

**Rinnai**

Installation guide

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Symmetry RDV3611



## Important:

The Symmetry RDV3611 is recommended for a new build installation into a false (mock) chimney. It is not suitable for retrofitting into an existing masonry fireplace.

Appliance, including flue, is installed after framing and before cladding. Rinnai strongly recommend the appliance is fully tested BEFORE any material is applied.

Appliance must be installed with a Rinnai approved flue system.

This appliance shall be installed in accordance with:

- Manufacturer's installation instructions
- AS/NZS 5601.1
- Local regulations and municipal building codes

Installation, servicing and repair shall be carried out only by authorised personnel.

### **WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

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For more information about buying, using, and servicing of Rinnai appliances call: 0800 RINNAI (0800 746 624).

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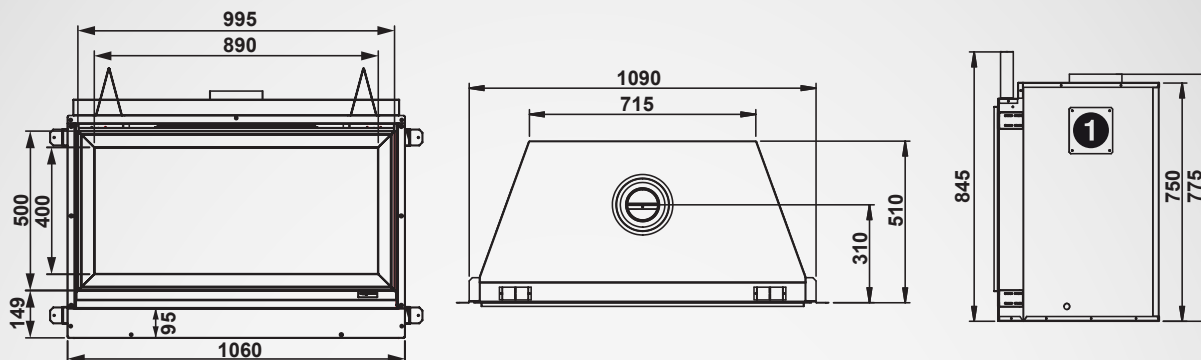
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# Specification

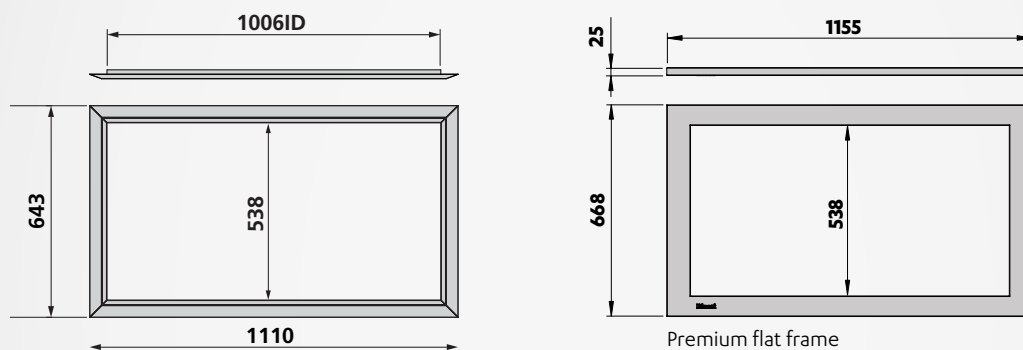
All dimensions are in mm.



## 1 Cover panel

Covers 150 mm opening on both sides of the heater. Covers are removed only when a Symmetry Heat Transfer Kit is installed.

## Outer frame



## Symmetry RDV3611

### Specification summary

Input	= 19-33 MJ/h
Output	= 3.8-7.5 kW
Efficiency	= 80%
Heating area	= up to 100 m <sup>2</sup>
Gas type	= NG or LPG

A direct vent (natural draft) inbuilt gas fireplace with a glass front and convection fan (top discharge). Operated with a remote control (7-day programmable timer).

### Combustion method

Ceramic top pan burner

### Data plate

Centre front of base panel (behind the service panels)

### Flue

Inner: 100 mm, outer: 170 mm.

Appliance must be installed with a Rinnai applied flue system.

### Gas connection

½ " BSP male flare

### Ignition

Integrated sparker to pilot

### Noise level

37-45 dB(A)

### Power consumption

High = 50 W

Standby = <1 W

Standard electrical connection is to the right side of the appliance.

### Safety devices

Light to pilot, delayed ignition, overheat switch, electronic flame failure supervision, and combustion chamber pressure relief.

### Temperature control

Thermostatic, temperature control range 7-32 °C.

### Weight

60 kg



# Location

The main points governing location are flueing and warm air distribution. The heater must not be installed where curtains or other combustible materials could come into contact with the appliance. In some cases curtains may need restraining.

## Enclosure dimensions

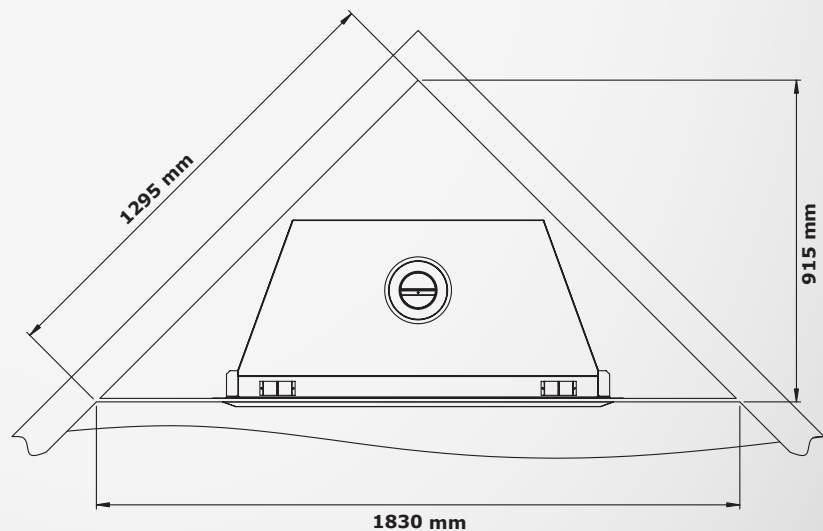
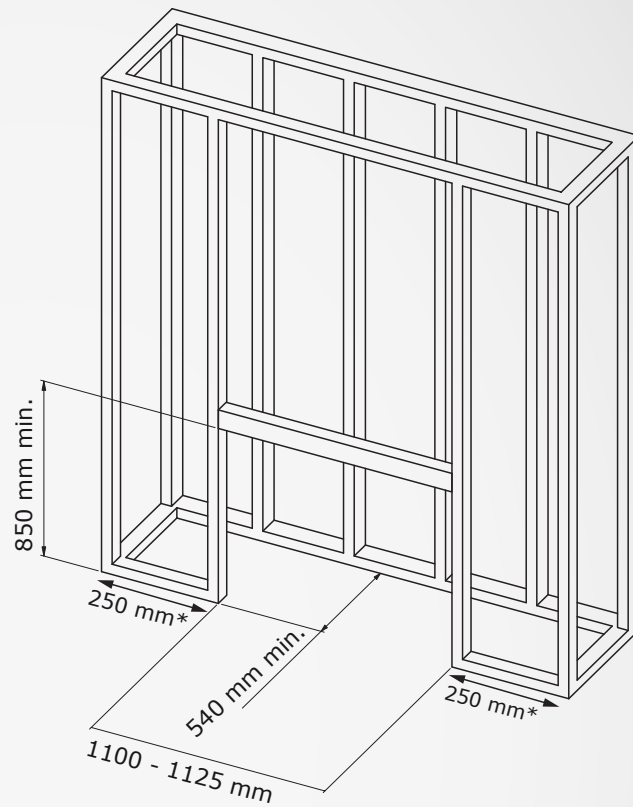
The heater must be positioned on a flat level surface. For installations further up the wall, the heater needs to be supported, either construct a base using board, or support with joists.

A 25 mm clearance is required around the unit (sides and back).

The 540 mm minimum dimension will give a 25 mm clearance (plus) from the back of the unit.

### \*250 mm side clearance

If installing the Symmetry Heat Transfer Kit, allow an additional side clearance of 250 mm (per kit). This clearance is required to ensure the ducting does not come into contact with the fire.



These are the minimum dimensions required if using the width, height, and depth dimensions above.

### Enclosure dimensions in a corner

# Clearances

The appliance must not be installed where curtains or other combustible materials could come into contact with the heater. In some case curtains may need restraining. The clearances listed below are minimum clearances unless otherwise stated.

Due to the number of different sized Symmetry frames, all dimensions are taken from the edge of the glass.

## Up-wall installations

If the Symmetry is being installed up the wall, the recommended minimum clearance to the ceiling is 1000 mm.

## Floor protection

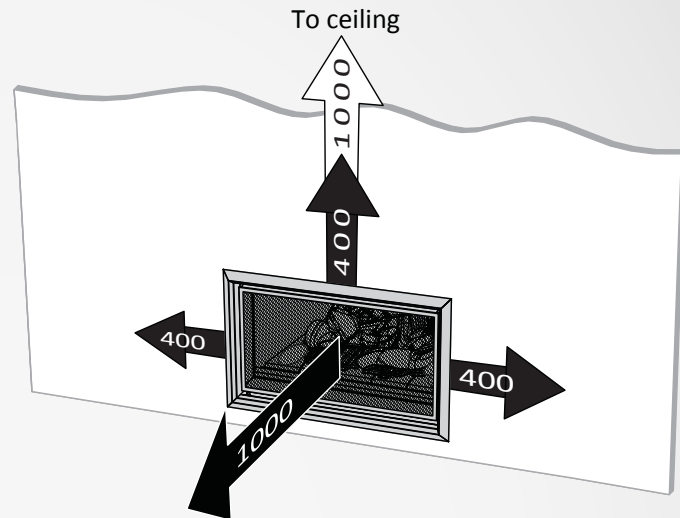
Heat emanating from this fire may over time affect the appearance of some materials used for flooring, such as, carpet, vinyl, cork or timber. This may be amplified if the air contains cooking vapours or cigarette smoke. To avoid this occurring, it is recommended that a mat be placed in front of this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

## Mantels and surrounds

A mantel and surround are allowed providing they are outside the minimum clearances shown.

