

# Installation guide

## Rinnai **INFINITY**<sup>®</sup> gas hot water heater internal flueing



The flueing components outlined in this guide are suitable for the following Rinnai INFINITY models:

### Current models

- EFi250 (REU-KM3237FFUD)
- HDi200 (REU-VR2632FFUG)

### Discontinued models

- HD200i (REU-VM2632FFUC)
- HDi200 (REU-VM2632FFUC)
- HD200ia (REU-VR2632FFUG)
- XR26i (REU-V2632FFUG)
- XR26ia (REU-VR2632FFUG)

## Important:

Rinnai INFINITY® gas hot water heater flueing shall be installed in accordance with:

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

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

### Warning

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

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

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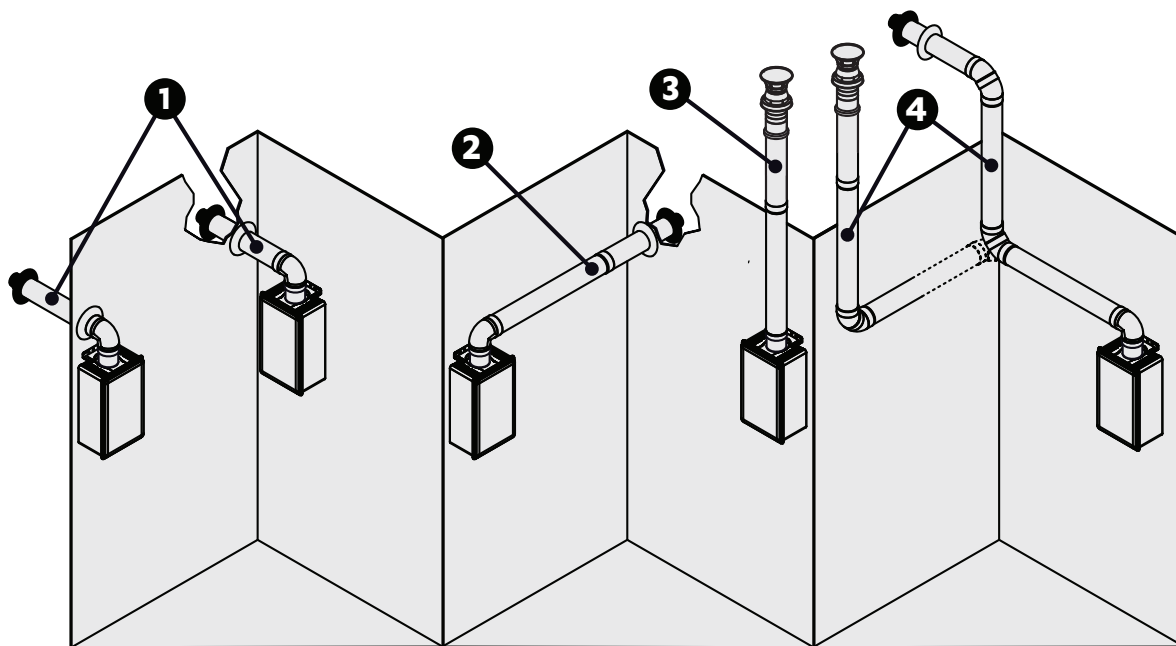
# contents:

Flueing options and suitability.....	4
Flueing guidelines .....	5
Flue spigots and condensate.....	6
Condensate .....	6
UV protectors.....	7
Cutting to size .....	7
Direct flueing using FFSSKIT .....	8
Horizontal extension flueing .....	8
Combination flueing .....	9
Flue components .....	10

# Flueing options and suitability

The flueing for internal water heaters is a coaxial design. It has a stainless steel inner pipe to discharge products of combustion and a thermoplastic outer pipe for air supply to the appliance.

Each Rinnai INFINITY water heater is flued individually, refer flueing options diagram below.



## 1 Direct flueing

For direct flue installations through an external wall using the direct flue kit FFSSKIT—maximum wall thickness 430 mm (EFi250) and 485 mm (HDi200).

