

Composite Recess Box (R1406)

Installation guide



These instructions are a guide only, designed to be used in conjunction with the NZ Building Code Approved Document - External Moisture E2. The recess box installation can be compared to the detail required to install a meter box.

Territorial authorities may have their own additional requirements regarding this type of installation. If in any doubt over compliance with building codes, it is advisable they are consulted prior to installation.

Important:

The recess box shall be installed in accordance with:

- Manufacturer's installation instructions
- AS/NZS 5601 Gas Installations
- AS/NZS 3000 Electrical Standards

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.

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

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Installers - please note:

These instructions are for the tradespeople installing the recess box and continuous flow water heater. If you are not installing the water heater, please leave these instructions, and any other kit components not used, such as the water heater installation bracket, inside the recess box. It is important that the gasfitter installing the water heater has access to the information and components required to fit the water heater inside the box.

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About the composite recess box

The composite recess box enables an external Rinnai INFINITY continuous flow water heater to be recessed¹ or semi-recessed² into an external wall, behind a door and out of sight.

Colour

Beige, can be painted to match the exterior cladding.

Suitability

Outdoor installations only.

Suitable for the following external Rinnai INFINITY water heaters:

- A-Series (A16-A26) current range
- VT-Series (VT16-VT26) discontinued
- XR-Series (XR16-XR26) vintage

Designed for new builds or major renovations. Installation needs to commence during the framing stage, before internal lining, cladding, or building wrap is applied.

Installation where the minimum framing depth is 88 mm.

The composite recess box is NOT SUITABLE for fire rated walls.

Kit components

- Recess box
- Flashing collar*
- Recess cover with sticker inside
- Screw and grommet pack
- A-Series lower installation bracket
- Installation guide and warning label

* Flashing collar is not required for brick installations

Clearance requirements

The location of the flue terminal must comply with AS/NZS 5601.1 Fig 6.2. If you do not have access to this document, we have produced a simplified diagram highlighting the main clearances on p. 11.

¹ Cover will protrude approximately 120 mm from the wall

² Cover/flashing collar will protrude approximately 240 mm from the wall

Protrusion from the finished wall will depend on the cavity depth and the cladding thickness.

Position

Some considerations when installing a Rinnai recess box with an external continuous flow water heater.

• Operating noise

A Rinnai INFINITY gas water heater operates at a slightly louder level than a unit installed on an outside wall. Please keep this in mind when positioning near a bedroom as the operating noise could affect some people.

• Hot water outlets

In most cases it's better to site the recess box closer to the kitchen where there is an expectation for instant hot water.

• Obstructions

Ensure there is no plumbing, electrical wires, timber, or other objects blocking the box inside or outside the cavity.