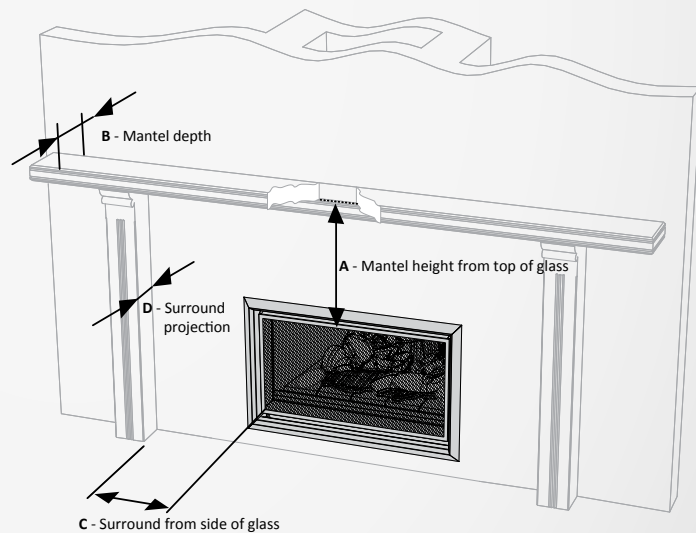
## Hearths

A hearth is not necessary but can be used for decorative purposes or protection of sensitive flooring if required. A hearth must not obscure the front of the fire.



### Note

The 400 mm side clearance includes side walls.



<b>A</b>	Mantel height from top of glass	400 mm min.
<b>B</b>	Mantel depth at A - 400 mm (vertical clearance)	250 mm max.

For every 50 mm of added mantel depth, there must be an additional 100 mm of vertical clearance. For example; a mantel depth (B) of 350 mm will require 600 mm (A) of vertical clearance.

<b>C</b>	Surround from side of glass	250 mm min.
<b>D</b>	Surround projection at C - 250 mm (side clearance)	250 mm max.

# TV installation above a fireplace

If installing a flat screen TV above the fire, the main issue is heat. Heat from the fire, and heat from the flueing components that sit behind the TV—especially if recessed

The Symmetry RDV3611 has a fan that distributes warm air from the top of the appliance out into the room. As warm air is dispersed outwards, as opposed to directly upwards, installation of a TV may be an option.

The diagram shows recommended clearances when installing a TV directly above the Symmetry RDV3611, or into a recess. All dimensions are in millimetres.

## 400 mm dimension

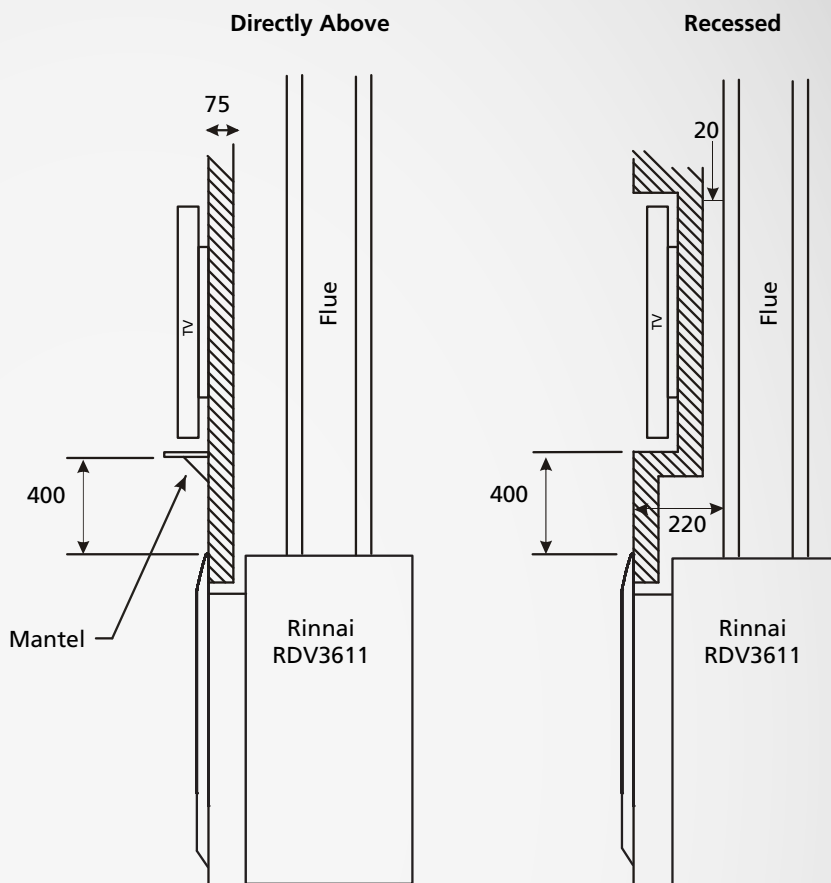
The 400 mm dimension is the minimum clearance required to combustibles to a mantel.

For a TV mounted directly above the Symmetry RDV3611, the mantel must be at least the depth of the TV to deflect heat away from the appliance.

## Always check with the TV supplier

It is up to the owner to check the TV installation with the TV supplier to verify clearances. Some TV manufacturers have warranty conditions that state a TV is not to be installed above a fireplace.

Rinnai does not accept any responsibility for damage to a TV resulting from the use of this information.



Symmetry RDV3611

# Installation



# Installation guide overview

This overview is intended to provide installation information at a high level. Further detail on each of the steps are provided in the following pages.

## Before installation

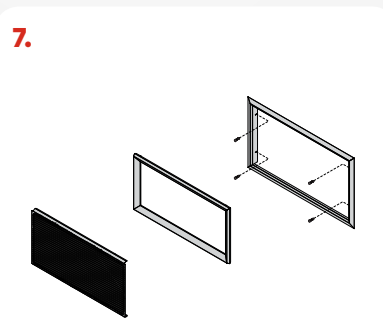
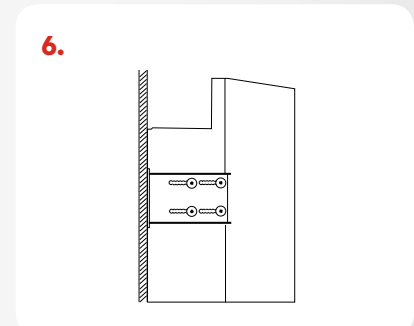
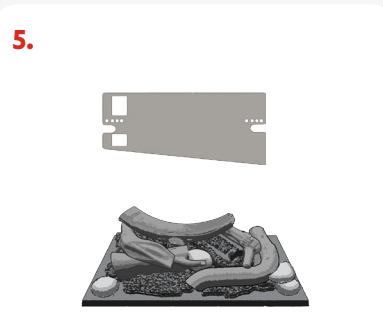
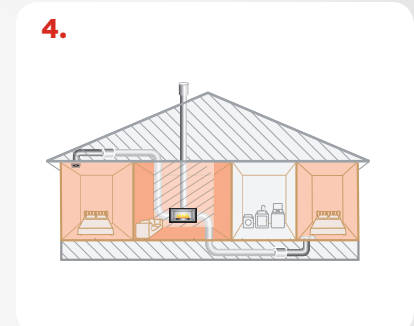
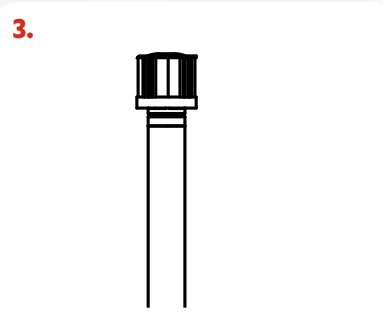
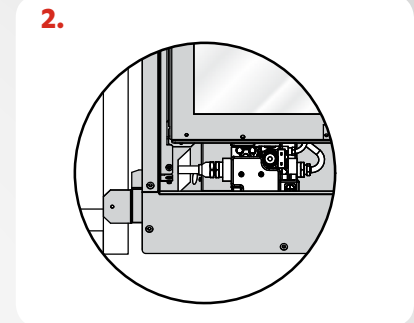
Unpack the appliance and components, and check for damage. DO NOT install any damaged parts.

Check all components have been supplied, and that you have the correct gas type.

Read these instructions to get an overview of the steps required before starting the installation. Failure to follow these instructions could cause a malfunction of the appliance. This could result in serious injury and/or property damage.

## Installation overview

1. Build the frame and complete electrical connection.
2. Install brackets, Symmetry unit, and fix the unit to the frame.
3. Install flue and complete gas connection.
4. Install ducting kit (if purchased), and gas pipe.
5. Install flue restrictor (if required), log set, test pressures, and establish flame pattern.
6. Install cladding.
7. Fit inner frame, outer frame, and mesh guard (if purchased).
8. Complete commissioning checklist.



**Please note:** If installing an LPG unit with a vertical vent termination, the appliance can be updated to 33 MJ/h using the uprating kit and instructions supplied with the unit.

# Building the frame

Using the dimension information on page 5, construct the frame. Ensure a 25 mm clearance around the sides and back of the unit.

