**Models:** RDV2320MN/L, RDV2320CN/L
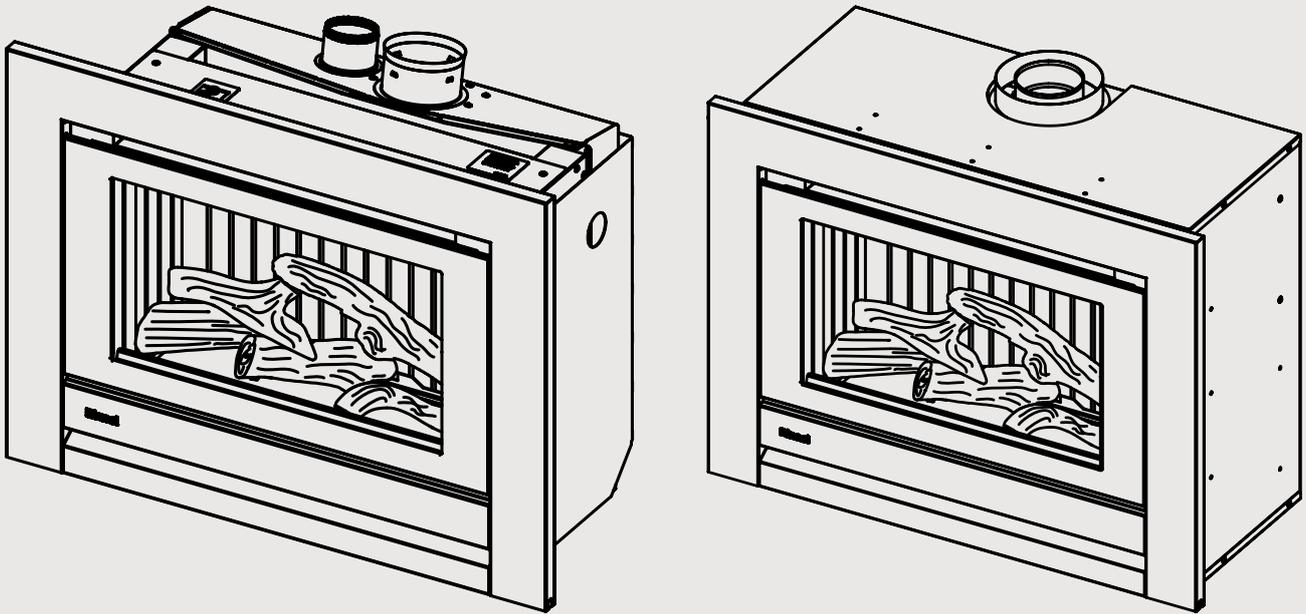
Novo direct vent inbuilt gas fireplaces
Installation guide

Rinnai

Important

Appliance must be installed with a Rinnai approved flue system.

This appliance shall be installed in accordance with:
- Manufacturer's installation instructions

Current:
- AS/NZS 5601 Gas Installations
- AS/NZS 5263 Gas Appliances General Requirements
- AS/NZS 3000 Electrical Standards
- AS/NZS 3500 Plumbing and Drainage Standards

For use with Natural Gas or Universal LPG as indicated on the appliance.

Appliance must be installed, commissioned and serviced by an authorised person, being in New Zealand a licensed gasfitter.

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

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

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            facebook.com/rinnainz

Contents

Installer please note
If the Wi-Fi module retrofit kit has been purchased as an accessory, it is ideal to have the homeowner present to test the Wi-Fi connectivity and correct operation of the fire.

Before you start

Unpack the appliance and components and check for damage. DO NOT install any damaged items. Check all components have been supplied, refer below, 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.

Novo DV inbuilt coaxial in timber frame (mock chimney)

- ✓ Engine
- ✓ Coaxial adpater[1]
- ✓ Zero clearance box[1]
- ✓ Outer frame
- ✓ IR remote

- ✓ Stainless steel gas pipe
- ✓ Brass adapter
- ✓ Aeration plates and screws[2]
- ✓ Log set and granules[3]
- ✓ Operation, and installation guides

[1] Comes assembled on the fire
[3] Supplied inside the fire

[2] Two are factory fitted on the fire, two are supplied in the accessory pack
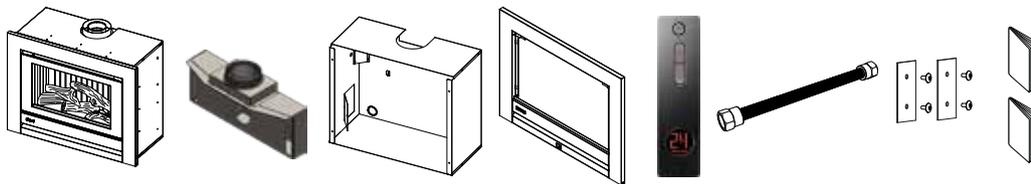

Novo DV inbuilt colinear in masonry

- ✓ Engine
- ✓ Colinear adpater[1]
- ✓ Masonry adapter frame[1]
- ✓ Outer frame
- ✓ IR remote

- ✓ Stainless steel gas pipe
- ✓ Brass adapter
- ✓ Aeration plates and screws[2]
- ✓ Log set and granules[3]
- ✓ Operation, and installation guides

[1] Comes assembled on the fire
[3] Supplied inside the fire

[2] Two are factory fitted on the fire, two are supplied in the accessory pack
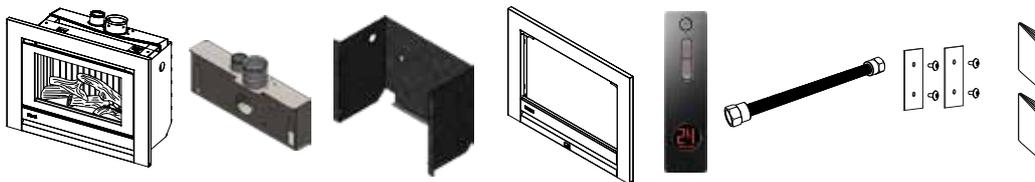
Coaxial / colinear flueing
Images are representative of some flueing options, components will be dependent on flue configuration and installation.
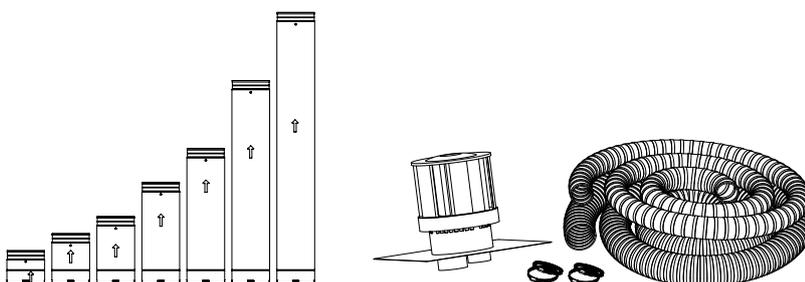
Optional accessories

Novo Inbuilt classic bronze frame
R2380

Designed to complement older villa style homes.

The classic frame is curved and comes with a inset bronze dress guard.
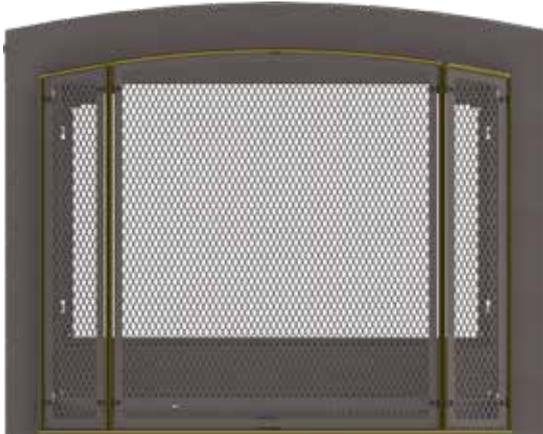
Novo Inbuilt mesh frame
R2370

The Novo Inbuilt black mesh frame is an accessory for the Novo black standard frame. The black integrated mesh guard can be easily installed, no fixing required. It is designed to protect against touching the hot surface of the glass[1].
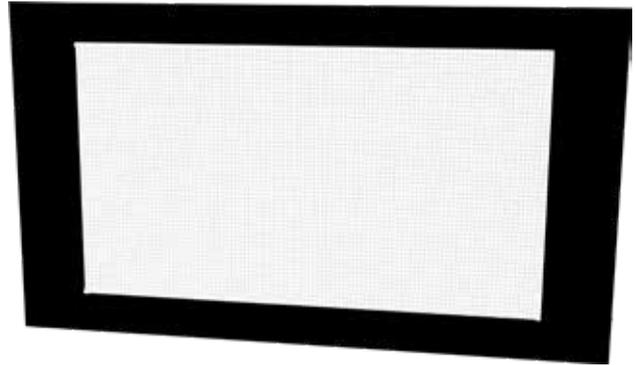
Novo Inbuilt masonry infill panel
R2373

Black powder coated panel for masonry installations where the cavity is slightly larger than the frame. The panel will cover the gap behind the fire and the standard rectangular frame. It is not suitable for use with the classic bronze frame.


Wi-Fi module retrofit kit
R7000

The Rinnai R7000 Wi-Fi board retrofit kit enables the fire to be connected to the Rinnai Fire Wi-Fi App for full thermostatic control, as well as other features such as timers. Ideally fitted at the time of installation.

[1] The mesh will still get very hot—it is not a fire guard

Specification
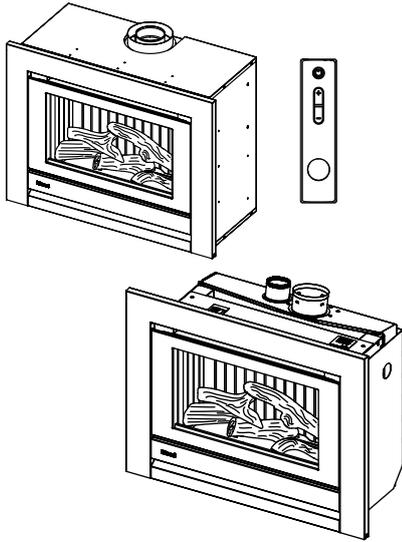
A direct vent (room sealed) inbuilt gas fireplace with glass front and convection fan, pushing warm air from the top of the appliance. Operated using a simple IR remote to control flame height and fan speed, or by the Rinnai Wi-Fi app (optional accessory) that allows full thermostatic control, as well as other features such as timers.

