for use in the “Positioning the Heater Engine” on page 29.

Before installing the heater, check it is labelled for the correct gas type, (refer to the gas type label on the top body panel of the heater). Refer to the local gas authority for confirmation of gas type if you are in doubt.

### Step 3. Preparing Heater Engine

Attach the adhesive backed foam sealing strip **A** supplied to rear face of the fascia assembly mounting panel **B**. Ensure the seal is stuck to the Fascia Assembly mounting panel at approximately 30mm from the top edge **C**.

The foam strip is intended to form a seal between the heater and the fireplace brickwork. If an adequate seal cannot be formed then another means of sealing must then be used. (e.g. non combustible insulation or heat resistant silicon).





# HEATER ENGINE INSTALLATION

## Step 4. Positioning the Heater Engine

Place the heater engine in front of the fireplace enclosure.



A panel from the cardboard packing carton placed on the floor underneath the heater will help prevent possible damage to flooring.

## Step 5. Connect Electrical Supply

Plug in the 3 pin connector if electrical connections inside the fireplace.

## Step 6. Prepare Gas Supply

Remove the threaded brass plug from the S/S flexi pipe consumer gas supply pipe.

## Step 7. Insert Heater Engine Into Fireplace

Carefully move the heater engine into the fireplace ensuring the gas supply pipe and fittings **D** feed into the rear access hole.

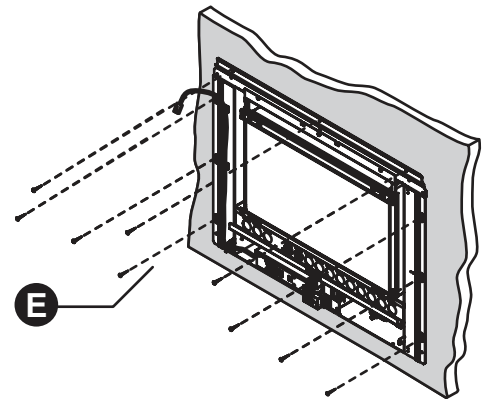
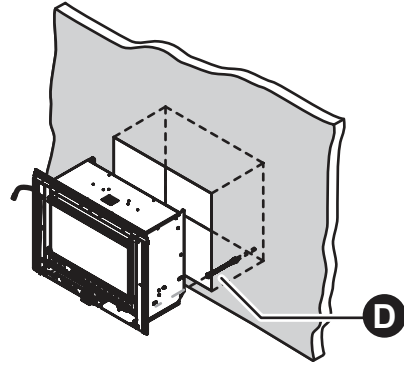


Take care that the electrical cord does not bunch up or get pinched behind the heater engine.

## Step 8. Securing The Heater Engine

Fasten the heater to the masonry work using appropriate fasteners (not supplied) using the three holes across the top of the fascia assembly mounting panel and in at least 2 of the holes on each side of the side panels as shown **E**.

## Step 9. Connect Gas, Go to page 37



# HEATER ENGINE INSTALLATION

## ZERO CLEARANCE INSTALLATION



Read this manual thoroughly and gain a full understanding of the requirements before undertaking installation.

Ensure gas supply to heater is turned off for the first stages of this instruction.

- |   |  |
|---|--|
| Step 1. Prepare Site - p.30                           | Step 7. Connect Electrical Supply - p.32           |
| Step 2. Assemble Zero Clearance Box - p.30            | Step 8. Prepare Gas Supply - p.32                  |
| Step 3. Fitting Zero Clearance Box Into Cavity - p.31 | Step 9. Insert Heater Engine Into Fireplace - p.32 |
| Step 4. Unpack The Heater Engine - p.31               | Step 10. Securing The Heater Engine - p.32         |
| Step 5. Preparing Heater Engine - p.31                | Step 11. Connect Gas, Go to page 37                |
| Step 6. Positioning the Heater Engine - p.32          |  |

### Step 1. Prepare Site



Ensure the intended enclosure meets the requirements of the dimensions as stipulated in "ENCLOSURE REQUIREMENTS" on page 22 and that gas and electrical supplies have been prepared in accordance with the dimensions stipulated in "GAS SUPPLY" on page 23 and "ELECTRICAL SUPPLY" on page 24.

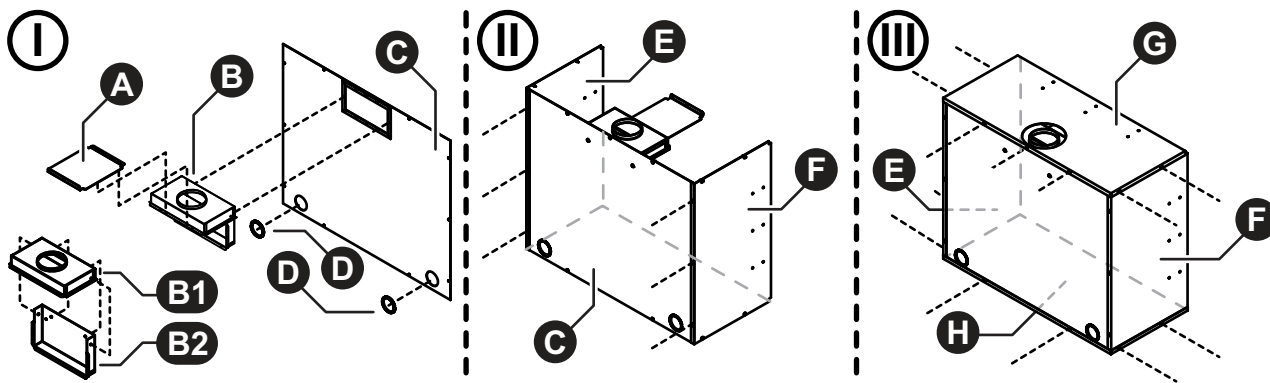
Ensure there are no wall studs, noggins, ceiling joists, wiring or other obstruction within the wall and or ceiling cavity where the flue is proposed to penetrate.

### Step 2. Assemble Zero Clearance Box

Carefully remove the contents from the carton and check to ensure you have all contents as listed in "BEFORE YOU START" on page 4. If **ANY** damage is evident or parts are missing **DO NOT** assemble the zero clearance box and contact your supplier for advice.



Flue guide rails and pop rivets supplied with Zero Clearance kit, part number R2340.



- I. Assemble the transition box halves **B1** and **B2**, secure together with 4 x screws (supplied).  
Attach the guide plate **A** to the transition box assembly **B** and secure with two pop-rivets (supplied).  
Drill 2 x Ø 3.2mm holes in the pre pressed location dimples on the back of the transition box and fit the transition box assembly **A B** to the back panel **C** and secure with the two screws (supplied).  
Fit the two plastic grommets **D** into the gas and electrical access holes of back panel **C**.
- II. Attach the two side panels **E** & **F** to the back panel **C** and secure with six screws (supplied).
- III. Attach top panel **G** to the back panel **C** aligning the flue outlet hole to the rear over the transition box outlet and secure with three screws (supplied).  
Next secure the top panel **G** to the side panels **E** & **F** with four screws (supplied).  
Attach base panel **H** to the back panel **C** and secure with two screws (supplied).  
Then secure the base panel **H** to the side panels **E** & **F** with four screws (supplied).  
Ensure flue has been installed as per 'Flueing Installation Manual For Rinnai Flamefire Heaters'.

# HEATER ENGINE INSTALLATION

## Step 3. Fitting Zero Clearance Box Into Cavity

Slide zero clearance box assembly into the cavity, ensuring the gas and electricity supplies are accessible.



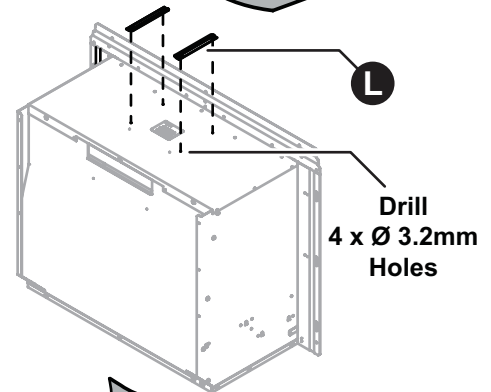
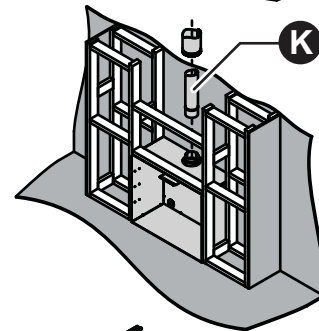
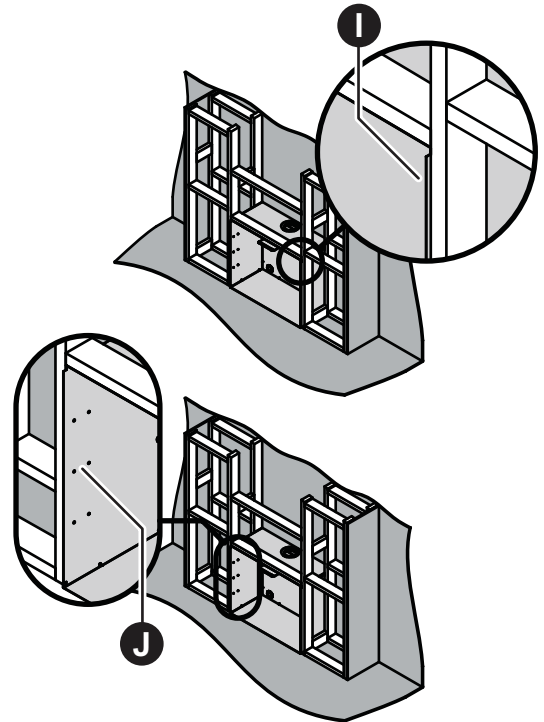
**When preparing a cavity / frame for a zero clearance installation the total cavity depth MUST also include the thickness of the external cladding **I**, as the zero clearance box MUST BE installed flush with the cladding surface, failure to do this will cause misalignment of the flueing.**

Secure the zero clearance into the cavity **J** with appropriate fasteners (not supplied).