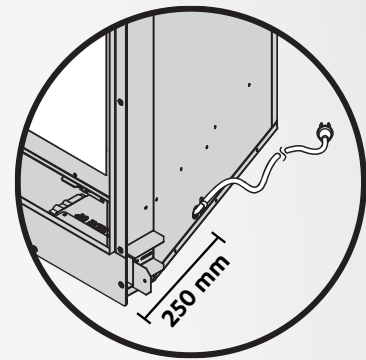
# Electrical connection

The standard electrical connection is to the right side of the front of the appliance. If necessary this can be changed by an electrician to terminate on the left. The appliance must not be located immediately below a socket outlet as this could be a potential fire hazard.

The connection is either direct wired or connected to a power point within the cavity.

A 1500 mm power cord is supplied with a 3-pin plug. This must be connected to a dedicated earthed power point. The electric isolation switch must be accessible after the appliance has been installed.

The electrical cord is not fire rated and should not come into contact with the fire. If the supply cord is damaged, it must be replaced by a licensed tradesperson. This must be a genuine replacement part available from Rinnai, part number 6765B.

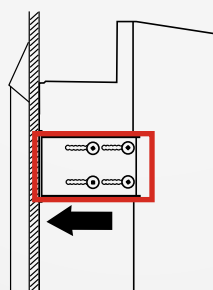


# Bracket installation

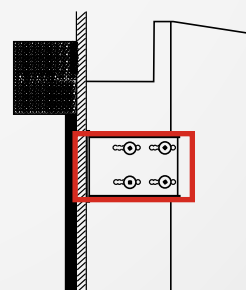
Install the four mounting brackets supplied onto the Symmetry RDV3611. The position of the brackets will depend on the cladding thickness, and type of installation (framed or frameless).

The Symmetry RDV3611 can be installed with Rinnai granite and metal frames, and also as a frameless installation. The frameless installation can have brick, rock veneer, or tiles, these sit tight up against the framing plate of the fireplace.

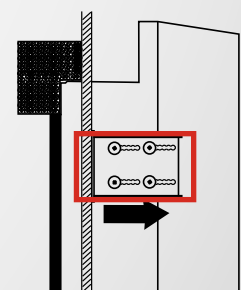
The metal mounting bracket adjusts 20 mm to allow for the different cladding thicknesses.



Rinnai granite or metal frame—bracket in forward position, and backing board around framing plate.



Rinnai brick or tile installation (note depth of brick recess)—bracket in middle position. Front face of backing board level with back face of framing plate.



Frameless brick or tile installation (note cutaway in brick for shallower recess)—bracket in back position. Front face of backing board sitting behind the framing plate.

# Fixing the unit to the frame

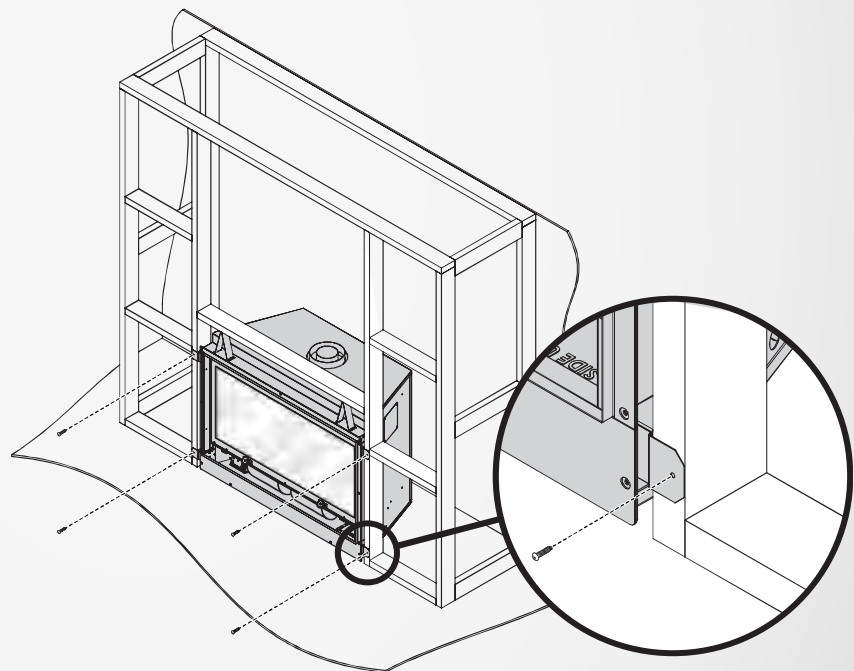
The Symmetry RDV3611 comes pre-assembled with the burner already in position. For all installations, the unit **MUST BE** positioned on a level surface.

1. Position the unit inside the cavity.
2. Bend and secure the two metal standoffs supplied with the unit into position. These provide the required 150 mm vertical clearance to the upper lintel.
3. Fix the unit to the frame with the four mounting brackets. These act as seismic constraints, as well as providing the horizontal clearance to the frame.
4. Install glass front, this will help protect the unit while the remaining installation work is completed.

The carton in which the Symmetry is packaged has a cardboard cutout that is the same size as the glass frame. This can be used to protect the unit during installation.



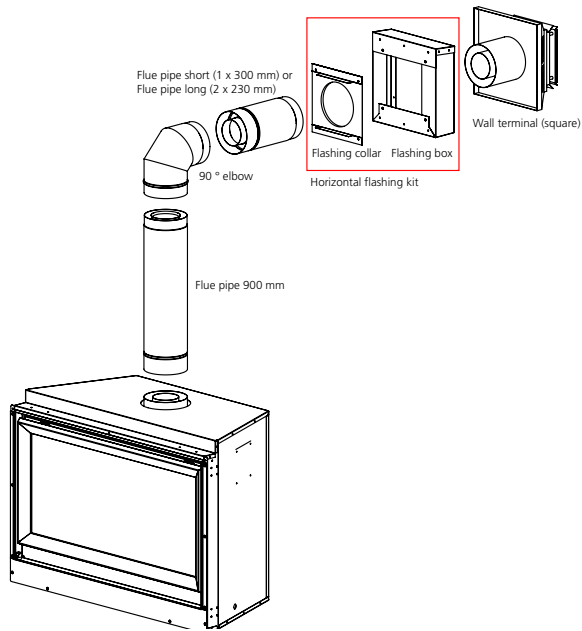
**Step 2: Bend and secure metal standoffs**



**Step 3: Fix unit to the frame with the four mounting brackets**

# Flue installation: Rinnai flue kits

Rinnai Symmetry RDV3611 flue kits have been based on the flue configurations shown. If you have a combined vertical and horizontal flue configuration, you can order separate components to suit.



## RDV3611 Flue Kit Horizontal A (Short, R3660)

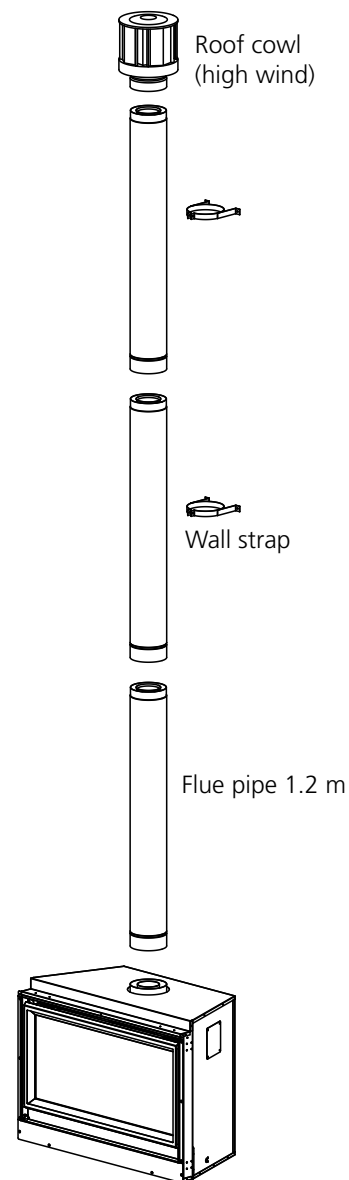
Contains:

- Flue pipe 900 mm x1
- Elbow 90° x1
- Flue pipe 300 mm x1
- Horizontal flashing kit x1
- Wall terminal x1

## RDV3611 Flue Kit Horizontal B (Long, R3661)

Contains:

- Flue pipe 900 mm x1
- Elbow 90° x1
- Flue pipe 230 mm x2
- Horizontal flashing kit x1
- Wall terminal x1



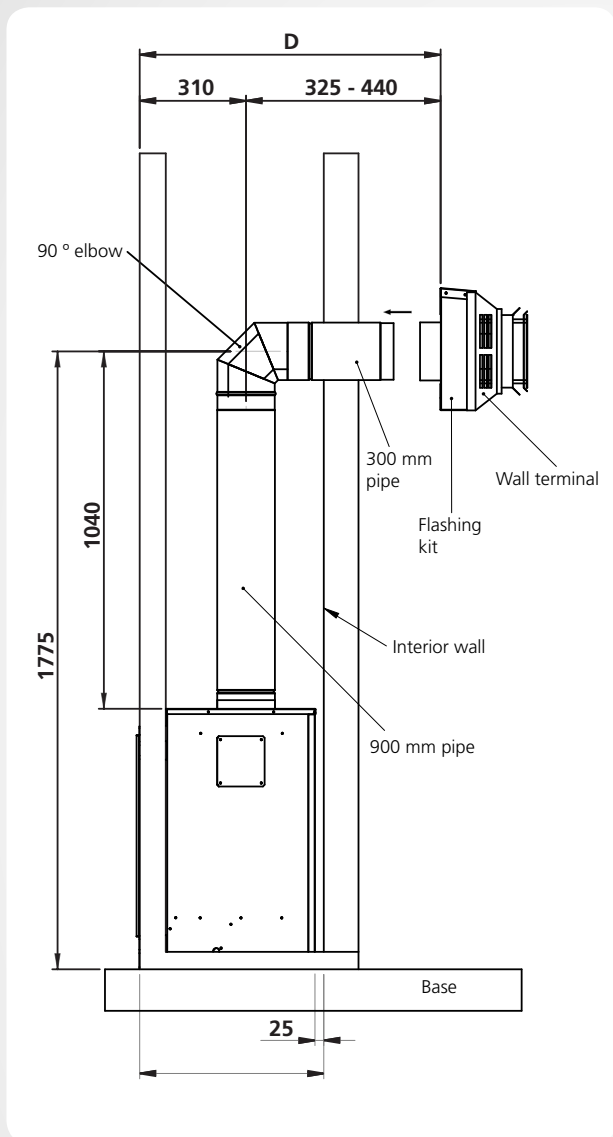
## RDV3611 Flue Kit Vertical 3.6 m (R3665)