Input: 14-30 MJ/h
Output: 3-6.6 kW*
Efficiency: 77%
Heating area: 65-112 m^2**
Gas type: NG or ULPG

* Will vary according to gas type and flue configuration
** Will vary depending on location in NZ

Suitability	Suitable for masonry installations and installations into a mock chimney in open plan areas and living rooms. As a room sealed appliance it can also be installed in larger bedrooms as long as this meets the 6.10.6.1 requirements of AS/NZS 5601.1.
Data plate	Lower RHS of the base panel (in front of the gas control)
Convection fan	120 V AC 50 Hz 2-speed centrifugal blower
Gas connection	Brass ½ " BSPT male fitting. The gas supply terminates inside the unit—lower RHS of the appliance.
Ignition	230-240 V AC 50 Hz high voltage electronic spark generation
Installation considerations	Room size, smaller rooms will heat up quickly, and due to the heat of the appliance, the fire will turn to a low setting once the set temperature has been reached.
Flue masonry	Colinear* direct vent flexi flue, air intake Ø75 mm, exhaust Ø100 mm
Flue mock chimney	Coaxial** direct vent flue, inner Ø100 mm, outer Ø170 mm.
Noise level	37-45 dB(A)
Electrical	A 1.5 m power cord with a thee pin plug is supplied. The power cord passes through a slot in the back left hand corner of the appliance. High - 50 W Standby - <3 W
Safety devices	Flame failure sensing system, pressure relief, overheat safety switch, air temperature sensor, thermal fuse, overcurrent fuse, and spark detection.
Temperature control	Operated by using the basic IR remote to control flame height and fan speed, or for more features, such as timers and thermostatic control, using Rinnai's Wi-Fi fireplace controller app—Wi-Fi module purchased as an optional accessory.
Weight	Approx. 64 kg

* Colinear: Uses TWO separate flexible aluminium chimney liners as the flue system
** Coaxial: One flue, the exhaust flue is nested inside the air intake flue—these are rigid flues

Colinear   **Coaxial**

Unit dimensions (mm)

## Coaxial in timber

865

500

660

Viewable glass
533 x 295

790

310   310

360

650

620   701

754

865

51   26.5
10

7

Colinear in masonry

865

500

660

Viewable glass
533 x 295

700

55 | 75

310

360

590

1050

Masonry infill panel

750
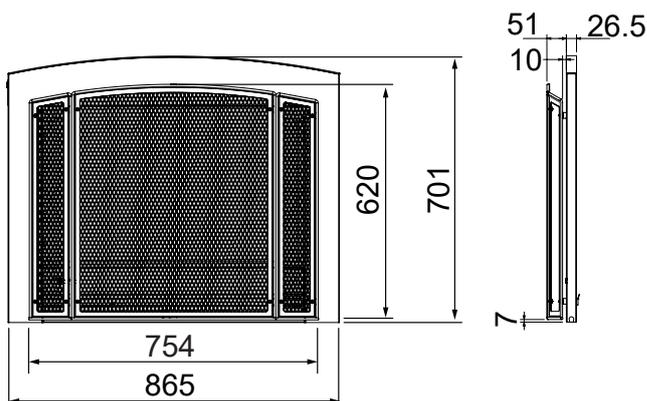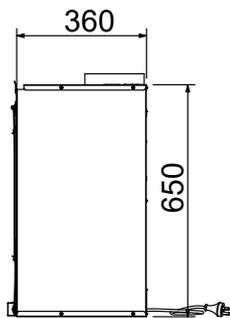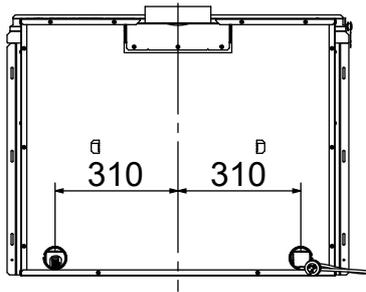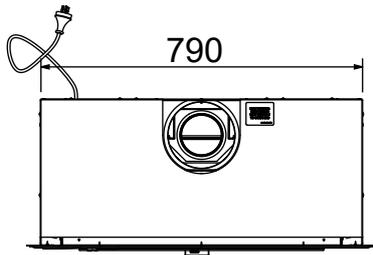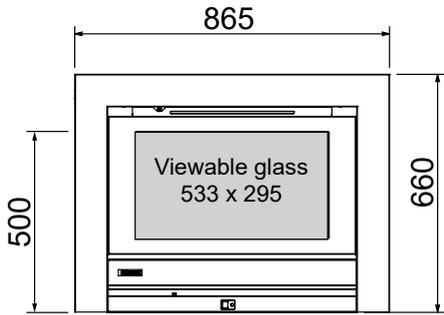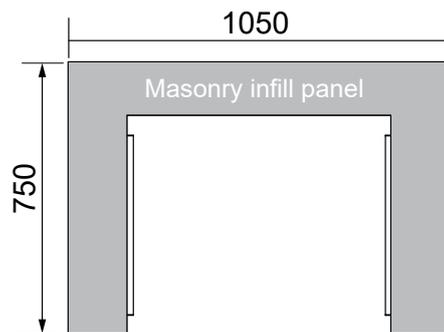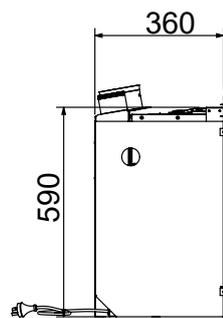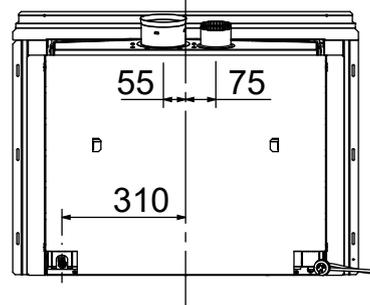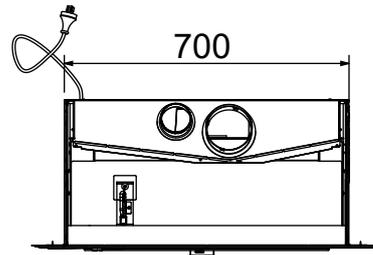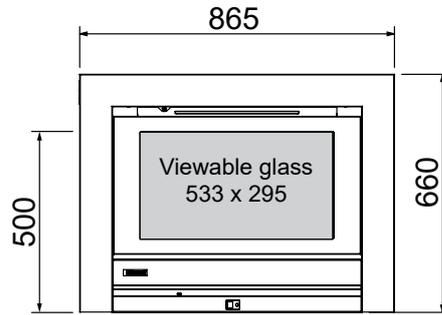
Positioning

Combustible clearances

The Novo must not be installed where curtains, furniture, or other combustible materials could come into contact with the fire while it is operating. The 400 mm side clearance, measured from the edge of the glass, includes side walls. The 1000 mm clearance is in front of the fire.

Hearths

A hearth is not necessary but can be used for decorative purposes. It must not obscure the front of the fire or obstruct the fire in any way.

Flooring and hearth material selection

The temperature in front of the Novo can reach up to 40 °C above ambient, which is why material selection is important. For more information refer next page.

Floor protection

Heat radiating from the fire may affect the appearance of some materials used for flooring such as vinyl planks, carpet[1], cork, or timber. To avoid this occurring it is recommended a mat be placed in front.

[1] Carpet cannot be fitted hard up against the fire as it will affect operation.

Mantles and surrounds

Combustible mantels and surrounds require clearance from the unit to minimise the risk of fire. They are allowed providing they are outside the minimum clearances shown.

The Novo gas fireplace is not designed to be built into bookcases.
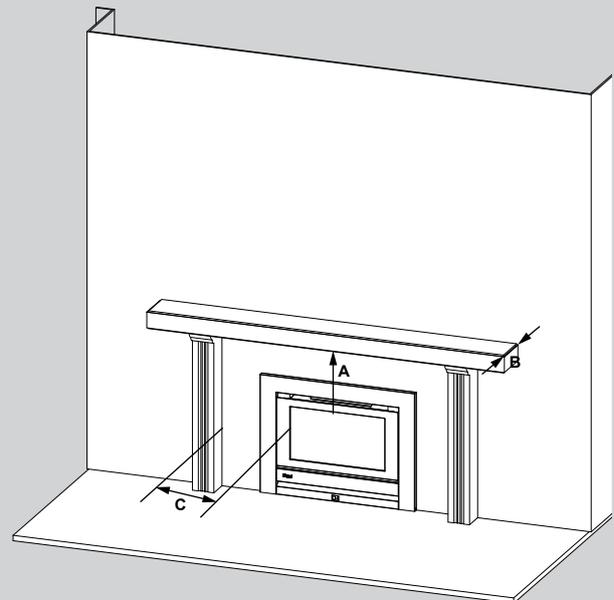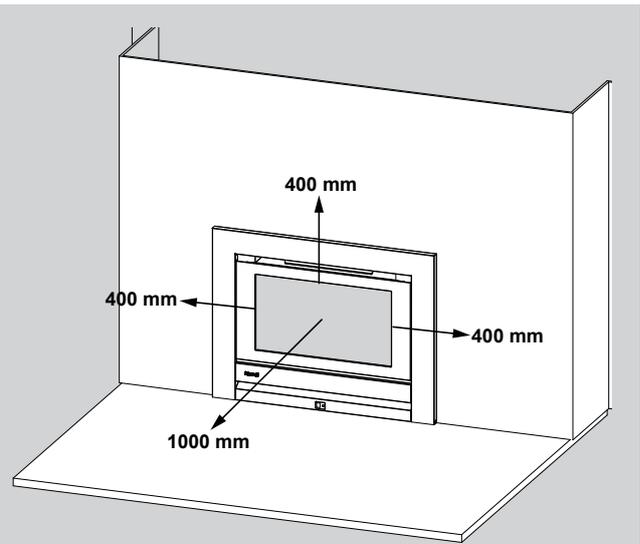
A	Mantel needs to be a min. of 400 mm away from the edge of the glass
B	Max. mantel depth at 400 mm (A) is 250 mm
C	Surround needs to be a minimum of 150 mm away from the edge of the glass

For every 50 mm of added mantel depth there must be an additional 100 mm of clearance from the edge of the glass. For example:

Mantel depth	Vertical clearance req. (A)
300 mm	500 mm
350 mm	600 mm
400 mm	700 mm

Flooring and hearth material selection

Flooring and hearth material selection
The temperature in front of the fire (200-350 mm x 400 mm wide) can reach up to 40 °C above ambient, which is why material selection is important, some guidelines are detailed below. For example we know that vinyl planks are only rated for ambient temperatures which is why the fire would not be suitable for installation directly on the floor.

non-combustible hearth
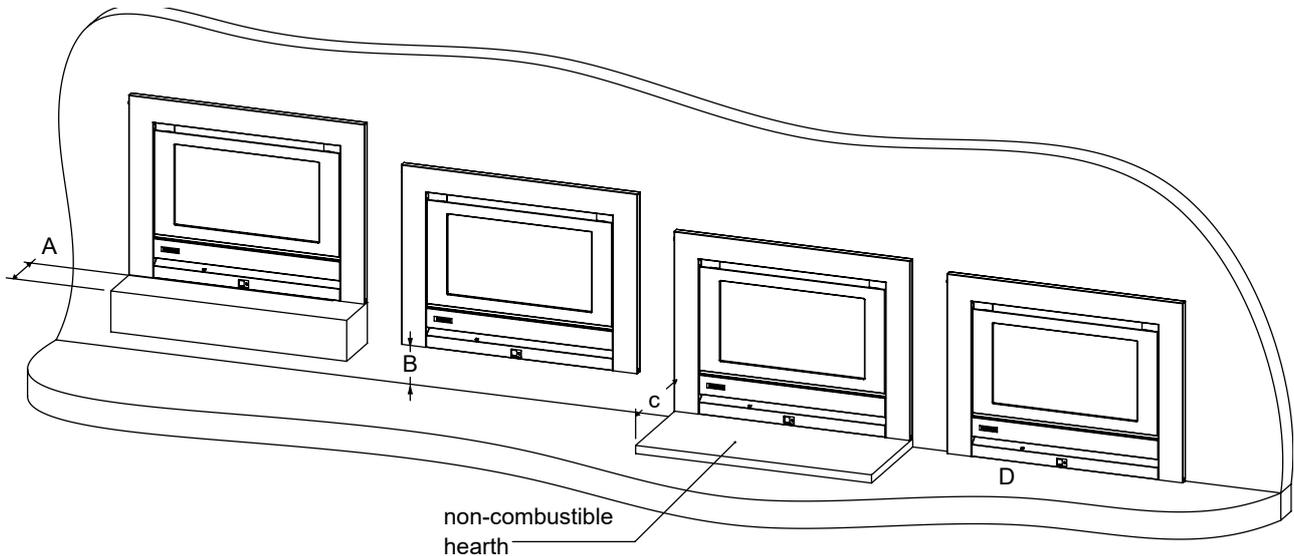
Dim.	Non-combustible materials or materials rated to 60 °C or higher above ambient	Materials rated to a maximum of 50 °C above ambient	Unrated materials, rated up to 20 °C above ambient
A	No maximum.	150 mm maximum[1]	100 mm maximum[1]
B	No minimum	150 mm minimum	300 mm minimum
C	No minimum	400 mm minimum of non-combustible material	450 mm minimum of non-combustible material
D	No restriction	Not suitable for carpets or any heat sensitive materials	
[1] Refer floating hearth section below			

Just because a material is rated >60 °C doesn't mean it will not deteriorate when exposed to heat cycles. Always refer to the materials supplier for suitability. The temperatures given are assuming the fire is operating in a room temperature of no more than 25 °C. Operation in higher ambient temperatures may result in higher surface temperatures. Non-combustible materials should be made of a heat resistant material.