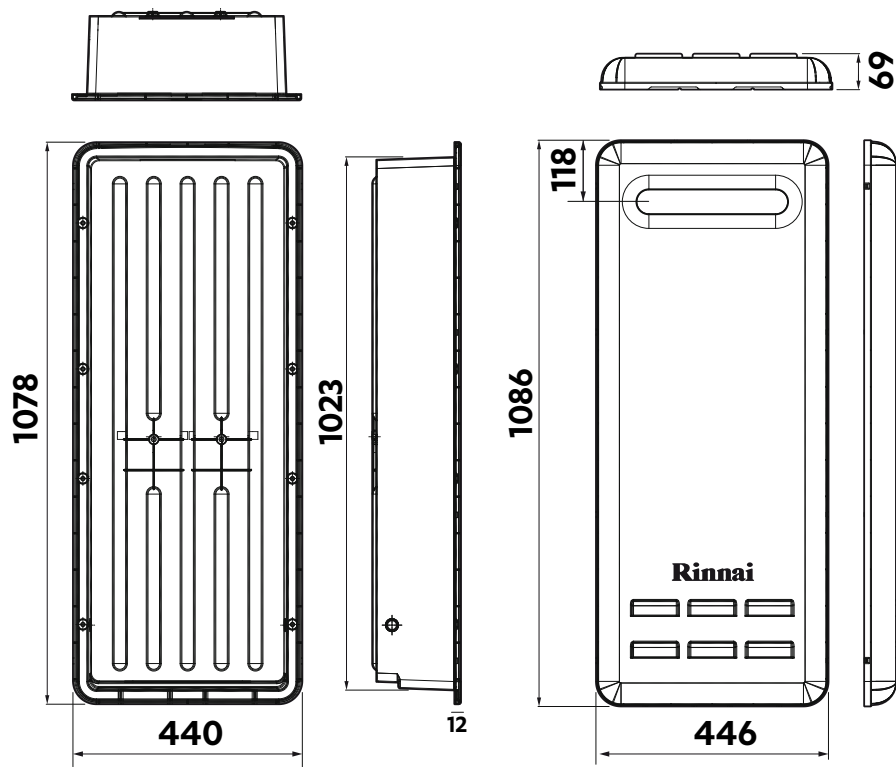
• Accessibility

Make sure the unit is accessible for maintenance and servicing.

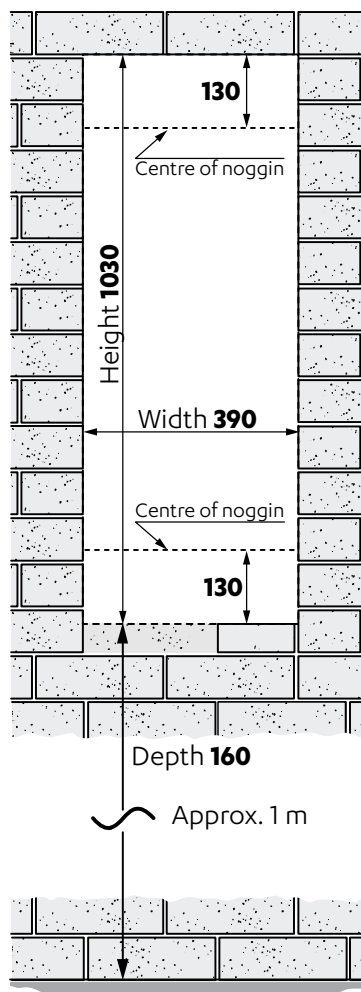
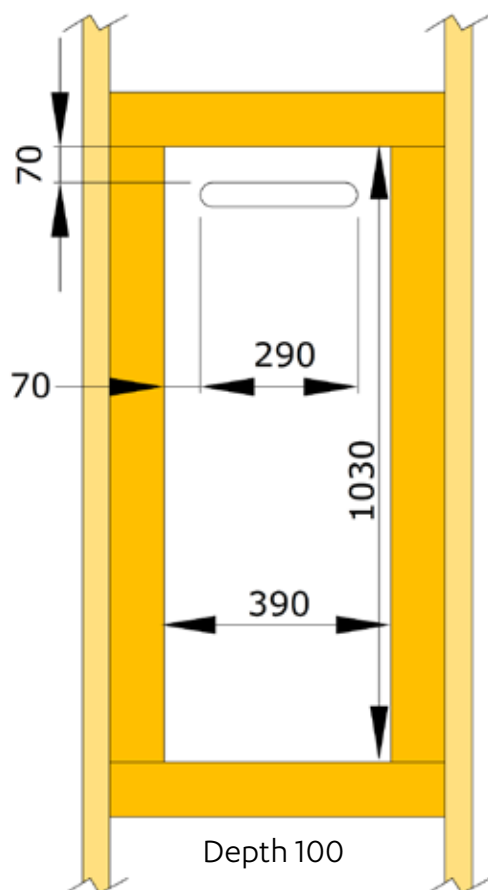
Heat

DO NOT apply heat in the vicinity of the composite recess box as this may distort and damage the box.

Dimension information (mm)



Approximate depth with cover on - 240 mm



Recessed and brick installations

Framing

Prepare a suitable opening for the recess box and the flashing system intended to be used to ensure the cavity is weathertight. Make sure there will be enough space to run the pipe and electrical connections into the box, and allow clearance at the top for the water heater mounting bracket to slip through.