Contains:

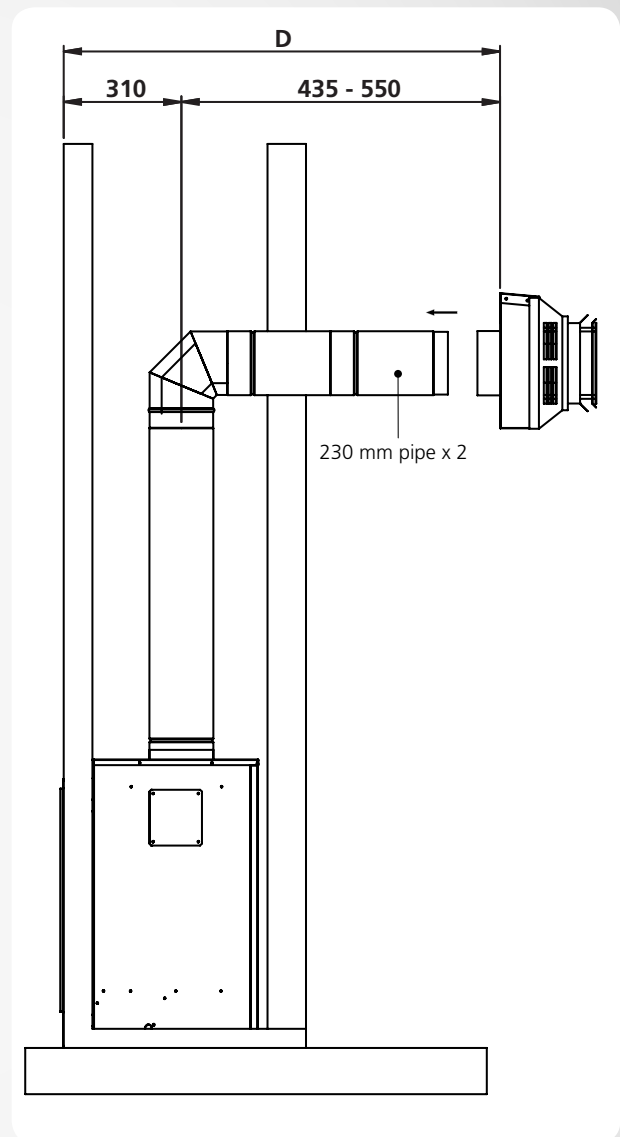
- Flue pipe 1.2 m x3
- Wall strap x2
- Roof cowl (high wind) x1

# RDV3611 horizontal flue kits

The following diagram explains the components, dimensions (mm), and appropriate flue kits available for differing horizontal flue installations. Refer to the table below to calculate what flue pipe length and/or kit you may need.



**RDV3611 Short Horizontal Flue Kit A (R3660)**



**RDV3611 Long Horizontal Flue Kit B (R3661)**

Distance from the appliance to the cowl

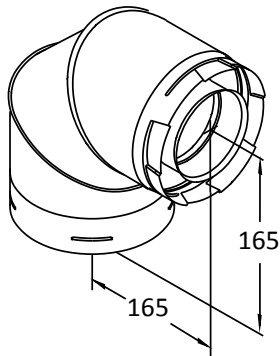
Flue Kit	Horizontal flue	D
	230 mm pipe	560-675
Short A	300 mm pipe	635-750
Long B	230 mm pipe x 2	745-860
	300 mm + 230 mm pipe	825-940
	300 mm pipe x 2	895-1010

Notes

- Adjust the distance by sliding the cowl on the pipe
- At its maximum position, the cowl should still keep a 45 mm overlap



# RDV3611 flue components

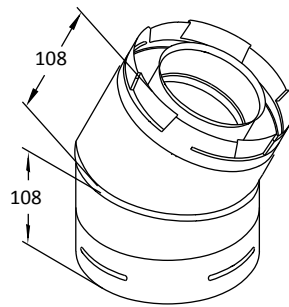


Flue elbow 90 °

Code = R3643

Used to facilitate vertical and horizontal flueing. Elbow swivels 360 ° at base. Angle not adjustable.

Once joined effective length reduces 35 mm to approximately 130 mm.



Flue elbow 45 °

Code = R3642

Offsets obstructions. Elbow swivels 360 ° at base. Angle not adjustable. Kit contains two 45 ° bends.

Once joined effective length reduces 35 mm to approximately 73 mm.



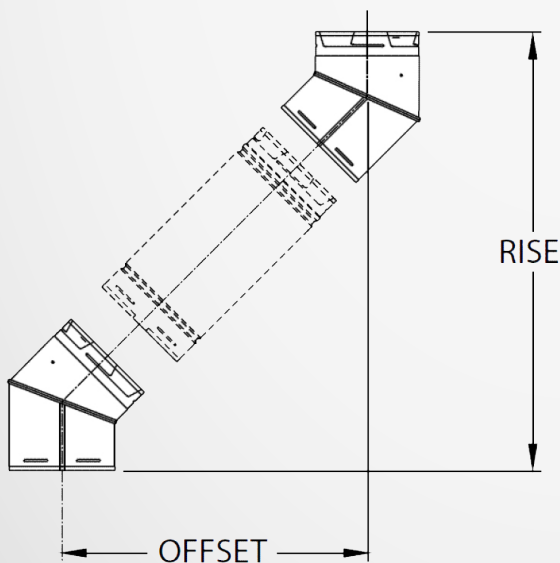
Flue pipes

Codes

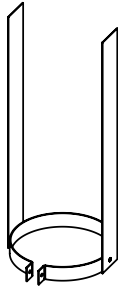
150 mm	= R3630
230 mm	= R3631
300 mm	= R3632
450 mm	= R3633
600 mm	= R3634
900 mm	= R3635
1200 mm	= R3636

Pipe used to construct horizontal and vertical flueing. Cannot be cut to size. Once joined nominal length reduces approx. 35 mm.

## 45 degree offsets



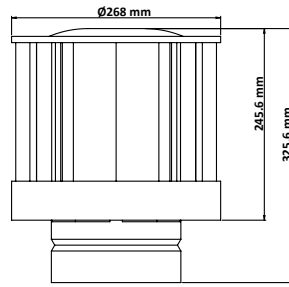
Flue pipe (length and code)	Offset (mm)	Rise (mm)
None (bend to bend) N/A	124	340
150 mm R3630	203	419
230 mm R3631	257	473
300 mm R3632	311	527
450 mm R3633	417	633
600 mm R3634	524	740
900 mm R3635	737	953
1200 mm R3636	949	1165



### Elbow strap

Code = R3644

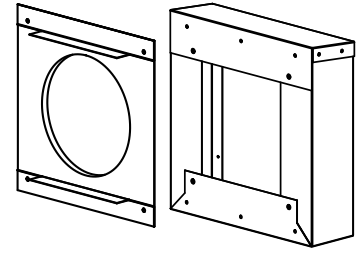
Used to prevent excessive weight in the flue elbow.



### Roof cowl

Code = R3651

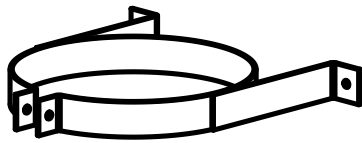
Aluminium flue terminal required for all vertical installations.



### Horizontal flashing kit

Code = R3646

Flashing components used to join internal flue to the outside flue, to provide a weathertight seal, in horizontal flue installations.

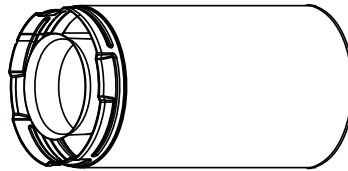


### Wall strap

Code = R3647

Adjustable strap used in interior/exterior installations to add lateral support to the flue.

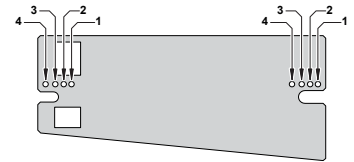
Provides a 50-200 mm clearance to combustible walls.



### Flue extension

Codes  
75-175 mm = R3638  
75-360 mm = R3639

Used for extended straight lengths of flue. Available in two lengths—extending to 175 mm or 360 mm.

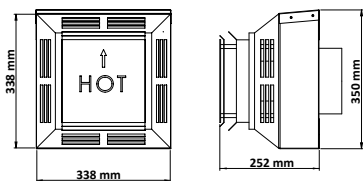


### Flue restrictor

Code = 11516

Supplied with the unit.

Maintains efficiency by restricting air flow through the unit as flue length, and flue pull increases.