Floating hearth - low rated and unrated flooring materials
For unrated flooring materials, if you use a non-combustible floating hearth, the dimensions of the hearth, minimum depth, and minimum height, can be tweaked using the following calculations:

• Min. hearth depth (A) = 450[2]-height of hearth (for 50 °C rated materials it will be 400)
• Min. hearth height = 450[2]-depth of hearth (for 50 °C rated materials it will be 400)

Example
If you wanted a 200 mm deep non-combustible hearth, the calculation for hearth height would be: 450 - hearth depth (A) (450-200 = 250). The non-combustible hearth height would need to be 250 mm minimum.

This would mean the floating hearth dimensions could be 200 mm deep and 250 mm high.

[2] Figure obtained from in-house temperature testing

TV installation

The Novo has a fan that distributes warm air from the top of the appliance out into the room. As warm air is dispersed outwards and not directly upwards, installation of a TV may be an option.

The general rule for television installations is that the bottom of the television should be at least 400-450 mm above the fire.

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

Always check with the TV manufacturer

It is up to the owner to check the TV installation with the TV manufacturer—some 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.

At least the depth of the TV

TV

Rinnai gas fireplace

400 mm minimum

TV

Rinnai gas fireplace

400 mm minimum
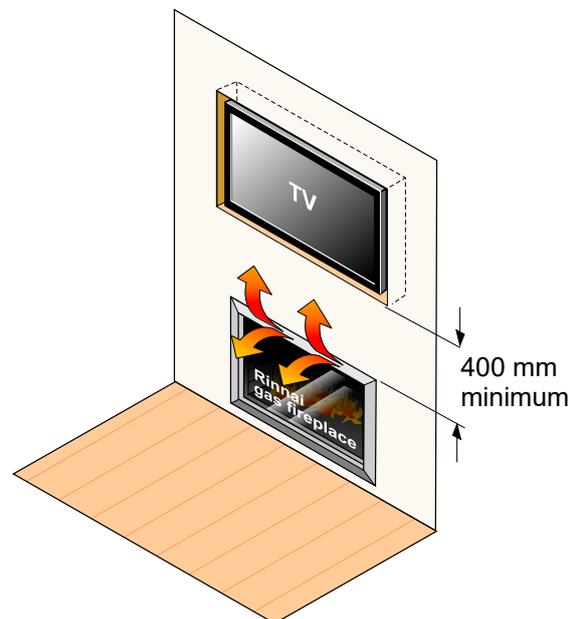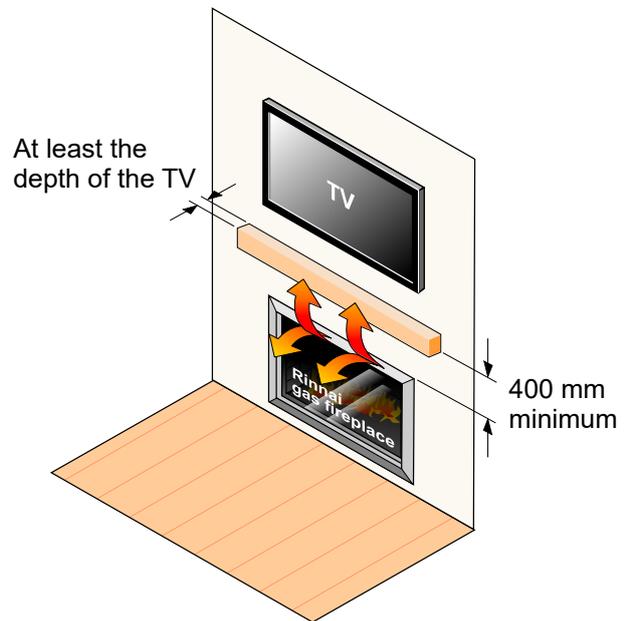
Enclosure dimensions

The Novo must be positioned within the enclosure on a level surface that allows free movement of the appliance. The enclosure must be capable of supporting 1.5 times the weight of the unit.

MASONRY

Actual size needs to be at least **200 x 200** mm for the flexi flues to fit down the chimney
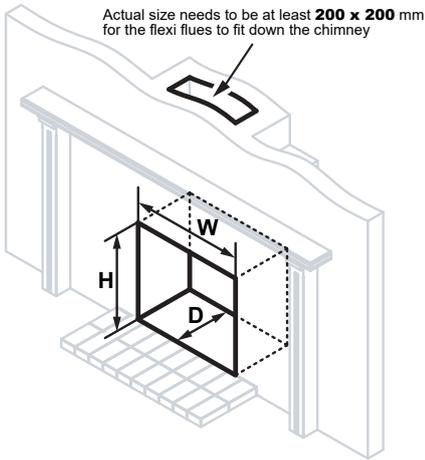
| Enclosure dimensions		With infill panel
W-width	700 mm	700-1030 mm
H-height	600 mm	600-740 mm
D-depth	370 mm min.	370 mm min.

Enclosure dimensions can be larger if using an infill panel. This is a panel for masonry installations where the cavity is slightly larger than the frame.

MOCK CHIMNEY
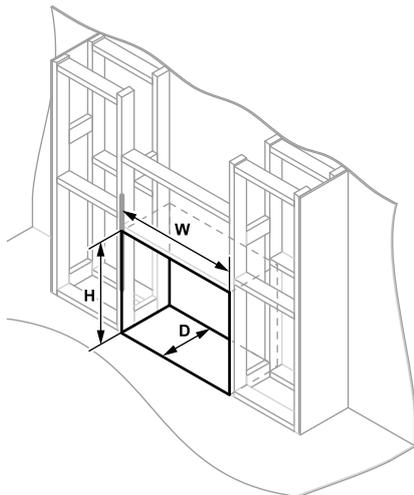
Enclosure dimensions	
W-width	800 mm
H-height	655 mm
D-depth	370 mm min.

This installation has a zero clearance box (comes with the fire). The total cavity depth must also include the thickness of the external cladding as the zero clearance box front flange is set forward to allow the wall lining and flange to be flush when finished.

CORNER INSTALLATIONS

790 mm

1105 mm

1550 mm
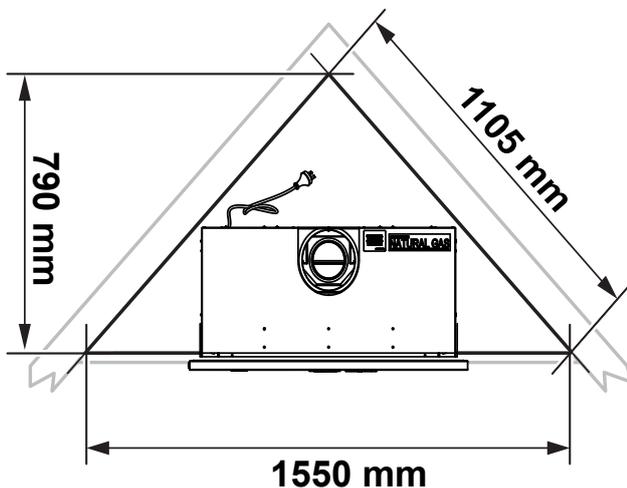
Gas supply and connection

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. An approved sizing chart such as the one in AS/NZS 5601.1 should be used. The gas supply termination is inside the heater and enters through the rear of the appliance.

Gas supply location

1. Mark off the location for the vertical centreline of the heater enclosure.

2. To the right of the vertical centreline, mark off the vertical and horizontal locations for the gas supply penetration.

Gas supply location

310 mm

35 mm

230 mm

WALL

Back of heater

Minimum clearance 75mm
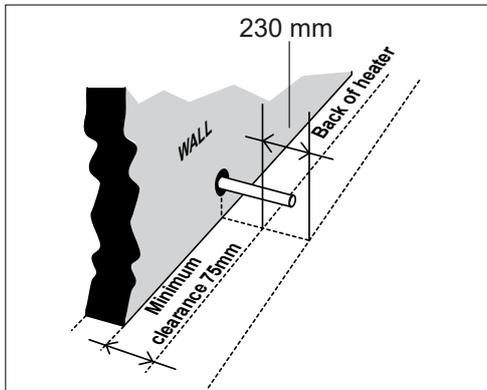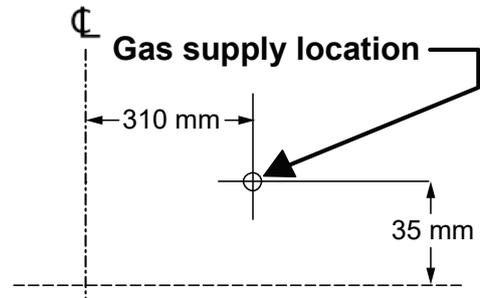
The length of the gas supply termination is measured from the front of the enclosure.

Supplied gas connection
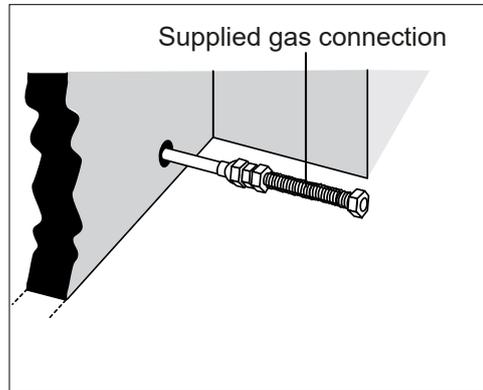
Installer to terminate to suit and fit supplied gas connection. Leak test joint between the flexible gas connection and termination.

Gas connection

Firmly grasp the stainless steel flexi pipe and bend to line up with the gas control valve inlet, then attach the pipe to the gas control valve and tighten.
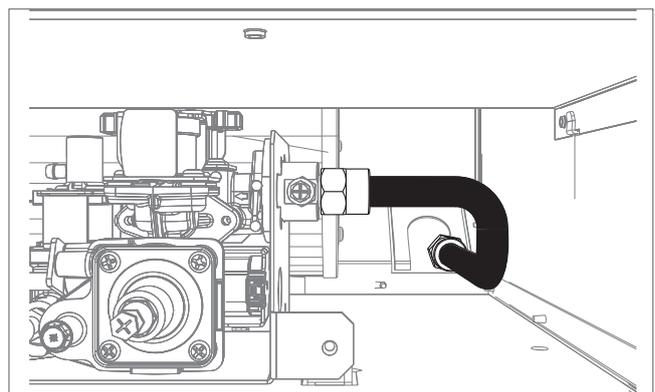
⚠ **IMPORTANT** The use of a rubber hose for any gas connection to a fixed appliance is NOT authorised by the manufacturer

Electrical supply

The Novo is supplied with a power cord (length 1500 mm) and a 3-pin plug. The standard electrical connection passes through the rear panel, but can also pass through the left or right hand side of the unit by removing the knockout tab from the bottom edge of the front panel. If changing the electrical position use the rubber grommet from the rear of the appliance for cable protection.