Install the Rinnai rigid flue system components **K** in accordance with the 'Flueing Installation Manual For Rinnai Flamefire Heaters' that is provided with the flue kit.



**Ensure there are no wall studs, noggins, ceiling joists, wiring or other obstruction within the wall and or ceiling cavity where the flue is proposed to penetrate.**



## Step 4. Unpack The Heater Engine

The heater engine is supplied in one carton, check to ensure you have all contents as listed on "BEFORE YOU START" on page 5 at the start of this manual before proceeding.

Remove carton by removing the straps and carefully lifting the carton off the appliance. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



**Retain the card board carton for use in the "Positioning the Heater Engine" on page 32.**

Before installing the heater, check it is labelled for the correct gas type, (refer to the gas type label on the top body panel of the heater). Refer to the local gas authority for confirmation of gas type if you are in doubt.

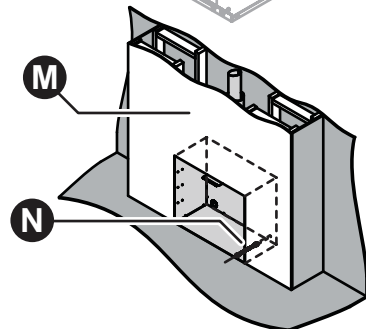
## Step 5. Preparing Heater Engine

Drill 4 x Ø 3.2mm holes in the pre pressed location dimples in the top panel of the heater. Then attach the flue guide rails **L** using these holes with four screws (supplied).



**Flue guide rails and pop rivets supplied with Zero Clearance kit, part number R2340.**

**Before proceeding any further with the heater engine installation ensure the cladding for the front of the enclosure has been fitted **M**.**



# HEATER ENGINE INSTALLATION

## Step 6. Positioning the Heater Engine

Place the heater engine in front of the zero clearance box / cavity.



A panel from the cardboard packing carton placed on the floor underneath the heater engine will help prevent possible damage to flooring.

## Step 7. Connect Electrical Supply

Plug in 3 pin connector if electrical connections are inside the fireplace.

## Step 8. Prepare Gas Supply

Remove the threaded brass plug from the S/S flexi pipe consumer gas supply pipe.

## Step 9. Insert Heater Engine Into Fireplace

Carefully move the heater engine into the zero clearance box ensuring the gas supply pipe and fittings **N** feed into the rear access hole.



Take care that the electrical cord does not bunch up or get pinched behind the heater engine.

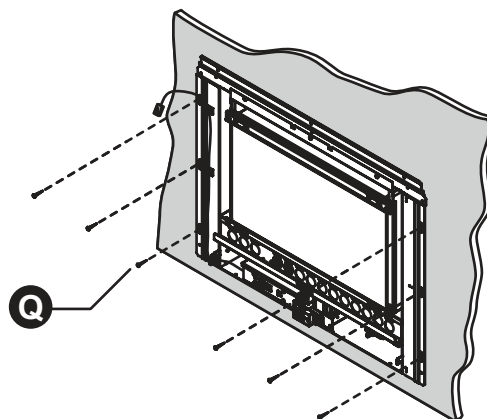
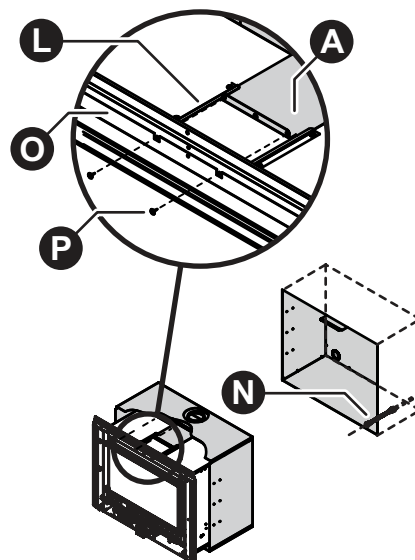
Align the guide rails **L** with the guide plate **A** and slide the heater engine in until the guide plate **A** is fully home against the rear of the fascia assembly mounting panel **O**.

## Step 10. Securing The Heater Engine

Secure the guide plate **A** to fascia assembly mounting panel **O** with two screws **P** (supplied).

Fasten the heater engine to cladding surface using appropriate fasteners (not supplied) in at least 4 positions as shown **Q**.

## Step 11. Connect Gas, Go to page 37



# HEATER ENGINE INSTALLATION

## FREESTANDING CONSOLE INSTALLATION



Read this manual thoroughly and gain a full understanding of the requirements before undertaking installation.

Ensure gas supply to heater is turned off for the first stages of this instruction.

- |   |   |
|---|---|
| Step 1. Prepare Site - p.33                       | Step 5. Prepare Gas Supply - p.34                   |
| Step 2. Unpack Heater Engine & Console Kit - p.33 | Step 6. Fit Heater Engine To Pillar Assembly - p.34 |
| Step 3. Assemble & Secure Pillar Assembly - p.33  | Step 7. Connect Electrical Supply - p.34            |
| Step 4. Attach Spigot Adaptor & Panels - p.34     | Step 8. Connect Gas, Go to page 37                  |

### Step 1. Prepare Site



Ensure the intended installation area has been prepared in accordance with dimensions as stipulated in "GAS SUPPLY" on page 23 and "ELECTRICAL SUPPLY" on page 24.

Ensure there are no wall studs, noggins, ceiling joists, wiring or other obstruction within the wall and or ceiling cavity where the flue is proposed to penetrate.

### Step 2. Unpack Heater Engine & Console Kit

The heater engine and the console kit are supplied in separate cartons, check to ensure you have all contents as listed on "BEFORE YOU START" on page 4 at the start of this manual before proceeding.

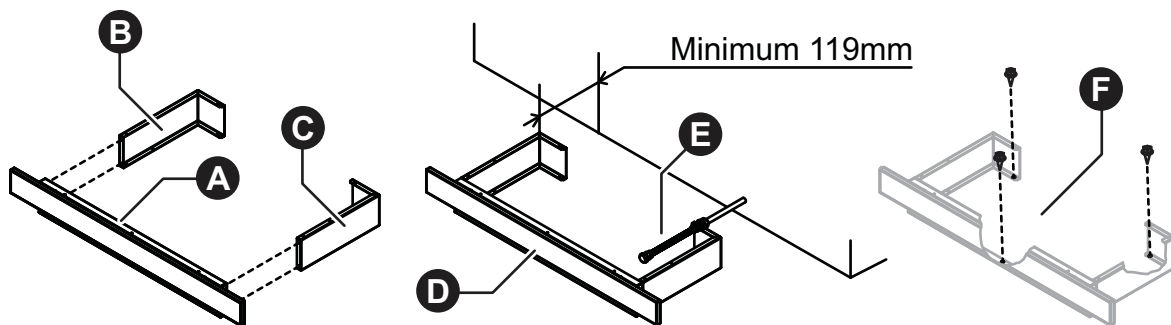
For heater engine remove carton by removing the straps and carefully lifting the carton off the appliance. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



Retain the card board carton for use in the "Attach Spigot Adaptor & Panels" on page 34.

Before installing the heater, check it is labelled for the correct gas type, (refer to the gas type label on the top body panel of the heater engine). Refer to the local gas authority for confirmation of gas type if you are in doubt.

### Step 3. Assemble & Secure Pillar Assembly



Assemble the pillar assembly **A**, **B** and **C** using the 4 - 8g x 10mm self tapping screws supplied creating base assembly **D**.



A panel from the cardboard packing carton placed on the floor underneath the heater engine and console components will help prevent possible damage to flooring during assembly.

Confirm the correct gas supply position **E** and locate the base assembly **D** in the selected installation position and fasten to the floor using appropriate fasteners (not supplied) through the three holes in the base plate **F**.

# HEATER ENGINE INSTALLATION

## Step 4. Attach Spigot Adaptor & Panels

Assemble the spigot adaptor halves **G1** and **G2**, secure together with 4 x screws (supplied).

Drill 4 x Ø 3.2mm holes in the pre pressed location dimples on the top and back of the heater engine, then fit the flue spigot adaptor **G** to the heater engine top and rear panels using 4 - 8g x 10mm self tapping screws (supplied).

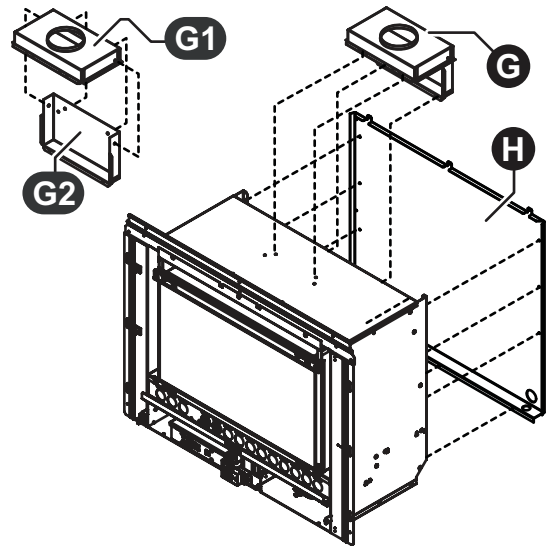
Fit the rear panel **H** using 9 - 8g x 10mm self tapping screws (supplied).



**Before attempting to fit the side panels it is necessary to elevate the heater engine by 100mm.**

Fit side Panels **I** and **J** to heater body at the front and the rear panel using 12 - 8g x 10mm self tapping screws (supplied).

Carefully align top panel **K** over tabs of the rear panel **H**, fasten to the heater at the front using 3 - M5 x 12mm screws (supplied) and at the rear using 3 - 8g x 10mm self tapping screws (supplied).



## Step 5. Prepare Gas Supply

Remove the threaded brass plug from the S/S flexi pipe consumer gas supply pipe.