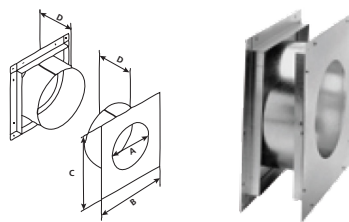


### Wall terminal

Code = R3650

Aluminium flue terminal required for all horizontal installations.

Side profile image shows dimensions with the horizontal flashing kit added.



### Thru-wall plate interior

Code = R3645

Interior through-wall plate—centres flue and ensures suitable clearances from combustibles.

A = 171.5 mm, B = 279.4 mm  
C = 304.8 mm, D = 101.6 mm

# Flue guidelines

Every gas fireplace requires a flue system that will draw effectively and clear flue products safely under all potential wind and climatic conditions.

It is the responsibility of the installer to ensure that the appliance is provided with an effective flue. Some guidelines to assist with flue design are listed below. These must be read and modified as necessary with reference to the particular installation

The Rinnai Symmetry RDV3611 must be installed with an approved Rinnai flue system. Approved flue components for this appliance are detailed in this guide.

## Clearance to combustibles

Minimum clearance from inner flue to combustible material must be greater than 50 mm—equates to 15 mm from the outer flue.

## Flashings

A Horizontal Flashing Kit is supplied with the horizontal flue kits. For all other flueing configurations flashings must be specified.

## Flue cowl clearance

To ensure products of combustion are cleared, adequate clearance for the building is required.

The flue cowl should have a 500 mm clearance from any part of the building. This also applies to steeped and pitched roofs which should be clear of the ridge line as shown. Lesser clearances may provide perfectly adequate flue systems depending on the installation.

Minimum clearances are shown in AS/NZS 5601.1.

## Flue terminal locations

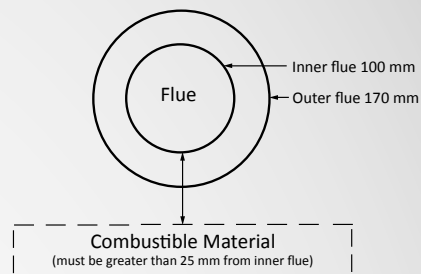
Must be compliant with the flue terminal clearances as shown in AS/NZS 5601.1. Flue is not to terminate under floors or in a roof space.

## Self-supporting flue

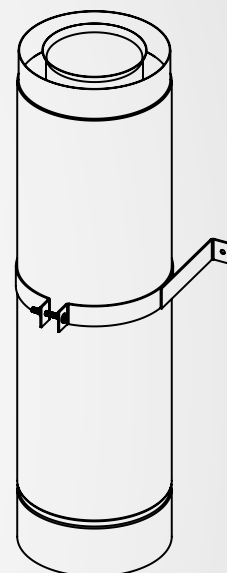
The weight of the flue system should not be supported by the appliance—it should be self-supporting. Supporting the flue is usually completed during the framing stage with flue supports or straps within the cavity. Wall straps have been included in the Rinnai Vertical Flue Kit to assist with this. Elbow straps are also available as a separate component to prevent excess weight on the flue elbow.

## Shared flues

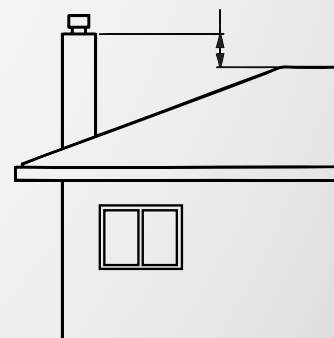
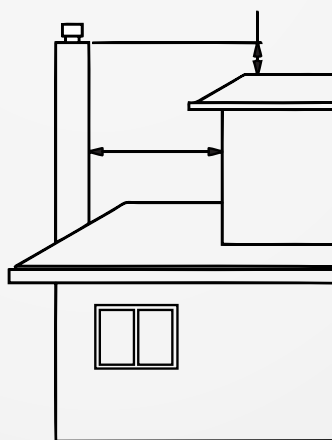
Gas appliances must not be connected to a chimney or flue serving a separate fuel burning appliance.



Clearance to combustibles



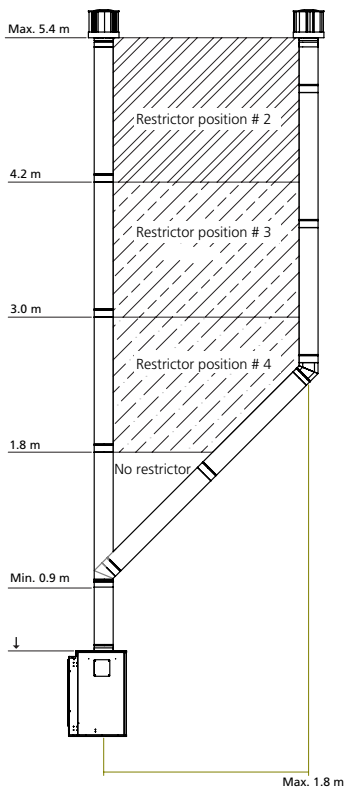
Self-supporting flue



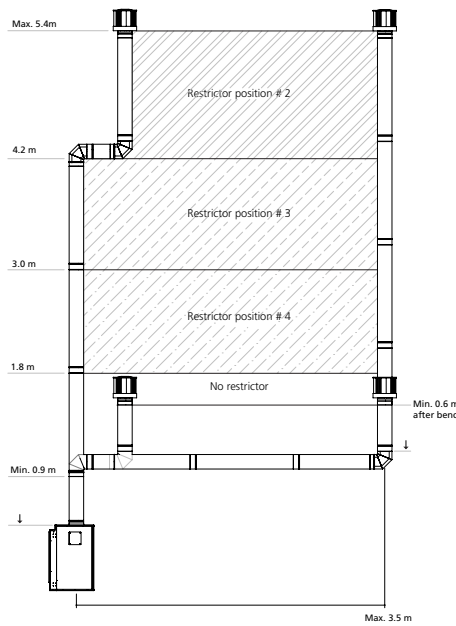
Flue cowl clearance—500 mm clearance from any part of the building

# RDV3611 flueing options

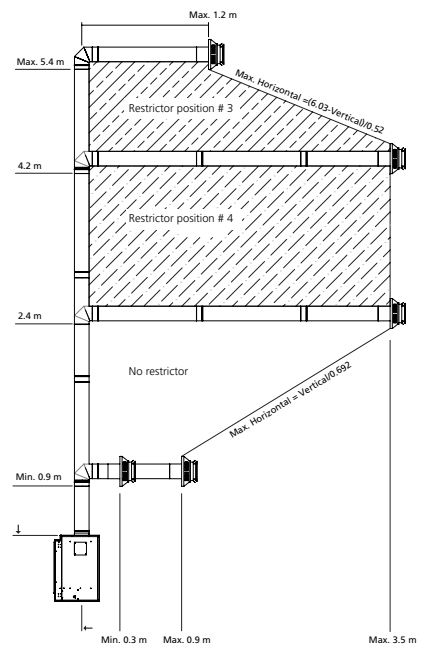
## Vertical termination with 45° bends



## Vertical termination with 90° bends



## Horizontal termination with a 90° bend



## Flueing notes

### Vertical termination with 45° bends

Vertical flue terminations with or without 45° bends (maximum of two). The shaded sections determine the position of the flue restrictor.

### Vertical termination with 90° bends

Vertical terminations with two 90° bends (maximum of two). The shaded regions determine the position of the flue restrictor.

### Horizontal termination with a 90° bend

Horizontal flue terminations with a 90° bend (maximum of one).

The shaded sections determine the position of the flue restrictor.

### Horizontal runs of flue pipe

Must be supported to prevent any downward sags. Horizontal pipe sections should be supported at least every 1.2 m. Wall straps can be used for this purpose.

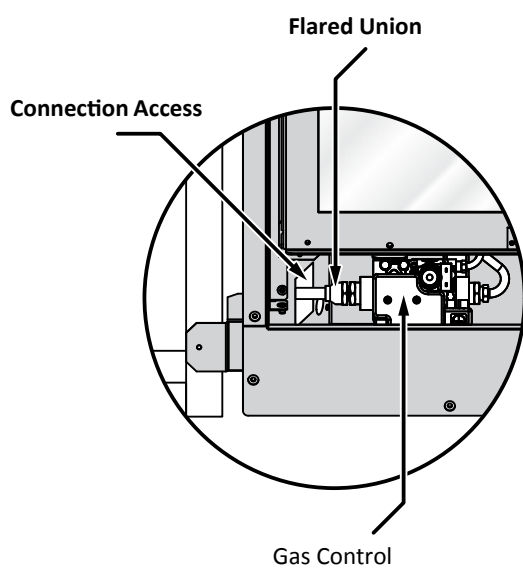
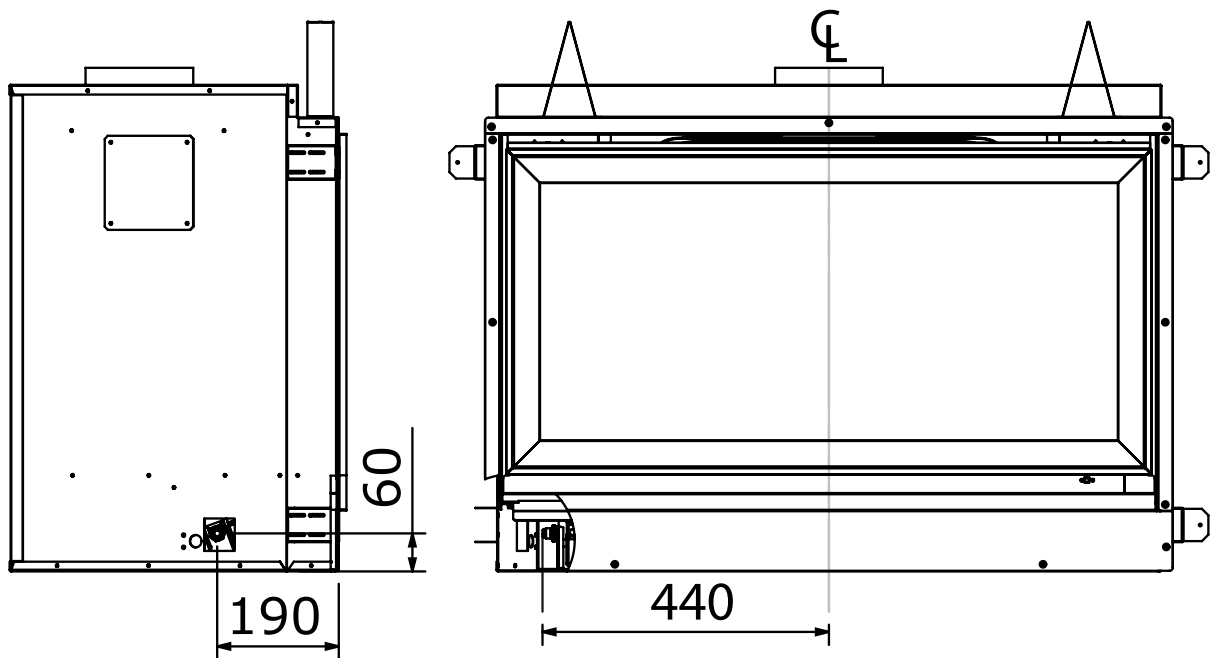
The horizontal run of flue pipe must have a 20 mm rise for every 1 m of run towards the termination. Never allow the