The connection is either direct wired* or connected to a power point within the cavity. This must be connected to a dedicated 240 V, 10 A earthed power point. The electric isolation switch must be accessible after the appliance has been installed.

The heater must not be located immediately below a socket outlet (potential fire hazard).

The power cord is not fire rated and should not come into contact with the unit. If the power cord is damaged, it must be replaced by a licensed tradesperson. This must be a genuine replacement part available from Rinnai.
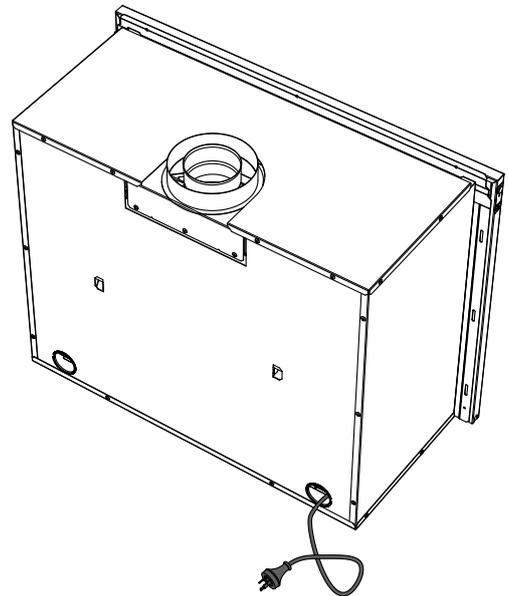
Using an existing externally mounted power point
If you already have an existing power point outside the enclosure, you can redirect the power cord through the LHS or RHS of the front panel. With the frame removed redirect the cord and plug (with the grommet), underneath the unit and to the front (left or right).

Remove the pre-punched metal knock-out located in the lower left or right edge of the frame, ensuring the grommet is fitted to the metal knock-out. Excess cord may be left in the cavity below the unit—DO NOT coil excess cord.
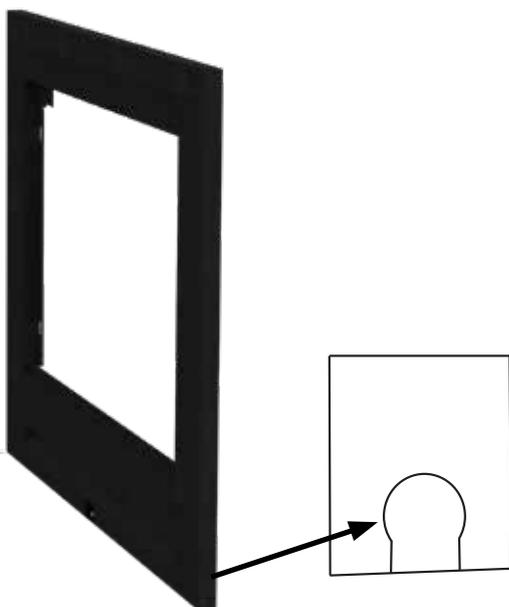
* Consult a qualified electrician if direct wiring is required as it must comply with AS/NZS 5601 and AS/NZS 3000 and other relevant local regulations

Masonry installation overview

1. Modify the enclosure: Ensure the enclosure meets the requirements set out on p.11.

2. Gas and electrical connections: Prepare gas and electrical connections, refer p.12-13.

3. Take the masonry adapter frame and colinear flue adapter off the engine
The adapter frame and flue adapter come assembled on the engine and need to be taken off.

1. Lift and remove the inner frame.
2. Remove the two screws holding the outer frame to the fire—lift and remove.
3. Disconnect the CAT5 cable from the ON/OFF button.
4. Remove the screws holding the fire to the adapter frame and slide the engine out of the box
5. Remove the four screws holding the flue adapter to the adapter frame and set aside.

4. Install the masonry adapter frame into the enclosure
Fit the adapter frame into the enclosure, base must be flat and level, and the notch in the back panel to be in line with the centre of the cavity. Fix in place through two holes in the back panel.

5. Connect flexi to flue terminal and drop flexi flues down the chimney
Stretch out the flexi to the required length and attach to the flue terminal using the clamps provided. Fix flue terminal in place, allow enough flue in the cavity to fix the flue adapter.

6. Connect flexi flues to the colinear flue adapter
Place the flue adapter in the cavity, it can be on the floor while attaching the flues. Attach the air intake flue over the spigot, place the flue clamp over the flue and tighten. DO NOT overtighten as this will crush and damage the flue. Drill through the pre-punched holes either side of the clamp, and into the flexi flue spigot. Secure in place using the stainless steel self tapping screws provided, ensuring the connection will stop movement or dislodgement of the flue.

Slide the exhaust flue into the spigot and push down until it is clipped in place—there are barbs either side to hold it in place. Refer images on p.27.

7. Secure flue adapter to the adapter frame
Lift adapter box into place and rest in support tags in the back panel. Fit to the back panel using four screws through the air inlet ports.

8. Check engine seals and determine flue length
Ensure the rubber seals fitted to the back of the fire are in place. Also determine flue length and aeration plate configuration, refer p.18.

9. Slide engine into the cavity
Slide fire into the cavity until the front flange of the fire is sitting flush against the flanges of the support panels. When properly aligned the red exhaust seal goes straight into the hole, and the four holes of the adapter frame and engine line up. Fix the fire to the adapter frame (four inner screws) and use the outer slots to fix the fire to the enclosure.

Once the fire has been screwed to the adapter frame, the front face of the frame and the front flange of the fire should be pulled up hard against each other. There are witness holes in the front flange of the fire to ensure this happens, refer image on p.19.

⚠️ **WARNING** It is critical to ensure that the air and flue seals are correctly compressed. If there is a gap present, there may not be a proper seal and performance could be affected.

10. Complete gas connection

11. Install the burn media and commission
Install the burn media, refer p.20. Refit the glass and the inner and outer frames. If using an infill panel, refer separate instructions.

DO NOT use an unlined masonry chimney as the flue for this appliance

Actual chimney size needs to be at least 200 x 200 mm for the two flexi flues to fit

Masonry adapter frame

Exhaust flue

Air intake

Colinear flue adapter

Aeration plate

Green air inlet seal

Red exhaust seal
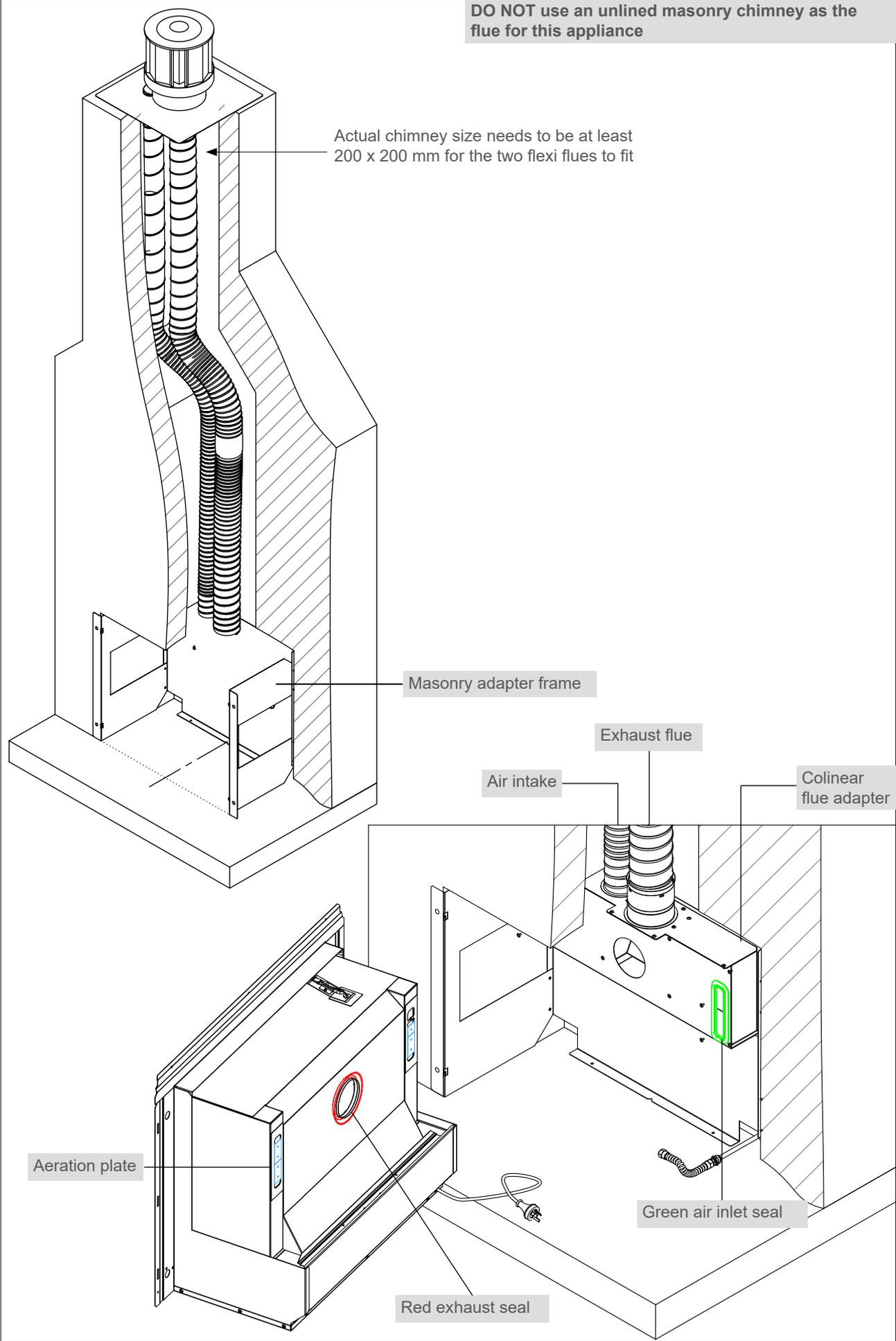
Mock chimney installation overview

1. Modify the enclosure: Ensure the enclosure meets the requirements set out on p.11.

2. Gas and electrical connections: Prepare gas and electrical connections, refer p.12-13.

⚠ **NOTE** The zero clearance box has an access flap on the left hand side. This allows access to the power cord after feeding it through the hole in the back panel.

3. Take the zero clearance box (zcb) and coaxial flue adapter off the engine
The zcb and flue adapter come assembled on the engine and need to be taken off.

1. Lift and remove the inner frame.
2. Remove the two screws holding the outer frame to the fire—lift and remove.
3. Disconnect the CAT5 cable from the ON/OFF button.
4. Remove the screws holding the fire to the zcb and slide the engine out of the box
5. Remove the four screws holding the flue adapter to the zcb and set aside.

4. Install the zcb into the enclosure
Fit the zcb. The base must be flat and level. Front flange to be set forward to allow the wall lining and flange to be flush when finished. Fit the zero clearance box to the framing on the side and top, use packers to ensure the screws do not deform the panels of the zcb.

5. Install the coaxial flue adapter
Slide the flue adapter up and in place using the support tags on the back of the zcb. Fix in place using four screws through the air inlet ports.

6. Install flue system: Install coaxial flue system. Ensure it is self supported.

7. Connect flue to flue adapter
Slide the flue into the spigot of the flue adapter and push down until it is clipped in place.

8. Check engine seals and determine flue length
Ensure the rubber seals fitted to the back of the fire are in place. Also determine flue length and aeration plate configuration, refer p.18.

