

Rinnai

Installation guide

Compact 2

Models: RIBF2N/RIBF2L



Important:

The Compact 2 is not designed to be built directly into a combustible opening. For combustible opening installations, a Rinnai zero clearance box and flue kit is mandatory. The Compact 2 is not to be installed, or operated in places where painting is taking place, or in places such as hair salons where there is a lot of dust and fluff, and where aerosols are used.

Appliance must be:

- Installed with a Rinnai supplied flue system.
- Installed, commissioned and serviced by a licensed tradesperson in accordance with these instructions and all applicable local rules and regulations.

Warning

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

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

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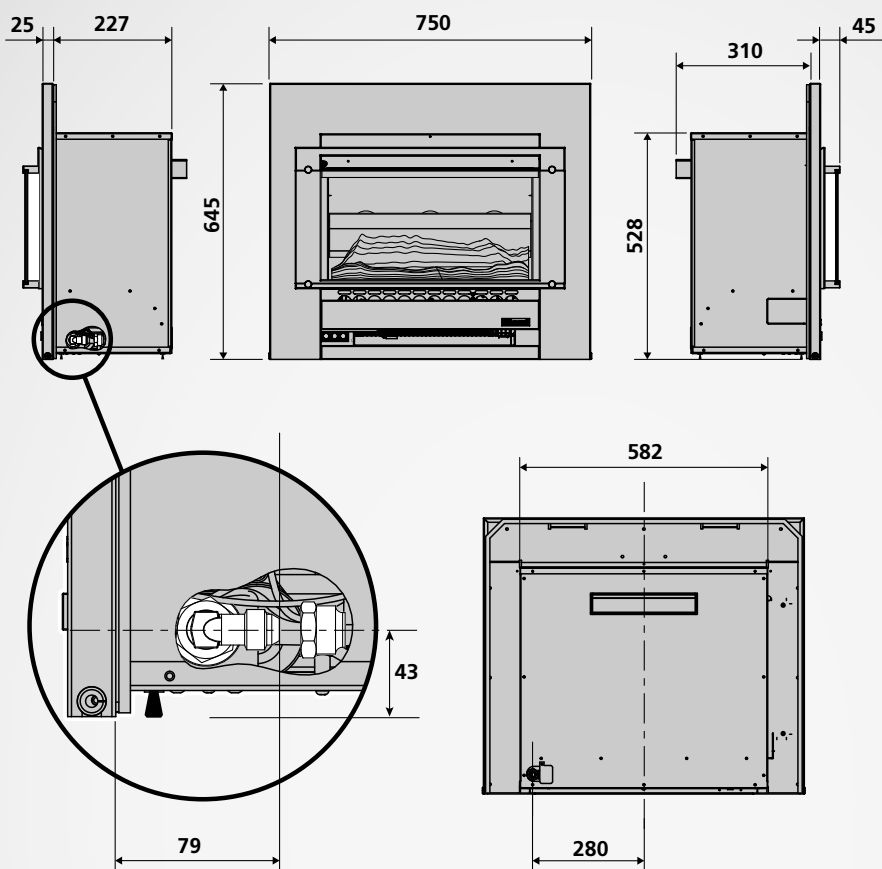
Phone: (09) 257 3800, Fax: (09) 257 3899
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Specification

All dimensions are in mm.



Compact 2

Specification summary

Input	= 9-25 MJ/h
Output	= 1.6-5.0 kW
Efficiency	= 73%
Heating area	= up to 78 m ²
Gas type	= NG or LPG

Inbuilt radiant/convector, glass fronted, ceramic log space heater with forced convection and natural draft flue system.

Burners

Ember bed and flame burner

Combustion system

Naturally aspirated multi port burner.

Data plate

Inside the appliance on the front right hand side panel.

Fan

Convection fan tangential 2-speed.

Flue (masonry)

Refer page 9.

Flue (mock chimney)

Refer page 9.

Gas connection

½ " BSPF male flare.

Gas control

Push button combination control valve.

Glass types

- Primary: Ceramic glass
- Secondary: Tempered glass
- Glass seal material: Woven fibre glass cord - Hytex® 1000
- Log set: Ceramic

Ignition

Continuous spark electronic ignition.

Noise level

49 dB(A)

Operation

Push button to light pilot and burners (low, medium, and high)

Power consumption

High = 20 W
Standby = 0 W

The electrical connection can exit the appliance from the lower left or right hand side, or from the rear of the heater.

Safety devices

Flame failure thermocouple, overheat switch (bi-metal strip), fan delay (bi-metal strip), and power failure protection

Weight

39 kg

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.

Clearances

The side and vertical clearances are measured from the edge of the frame.

The 180 mm side clearance includes side walls.

Wall surface above the heater

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, please contact the manufacturer for their specification.