## Step 6. Fit Heater Engine To Plinth Assembly



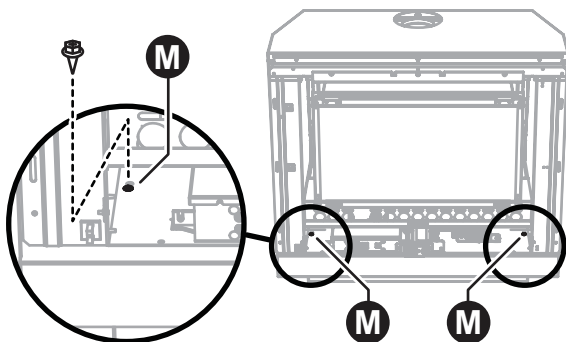
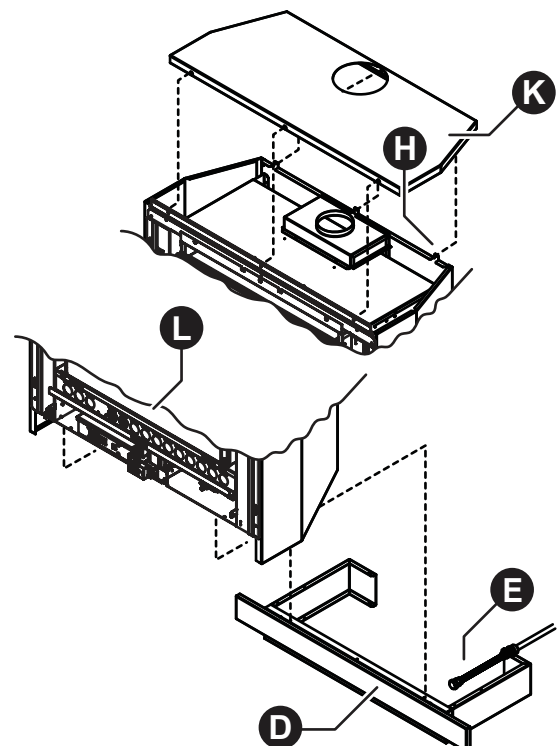
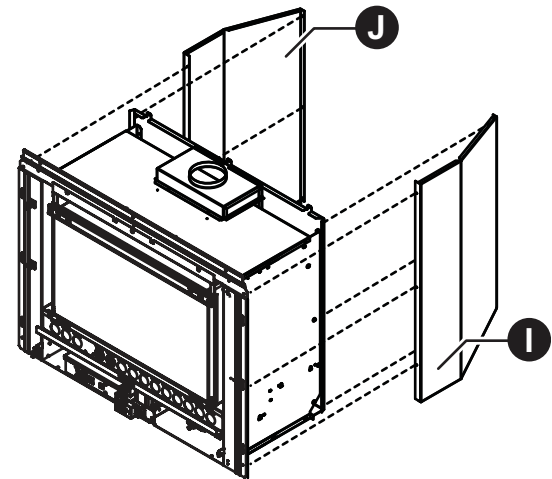
**This installation step requires a two man lift. Seek assistance before proceeding further.**

Carefully lift the heater engine assembly **L** onto the plinth assembly **D** ensuring that the gas supply pipe and fittings **E** feed into the rear access hole.



**Take care that the electrical cord does not bunch up or get pinched behind the heater engine.**

Align the heater securing holes over the M5 root nuts, then secure using the 4 - M5 x 12mm screws supplied. Note that two screws are located midway into the appliance on the lower left and right edges, refer to detail **M** below.



## Step 7. Connect Electrical Supply

Plug in 3 pin connector, if a general purpose outlet (power point) is used.

## Step 8. Connect Gas, Go to page 37

# HEATER ENGINE INSTALLATION - CONSOLE

## FREESTANDING PLINTH INSTALLATION



Read this manual thoroughly and gain a full understanding of the requirements before undertaking installation.

Ensure gas supply to heater is turned off for the first stages of this instruction.

- |   |   |
|---|---|
| Step 1. Prepare Site - p.35                       | Step 5. Prepare Gas Supply - p.36                   |
| Step 2. Unpack Heater Engine & Console Kit - p.35 | Step 6. Fit Heater Engine To Plinth Assembly - p.36 |
| Step 3. Assemble & Secure Plinth Assembly - p.35  | Step 7. Connect Electrical Supply - p.36            |
| Step 4. Attach Spigot Adaptor & Panels - p.36     | Step 8. Connect Gas, Go to page 37                  |

### Step 1. Prepare Site



Ensure the intended installation area has been prepared in accordance with dimensions as stipulated in "GAS SUPPLY" on page 23 and "ELECTRICAL SUPPLY" on page 24.

Ensure there are no wall studs, noggins, ceiling joists, wiring or other obstruction within the wall and or ceiling cavity where the flue is proposed to penetrate.

### Step 2. Unpack Heater Engine & Console Kit

The heater engine and the console kit are supplied in separate cartons, check to ensure you have all contents as listed on "BEFORE YOU START" on page 4 at the start of this manual before proceeding.

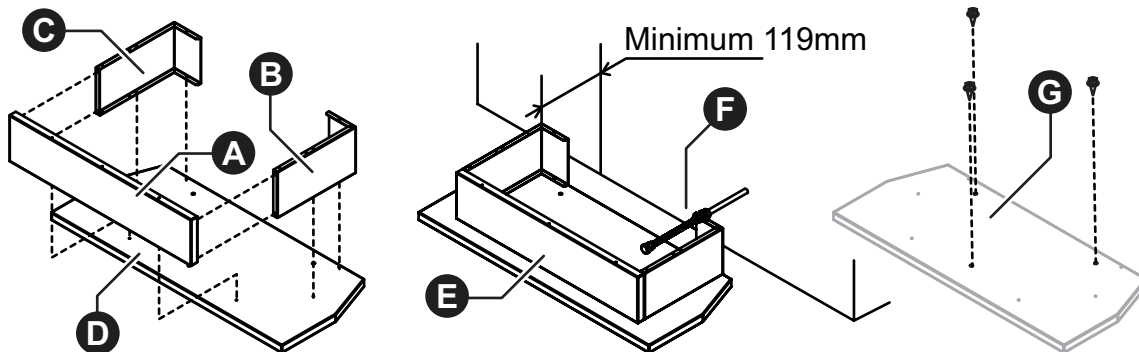
For heater engine remove carton by removing the straps and carefully lifting the carton off the appliance. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



Retain the card board carton for use in the "Attach Spigot Adaptor & Panels" on page 34.

Before installing the heater, check it is labelled for the correct gas type, (refer to the gas type label on the top body panel of the heater engine). Refer to the local gas authority for confirmation of gas type if you are in doubt.

### Step 3. Assemble & Secure Plinth Assembly



Assemble the pillar assembly **A**, **B** and **C** to the base panel **D** using the 10 - 8g x 10mm self tapping screws supplied creating base assembly **E**.



A panel from the cardboard packing carton placed on the floor underneath the heater engine and console components will help prevent possible damage to flooring during assembly.

Confirm the correct gas supply position **F** and locate the base assembly **E** in the selected installation position and fasten to the floor using appropriate fasteners (not supplied) through the three holes in the base plate **G**.



# HEATER ENGINE INSTALLATION

## Step 4. Attach Spigot Adaptor & Panels

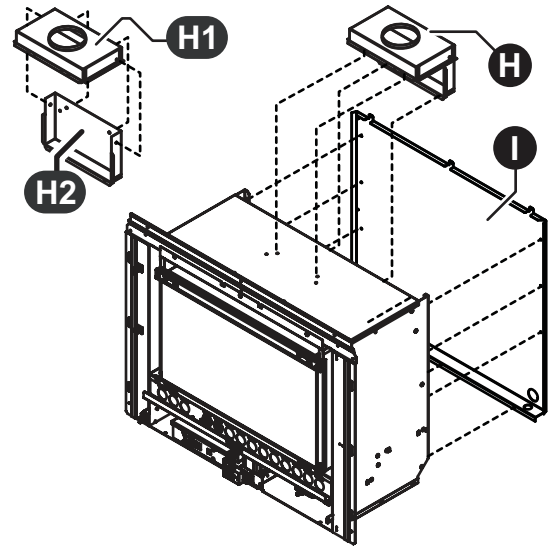
Assemble the spigot adaptor halves **H1** and **H2**, secure together with 4 x screws (supplied).

Drill 4 x Ø 3.2mm holes in the pre pressed location dimples on the top and back of the heater engine, then fit the flue spigot adaptor **H** to the heater engine top and rear panels using 4 - 8g x 10mm self tapping screws (supplied).

Fit the rear panel **I** using 9 - 8g x 10mm self tapping screws (supplied).

Fit side Panels **J** and **K** to heater body at the front and the rear panel using 12 - 8g x 10mm self tapping screws (supplied).

Carefully align top panel **L** over tabs of the rear panel **I**, fasten to the heater at the front using 3 - M5 x 12mm screws (supplied) and at the rear using 3 - 8g x 10mm self tapping screws (supplied).



**IMPORTANT** Before attempting to fit the side panels it is necessary to elevate the heater engine by 100mm.

## Step 5. Prepare Gas Supply

Remove the threaded brass plug from the S/S flexi pipe consumer gas supply pipe.