## 2 Horizontal extension flueing

For flue installations through an external wall using the direct flue kit FFSSKIT and additional lengths of pipe.

## 3 Vertical straight flueing

Installations where the internal unit is flued vertically through the roof.

## 4 Combination flueing

Installations using a combination of horizontal and vertical flueing.

### Please note

The installation and flue component images throughout this guide refer to our current internal models only (HDi200 and EFi250). Please adapt the information as necessary if you are referencing this document for the discontinued XR26i internal or HD200i internal models.

# Flueing guidelines

Flue gases can reach temperatures up to 200 °C. The flue terminal is to terminate in a location so as not to cause a nuisance, in accordance with AS/NZS 5601.

## Flue support

Ensure the flue is supported independently of the appliance by use of suitable clips or brackets, in accordance with AS/NZS 5601. Appropriate standoff brackets are supplied with each FFSSROOFCOWL and FFSSPIPE1000.

## Flue length

The chart below highlights the maximum flue length and number of bends.

		Number of 90° Bends				
		0	1	2	3	4
Flue Length (m)	1					
	2					
	3					
	4					
	5					
	6					
	7					
	9					
	11					
	13					
	15					

Max. flue length

## Vertical terminations.

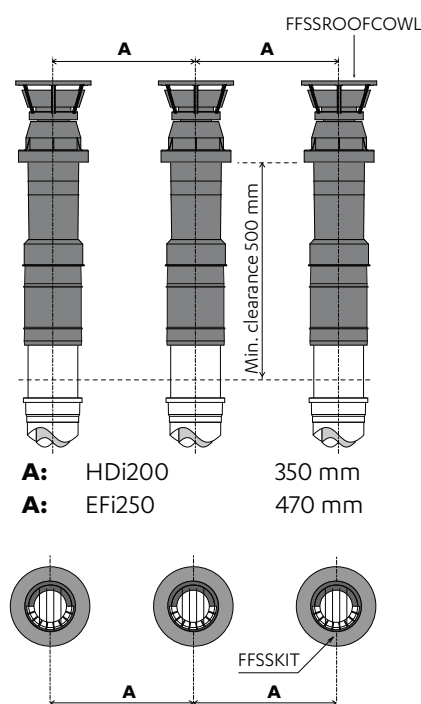
To ensure products of combustion are cleared, adequate clearance from the building is required.

The flue cowl should have a 500 mm clearance from any part of the building. This also applies to steeped and pitched roofs, which should be clear of the ridge line.

Lesser clearances may provide perfectly adequate flue systems depending on the installation. Minimum clearances are shown in AS/NZS 5601.

## Multiple flues

Ensure minimum distances, as shown below are maintained.



Each terminal is to be terminated at the same vertical height, refer images below—please note these images show our older style terminals, which have since been updated.



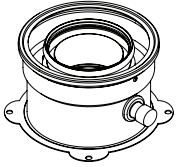
Older style roof cowls all terminating at the same height



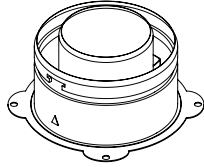
Older style horizontal terminals all terminating at the same height

# Flue spigots

The Rinnai INFINITY internal water heater models noted on the front cover have a FEMALE flue spigot attached to the top of the unit. This differs to the older units, which have a MALE flue spigot attached. This is relevant if you are trying to fit a newer model Rinnai INFINITY\* into 'old' flueing—the male flue spigot will need to be ordered. Please contact Rinnai for further information.



Female flue spigot - part 4913

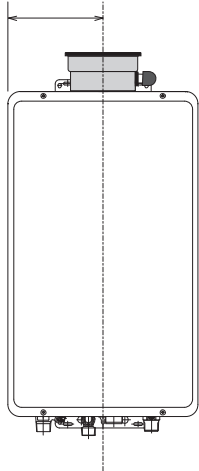


Male flue spigot - part 4914

\* Not applicable if installing an EFi250 model, this MUST USE the FFSS (stainless steel) flue components detailed in this guide.