Floor protection

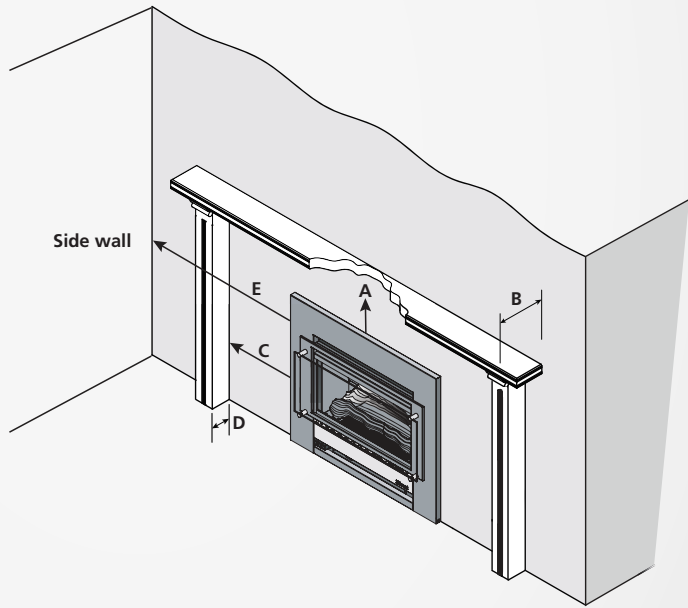
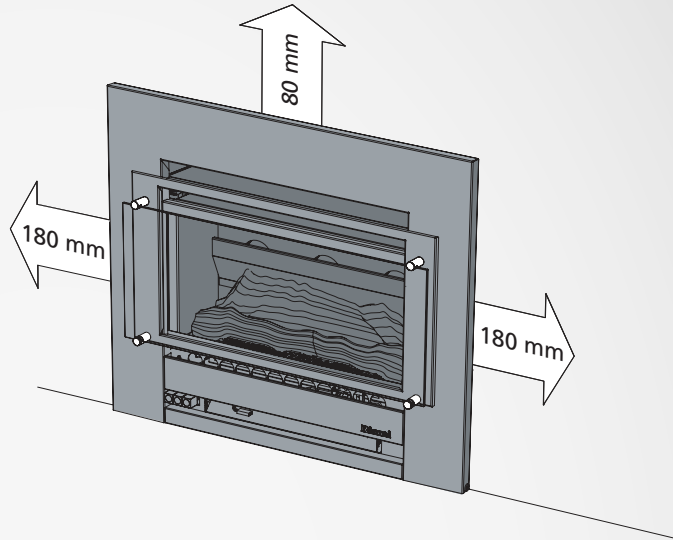
Heat emanating from this fire may over time affect the appearance of some materials used for flooring, such as, carpet, vinyl, cork or timber. This may be amplified if the air contains cooking vapours or cigarette smoke. To avoid this occurring, it is recommended that a mat be placed in front of this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



A	Mantel height from edge of frame	80 mm min.
B	Mantel depth at A - 80 mm (vertical clearance)	150 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 200 mm will require 180 mm (A) of vertical clearance.

C	Surround from edge of frame	80 mm min.
D	Surround projection at C - 80 mm (side clearance)	250 mm max.
E	Clearance to side wall	180 mm min.

Location

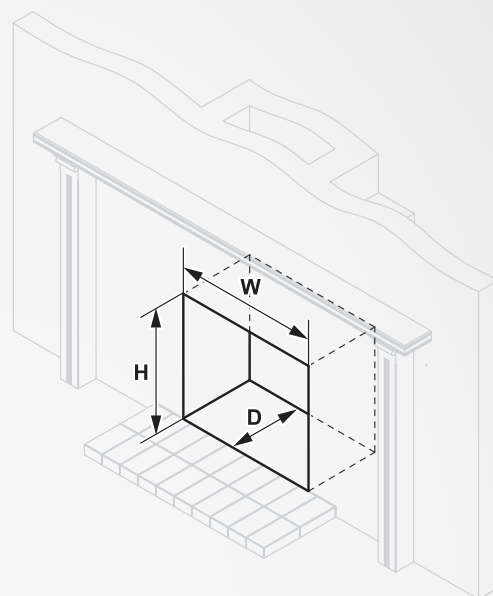
The main points governing location are flueing and warm air distribution. The heater must not be installed where curtains or other combustible materials could come into contact with the appliance. In some cases curtains may need restraining.

Enclosure dimensions

The heater must be positioned on a flat level surface that allows free movement of the appliance.

- Masonry installations
Use a slurry of sand and cement to level the base as required.
- Mock chimney installations
The zero clearance box needs to be supported. Either construct a base using board with supporting joists, or support with the frame itself.

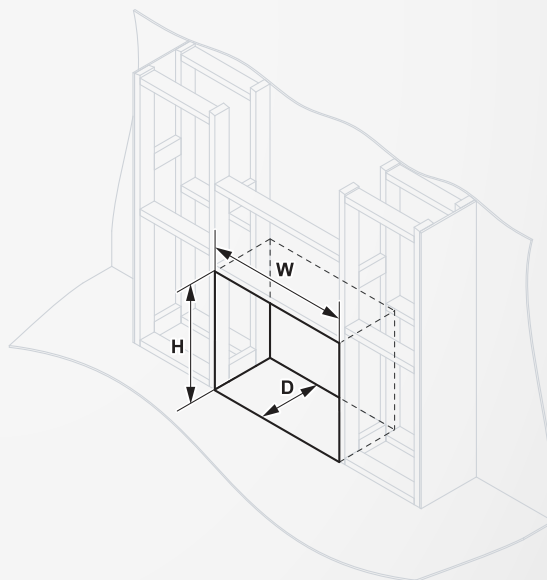
All dimensions provided are critical to the installation of this appliance and must be adhered to.



Masonry installation

Mock chimney installations

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 system.



Zero clearance (mock chimney) installation

	Masonry	Zero clearance
W-width	595-700 mm	685 mm
H-height	550-630 mm	615 mm
D-depth	360 mm*	380 mm

* Min clearance of spigot to back of fireplace is 50 mm

Gas and electrical connection

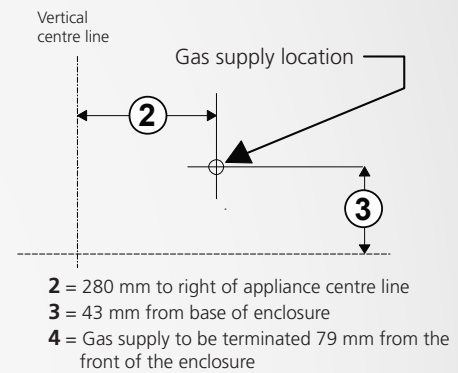
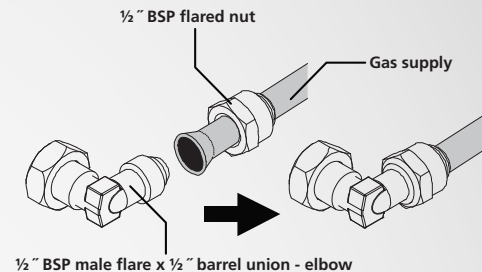
Gas pipe sizing must consider the gas input to this appliance, as well as other gas appliances in the premises. The gas supply termination is inside the heater, and enters from the rear of the appliance.