9. Slide engine into the cavity
Slide fire into the cavity until the front flange of the fire is sitting flush against the flange of the zcb. When properly aligned the red exhaust seal goes straight into the hole, and the four holes of the coaxial adapter and engine line up. Fix the fire to the zcb (four inner screws) and use the outer slots to fix the fire to the enclosure.

Once the fire has been screwed to the zero clearance box, the front face of the frame and the front flange of the fire should be pulled up hard against each other. There are witness holes in the front flange of the fire to ensure this happens, refer image on p.19.

⚠ **WARNING** It is critical to ensure that the air and flue seals are correctly compressed. If there is a gap present, there may not be a proper seal and performance could be affected.

10. Complete gas connection

11. Install the burn media and commission
Install the burn media, refer p.20. Refit the glass and the inner and outer frames.

Mock chimney enclosure

Novo DV with zcb and adapter removed

Zero clearance box installed

Zero clearance box and coaxial flue adapter

Zero clearance box

Coaxial flue adapter

Aeration plate

Red exhaust seal
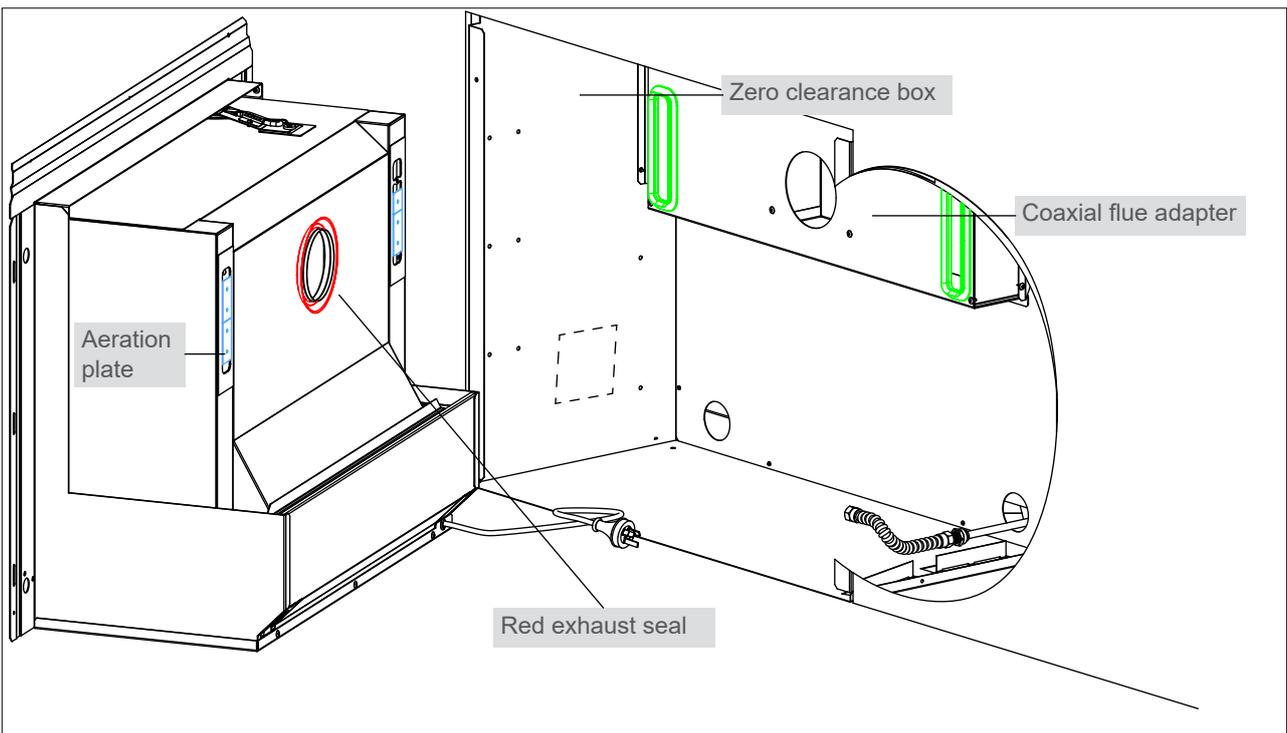
Aeration plates

The Novo has an aeration plate factory fitted either side of the unit, refer photo. The plates are fitted in a position for flue lengths between 3-5.5 m. Two additional plates are supplied in the accessory pack, these are for flues between 5.6-8 m.

To control flame lift and efficiency on long flues (anything over 3 m) it's important the aeration plates are configured correctly—refer chart below.

Aeration plate configuration

Vertical flue height	< 3 m	3-5.5 m	5.6-8 m
Action required	Remove factory fitted aeration plates	No action required	Fit additional plates supplied in accessory pack
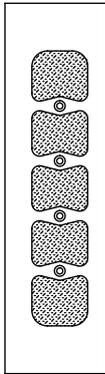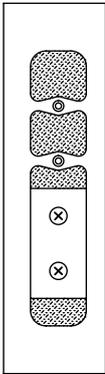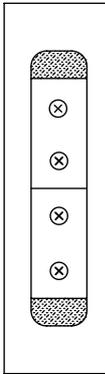
To maintain balance within the combustion chamber, it is important to fit the plates equally to both sides. The chart shows the plates required for any given flue length. Fitting more plates than shown may have a detrimental effect on startup performance, especially in very cold areas.

Installation: Fire to flange connection

The below installation step is common to masonry and mock installations. IT IS CRITICAL to the safe operation of the fire.

Once the fire has been screwed to the zero clearance box or masonry adapter frame, the front face of the frame and the front flange of the fire should be pulled up hard against each other. There are witness holes in the front flange of the fire to ensure this happens.

⚠️ **WARNING** It is critical to ensure that the air and flue seals are correctly compressed. If there is a gap present, there may not be a proper seal and performance could be affected.

Fixing check markers
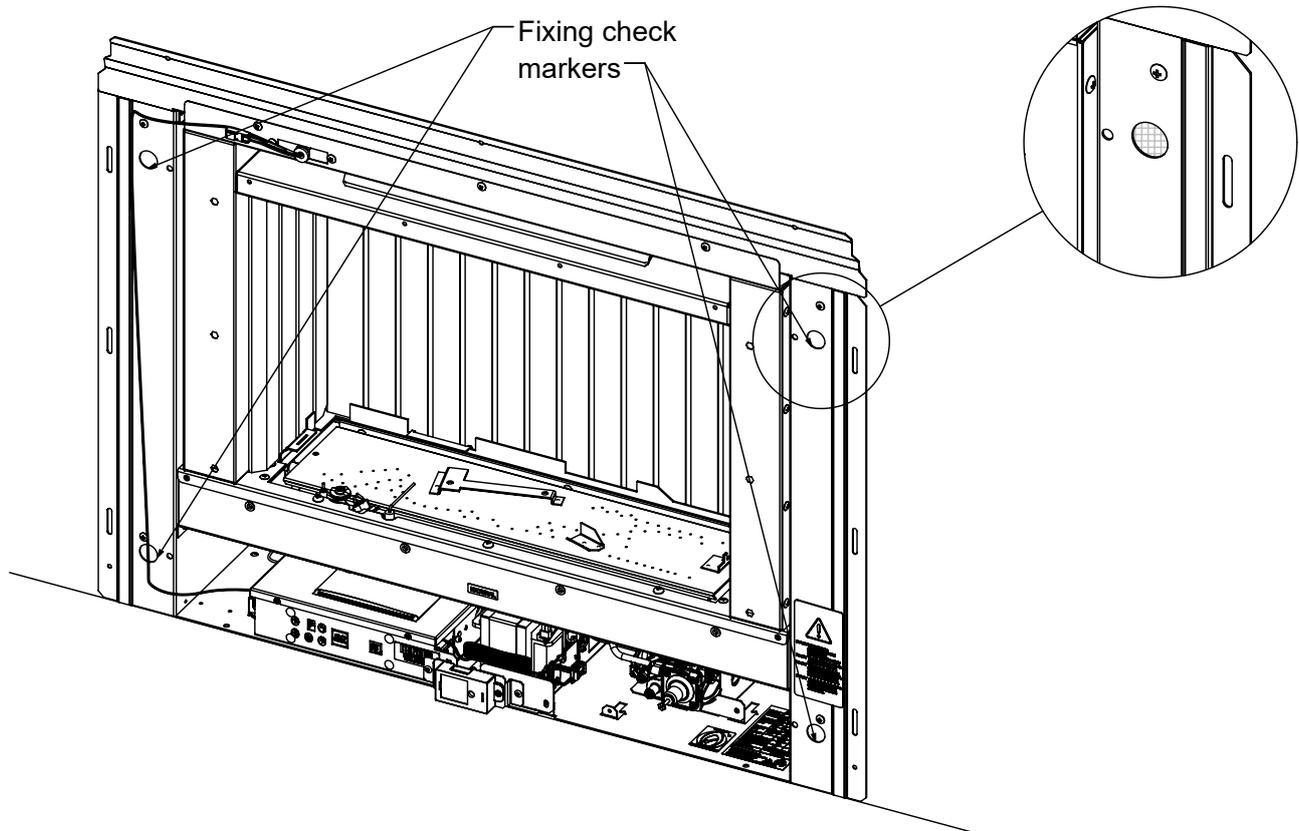
Burn media installation

The granule pack and log set, consisting of five logs, comes packaged inside the appliance. Use extreme care when handling the logs, they are fragile and will damage easily. The unit must never be used with broken logs or other burn media.

Experience has shown that the majority of performance problems are caused by burn media being installed incorrectly. Incorrect placement can create carbon build-up and affect performance. Please take the time to read and follow these instructions as malfunctioning due to incorrect placement is not covered by warranty.

The granules as well as being added to create a more realistic log effect (they diffuse the gas flames) also assist in soot prevention and are CRITICAL to the correct operation of the fire. Never pour the granules directly from the pack as dust particles and the granules may block the burner ports.

A four minute burn media installation YouTube video is also available on the Rinnai YouTube channel: https://www.youtube.com/watch?v=I4IdLOHIacw&t=2s

Place 31 granules around the burner ports (not directly over) as shown below. You will have granules left over.
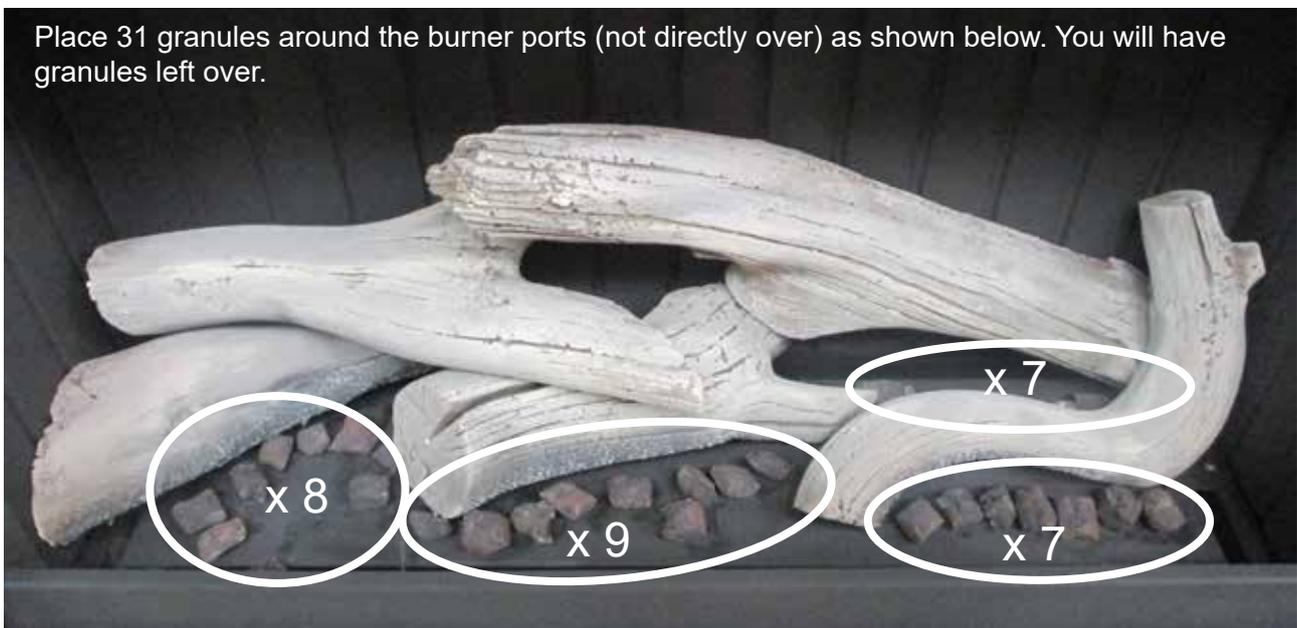
Ensure the left hand log is sitting on top of the two support brackets and NOT directly on the burner.