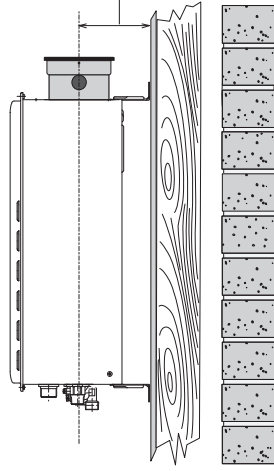
## Appliance spigot centres

175 mm (HDi200)  
230 mm (EFi250)



Flue spigot centreline  
from edge of appliance

95~135 mm (HDi200)  
155~195 mm (EFi250)



Flue spigot centreline  
from wall

The wall mounting brackets are adjustable by 40 mm. Adjusting the mounting bracket also adjusts the spigot centre.

# Condensate

The condensate trap collects any condensate from the flue and prevents condensate from entering the water heater and causing damage.

Condensate is a by-product of gas combustion and is mildly acidic. For this reason copper tube and fittings must not be used as it will corrode. Instead Rinnai recommends plastic pipe and fittings such as UPVC or PE.

## Condensate: HD200 and XR26 internal models

A condensate trap kit (FFSSCOND) is required for flue lengths over 1.5 m. If flueing is less than 1.5 m, the flue spigot on the top of the unit is capped using the drain cap tube supplied with the unit. The drain cap is only removed if the condensate kit is connected..

## Condensate: EFi250 internal models

The FFSSCOND is not needed for the EFi250 as there is a different method for draining condensate (that doesn't require the additional FFSSCOND component). For further information refer to the Rinnai INFINITY installation guide, section 'EF models: Condensate Drain'.

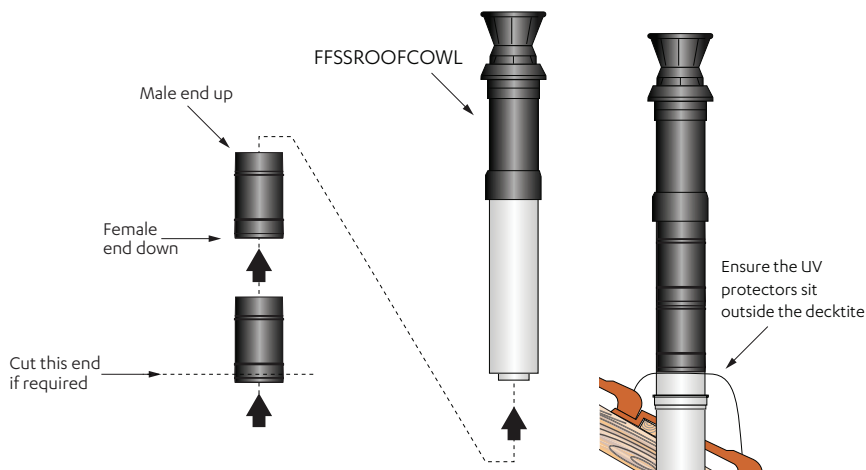
# UV roof protectors

The roof cowl comes with two black UV injection moulded pipe sections for covering and protecting the white flue pipe from UV damage.

To install, click together and if required cut to length. If for some reason any remaining white pipe is exposed to UV, this should be painted with a suitable UV resistant coating.