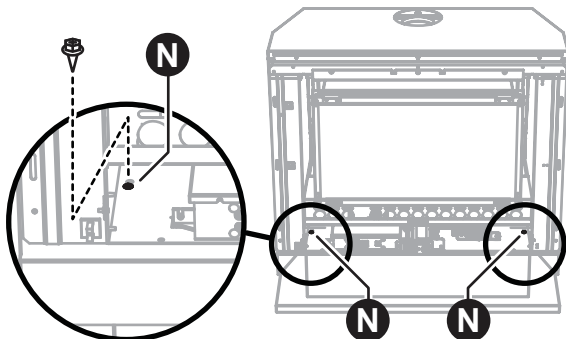
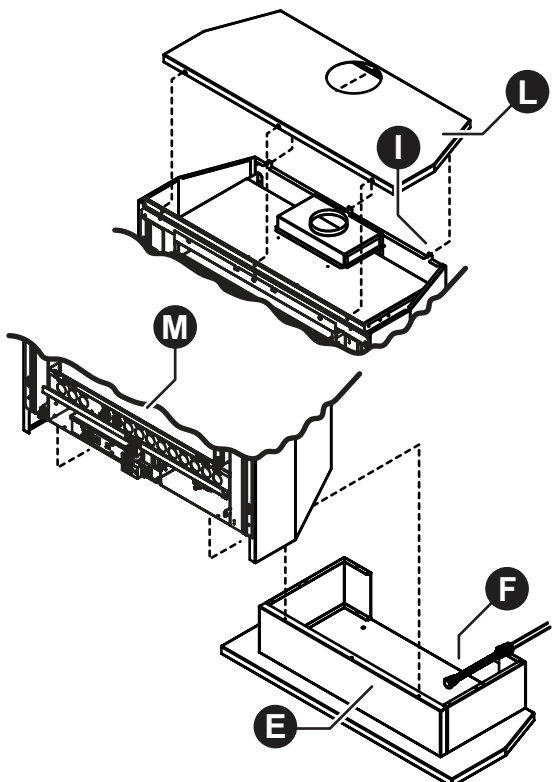
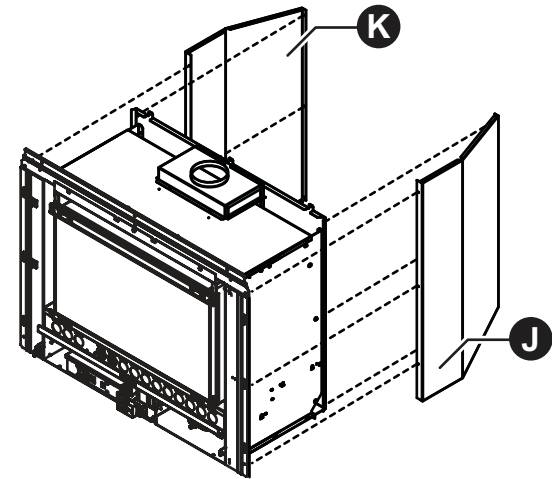
## Step 6. Fit Heater Engine To Plinth Assembly

**WARNING** The following installation step requires a two man lift. Seek assistance before proceeding further.

Carefully lift the heater engine assembly **M** onto the plinth assembly **E** ensuring that the gas supply pipe and fittings **F** feed into the rear access hole.

**CAUTION** Take care that the electrical cord does not bunch up or get pinched behind the heater engine.

Align the heater securing holes over the M5 root nuts, then secure using the 4 - M5 x 12mm screws supplied. Note that two screws are located midway into the appliance on the lower left and right edges, refer to detail **N** below.



## Step 7. Connect Electrical Supply

Plug in 3 pin connector, if a general purpose outlet (power point) is used.

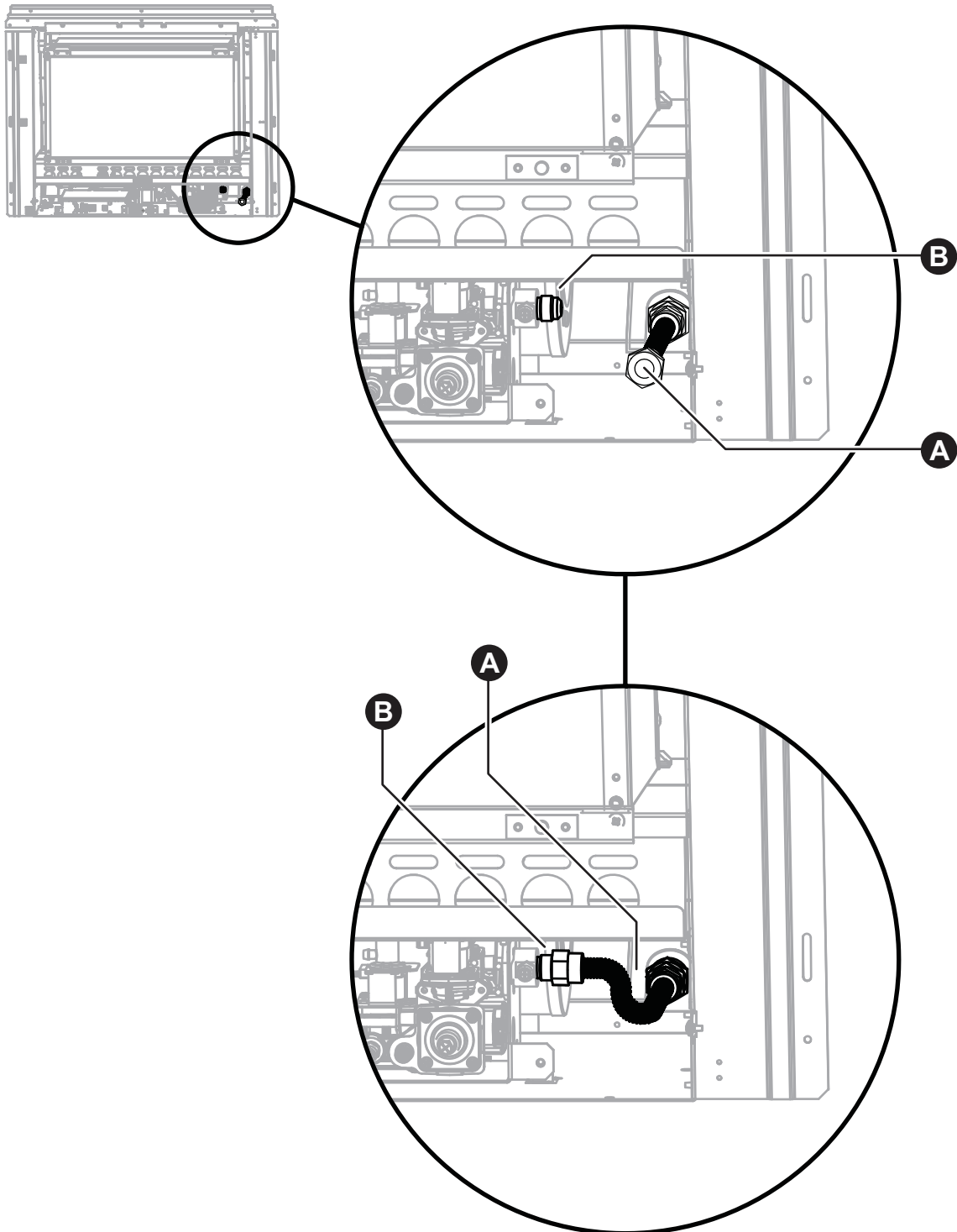
## Step 8. Connect Gas, Go to page 37



# CONNECTING GAS

## Step 1. Connect Gas Supply

Firmly grasp the S/S flexi pipe **A** and bend at 90° approximately mid way to line up with the gas control valve inlet **B** then attach pipe to gas control valve and tighten.



## Step 2. Leak Testing

Turn gas back ON and leak test appliance connection.



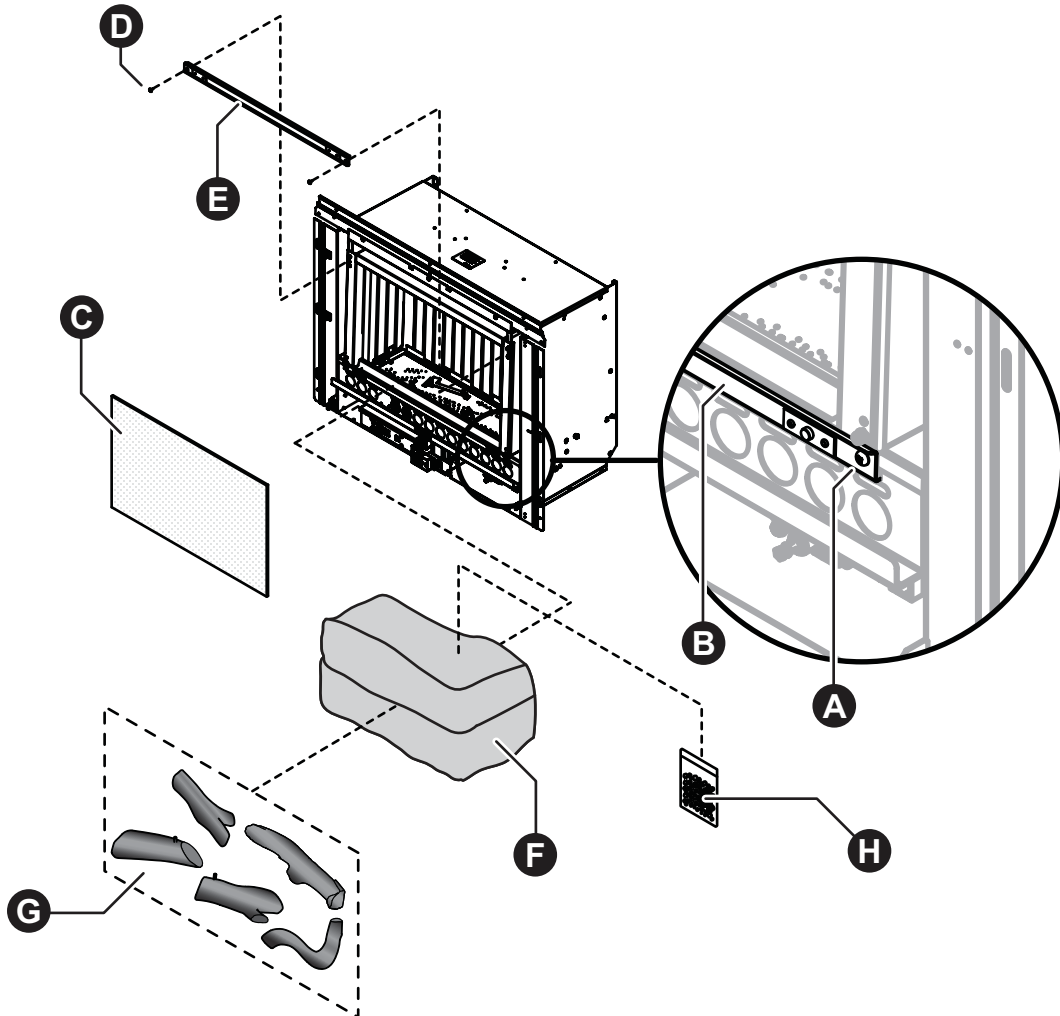
**Use a soapy solution to test all gas connections. If a leak is present bubbles will form at the leak point. when finished remove any residue with a rag. Prevent any soapy solution from coming in contact with electrical components.**

Proceed to "BURNER MEDIA INSTALLATION" on page 38.