Ensure the left hand log is pushed hard against the left and rear ceramic panels.

DO NOT place the granules directly in front of the pilot flame
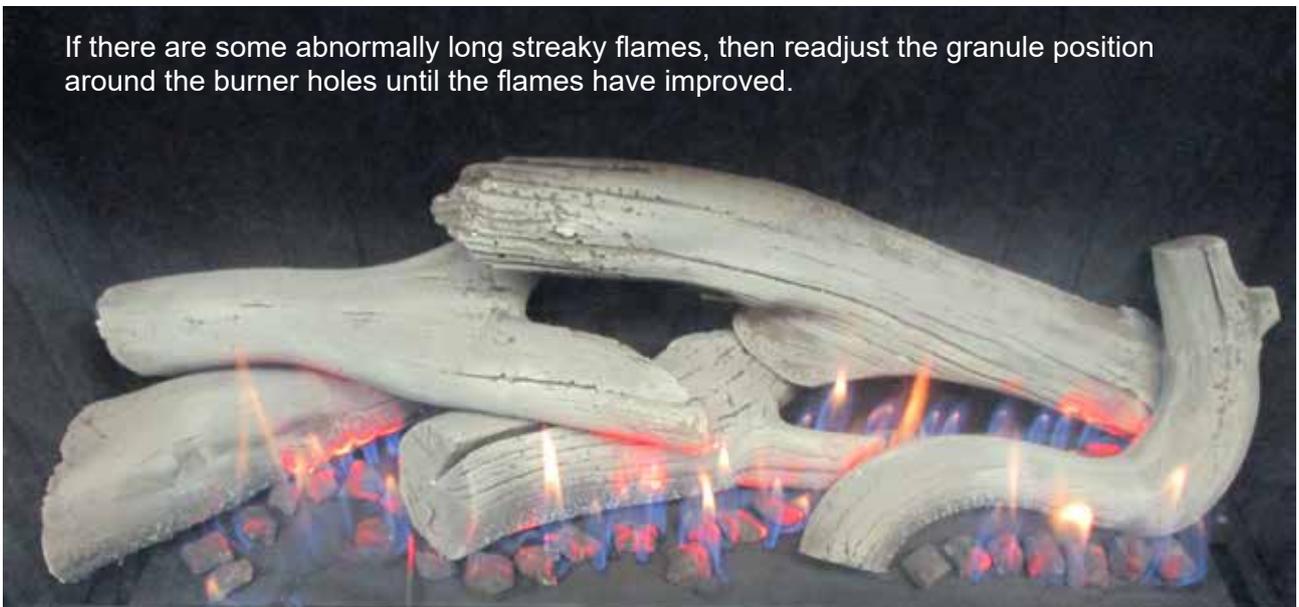
If there are some abnormally long streaky flames, then readjust the granule position around the burner holes until the flames have improved.

Commissioning

The gas pressures must be checked against those printed on the data plate of the appliance. The pressures are factory set and may not require adjustment. When checking the operating pressures the combustion chamber glass must be on.

A three minute commissioning YouTube video is also available on:
https://www.youtube.com/watch?v=awaQkgAx6uk
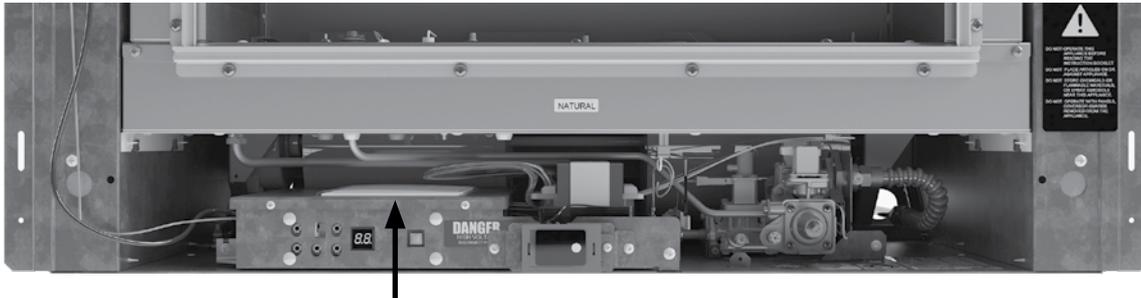
The commissioning sheet is located in a plastic pouch inside the unit on top of the PCB cover.

Follow the commissioning instructions to complete the gas pressure checks. When commissioning is complete check for full and correct operation of the appliance, and return the commissioning sheet to its plastic pouch.

Inlet pressure test point screw

Pilot pressure adjustment screw

Pilot pressure test point screw

Main burner pressure test point screw
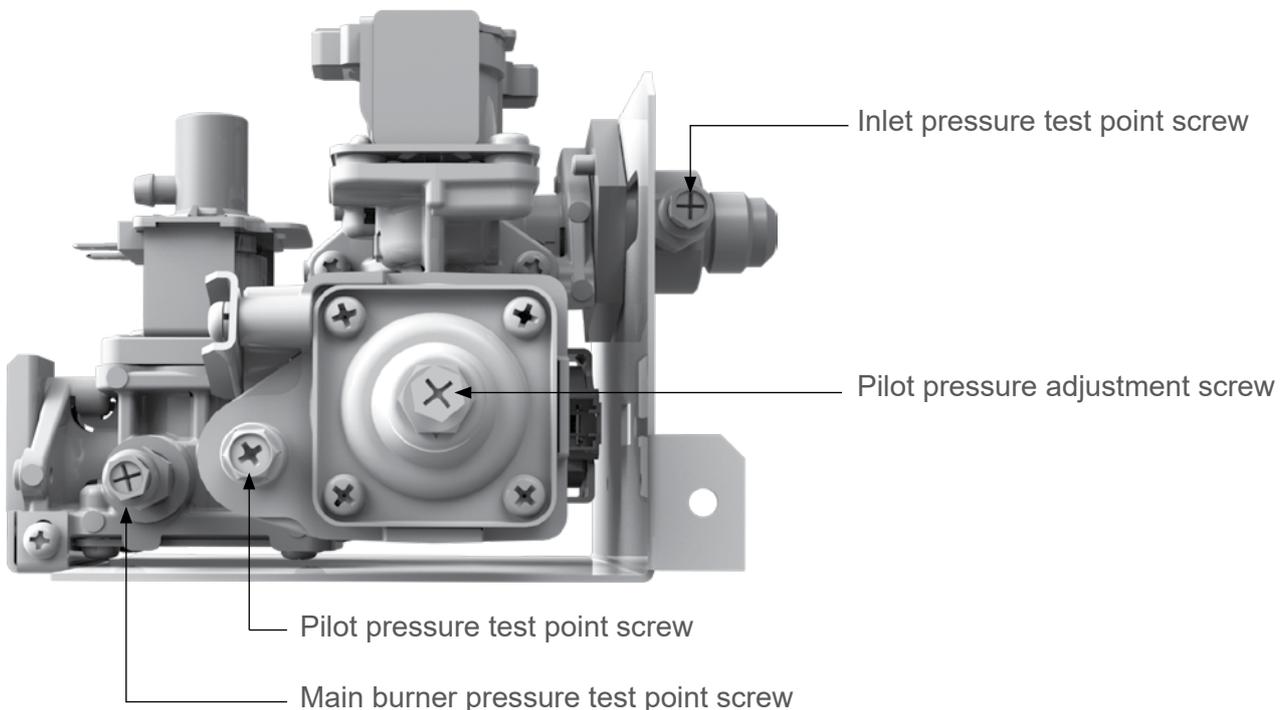
As per AS/NZS 5601.1:
E7 TESTING A CONNECTION MADE AFTER A TEST PROCEDURE
Any connection made after a test has been completed shall be checked for leakage at *operating pressure*. A suitable leak detection solution or other suitable leakage detection method shall be used and the connection left *gastight*.

Wi-Fi module installation (if applicable)

If the Wi-Fi module retrofit kit has been purchased as an accessory, complete the installation using the instructions provided in the kit. Once installation has been completed check, when the power is on, that the Wi-Fi LED flashes and turns a solid red. This indicates everything is ready for setup via a smart device. Go through the app sequence with the homeowner.

If unable to connect, the Wi-Fi board must be reset. The reset button is a small hole in the base of the board, underneath the LED. Using a paper clip or similar, press and hold the reset button for 10 seconds.

1. Wi-Fi LED
2. Wi-Fi module reset hole position

Frame installation

⚠️ **IMPORTANT** Before installing the frame make sure the ON/OFF button on the PCB control panel (B) is in the OFF position, otherwise the button on the frame will not work.

1. Ensure the CAT5 cable (A) is installed into the ON/OFF button on the frame and clipped in place in the front of the fire.

2. Fit the frame over the top flange of the fire.

3. Fix the frame to the fire using the two supplied black M4 screws. It is CRITICAL to the safe operation of the fire that these screws are in place (seals the fire).