flue pipe to run downward. A downward slope can trap heat and become a fire hazard.

# Gas connection

The gas connection from the control valve is a ½ " BSP male flare fitting. This connects straight into the gas control on the lower left hand side of the appliance.

Gas pipe sizing must consider the gas input to this appliance, as well as other gas appliances in the premises.



To access the gas connection, remove the upper and lower bracket (also called the service access panels). The brackets can be removed by undoing the screws shown below at each end.





# Flue restrictor installation

Different flue configurations require different positioning of the flue restrictor—refer to the RDV3611 flueing options page to determine what setting is required.

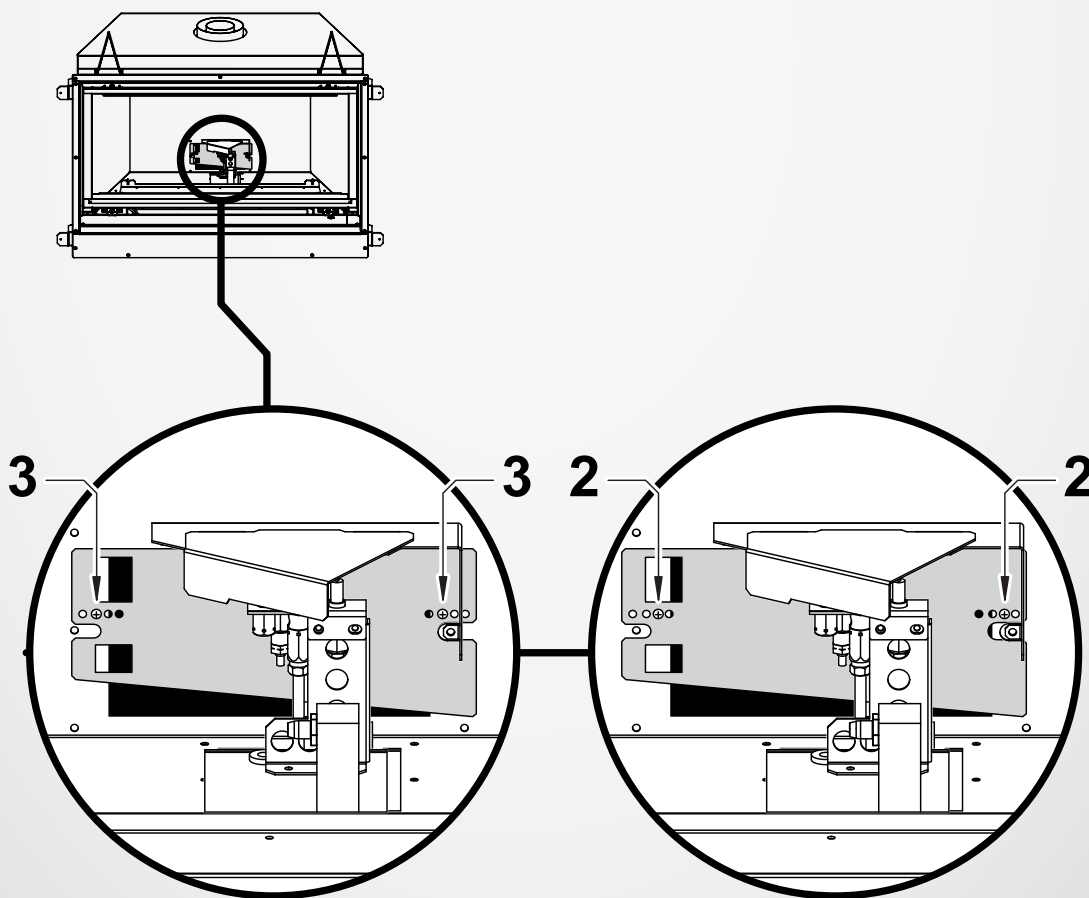
The flue restrictor works by limiting the amount of air required for combustion. The higher the flue, the more the air is circulated. This can affect the performance of the fire.

The different hole positions are shown in the diagram. These are stamped on the flue restrictor.

## Before installing the flue restrictor

Before the flue restrictor can be installed you need to remove the pilot shield and carefully lift the burner bed out of the unit.

Attach the flue restrictor as shown by securing with the screws provided.



# Log set installation

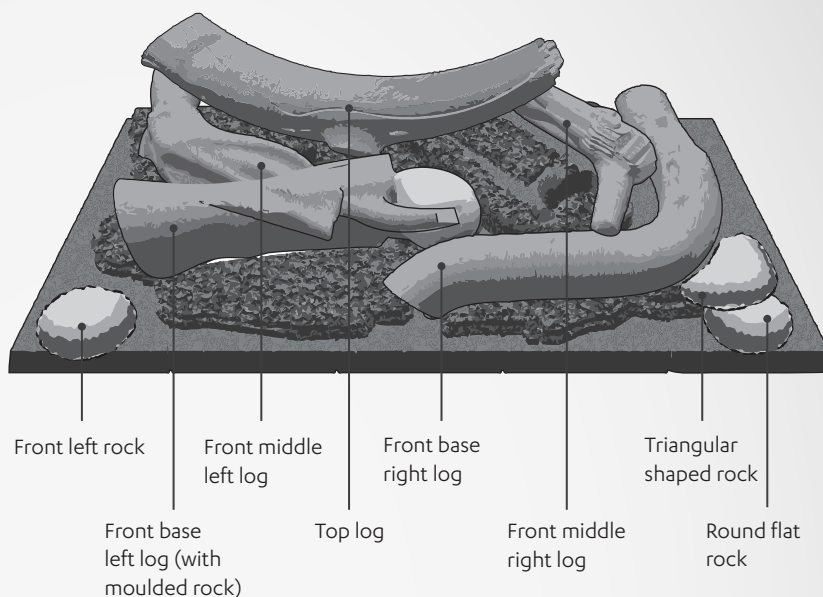
The log set (burn media) is packaged separately and consists of five log pieces and three moulded rocks. Handle the log set with care to avoid chipping.

It is important you position the pieces as shown below as incorrect placement can create carbon build up and affect performance.

Malfunctioning due to improper log and rock placement is not covered under warranty. The unit must NEVER be used with broken logs, or used with other burn media, except Rinnai Rockwool.

## Moulded rocks

The rocks form an important part of the log set and must be positioned as shown on the following page. There are three distinct shapes—these are identified in the diagram.

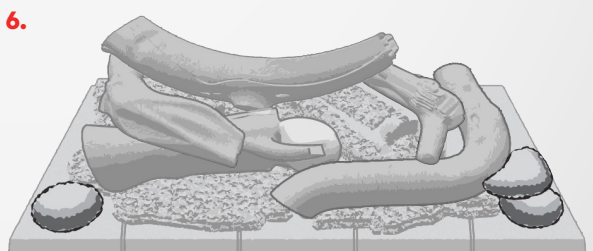
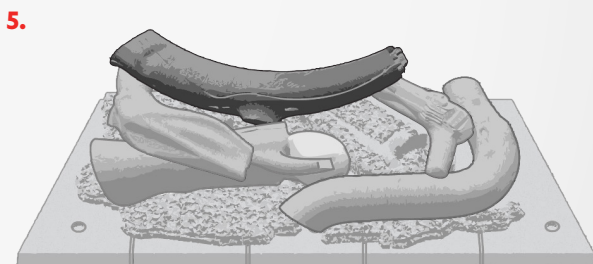
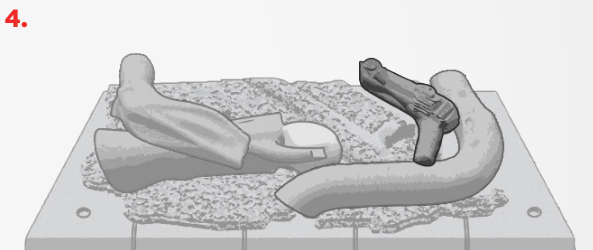
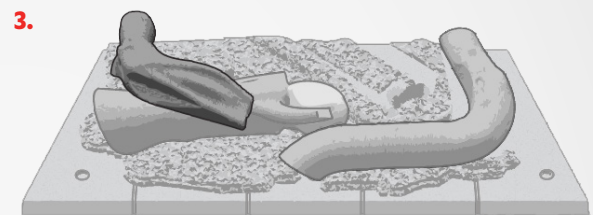
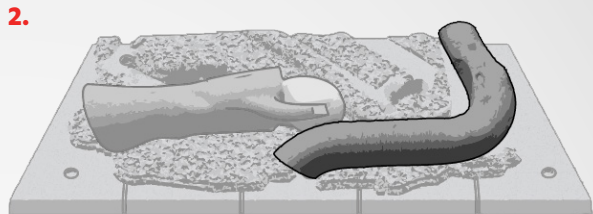
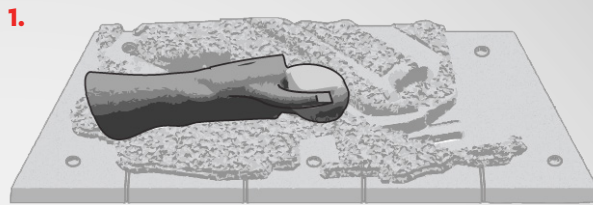