The length of the gas supply termination is measured from the front of the enclosure, including the thickness of any cladding material.

A ½ " BSP nut and a ½ " BSP male flare x ½ " barrel union - elbow are provided for connection to the gas supply. They are shipped inside the engine attached on the gas inlet connection of the heater.

Gas supply location

1. Mark off the location for the vertical centre line of the heater enclosure.
2. To the right of the vertical centre line, mark off both the vertical and horizontal location for the gas supply penetration.



Purging gas supply

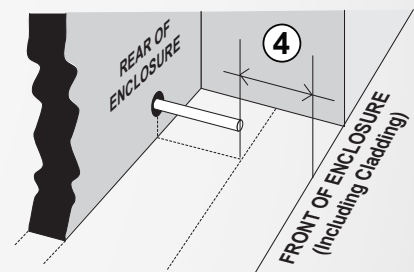
Foreign materials and debris such as swarf, filings etc must be purged from the gas supply. Failure to do so may cause damage to the control valve causing it to malfunction.

Electrical connection

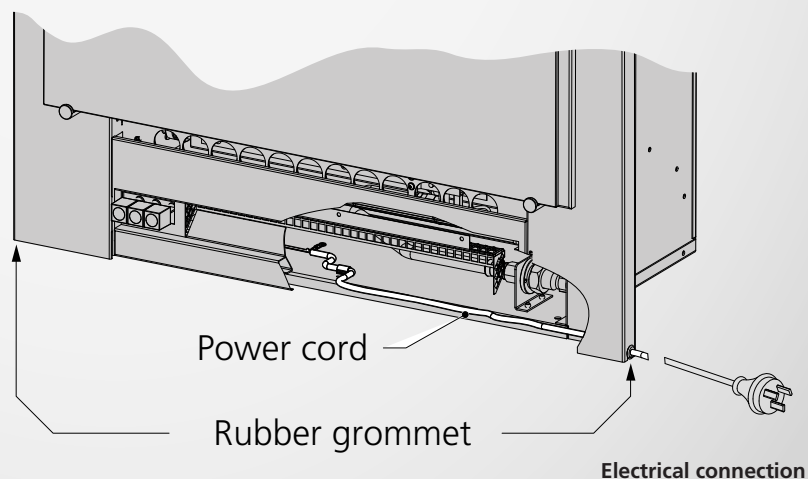
This appliance has a power cord with a 3-pin plug supplied. The power cord passes through the slot in the lower left or right hand side of the heater front assembly, or from the rear panel.

Rinnai recommends that the heater is plugged into a 230 V 10 A earthed power point. The power point must be a minimum of 300 mm to the side, and MUST NOT be above the unit.

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.



Gas connection

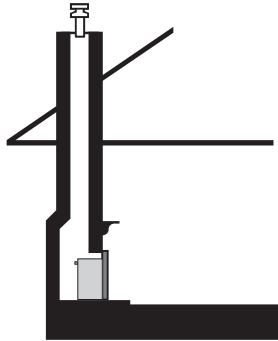


Compact 2

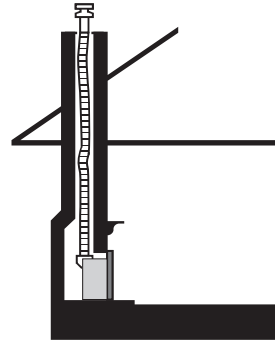
Flueing

Flueing options

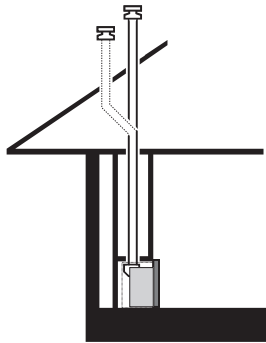
Masonry - no flexiliner



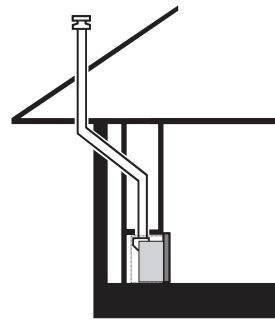
Masonry - flexiliner



Zero clearance- direct and offset



Zero clearance - offset



Flueing notes

Masonry flueing

Rinnai strongly recommends the use of a Rinnai flexiliner flue system. Failure to meet this criteria may result in an unsafe situation. Installation without a flexiliner flue is permissible as long as the chimney is checked for soundness and ability to achieve a good draw. If in doubt install a Rinnai flexiliner flue system.

Rear discharge spigot
43 x 245 mm.

Zero clearance flueing

Natural draft double skin flue.
Termination—an approved 100 mm cowl must be fitted to all installations.

For new fireplace installations (installations into a combustible opening) a Rinnai zero clearance box and flue kit is a mandatory requirement to meet warranty conditions.

Flue dimensions:
Outer: 150 mm
Inner: 100 mm

Flueing guidelines

Clearance to combustibles

Minimum clearance from inner flue to combustible material must be greater than 25 mm.

Flashings

To top of chimney structure do not form part of the flue kit and 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 length and bends

This is required for adequate draw, and prevents spill-back of combustion products that can cause the safety sensors to shut down the fire.