## Important

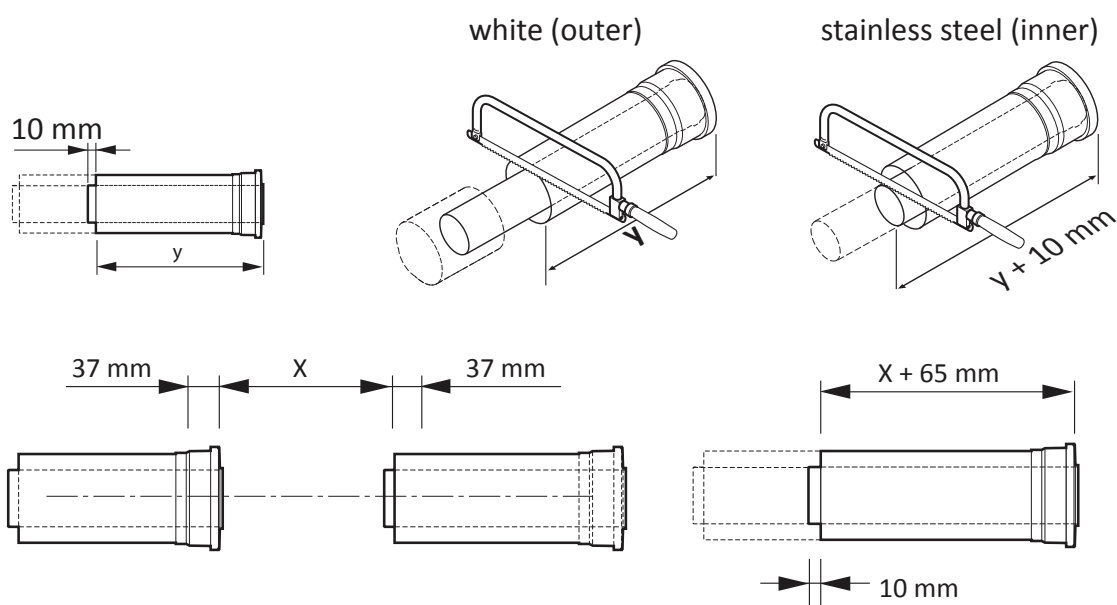
When installing the UV protectors it is critical that the protector sits outside the decktite, not inside. Weathertightness will be an issue if the protector is installed inside the decktite.



## Cutting to size

Pipes overlap by approximately 37 mm. Once joined the effective length reduces by 37 mm. This needs to be factored when cutting to size. Add 2 x 37 mm to extension pipe X.

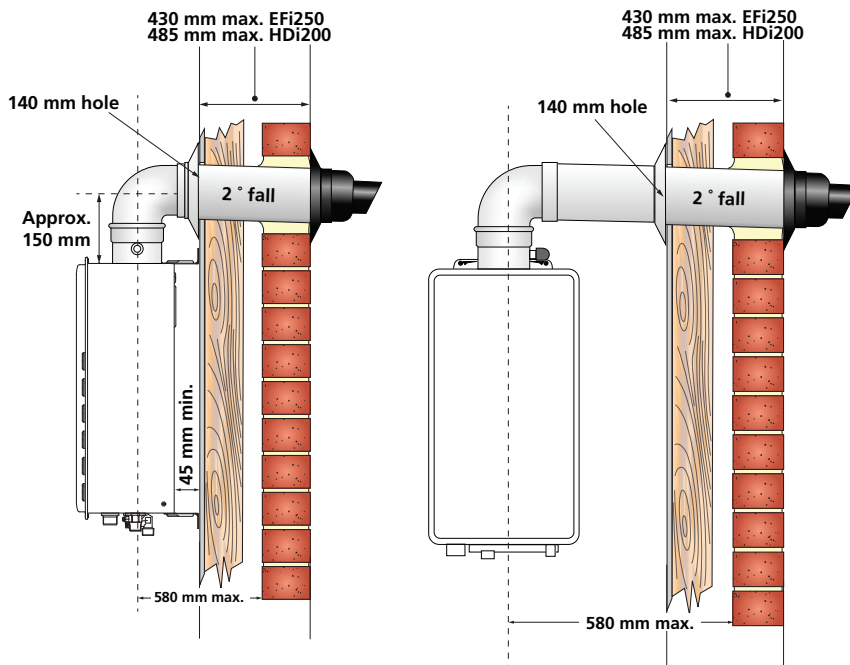
The inner pipe must always extend 10 mm beyond the outer pipe in the male end of the flue. Always cut the male end of the flue and not the female end. Deburr sharp edges as this could damage the gasket resulting in a system that is no longer air-tight.