**Final log set layout**



**Moulded rock shapes**

1. Carefully remove log set from packaging and fit the Front Base Left Log in the created gap. It should only fit one way.
2. Fit Front Base Right Log into position on the far right of the burner base.
3. Fit Front Middle Left Log into the back flat section of the burner, and slot on top of the Front Base Left Log.
4. Place Front Middle Right Log into the u-shaped groove.
5. Place the Top Log onto the recessed sections of the left and right middle logs. Ensure the middle elbow section rests on the top of the Bottom Log.
6. Position the Round Flat Rock and Front Left Rock over the screw holes. Keep them as far away as possible from the glass, while making sure they still cover the holes. Place the remaining Triangular Shaped Rock on top of the Round Flat Rock as shown.

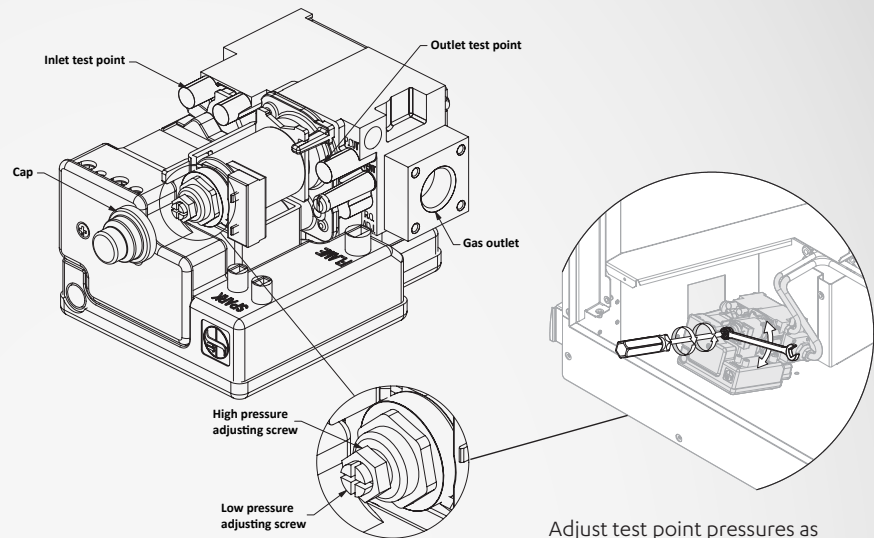


# Test pressures

If installing an LPG unit with a vertical vent termination, the appliance can be updated to 33 MJ/h using the uprating kit and instructions supplied with the unit.

## To check and set the burner pressures

1. Turn on the gas and power supply to the unit.
2. Refer to the data plate for applicable test point pressures.
3. The test point is on the gas control valve. Using a suitable screw driver loosen the captivated test point screw and attach a manometer.
4. Using the manual control switch (on the appliance), turn the unit on and switch to the HIGH setting, and adjust the pressure as necessary.
5. Disconnect the solenoid (yellow wire). This will ensure the unit is on the lowest setting and set the appliance to the LOW setting. Adjust the pressure as necessary. Reconnect the solenoid.
6. After checking pressures, turn the unit off, remove the manometer, and replace the test point screw.
7. Turn the heater on and off a few times to check ignition.
8. When you are satisfied that the heater is working correctly, reassemble and start the appliance to check the flame pattern.



Adjust test point pressures as necessary using a screwdriver and spanner as shown above.

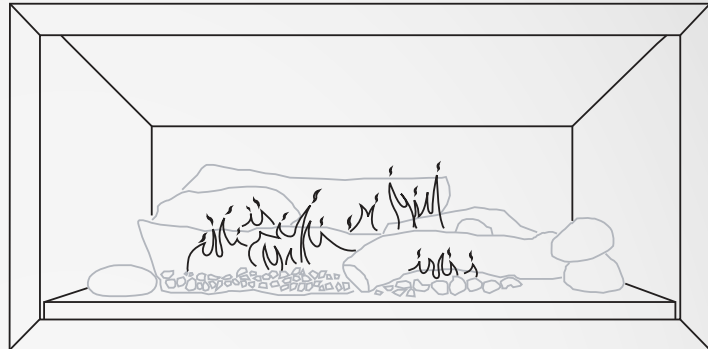
# Flame pattern

It may take approximately two hours of operation for the logs to achieve their full flame pattern and glow. During the initial burning in period, some smoke and smell may be experienced. The appliance should run on the high setting in a well ventilated room until these dissipate. It is important to check the flame pattern during this time.

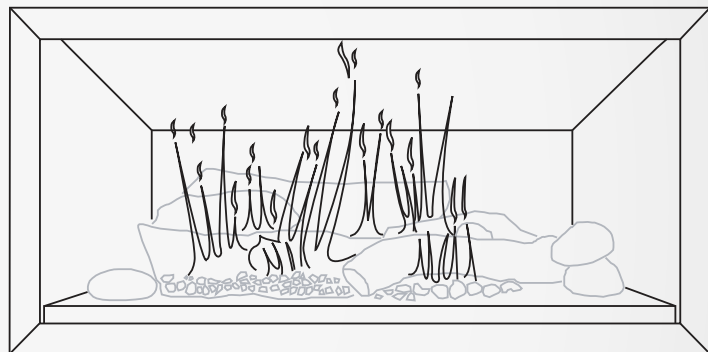
## Abnormal flame pattern

Abnormal flame performance and/or pattern can indicate a problem with your fire, such as blocked gas injectors, or log set (burn media) has shifted from when the fire was first installed. There are some warning signs that could indicate a problem.

- Unusual smell from the appliance
- Continued difficulty or delay in establishing a flame
- 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 door



**Normal flame pattern**



**Abnormal flame pattern**

## Important

It is the responsibility of the installer to check that under normal 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.

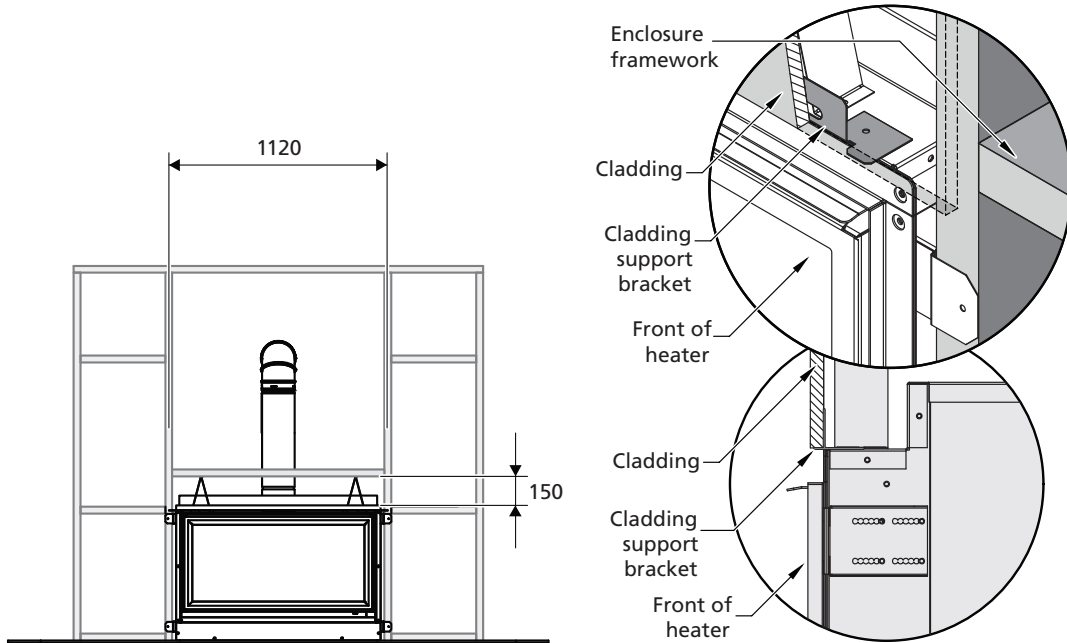
If the appliance cannot be made to perform correctly please contact Rinnai.