# BURNER MEDIA INSTALLATION

## Step 1. Removing the Burner Box Glass

Loosen but do not remove the two retaining screws **A** for the bottom burner box glass clamp **B**. While supporting the burner box glass panel in place, completely unscrew and remove the two retaining screws **D** and the top burner box glass clamp **E**. Then lift burner box glass panel **C** away and place it safely aside where it can not get damaged.



## Step 2. Unpacking Log Set & Granules Satchel

There are two items shipped inside the burner box of the heater engine, these are the log set **G** and the burner granules **H**. These items are now accessible for removal.



The satchel containing the burner granules **H** is taped to the outside of the foam packing that contains the log set. Ensure that you locate and remove the satchel before discarding the packaging material.

Carefully unpack the five logs **G** from the packaging material **F** and inspect each log for damage, temporarily return logs to the packaging **F** for safe keeping. After inspection place the logs and the burner granules satchel **H** safely aside where they can not get damaged. If **ANY** damage is evident on the logs **DO NOT** continue with installation and contact your supplier for advice.

# BURNER MEDIA INSTALLATION

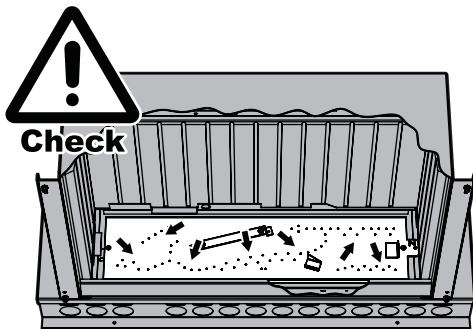
## Step 3. Installing the Log Set and Burner Granules



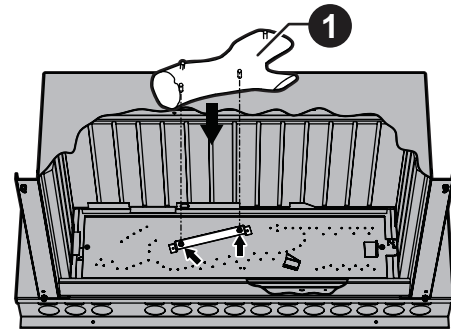
For clarity the drawings are displayed without showing the entire heater.

**DO NOT** remove the burner from heater engine to install the log set.

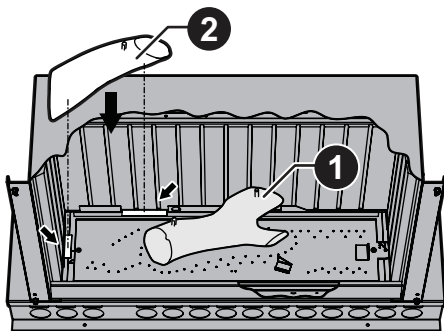
Use extreme care when handling the Log Set components, they are made from a very fragile high temperature material and will damage if handled roughly. Only remove the components from their packaging as required.



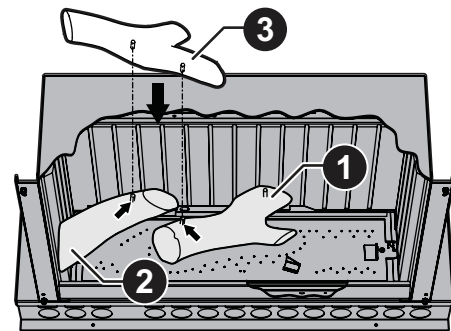
⚠ Check to ensure that the ports of the burner are clean and clear of any particles and all packaging material. The log set **MUST BE** installed in the precise order as stated.



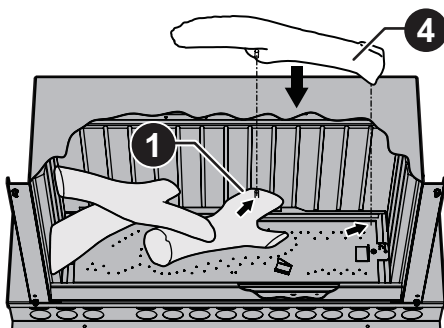
Log **1** thick 'Y' shaped log with two locating holes and pins. Line up the holes with the pins of the bracket fixed to the centre of the burner. When correctly positioned the log rests on this bracket.



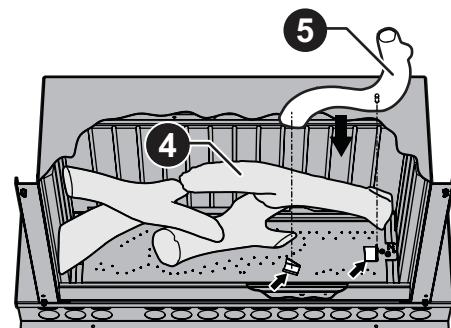
Log **2** the short straight log with a single locating pin. Place the log onto the sheet metal tabs at the left and rear of the burner box. When correctly positioned this log will be touching the left and rear burner box walls.



Log **3** thinner 'Y' shaped log with two locating holes. Line up the holes with the pins of logs **1** and **2**. When correctly positioned the log rests on both logs **1** and **2**.

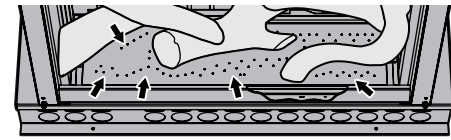
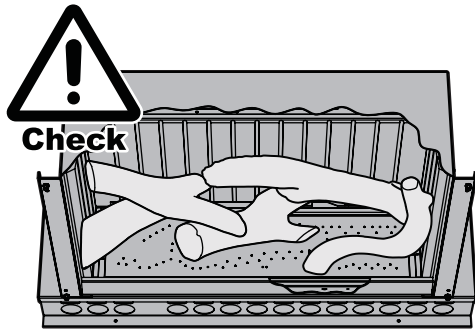


Log **4** long log with a single locating hole. Line up the hole with the pin of log **1**. When correctly positioned this log will be touching log **1**, the rear burner box wall and the burner.



Log **5** bowed log with a single locating hole. Line up the hole with the pin bracket to the right of the burner and locate the front of log onto the stop bracket. When correctly positioned this log will be touching both brackets, log **4** and the right burner box wall.

# BURNER MEDIA INSTALLATION



## ! COVERING PORTS



⚠ Confirm the correct location of all the logs before proceeding with the placement of the granular burner medium, ensuring that all the logs are firmly seated in their correct positions and that the ports of the main burner are clean and clear of any debris that may have been shed during the log installation.

For best flame effect carefully place the granular burner medium over and around the front burner ports. It is desirable that the gas jet is diffused by the granules, this will reduce any 'candling' effect of the flame enhancing the realistic log burning look of the heater.

⚠ **DO NOT** force any granular material into the burner ports or completely block any of the burner ports.



### Candling Flames - Propane and ULPG appliances

Particular care of granular placement must be observed when setting up on Propane or ULPG. In the event of a long candle like flame developing the granular media will need to be carefully positioned to cover the offending burner port enough to diffuse the flame.

#### Step 4. Replacing the Burner Box Glass

Replace burner box glass panel assembly in reverse sequence as instructed in Step 2. page 38.

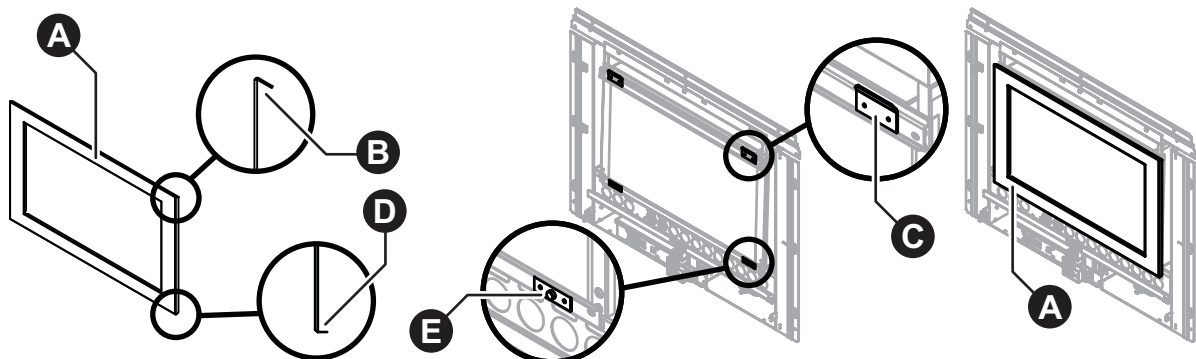
#### Step 5. Unpack the Fascia Assembly & Inner Frame

The Fascia Assembly and the Inner Frame are supplied in a separate carton, check to ensure you have all the contents as listed on "CARTON CONTENTS / ITEM CHECKLIST" on page 4 at the start of this manual before proceeding. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



When placing the standard fascia assembly down ensure it is placed on its lower edge or flat. If it is placed on its left or right edge the glass may slide out of the stand off posts. If this should occur ensure that the silicon rubber mounts are not dislodged when sliding the glass back into position.

#### Step 6. Fitting the Inner Frame



The inner frame **A** is packed with the Fascia and can now be fitted to the heater engine. The inner frame is held in position by return tabs **B** on the top edge and by magnets **C** on the bottom edge.

Fit the inner frame **A** to the heater engine by locating the over-folded edge **B** over the two return tabs **C** then gently swing down the bottom edge **D** onto the magnets **E**.

Proceed to the "COMMISSIONING INSTRUCTIONS" on page 41.