Opening dimensions:

Height	Width	Depth
1030 mm	390 mm	160 mm

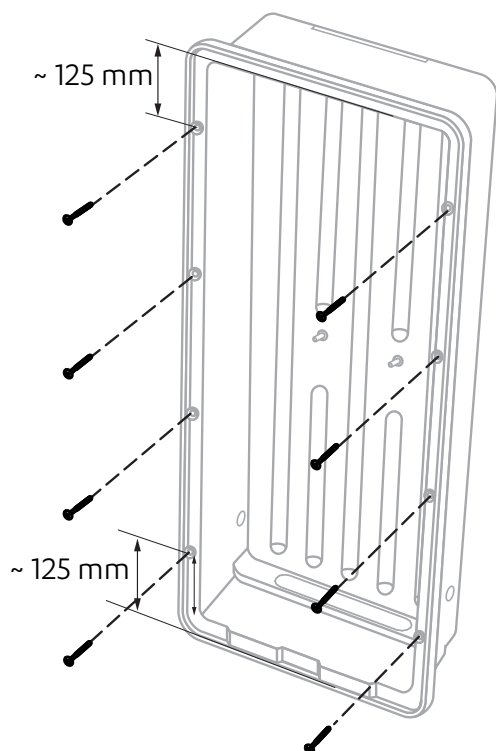
Securing options

The recess box can be secured using any of the methods described below:

- Secured externally
- Secured using brick ties
- Secured internally through the rear wall
- Secured internally through a side wall

Secured externally

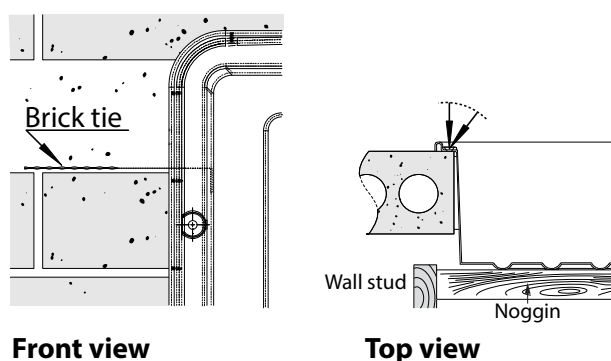
Secured to the wall surface via the eight screw holes provided in the flange of the recess box using suitable fasteners.



Secured using brick ties

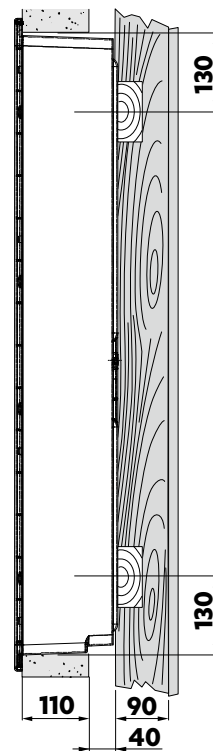
Secure a brick tie to the side walls of the recess box with pop-rivets or screws.

As the brickwork is being laid, use the attached brick ties to secure the recess box into the brick courses. Use two brick ties per side, one near the top, and one near the bottom.



Secured internally - rear wall

Install two nogs between the wall studs. These are to be centered at 130 mm from the top and bottom of the opening. Secure the recess box through the rear using suitable fasteners.

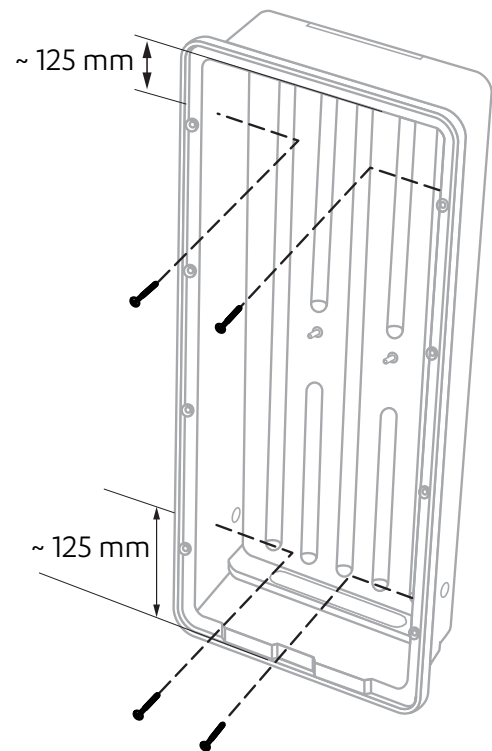


Secured internally - side wall

Secure the recess box into a solid fixture through the side walls using suitable fasteners.