- Minimum flue length
3.6 m vertical. 1.2 m of vertical flue is required before any bend or offset.
- Maximum flue length
Rinnai recommend a maximum flue height of 8 m.
- Bends
Maximum of 2 x 45 ° bends.

Flue terminal locations

Must be compliant with 'Clearances Required for Flue Terminals' from AS/NZS 5601.1.

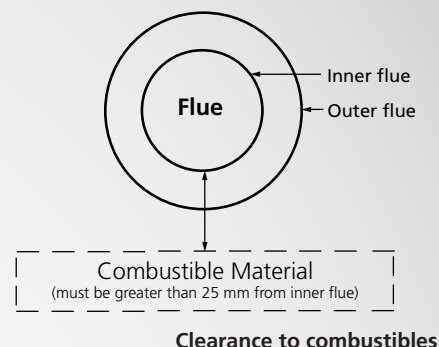
Flue is not to terminate under floors or in a roof space.

Self-supporting flue

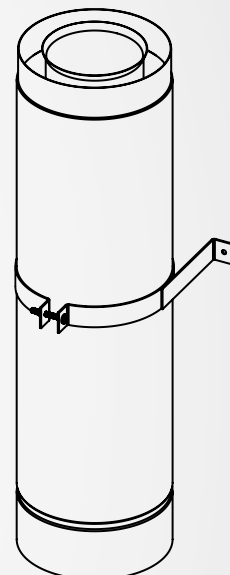
The weight of the flue system should not be supported by the appliance—it should be self-supporting. Supporting the flue is usually completed during the framing stage with flue supports or straps within the cavity.

Shared flues

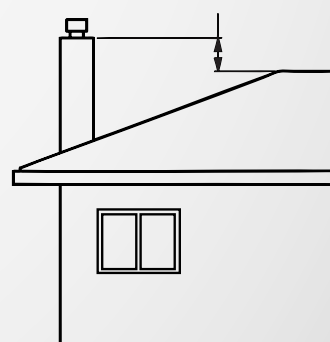
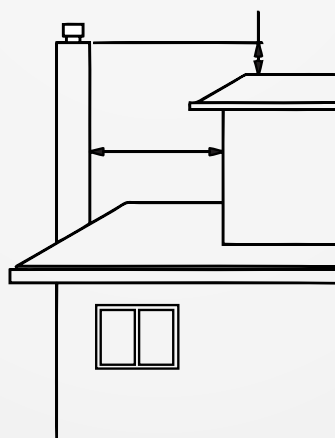
Gas appliances must not be connected to a chimney or flue serving a separate fuel burning appliance.



Clearance to combustibles



Self-supporting flue



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

Masonry flue installations

There are two types of masonry flue installations; open chimney and lined chimney. An open chimney uses the natural draft properties of a sound chimney, and an approved chimney plate and cowl to provide 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 system to provide flueing for the heater.

Check dimensions of opening

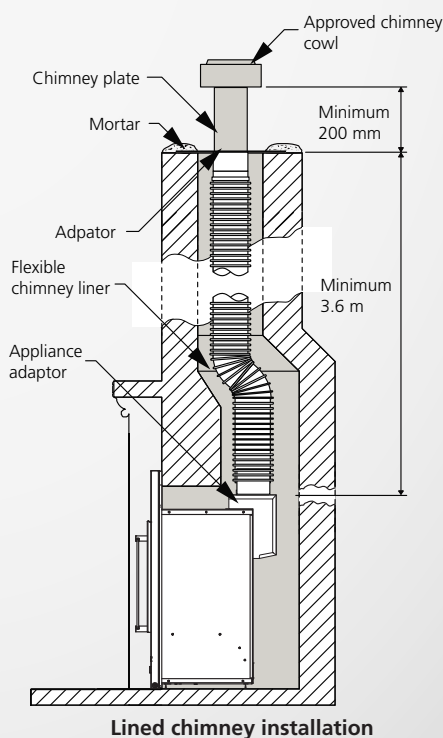
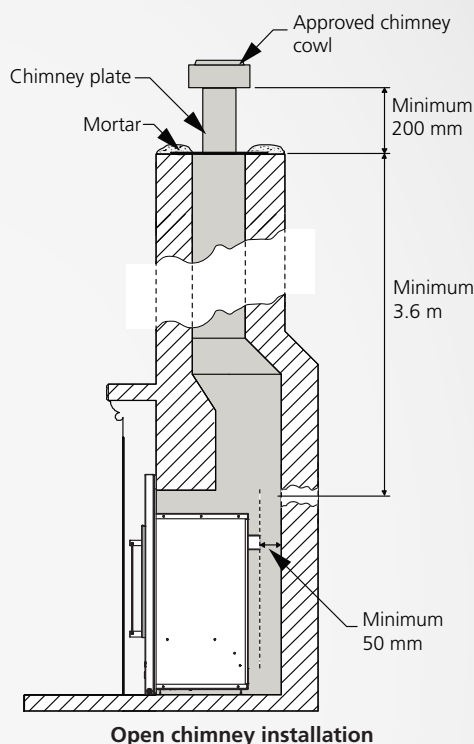
Ensure opening is within the range provided (p. 6), and if necessary bring them to the required dimensions. Also check chimney height as inadequate height can affect product performance. Some installations may require the chimney height to be extended to reduce down drafts. Also check there are no obstructions.

Provide a firm, flat, and sealed base, otherwise noise and vibration may result. Sealed means no holes or openings in the fire place.