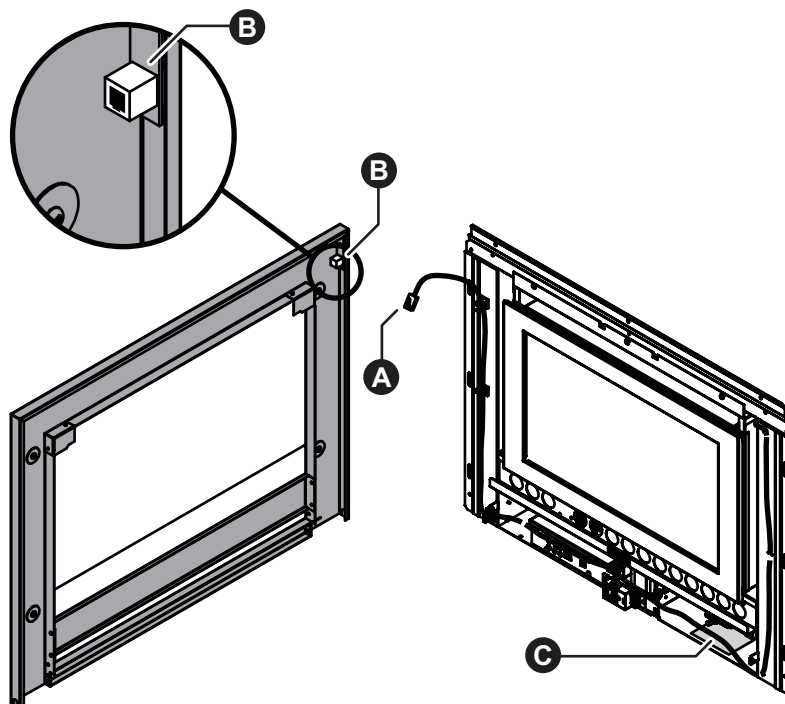
# COMMISSIONING INSTRUCTIONS

## COMMISSIONING

### Step 1. Unpack the Fascia

For commissioning, the control panel located on the fascia will need to be connected to the communication cable of the heater engine.

The Fascia Assembly is supplied in a separate carton, check to ensure you have all the contents as listed on "CARTON CONTENTS / ITEM CHECKLIST" on page 4 at the start of this manual before proceeding. Remove all packaging materials and check all components for damage. If **ANY** damage is evident **DO NOT** install or operate this appliance. Contact your supplier for advice.



*Note: Standard Fascia shown for illustrative purposes*

### Step 2. Connect Push Button Control

Carefully pick up fascia assembly, and position the fascia close to the heater engine.

Connect the RJ45 plug **A** into the socket **B** located on the back of fascia on the bottom left hand corner, (this connects the push button control panel via a communications cable to the heater engine's control box).



Carefully lean the fascia up against a wall, placing the card board carton between the fascia and the wall will protect both the wall and the fascia from being damaged while completing the heater commissioning.

### Step 3. Switch On the Electricity Supply



**230 VOLTS, RISK OF ELECTRICAL SHOCK!**

Installation and commissioning must be carried out only by an authorised person.

Wiring inside this appliance may be at 230V potential, when performing the commissioning, the appliance electrical power will need to be connected. Exercise **CAUTION** as there is potential for electric shock from the exposed wiring and circuitry. **DO NOT** leave the appliance unattended when power is connected and the panels are removed.

### Step 4. Commission the Appliance



**DO NOT** test for gas escapes with an open flame.

The gas type codes and gas pressures for this appliance **MUST BE** checked and set in accordance with these instructions when the appliance is installed, **OR** after the replacement of any component or reassembly after service.

Burner gas pressures and gas types are factory set.

The location of the gas control is in the air gap at the lower right hand side of the appliance.

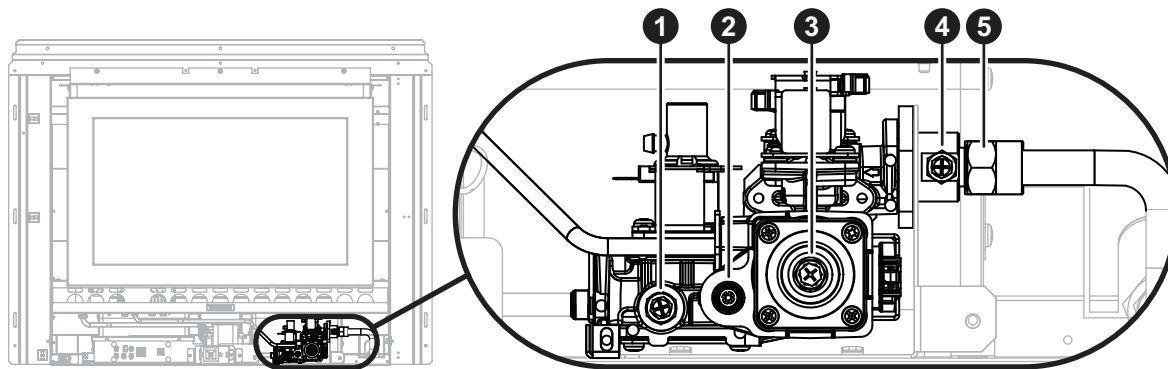
The location of the data plate **C** is on the base plate of the heater engine within the air gap on the right hand side of the appliance.



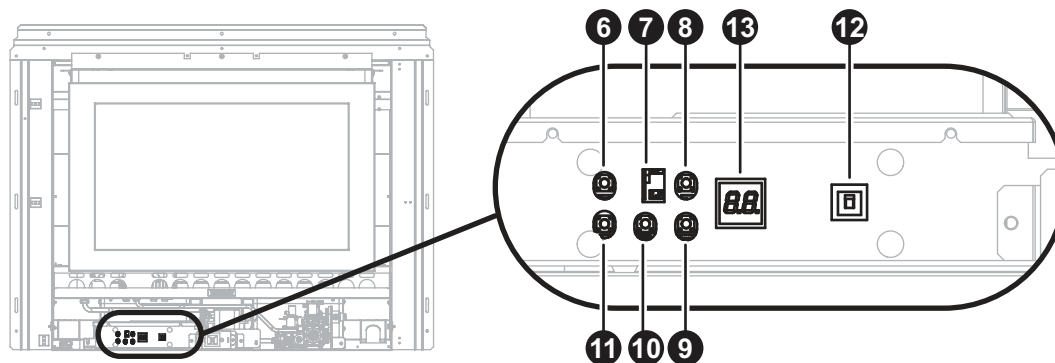
Gas supply pressure is to be checked with all other gas appliances in the household running on high. Failure to check this may result in lower than recommended required gas pressures, resulting in poor performance and reduced flame effect.

# COMMISSIONING INSTRUCTIONS

## Step 5. Checking Supply Pressure. (Ensure gas is connected)



1. Remove the gas inlet test point screw **4**, and connect the positive pressure manometer hose. Refer to valve drawing above.
2. Press the heater ON/OFF button **12**, on the PCB control panel to start the ignition sequence. The appliance will ignite normally. Refer to PCB Control panel image below.



3. Check the pressures as per the table below for the correct gas type. Ensure all other gas appliances in the household are running on 'High'

	Natural Gas	Propane Gas
Min. Supply pressure	1.13 kPa	2.50 kPa
Max. Supply pressure	3.50 kPa	3.00 kPa

Refer to this table for the correct gas settings, noting that data plate values override the values printed in this instruction!

4. Press the heater ON/OFF button **12** to stop the appliance operation.
5. Disconnect the manometer hose and replace the inlet test point screw **4**. Check for leaks using soapy water solution.

## Step 6 . Checking and Setting burner gas pressure.

1. Remove the main burner test point screw **1**, and connect the positive pressure manometer hose.
2. Press the heater ON/OFF button **12**, on the PCB control panel to start the ignition sequence. The appliance will ignite normally. Refer to PCB Control panel image above.
3. Press the 'TEST' button **6**, twice on the PCB control panel, the igniter will spark and the appliance will light to its lowest setting, (Main burner - stage 1), and the display **13**, will show **P L**.
4. Press the 'UP' button **8** or 'DOWN' button **9** to adjust to the required value if values are different to those in the table below.

	Natural Gas	Propane Gas
P L (stage 1)	0.15 kPa	0.50 kPa
P H (stage 7)	0.71 kPa	1.80 kPa

Refer to this table for the correct gas settings, noting that data plate values override the values printed in this instruction!

# COMMISSIONING INSTRUCTIONS

5. Press the 'Set Button' **11**, once to save the setting. The display **13**, should now be displaying **FH**, (Main burner stage 7).
6. Press the 'UP' button **8** or 'DOWN' button **9** to adjust to the required value, If the pressure is already correct or when the desired pressure is achieved press the 'Set Button' **11**, once to save the setting.
7. The display **13**, will now show **7**. If the display does not change to **7** there was an error in pressure setting and the pressure setting procedure should be repeated from step 1 onward after turning the appliance 'OFF'
8. With the display **13**, showing **7** Press the heater ON/OFF button **12**.
9. Setting main burner pressure is now complete. Remove the manometer hose and replace the inlet test point screw **1**. Check for leaks using soapy water solution.

## Step 7 . Checking and setting Pilot burner pressure.

1. Remove the pilot burner gas test point screw **2**, and connect a positive pressure manometer hose.
2. Press the heater ON/OFF button **12** to start the ignition sequence, the appliance will ignite normally.
3. Press the 'TEST' button **6**, twice on the PCB control panel, the igniter will spark and the appliance will light to its lowest setting, (Main burner - stage 1), and the display **13**, will show **FL**.
4. Adjust the pilot burner gas pressure to the value for the gas type as listed in the table below via the 'Pilot Buner Pressure Adjustment' screw **3**.

	Natural Gas	Propane Gas
Pilot Burner Pressure	1.00 kPa	2.00 kPa

*Refer to this table for the correct gas settings, noting that data plate values override the values printed in this instruction!*

5. Press the heater ON/OFF button **12**, once to stop the appliance operation. Disconnect the manometer hose and replace the pilot burner gas test point screw **2**.
6. Check for gas leaks using soapy water, setting or checking pilot burner pressure is now complete.