4. Fit the inner frame to the fire by setting it into the allocated slot of the outer frame and sliding it down.

5. On the PCB control panel (B), return the button to the ON position. Check the operation of the ON/OFF button on the frame and that the remote control is working.
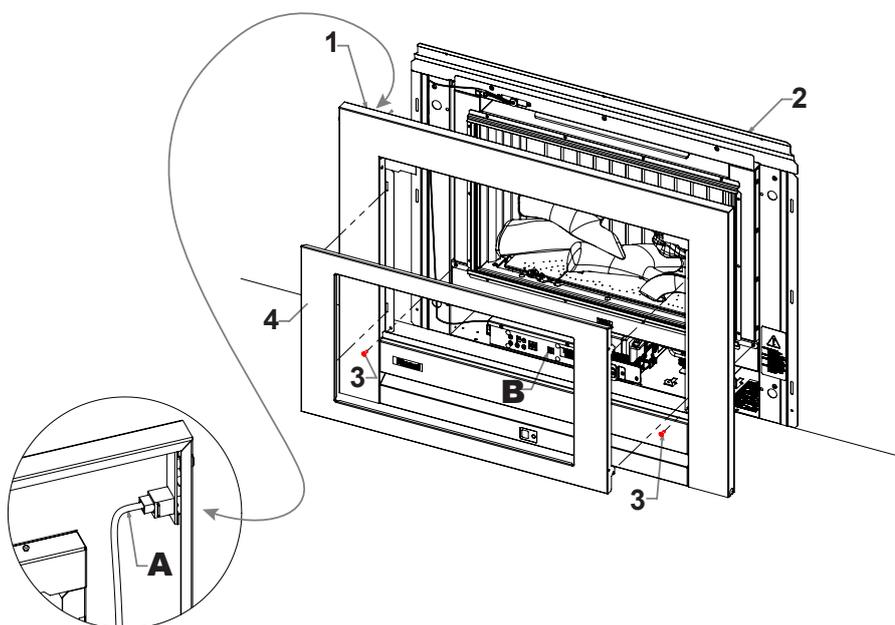
Test operation and lighting sequence

It may take approximately two hours of operation for the burn media 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 that the burn media has shifted. 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

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.
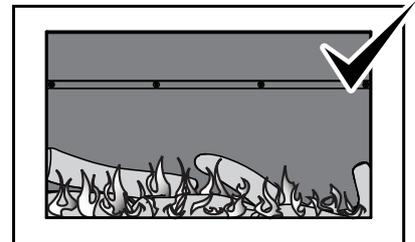
Normal flame pattern
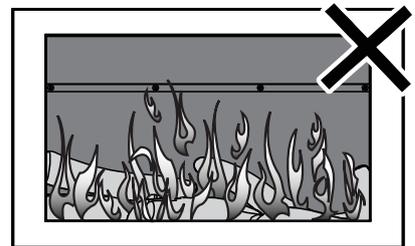
Abnormal flame pattern
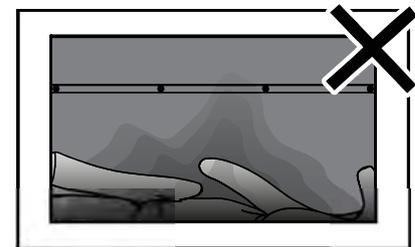
Soot build up

Installation checklist and customer handover

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

Wiring diagram (part of commissioning)

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

AC 230-240V

F 5A

ER

SP

Light Only for RDV600-700

L

FM

TR

HI COM MED LO

POV

SV 3   SV 2   SV 1

FR2 FR1

OH.TH1   R.TH

TF

CONTROL DISPLAY UNIT

RCR

ON/OFF DISPLAY UNIT

WIRING DIAGRAM UNI CONTROL
RIB23, RDV23
Issue A

Novo flueing

Every gas fire 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 the appliance is provided with an effective flue.

Some guidelines to assist with flue design are detailed in this guide. These must be read and modified as necessary depending on the installation. The Novo must be installed with an approved flue system, approved components are shown in this guide.

General flueing guidelines

Flueing for the Novo, depending on the installation:

• **Mock chimney coaxial flueing**

• **Masonry colinear flueing**
  Flexible aluminium flues that come straight off the fire.

Self-supporting flue - mock chimney
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 coaxial vertical flue kit. Elbow straps are also available as a separate component to prevent excess weight on the flue elbow (if used).

Flue terminal locations
Flue terminals must be compliant with the flue terminal locations shown in AS/NZS 5601.1.

The flue cannot terminate under a floor or in a roof space.

Coaxial flue
25 mm from the outer flue to a combustible surface to allow for expansion and contraction of the outer flue components.
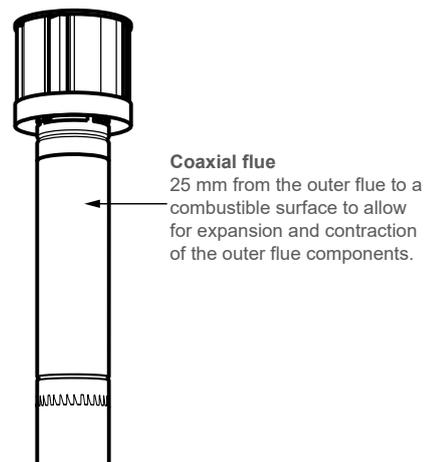
Flue cowl clearance

To ensure products of combustion are cleared, adequate clearance from 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 where the flue cowl should be 500 mm clear of the ridge line.

An adequate flow of fresh air must exist around the flue cowl following installation.

Minimum clearances are shown in AS/NS 5601.1

500 mm to nearest part of roof
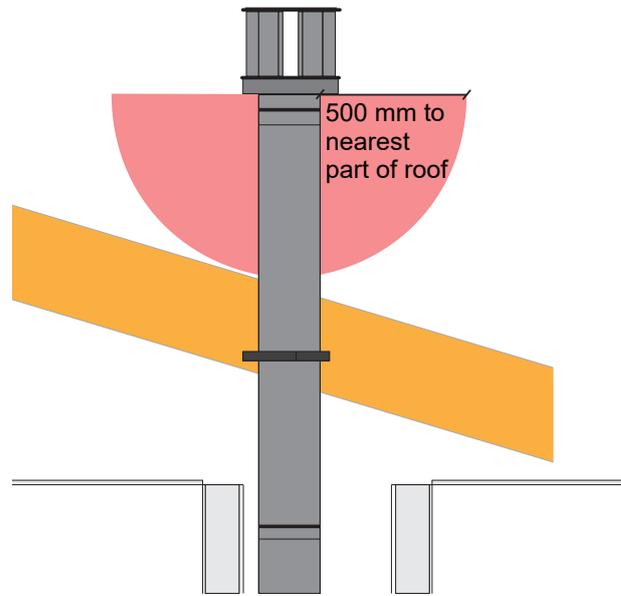
Shared flues

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

Flashings

Flashings are not included in the flue kits. Flashings must comply with E2, this is the responsibility of the installer.

Attaching the masonry colinear flexi flues to the flue adaptor box

The flexi flues need to be securely fixed to the colinear flue adapter.

- **Air intake flue (smaller flue LHS)**
  Attach the air intake flue over the spigot, place the clamp over the flue and tighten. Do NOT over tighten as this will crush and damage the flue. Drill through the pre-punched holes either side of the clamp, and into the spigot on the flue adaptor. Secure in place using the stainless self taping screws provided, ensuring the connection will stop movement or dislodgement of the flue.

- **Exhaust flue (larger flue RHS)**
  Slide the exhaust flue into the spigot and push down until it is clipped in place—there are barbs either side to hold it in place.
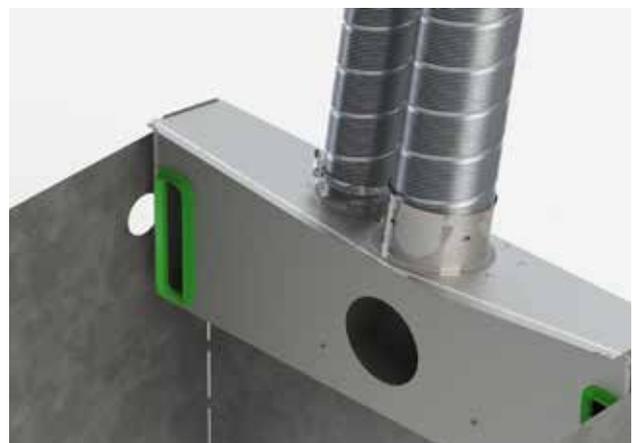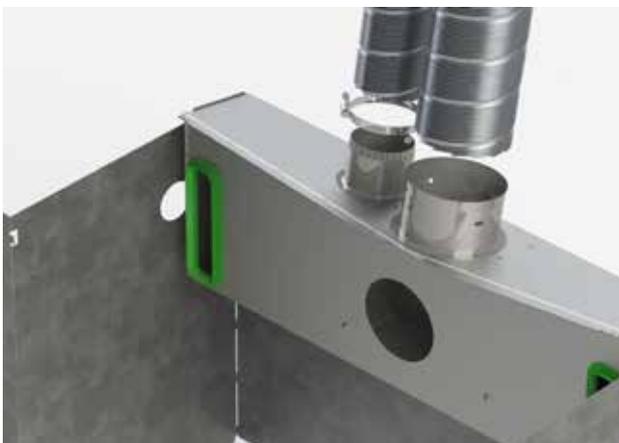
Flueing option: Masonry vertical
Colinear flexi flues with Duravent cowl

Min. 3 m, max. 8 m (with extension kit)

590
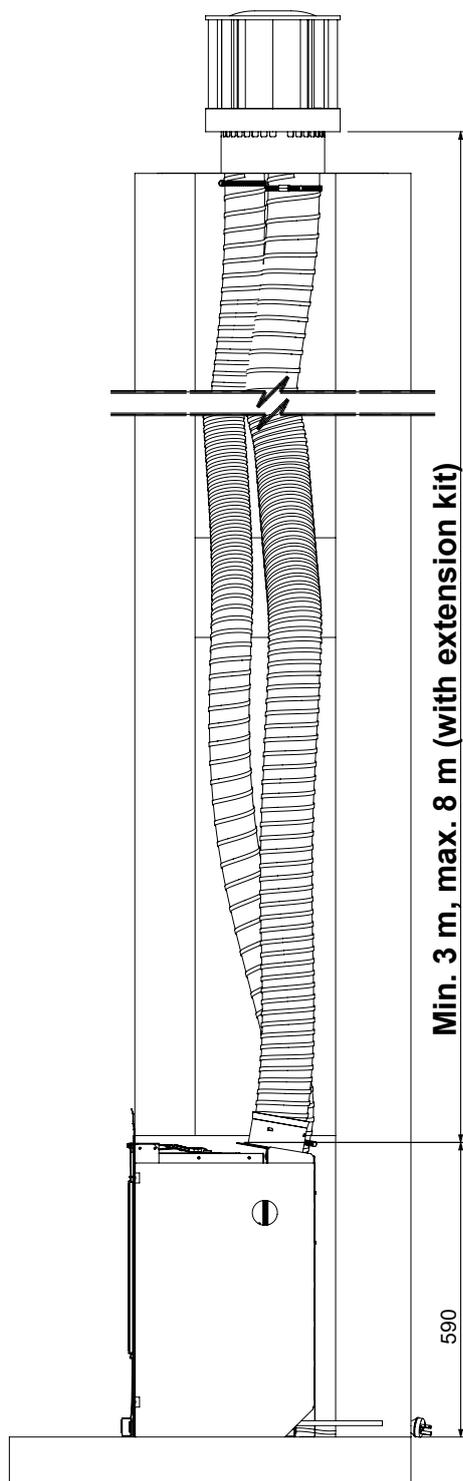
Masonry vertical flexi flue kit 5.5 m DV
For installations in a masonry fireplace. Extends out to 5.5 m. If longer flueing is required then the colinear flexi flue extension kit needs to be ordered.

Kit includes:
• aluminium colinear roof cowl DV
• chimney plate 455 x 455 mm
• intake flexi Ø75 mm (LHS)
• exhaust flexi Ø100 mm (RHS)
• 4 x Ø100 mm flue clamps stainless steel
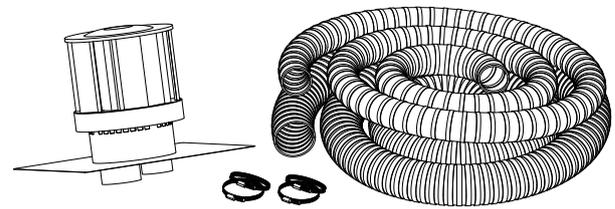
R3656

Masonry vertical flexi flue ext kit 2.5 m
When flueing needs to extend beyond 5.5 m.

Kit includes:
• intake flexi Ø75 mm (LHS)
• exhaust flexi Ø100 mm (RHS)
• 2 x joiners
• 4 x 100 mm flue clamps stainless steel
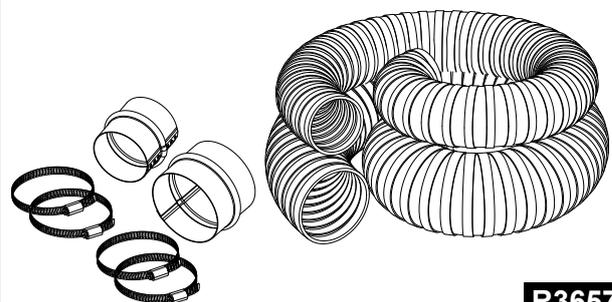
R3657

High wind areas

If located in a particularly windy areas such as Wellington, coastal properties, or elevated properties on hills etc., then a DV high wind vertical cowl protection kit (R3655) is recommended. It is designed to wrap around the vertical flue cowl to reduce wind entering the flue and causing flame disturbances. Refer p.31 for more information.