# Direct flueing using the FFSSKIT

For installations where the Rinnai INFINITY is mounted directly on the inside of an external wall with a maximum wall thickness of 430 mm (EFi250) and 485 mm (HDi200).



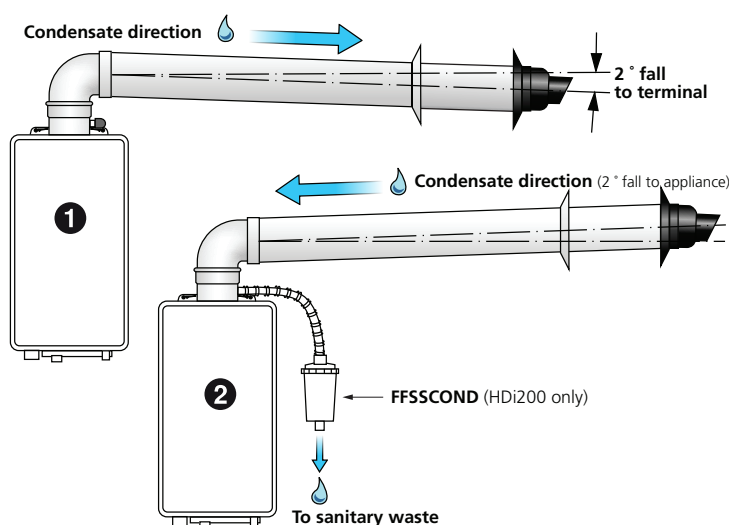
## FFSSKIT contains

- 90 ° bend
- horiz. flue terminal
- int. rubber white wall trim
- ext. rubber black wall trim

Horizontal flues **MUST** SLOPE 20 mm per metre to the termination point. Ensure condensate drains appropriately.

# Horizontal extension flueing

For installations where the Rinnai INFINITY gas hot water heater is mounted against an internal wall and the flueing needs to be extended for a longer distance horizontally to exit an external wall.



Use FFSSKIT as a starting point and customise with flue pipe (FFSSPIPE1000). More than one flue pipe (can be cut to size) may be required. Total flue length can be up to 13 m.

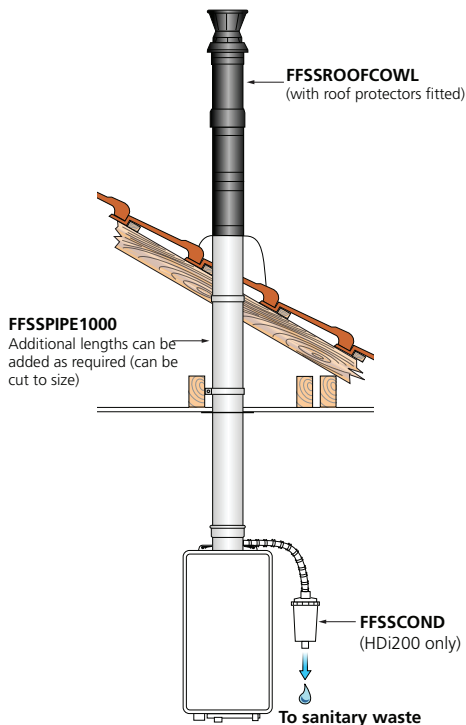
Condensate can be handled in two ways:

1. 2° fall to the termination point (20 mm per metre), ensure condensate drips will not cause damage.
2. Condensate drains back to the unit—HDi200 unit will need a condensate trap kit (FFSSCOND).