### The Requirements of AS / NZS 5601 include:

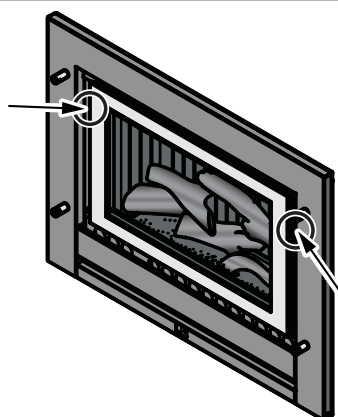
- a. checking whether mechanical extraction ventilation draws air through flue systems or chimneys or not. If yes, this will most likely result in combustion product spillage from appliances during their operation.
- b. checking whether the operation of appliances and flue systems or chimneys is satisfactory.
- c. a method for determining the additional fixed ventilation area required to counteract the effect of mechanical extract ventilation.



**Always check gas pressure values against those recorded on this appliances data plate, values on the data plate override values printed in this instruction.**



**Spillage tests and countermeasures (when required) are critical for safe operation of the appliance. Spillage can be detected at the downdraft diverter relief openings located at the front and on the sides of the appliance, as shown to the below. If unsure contact Rinnai for advice.**



**TEST BOTH SIDES**



# COMMISSIONING INSTRUCTIONS

## COMMISSIONING THE APPLIANCE FOR DIFFERENT GAS TYPE



### 230 VOLTS, RISK OF ELECTRICAL SHOCK!

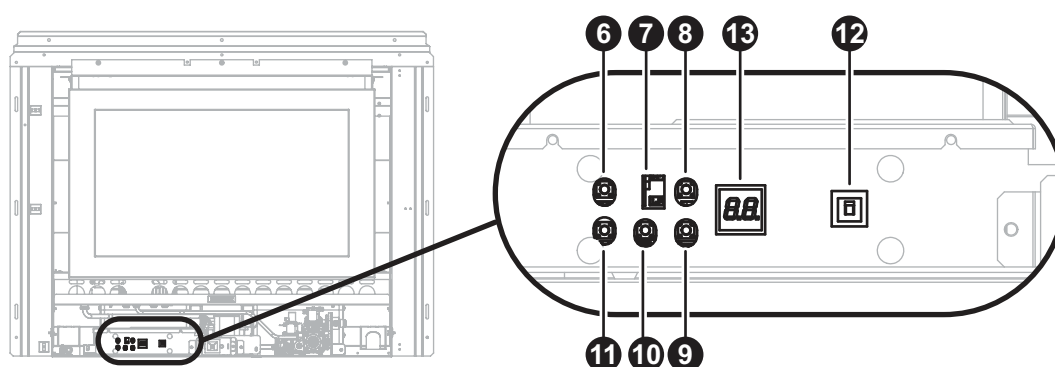
Installation and commissioning must be carried out only by an authorised person.

Wiring inside this appliance may be at 230V potential, when performing the commissioning, the appliance electrical power will need to be connected. Exercise CAUTION as there is potential for electric shock from the exposed wiring and circuitry. DO NOT leave the appliance unattended when power is connected and the panels are removed.

This appliance is factory set for the correct gas type as per it's gas type labelling, re-commissioning for gas type will only be required if the PCB is being replaced or if it has undergone a gas type conversion, i.e.; from NG to Propane or vice versa. Commissioning of the gas is carried out via the PCB.



Commissioning of the PCB must be carried out BEFORE the gas pressures are checked.



1. Turn on the gas and power supply to the appliance.
2. Press the 'UP' button **8** or 'DOWN' button **9** to obtain the correct gas type code for the appliance. Refer to chart to below for the correct gas type code.

Natural Gas	Propane Gas
A1	L1

3. With the appliance OFF, press the 'TEST' button **6**, the gas type code will be shown on the display.
4. Press the 'Set Button' **11**, to lock in the code.
5. Gas pressure settings should now be checked as per "Checking and setting Pilot burner pressure." on page 43, Steps 1 through 3.

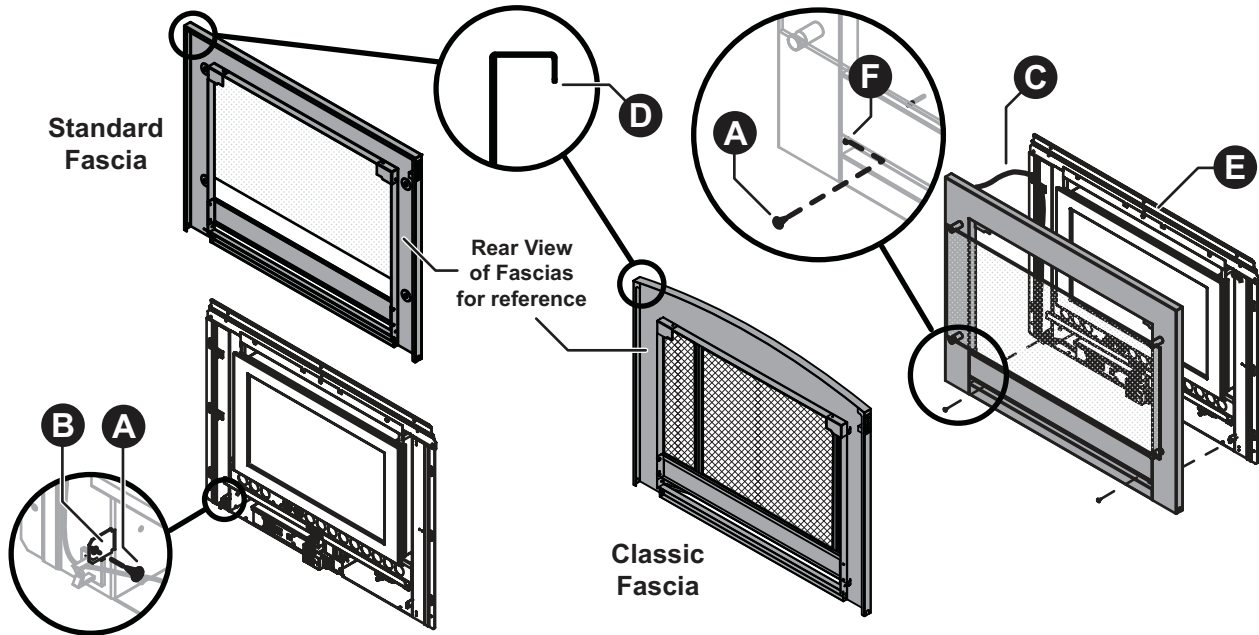
Proceed to "COMPLETING HEATER INSTALLATION" on page 45



# COMPLETING HEATER INSTALLATION

## ATTACHING FASCIA ASSEMBLY

### Step 8. Attach the Fascia to the Heater Engine



Locate and remove the two 8g - 10mm fascia assembly securing screws **A** pre-positioned in the fascia mounting tabs **B** on the heater engine body.



**These screws have been pre-inserted by the manufacturer to ensure correct threading of the fascia securing tabs.**

Carefully pick up fascia assembly, taking care not to tilt the standard model fascia on it's edge as the glass may slide out from the stand off posts.

Position the top fold **D** over the fascia assembly mounting panel **E** and gently push the lower edge of the fascia assembly until it is flush at the edges.



**Ensure you DO NOT place excessive tension on or pinch the communication cable **C** when manoeuvring the fascia into position.**

Fit and tighten the two fascia retaining screws **A** through both the fascia **F** and the fascia mounting tabs **B** on the heater engine body.



**The glass dress guard (standard model) and the mesh dress guard (classic model) fitted to this appliance reduces the risk of fire and injury and no part of it should be permanently removed. For protection of young children or the infirm a secondary guard is required.**



**If the heater is not operating correctly refer to the "TROUBLE SHOOTING CHECKLIST" on page 17 before contacting Rinnai.**

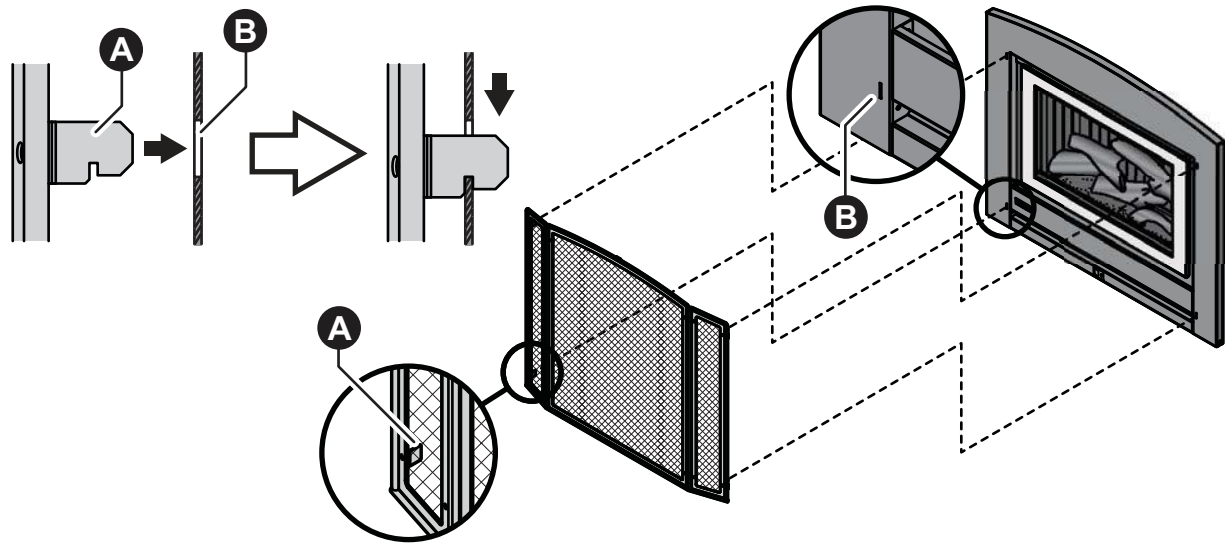
**It is the responsibility of the installer to check that under normal operating conditions of the appliance, all flue gases are exhausted to the outside atmosphere and that there is no spillage of combustion gases into the room. Please refer to current AS/NZS 5601.**

**During the initial burning in period of approximately 2 hours, some smoke and smell may be experienced. During this period the heater should be operated on High and the space being heated should be well ventilated. It may take up to 20 minutes of operation for the logs to achieve their full flame pattern and glow.**

**Burner aerations are factory set and can not be adjusted. If you are unable to get the unit to operate correctly refer to "TROUBLE SHOOTING CHECKLIST" on page 17 before contacting Rinnai.**

# COMPLETING HEATER INSTALLATION

## ATTACHING DRESS GUARD TO CLASSIC FASCIA ASSEMBLY



The mesh dress guard of the classic model fascia is held in place by four slotted tabs (two on each side) **A** which lock into four slots **B** on the front of the fascia.