The excess space between the side walls of the recess box and the solid fixture may require packing to prevent distortion of the recess box.

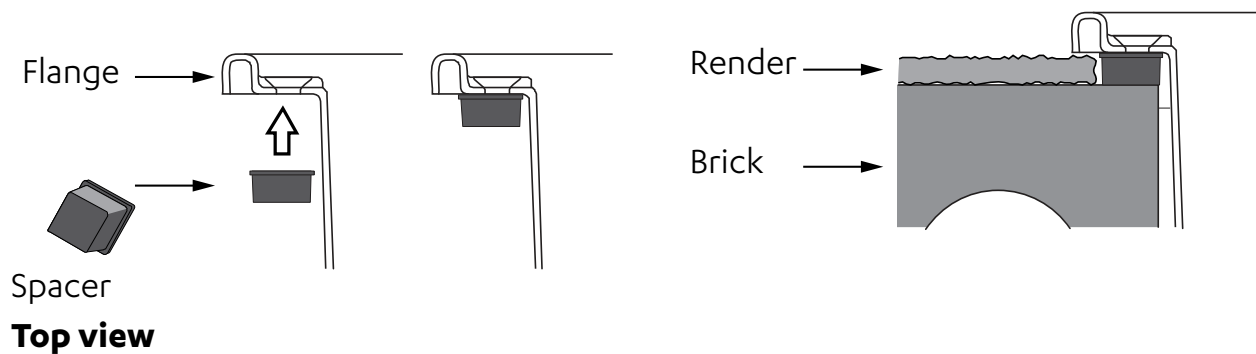
At least two fasteners should be used through each side wall, approximately 125 mm from the inside of the top and horizontal faces of the recess box.



Installing to rendered surfaces

Use spacers (not provided) to install the recess box, leaving sufficient clearance for rendering.

When the render is applied ensure that the gap provided by the standoff spacers is not exceeded as this will prevent the cover from being fitted.



Semi-recessed frame installation

Framing

Prepare a suitable opening for the recess box and the flashing system intended to be used to ensure the cavity is weathertight.

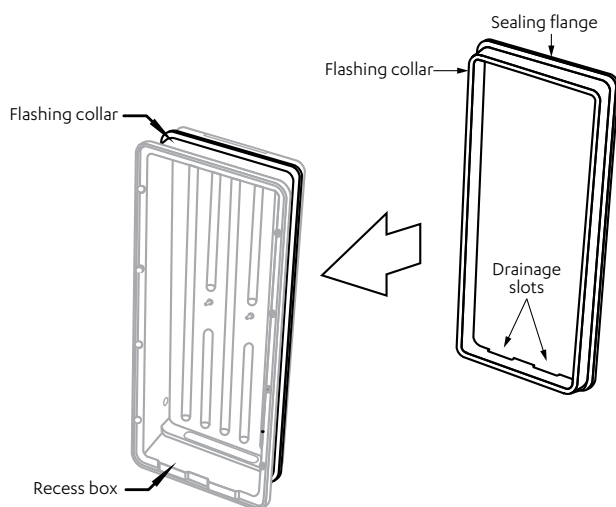
Make sure there will be enough space to run the pipe and electrical connections into the box, and allow clearance at the top for the water heater mounting bracket to slip through.

Opening dimensions:

Height	Width	Depth
1030 mm	390 mm	160 mm

Installation

When installing the recess box ensure it is oriented so the sealing flange is against the wall surface and the drainage slots are in the lower most position.