Flueing option: Mock chimney vertical
Coaxial flue with Duravent cowl

Max. 2m

Min. 3 m / max. 8 m

Min. 3 m / max. 8 m
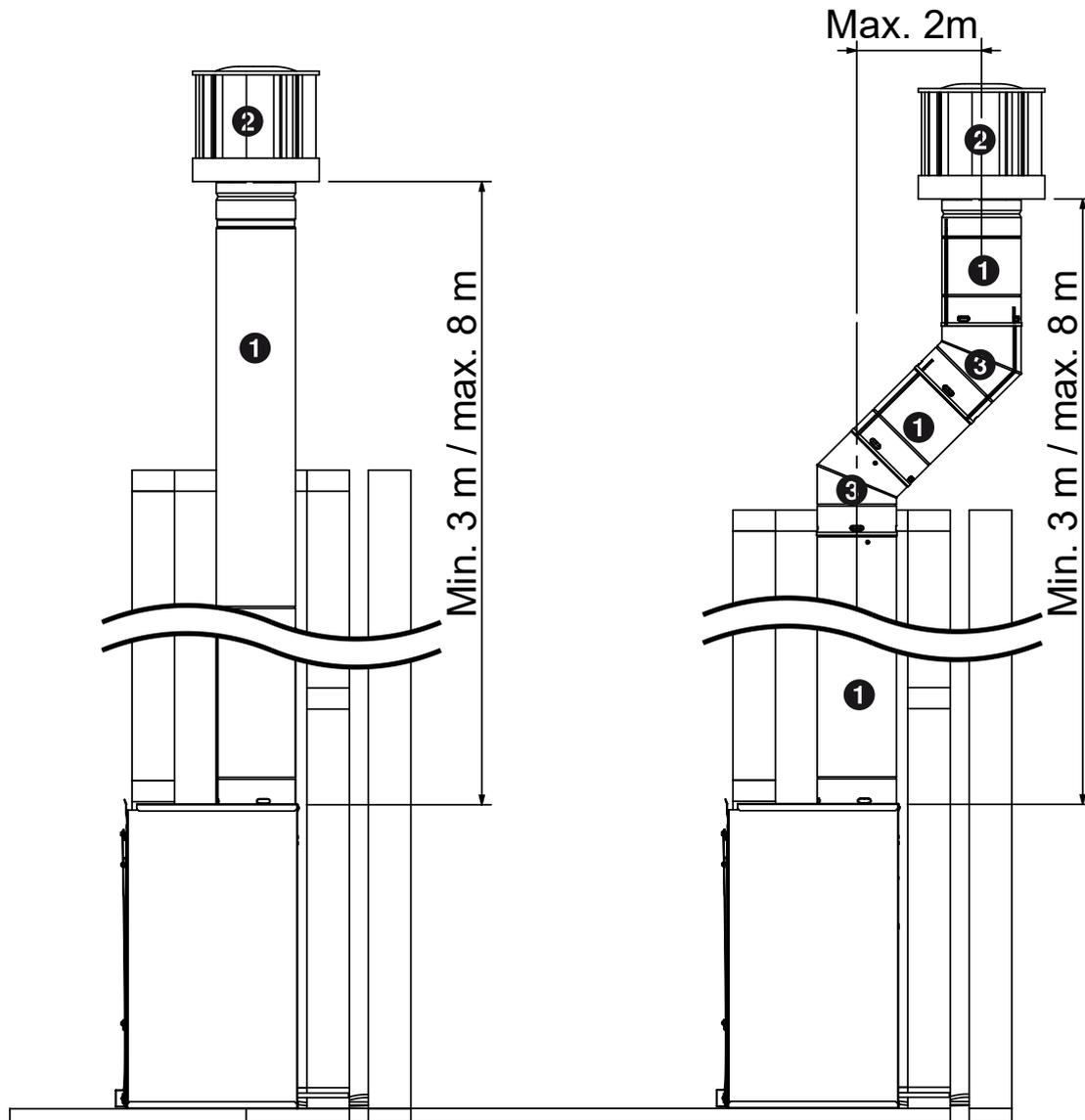
Straight vertical flueing

If doing a short vertical flue (no bends) for a single storey dwelling, the mock chimney vertical flue kit 3.6 m (R3665) can be used otherwise the flue components can be ordered separately.

❶   Flue pipe(s) or flue extension.

❷   Roof cowl (R3651)

❸   Flue elbow 45 ° (R3642), maximum number of bends is two.

High wind areas

If located in a particularly windy areas such as Wellington, coastal properties, or elevated properties on hills etc., then a DV high wind vertical cowl protection kit (R3655) is recommended. It is designed to wrap around the vertical flue cowl to reduce wind entering the flue and causing flame disturbances. Refer p.31 for more information.

Novo DV flue components

Coaxial vertical flue kit 3.6 m
Kit includes:
- Coaxial vertical roof cowl (R3651)
- 3 x 1200 mm interlocking flue pipes (R3636)
- 2 x wall straps (R3647)

If longer flueing is required order additional lengths of flue pipe.
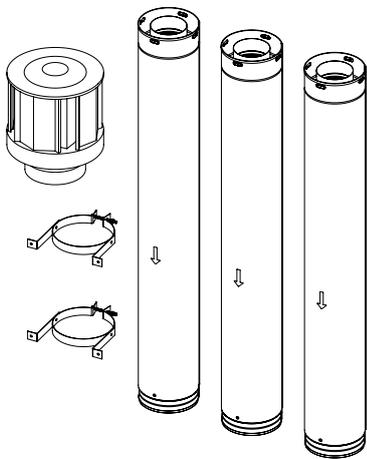
R3665

Coaxial vertical flue cowl
Aluminium flue terminal required for all coaxial vertical flue installations—part of vertical flue kit.


Ø268 mm
245.6 mm
325.6 mm
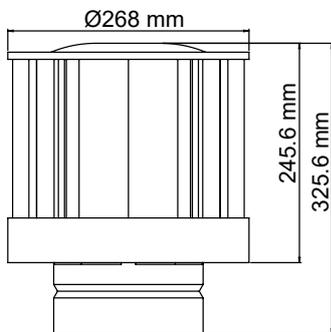
R3651

Flue pipe extensions
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. CANNOT be cut to size.

Inner: Aluminium Ø100 mm
Outer: Galv. steel Ø170 mm
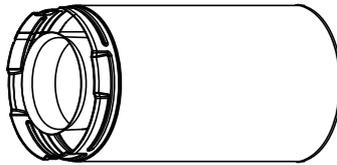
Coaxial 45° flue elbows
Two bends in a kit.

Offsets obstructions. Elbow swivels 360° at base. Angle not adjustable. Once joined effective length reduces 35 mm to approx. 73 mm.

Inner: Aluminium Ø100 mm
Outer: Galv. steel Ø170 mm


108
108
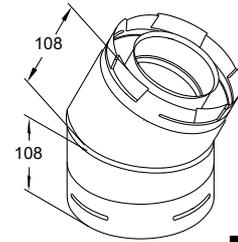
R3642

Coaxial flue pipes DV
Interlocking. CANNOT be cut to size.
Once joined nominal length reduces approximately 35 mm.

- Inner: Aluminium (Ø100 mm)
- Outer: Galvanised steel (Ø170 mm)

Pipe	Installed length	Code
150 mm	114 mm	R3630
230 mm	191 mm	R3631
300 mm	267 mm	R3632
450 mm	419 mm	R3633
600 mm	572 mm	R3634
900 mm	876 mm	R3635
1200 mm	1181 mm	R3636
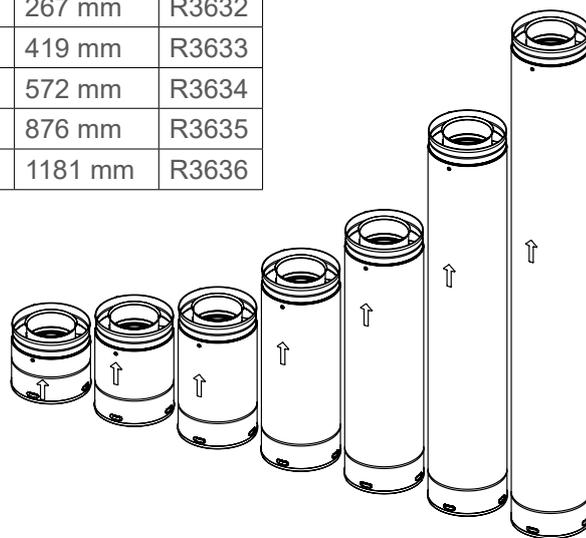
Wall strap DV

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

Provides a 50-200 mm clearance to combustibles.
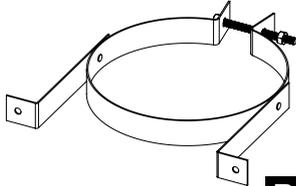
R3647

Elbow flue strap DV

Flue supports for elbows and offsets. Strap length approximately 432 mm.
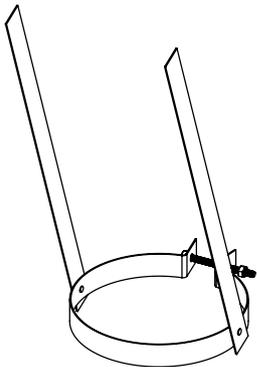
R3644

High wind vertical cowl protection kit

For windy areas such as Wellington, coastal properties, or elevated properties on hills. Designed to wrap around the vertical cowl (as pictured) to reduce wind entering the flue and causing disturbances. it is fitted to the cowl and can be retrofitted.

Construction - stainless steel
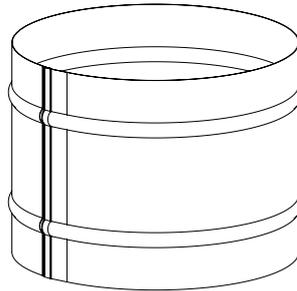
R3655

45° bend offset / rise dimensions
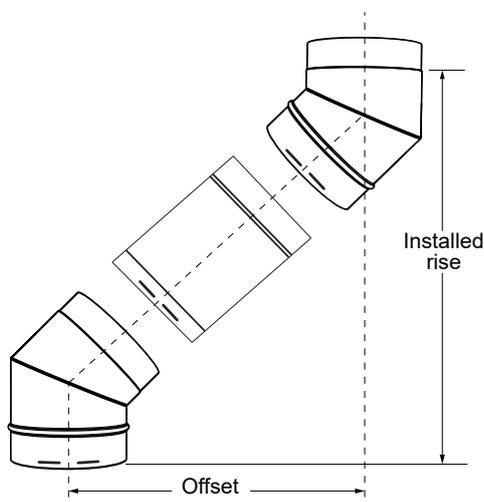
Flue pipe (length and code)		Offset	Installed rise
None (bend to bend)	N/A	124 mm	288 mm
150 mm	R3630	203 mm	369 mm
230 mm	R3631	257 mm	423 mm
300 mm	R3632	311 mm	477 mm
450 mm	R3633	417 mm	584 mm
600 mm	R3634	524 mm	692 mm
900 mm	R3635	737 mm	908 mm
1200 mm	R3636	949 mm	1123 mm

Installed rise

Offset

Rinnai.co.nz