Some criteria for checking chimney soundness

Rinnai strongly recommends the use of a Rinnai flexiliner flue system. Failure to meet this criteria may result in an unsafe situation. Installation without a flexiliner flue is permissible as long as the chimney is checked for soundness and ability to achieve a good draw. Some criteria for checking soundness:

- All loose/broken bricks must be replaced or repaired ensuring the chimney is of sound construction and does not leak.
- Chimney must be swept clean and be free from soot and creosote that may have built up if previously used for a solid fuel fire
- Any damper plate must be fixed in an open position or removed
- Any underfloor air supply to the fireplace must be completely sealed to prevent secondary air draw



Compact 2

Installation

Masonry installation (without flexiliner flue)

Masonry installation overview

1. Prepare site
2. Unpack heater engine
3. Prepare heater engine
4. Position heater engine
5. Connect the electrical supply
6. Insert heater into fireplace
7. Connect gas
8. Leak test
9. Secure heater
10. Complete installation

1. Prepare site

Ensure the intended enclosure meets the dimension requirements, and that the gas and electrical supplies have been prepared in accordance with the information stated on page 7.

2. Unpack heater engine

The heater engine is supplied in one carton. Check for damage, and ensure you have the correct gas type before starting. Do not install if any damage is evident.

3. Prepare heater engine

Attach the adhesive backed foam sealing strip (supplied) to the rear face of the front assembly mounting panel at approximately 20 mm from the top edge.

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 be used (e.g. non-combustible insulation or heat resistant silicon).

Remove, but do not discard the gas/electrical plate (five screws).

4. Position the heater engine

Place the heater engine in front of the fireplace enclosure. Use a panel of the cardboard packaging underneath the heater to help prevent damage to the flooring.

5. Connect the electrical supply

Plug in the 3-pin connector if electrical connection is inside the fireplace.

6. Insert heater into fireplace

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

7. Connect gas

Connect gas supply pipe and fittings to the gas control valve inlet and tighten.

8. Leak test

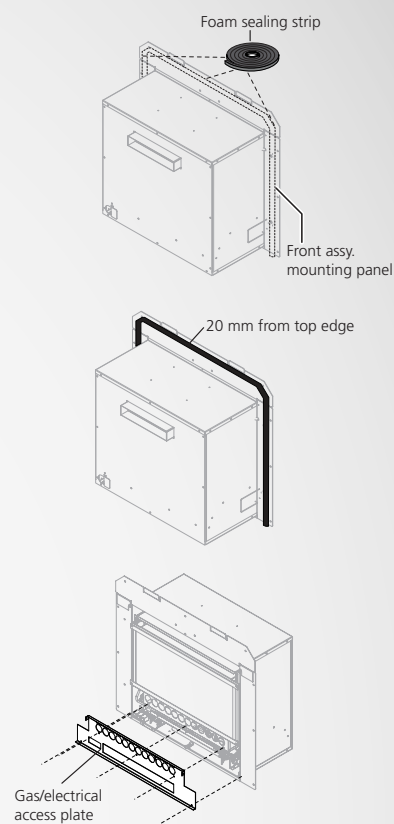
Turn the gas on and using a soapy solution, leak test all appliance connections. If a leak is present bubbles will form at the leak point. When finished remove any residue with a rag. Prevent any soapy solution coming into contact with electrical components.

9. Secure heater

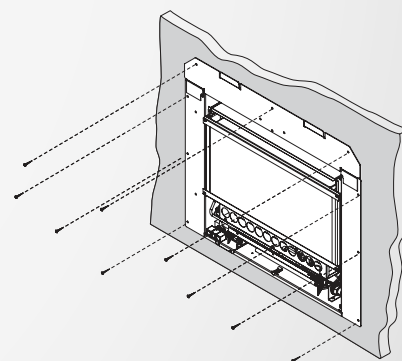
Fasten the heater to the masonry using appropriate fasteners (not supplied). There are three holes across the top of the front assembly mounting panel and side panels.

10. Complete installation

Refer to instructions on page 16.



Preparing the heater engine



Securing the heater

Zero clearance installation

Zero clearance installation overview

1. Prepare site
2. Assemble zero clearance box
3. Fit zero clearance box
4. Install flue
5. Unpack heater engine
6. Prepare heater engine
7. Fit cladding
8. Connect flue adaptor
9. Position heater engine
10. Connect electrical supply
11. Insert heater into fireplace
12. Connect flue
13. Secure flue
14. Connect gas
15. Secure heater
16. Leak test
17. Complete installation

1. Prepare site

Ensure the intended enclosure meets the dimension requirements, and that the gas and electrical supplies have been prepared in accordance with the information stated on page 7.

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

2. Assemble zero clearance box

Refer separate assembly instructions included with the zero clearance box.

3. Fit zero clearance box

Slide assembled zero clearance box into the cavity, ensuring the gas and electrical supplies are accessible.

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

4. Install flue

Install zero clearance flue system components.

5. Unpack heater engine

The heater engine is supplied in one carton. Check for damage, and ensure you have the correct gas type before starting. Do not install if any damage is evident.

6. Prepare heater engine

Attach the flue guide rails (supplied with the zero clearance box) to the top of the heater engine using the four predrilled holes and four screws supplied.

Remove (do not discard) the flue access plate, and the gas/electrical access plate.

7. Fit cladding

Before installing the heater ensure the cladding for the front of the enclosure has been fitted. Remember, the cladding **MUST BE** installed flush with the zero clearance box. Failure to do this will cause alignment problems with the flue.

8. Connect flue adaptor

Connect the flue adaptor* to the engine by aligning the guide rails with the guide plate* of the flue adaptor. Slide the flue adaptor in until the guide plate is fully home against the rear of the flange at the top of the heater.

* Supplied with the zero clearance box.

9. Position heater engine

Place the heater engine in front of the fireplace enclosure. Use a panel of the cardboard packaging underneath the heater to help prevent damage to the flooring.