## ABNORMAL FLAME PATTERN

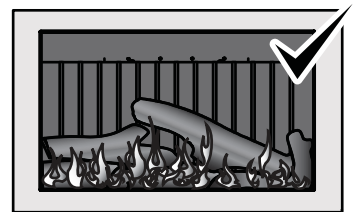
Each Rinnai Flame Fire heater has a distinct flame pattern. The flame should look the same every time you start your heater, after an initial warm up period of approximately 15 minutes.

Abnormal flame performance and/or pattern can indicate a problem with your heater, such as blocked gas injectors, incorrectly installed / inadequate flue system or the artificial logs/burn media may have shifted from when the heater was first installed.

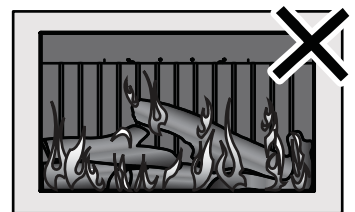
There are some warning signs that could indicate a problem. If any of the signs below occur, please contact Rinnai.

### Key signs of Abnormal flame performance:

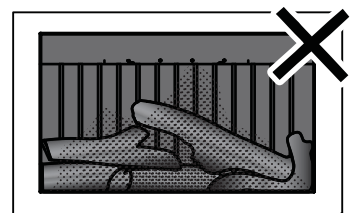
- Appliance turns 'OFF' soon after start up and does not relight.
- Flame appears overly orange-yellow.
- Flame appears either very short or very long.
- Flame only burns part way across the burner.
- Severe soot building up on the inside of the glass and logs.
- Continuous unusual smell from the appliance.
- Continued difficulty or delay in establishing a flame.



NORMAL FLAME PATTERN



ABNORMAL FLAME PATTERN  
CANDLING FLAMES



SOOT BUILD UP



**NOTE** Be advised that appliances incorporating a live fuel effect, and designed to operate with luminous flames, may exhibit slight carbon deposition, this is normal operation.



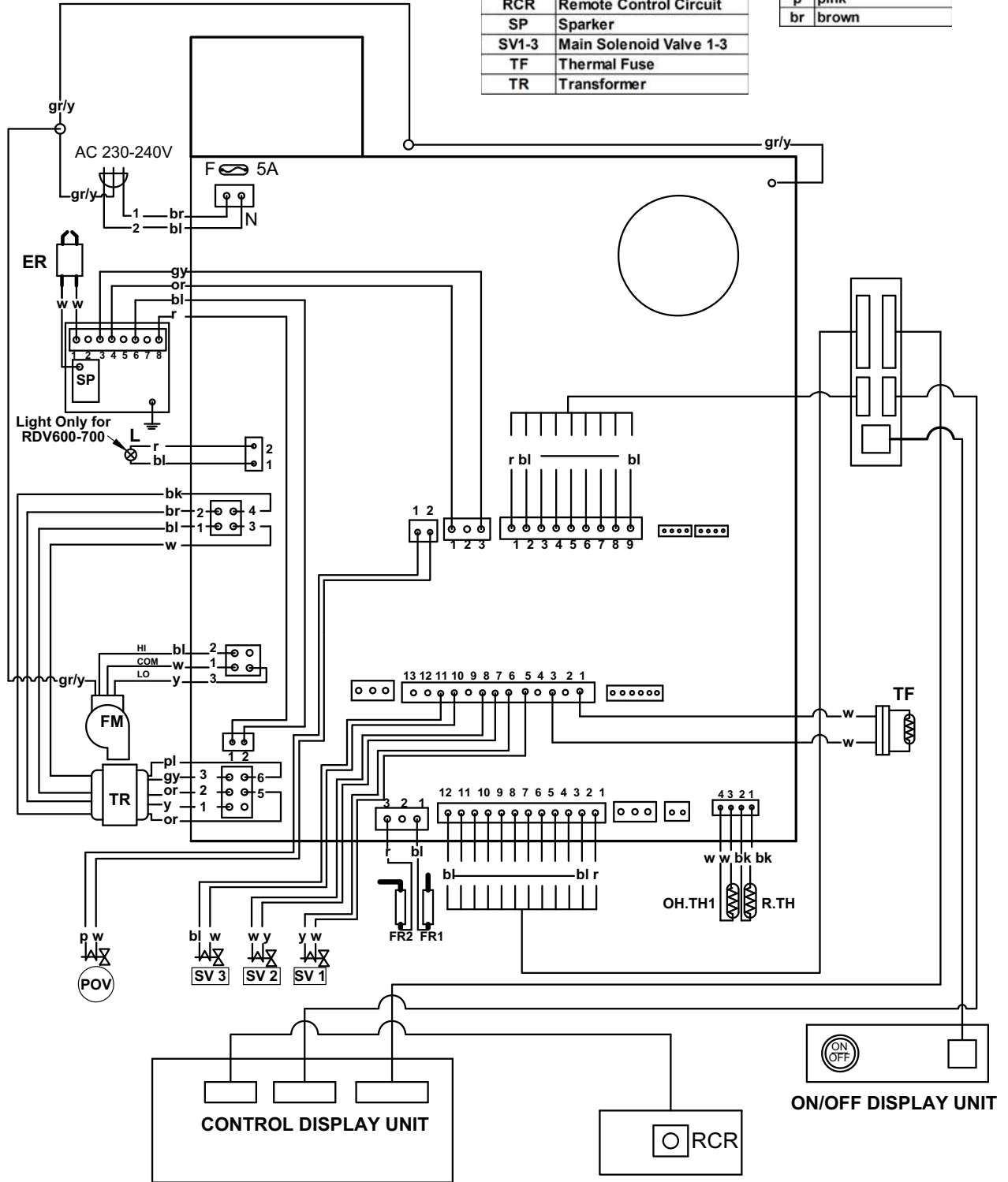
### Candling Flames - Propane and ULPG appliances

**NOTE** Particular care of granular placement must be observed when setting up on Propane or ULPG. In the event of a long candle like flame developing the granular media will need to be carefully positioned to cover the offending burner port enough to diffuse the flame.

# WIRING DIAGRAM

Mark	Part
B	Burner
ER	Electrode
F	Fuse Electrical
FM	Convection Fan Motor
FR1-2	Flame Rod 1-2
L	Light
OH.TH1	Over Heat Thermistor
PB	Pilot Burner
POV	Modulated Solenoid Valve
R.TH	Room Thermistor
RCR	Remote Control Circuit
SP	Sparker
SV1-3	Main Solenoid Valve 1-3
TF	Thermal Fuse
TR	Transformer

Mark	Colour
bk	black
bl	blue
gr/y	yellow-Green stripe
gy	grey
or	orange
pl	purple
r	red
w	white
y	yellow
p	pink
br	brown



WIRING DIAGRAM UNI CONTROL MODEL 3  
1 Burner  
Issue B

# INSTALLATION AND COMMISSIONING CHECKLIST

- Complete the Installation Check List and the Installer details below.
- Instruct customer on the Sapphire Flame Fire operation.
- Ensure the customer understands the content of this manual.



Advise the customer that during the initial burning period of approximately 2 hours, some smoke and odour may be experienced. During this period the heater should be operated on 'High' and the space being heated should be well ventilated. It may take up to 20 minutes of operation for the logs to achieve their full flame pattern and glow.



The glass dress guard (standard model) and the mesh dress guard (classic model) fitted to this appliance reduces the risk of fire and injury and no part of it should be permanently removed.

- For protection of young children or the infirm a secondary guard is required.
- Ensure this Operation and Installation manual is left with the customer.



Ensure the Customer understands that:

- No part of this appliance should be permanently removed.
- Paper or other material must not be burnt in this appliance.
- Young children and the infirm should be supervised at all times.



**CHECKLIST TO BE COMPLETED BY CERTIFIED GAS INSTALLER**

NO / YES

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 1. Is the appliance positioned in a suitable location (clearances, combustible clearances, mantels and surrounds etc)? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Was a Rinnai approved flue system installed and tested in accordance with the instructions?                         | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Has the gas pressure checked and set?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Has the log set / burn media been installed as per instructions?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Was the appliance tested for correct operation and to ensure no gas leaks?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has combustion spillage testing been conducted in accordance with AS/NZS5601?                                       | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Has the customer been instructed on operating procedure and safety requirements?                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the end-user fully aware of operating procedure?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Has the Dress Guard been fitted?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Has the customer been advised not to remove the dress-guard?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Has the customer been advised to service the heater every two years?   | <input type="checkbox"/> | <input type="checkbox"/> |

# NOTES

# NOTES

# NOTES

# Rinnai

**Rinnai Australia Pty. Ltd.** ABN 74 005 138 769

## Head Office

100 Atlantic Drive,  
Keysborough VIC 3173

P.O. Box 460  
Braeside, VIC 3195

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires service, please call our National Help Line. Rinnai recommends that this appliance be serviced every 2 years.

Product Sales and Service - National  
Phone: 1300 555 545\* Fax: 1300 555 565\*  
Technical Helpline and Spare Parts  
National (Mon-Fri 8am - 5.30pm EST)  
Phone: 1300 555 545\* Fax: 1300 300 141\*  
*\*Cost of a local call higher from mobile or public phones.*

E-mail: [enquiry@rinnai.com.au](mailto:enquiry@rinnai.com.au)

For further information visit: [www.rinnai.com.au](http://www.rinnai.com.au)