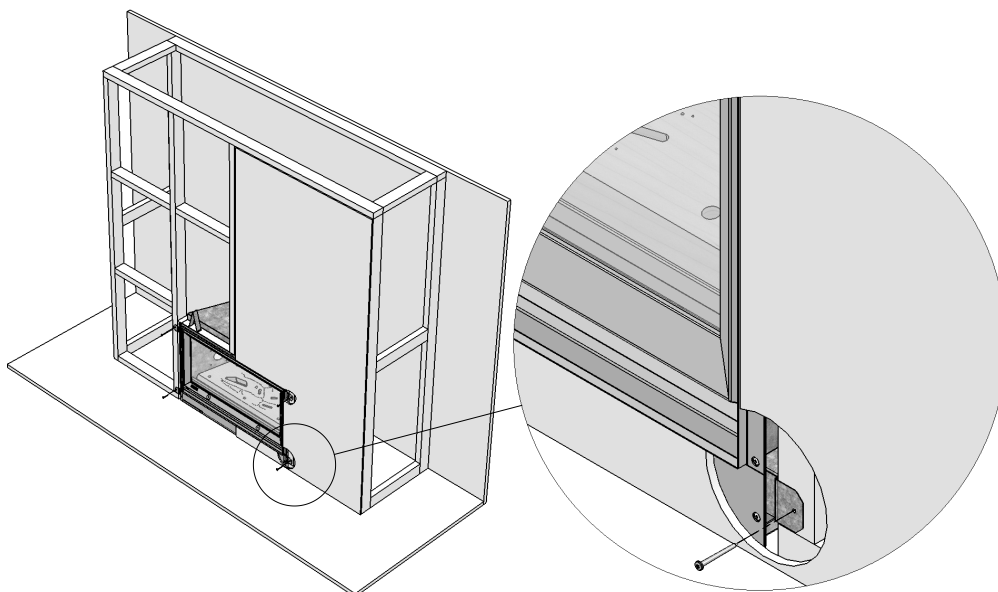
# Cladding



Cladding **MUST NOT** extend lower than the cladding support bracket.



When installing the cladding, ensure it is installed up to the flange and not over it. Any overhang will affect performance of the appliance and cause an unsafe situation.



# Fitting the frames & dress guard



Before fitting the frames and/or dress guard, ensure the glass front is secured in place. It is critical when fitting the glass front that you double check that it is not scratched or damaged in any way, and that you have checked the gasket.

## Inner frame

Hook over the glass panel assembly and secure in place on the two large lower magnets on the front assembly.

## Standard outer frame

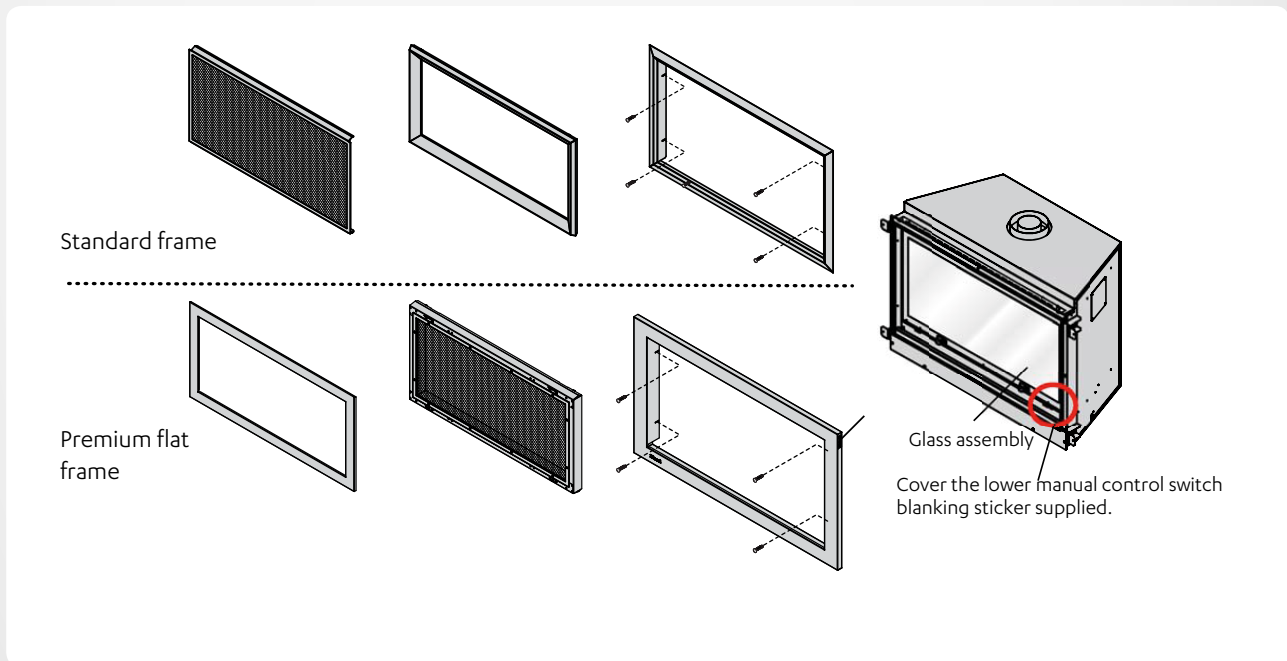
Screw into position with the four screws provided. If you have the granite outer frame, refer to the separate installation instructions provided with the frame.

## Premium flat frame

Disconnect the CAT5 cable from the RJ45 connector on the back of the manual control on the heater. Using the double female RJ45 adaptor, connect the CAT5 cable from the frame to the heater. Fit the outer frame by using the two retaining screws located on the inner left hand and the two screws on the inner right hand sides of the burner box. Cover the lower manual control switch with the blanking sticker supplied with the premium square frame.

## Mesh dress guard (optional accessory)

This inserts flush into the inner frame by hooking onto the top and then pushing in—no fixings required.

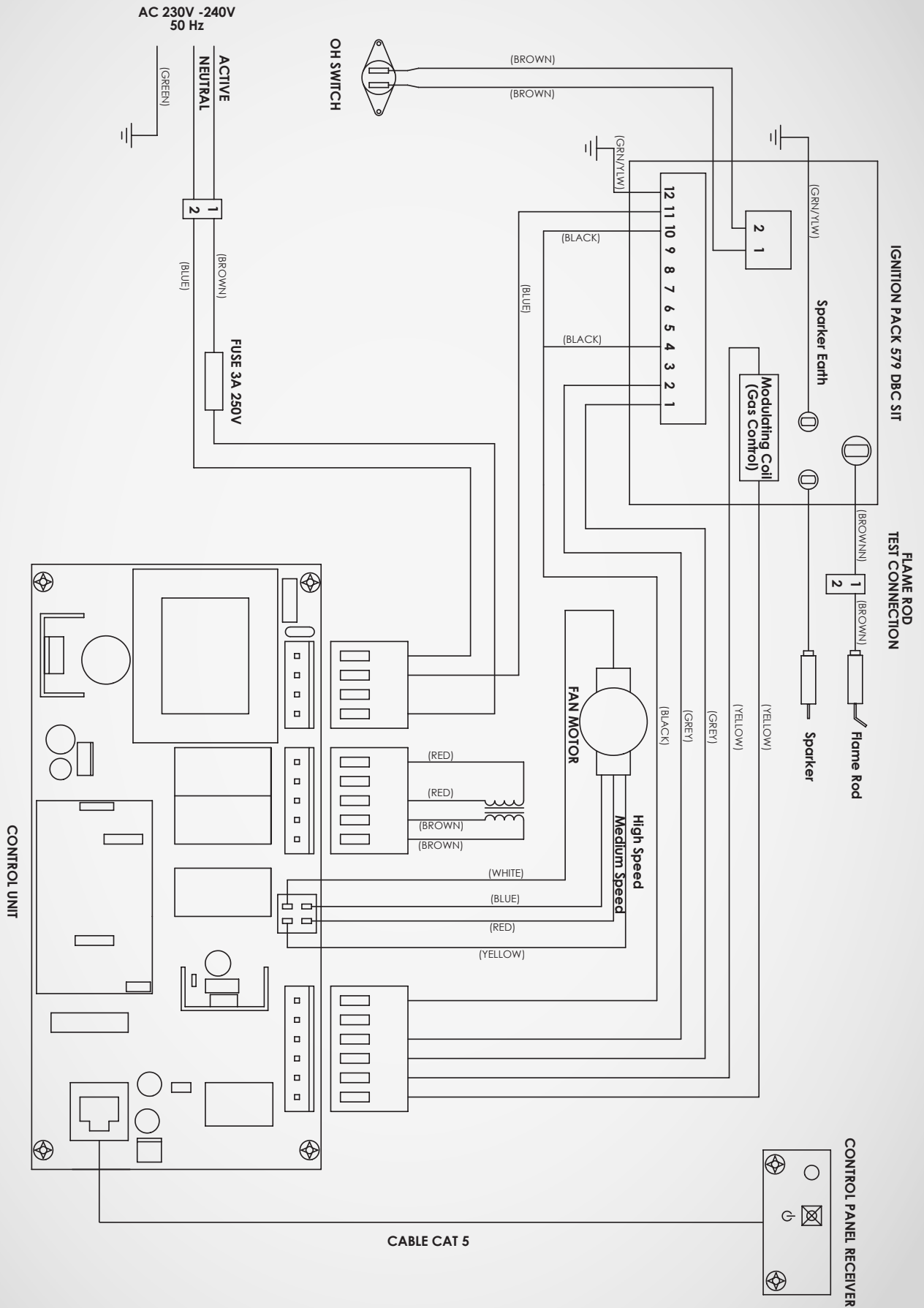


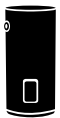
# Commissioning

Complete the installation and commissioning checklist in the customer operation guide, and make sure you leave the guide with the customer. Explain to the customer about the use and care of the unit, and that they understand the instructions and operation of the appliance.

If operating without a dress guard, advise the customer of the safety instructions to prevent the risk of injury.

# Wiring diagram (11652-A)





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