The recess box can be secured using any of the methods described below:

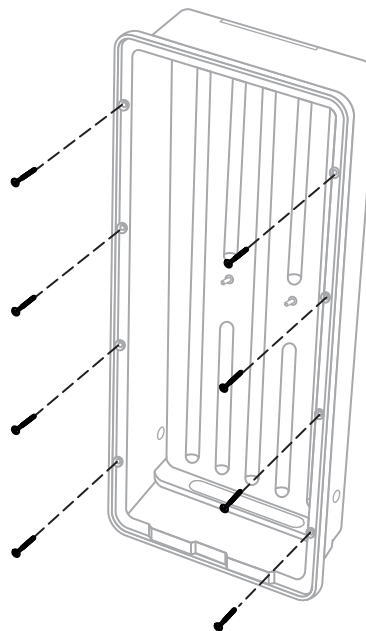
- Secured externally
- Secured using brick ties
- Secured internally through the rear wall
- Secured internally through a side wall

Secured externally

Use the 8 x 100 mm screws supplied to secure the flashing collar and recess box to the wall surface.

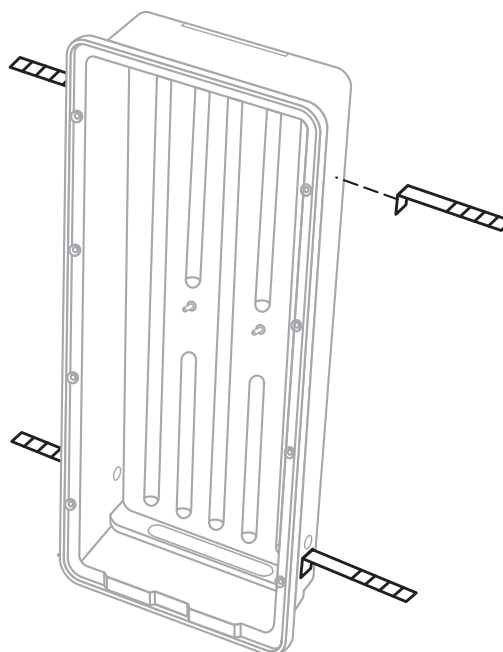


Use only the eight holes that are provided. DO NOT attempt to screw or nail through the sealing flange as this may damage the frame.



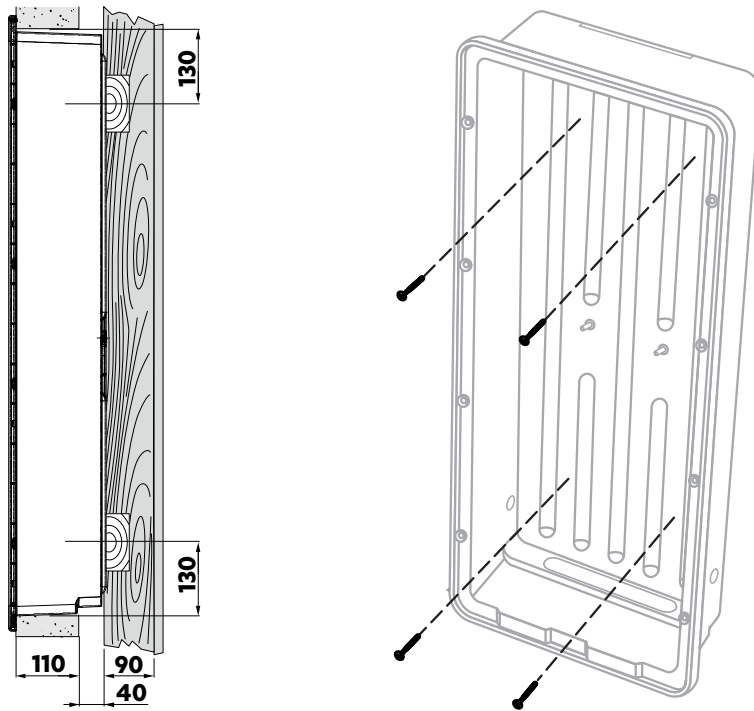
Secured using brick ties

Secure a brick tie to the side walls of the recess box with pop-rivets or screws.