# Vertical straight flueing

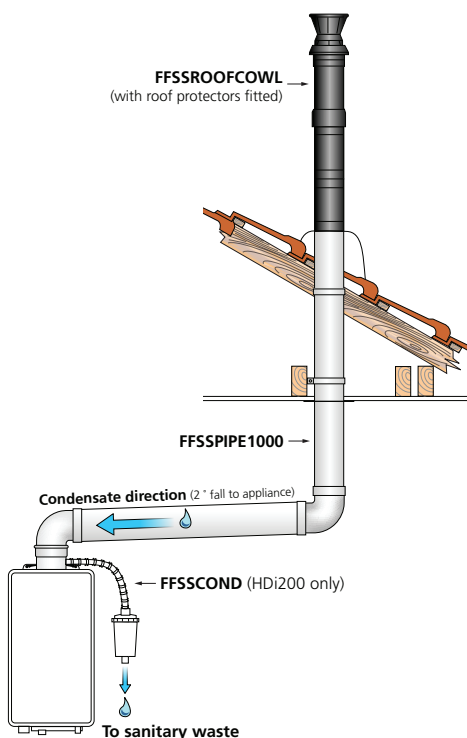
For installations where the Rinnai INFINITY needs to be flued vertically through the roof.



For HDi200 units, a condensate trap (FFSSCOND) is required for flue lengths over 1.5 m. Total flue length can be 15 m.

# Combination flueing

Combination of vertical and horizontal flueing. HDi200 unit will need a condensate trap kit (FFSSCOND).



If starting horizontally and finishing horizontally, use FFSSKIT as a starting point and customise.

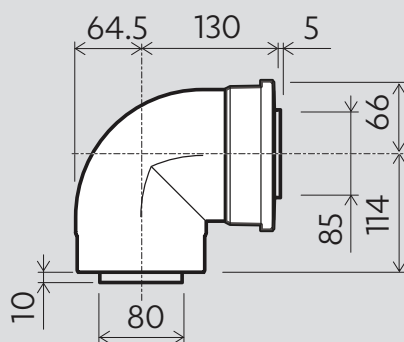
If starting horizontally and ending vertically or vice versa, individual flue components will need to be ordered. Flueing must start with a FFSSBEND90 or FFSSPIPE1000 (can be cut to size).

# Rinnai INFINITY flue components

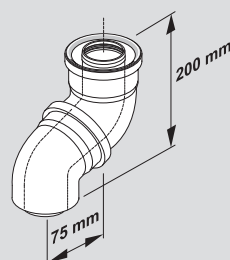
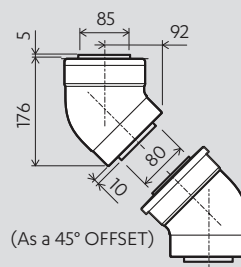
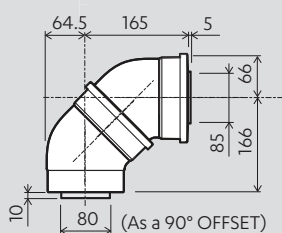
All the major flue components are constructed of a PVC outer and a stainless steel inner. These have zero clearance from combustibles.

All dimensions are in mm.

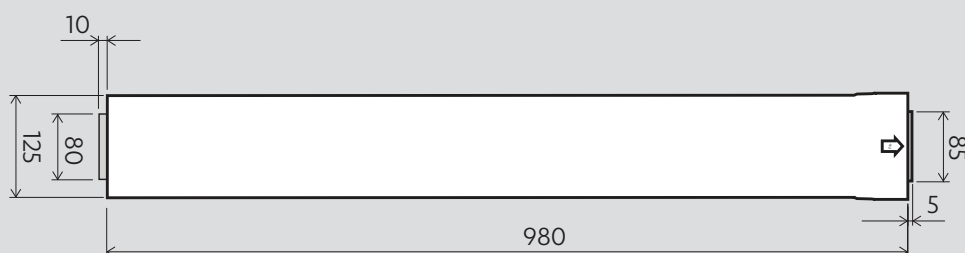
## 90 degree bend (FFSSBEND90)



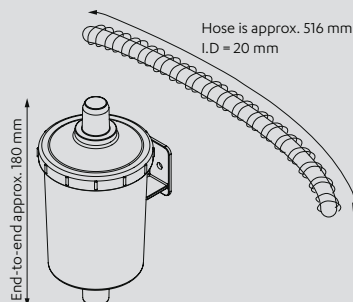
## 45 degree bend (FFSSBEND45) - sold as a pair