10. Connect the electrical supply

Plug in the 3-pin connector if electrical connection is inside the fireplace.

11. Insert heater into fireplace

Carefully move the heater into the zero clearance box, ensuring the gas supply and fittings feed into the rear access hole.

12. Connect 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.

13. Secure flue

Replace the flue access plate, and secure the guide plate of the flue adaptor to the flue access plate with the two screws supplied. Re-secure the flue access plate to the heater (three screws).

14. Connect gas

Connect gas supply pipe and fittings to the gas control valve inlet and tighten.

15. Secure heater

Fasten the heater to cladding surface using appropriate fasteners (not supplied). There are three holes across the top of the front assembly mounting panel and side panels.

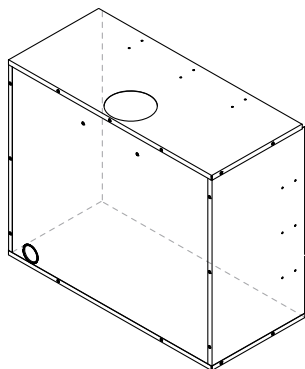
16. Leak test

Turn the gas on and using a soapy solution, leak test all appliance 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 coming into contact with electrical components.

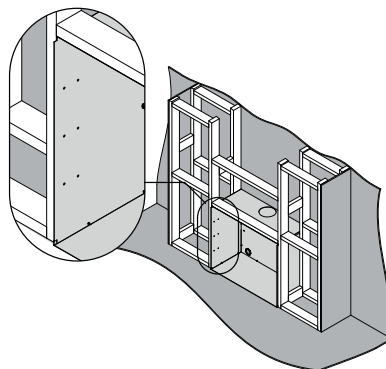
17. Complete installation

Refer to instructions on page 16.

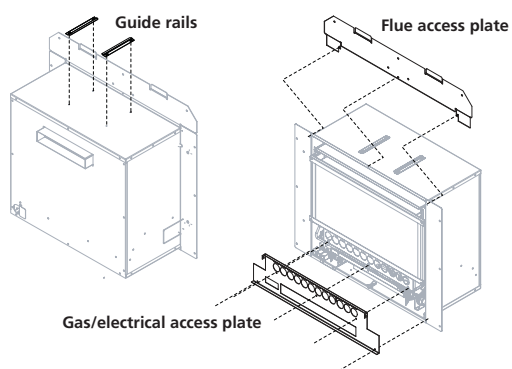
2. Assemble zero clearance box



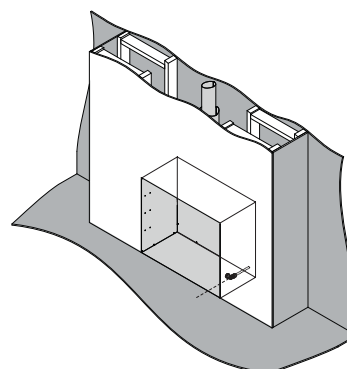
3. Fit zero clearance box



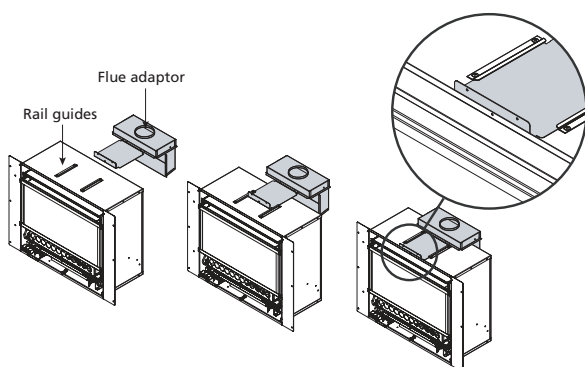
6. Prepare heater engine



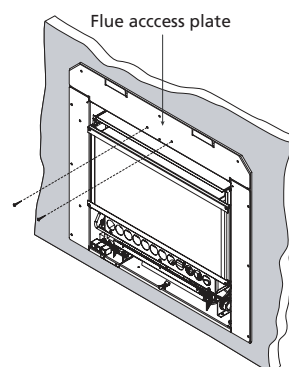
7. Fit cladding



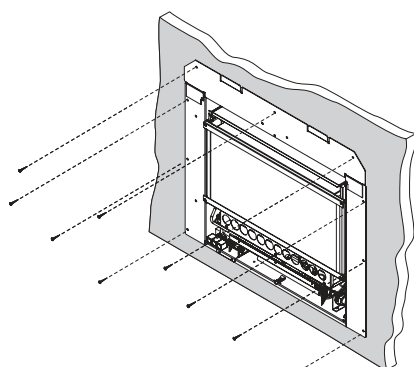
8. Connect flue adaptor



13. Secure flue



15. Securing the heater



Completing heater installation

Heater installation overview

1. Remove burner box glass
2. Unpack log set and granules
3. Install log set and granules
4. Replace burner box glass
5. Turn on electrical supply
6. Check burner pressures
7. Attach frame assembly
8. Complete installation checklist

1. Remove burner box glass

Loosen, but do not remove the two retaining screws for the bottom burner box clamp.

While supporting the burner box glass panel, completely unscrew and remove the two remaining screws and the top burner box clamp. Lift burner box glass panel and place aside.

2. Unpack log set and granules

Carefully unpack the log set from the packaging material and inspect for damage. If any damage is evident, do not continue with the installation.

The satchel containing the burner granules is taped to the outside of the foam packing that contains the log set.

3. Install log set and granules

Do not remove the burner from the heater to install the log set.

Use extreme care when handling the log set as it is fragile and will damage easily.

To position correctly, hold the log set at approximately 45 ° directly in front of the burner box. Maintain this angle and place the front feet of the log set behind the unpainted inner horizontal steel lip of the combustion chamber. Take care to ensure the ends of the log set do not touch the burner box walls.