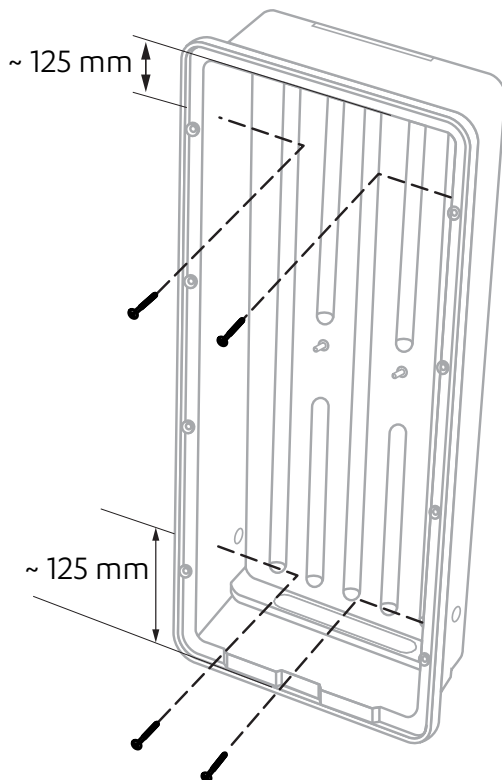
Secured internally - rear wall

Install two nogs between the wall studs. These are to be centered at 130 mm from the top and bottom of the opening. Secure the recess box through the rear using suitable fasteners.



Secured internally - side wall

Secure the recess box into a solid fixture such as timber studs, through the side walls using suitable fasteners. At least two fasteners should be used through each side wall, approximately 125 mm from the inside of the top and horizontal faces of the recess box.



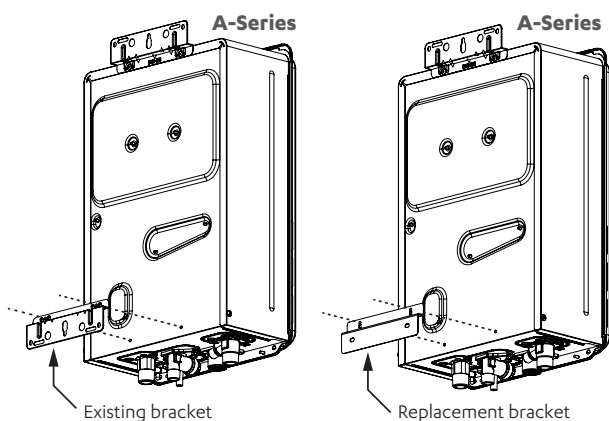
Installing the water heater

Ensure the water heater model and serial number is copied legibly from the data plate, left hand side of the appliance, to the sticker on the inside of the recess box cover—this must be done. The model and serial numbers are required for servicing, troubleshooting, warranty claims, and parts supply.

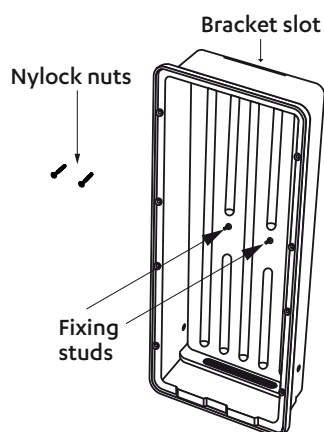
Installation

1. Remove the two M5 nylock nuts from the fixing studs of the box.
2. For Rinnai A-Series models ONLY, remove the existing lower water heater bracket, secured with two screws and replace with the one provided in the kit.

This allows the water heater to line up with the fixing holes of the recess box.



3. Insert the upper mounting bracket of the water heater into the bracket slot.
4. Push the appliance up until the lower mounting bracket aligns with the fixing studs and secure with the two nylock nuts removed in step 1.