## Flue pipe (FFSSPIPE1000) - can be cut to size, includes a Munzing ring to support the flue

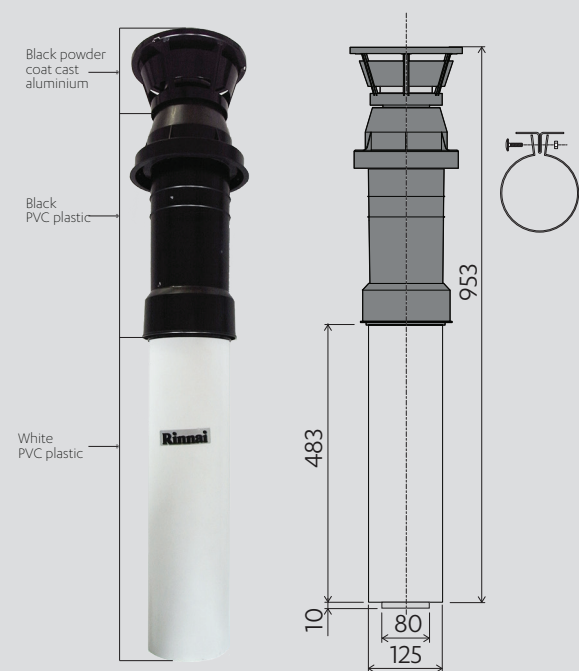


## Condensate trap kit (FFSSCOND) for the HDi200



The FFSSCOND is not needed for the EF250 as there is a different method to drain condensate (that doesn't require additional flue components). For further information refer to the Rinnai INFINITY installation manual.

## Roof cowl for vertical installations (FFSSROOFCOWL) - can be cut to size



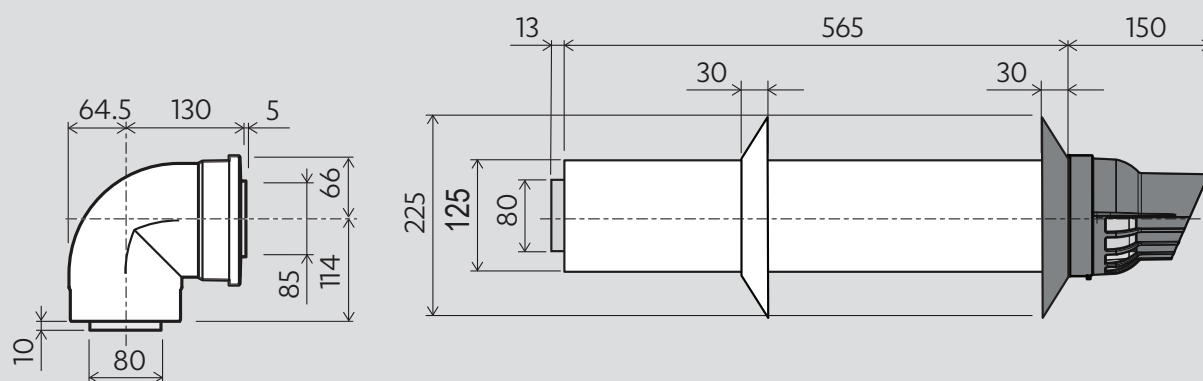
Includes two black injection UV roof protectors, shown below for covering and protecting the white flue pipe from UV damage. Also includes a flue pipe clamp to support the flue.



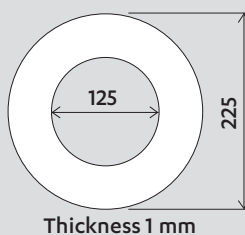
### Roof protector dimensions

Length	approx. 197 mm
Joined length	approx. 347 mm
Diameter	140 mm

## Direct flue kit for horizontal installations (FFSSKIT) - can be cut to size



Black and white wall trims that come with the kit





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