To set the log set into the final position, rotate the back of the log set down, using the location of the front feet as pivot points, until it is sitting flat on the rear burner.

Check the correct position of the log set before installing the granules. Ensure the log set is firmly seated in the centre of the burner box and not touching the side walls, and that the ports are clear of any debris that may have occurred during installation.

Carefully place (do not pour) the granules over and around the front burner ports. It is beneficial that the gas jet is diffused by the granules. This will reduce any candling effect of the flame and enhance the realistic log-burning look of the heater.



Do not force, or block the burner ports with the granules.

Do not place any granules on the rear burner.

4. Replace burner box glass

5. Turn on electrical supply

6. Check burner pressures

Turn gas supply on, and refer to the data plate on the appliance for the correct gas pressure settings.

Remove the pressure test point screw and attach a manometer to the test point situated on the front of the injector block.

Light the heater, select the high heat setting, and check the pressure. If adjustments are necessary, the regulator is situated on the front of the gas control.

After checking pressures, turn the unit off, remove manometer, and replace test point screw.

Turn the heater on and off a few times to check ignition. When you are satisfied that the heater is working correctly, re-attach the gas/electrical access plate (five screws), and check the flame pattern.

7. Attach frame assembly

Locate and remove the two 8 g x 10 mm frame assembly securing screws. These are positioned in the frame mounting tabs on the gas/electrical access plate.

Carefully pick up the frame assembly taking care not to tilt it on its edge as the glass may slide out of the stand-off posts.

Position the top fold over the frame assembly mounting tabs and gently push the lower edge of the frame assembly until it is flush at the edges.

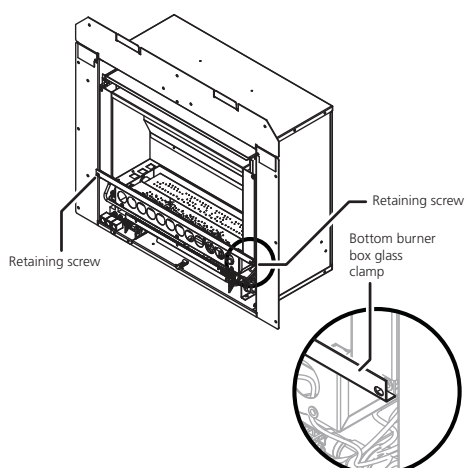
Fit and tighten the two frame retaining screws and the frame mounting tabs on the heater.

8. Complete the installation checklist

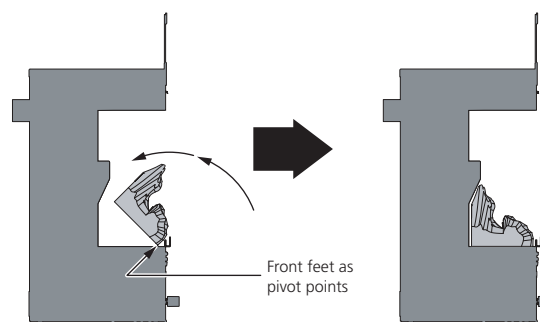
Complete the installation and commissioning checklist in the customer operation guide, and make sure you leave the guide with the customer. Explain to the customer about the use and care of the heater, and ensure they understand the instructions and operation of the appliance.