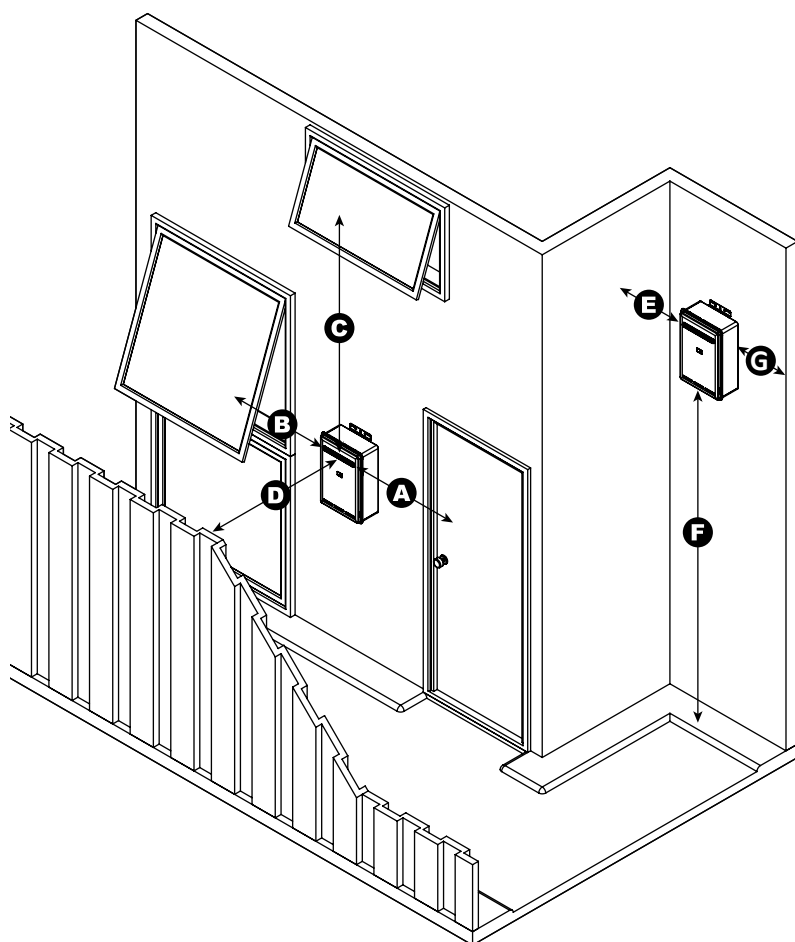
5. Select the locations for the pipe and electrical entry to the box. Remove the blanking plugs from the holes that will be used and replace with the grommets supplied, otherwise use the supplied grommets for other drilled holes. The pipe entry points are elevated to prevent water ingress.
6. Complete the gas and water connections. It is recommended that flexible gas and water connectors are used to make the final connections—this allows the water heater to be removed if necessary without having to cut the pipework.
7. Install an approved weatherproof electrical general power outlet (GPO). This can be installed inside the box in accordance with AS/NZS 3000 electrical wiring rules.
8. Commission the water heater in accordance with the commissioning checklist supplied with the Rinnai INFINITY.
9. Attach the warning label supplied with the recess box to the front panel of the water heater.
10. Install the recess box cover by ensuring the four locking clips have securely engaged.

Also secure the cover to the body of the recess box with the two screws provided in the kit—these come screwed into the middle of the recess box. These are needed, especially in windy areas, to prevent the cover being blown off.

11. Use an approved solution to seal the box, cavity and any penetrations, including any pipe and electrical penetrations.

Flue terminal clearance positioning diagram

The below diagram shows the main flue terminal clearances for a continuous flow water heater. Even though it does not display a water heater inside a recess box, the clearances (excluding F) will be the same as the dimensions taken from the flue outlet of the water heater.



Dim.	INFINITY A-Series, VT and XR models
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A	Min. 300 mm
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B	Min. 300 mm
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C	Min. 1.5 m
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D	Min. 500 mm
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E	Min. 300 mm
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F	Min. 300 mm*
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G	Min. 300 mm
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Clearance below eaves, balconies, and other projections for all models is 300 mm.

* Rinnai recommend 1.5 m to give enough clearance for the pipe work, and to safely expel flue gases.



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