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

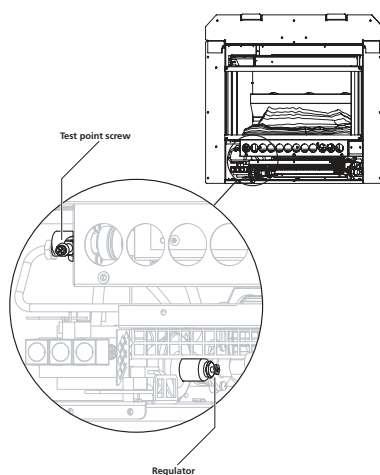
1. Removing the burner box glass panel



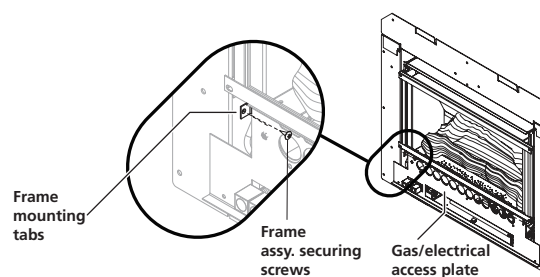
3. Install log set and granules



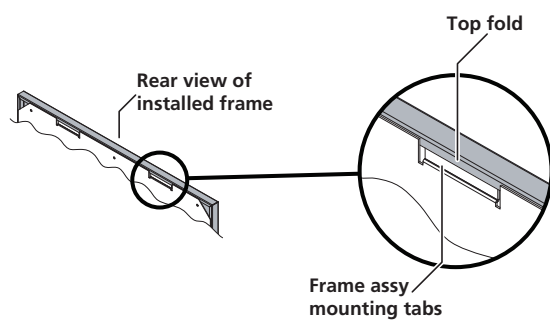
6. Check burner pressures



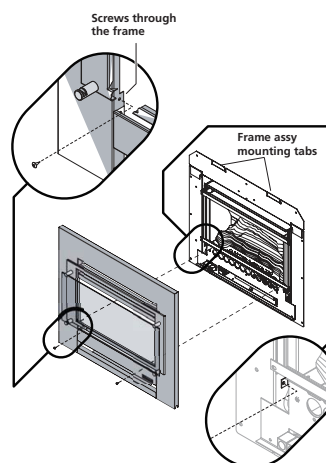
7. Attach frame assembly



7. Attach frame assembly



7. Attach frame assembly



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

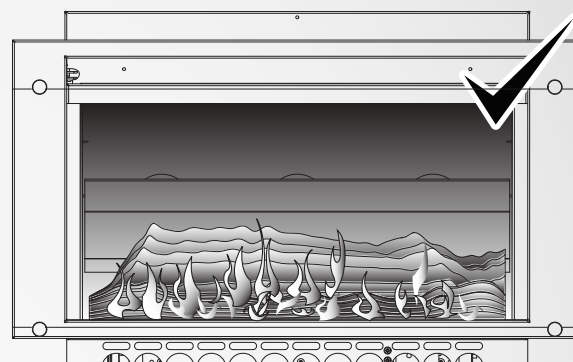
Abnormal flame performance and/or pattern can indicate a problem with your fire, such as blocked gas injectors, or log set (burn media) has shifted from when the fire was first installed. There are some warning signs that could indicate a problem.

- 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

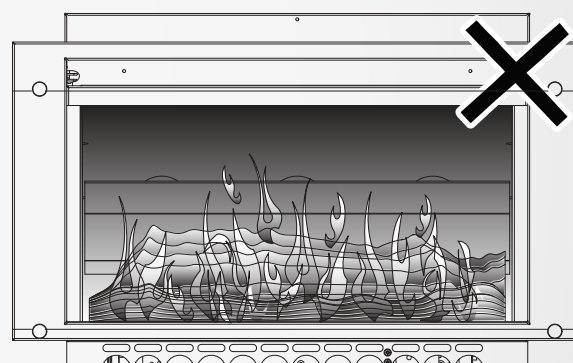
Important

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.

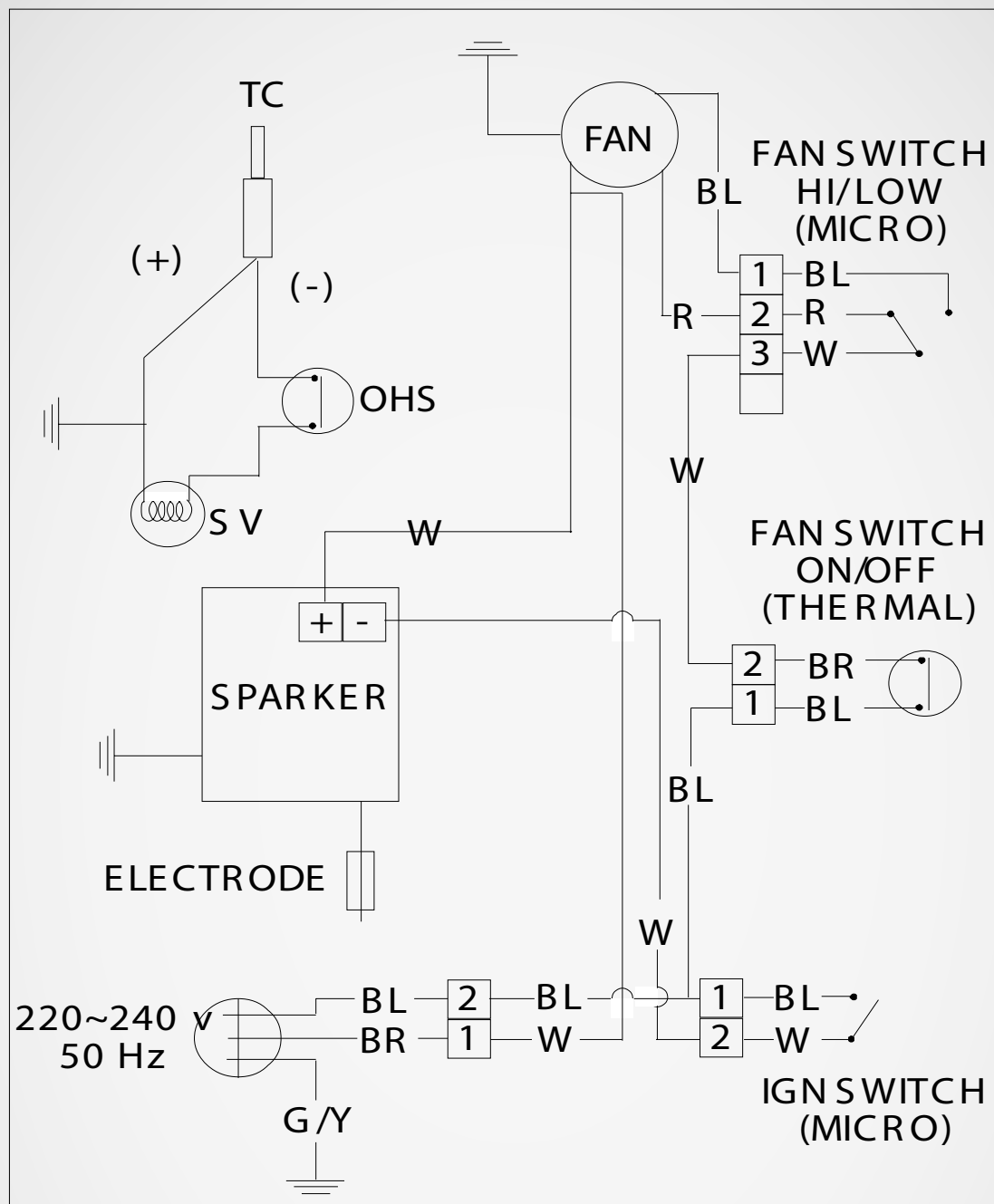


Normal flame pattern



Abnormal flame pattern

Wiring diagram (10153)



R Red
 BL Blue
 BR Brown
 W White
 G/Y Green/Yellow

OHS Overheat Switch
 SV Solenoid Valve
 TC Thermocouple



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