

## Arriva and Evolve gas fireplaces

### Flue installation guide

**Rinnai**

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# Important

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Rinnai gas fireplace flueing shall be installed in accordance with:

- Manufacturer's installation instructions
- Current AS/NZS 3000, AS/NZS 3500, AS/NZS 5601.1 and G12/AS1

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

The Arriva and Evolve fires must be installed with an approved flue system, approved components are shown in this guide.

## **Warning**

Improper installation, adjustment, alteration, service and 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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### Installer responsibility

Every gas fire requires a flue system that will draw effectively and clear flue products safely under all wind and climatic conditions. It is up to the installer to ensure the appliance is provided with an effective flue.

#### Down rating the fire

For all flueing EXCEPT direct flueing, the fire must be down rated (ensures optimum performance of the fan) as per the commissioning instructions.

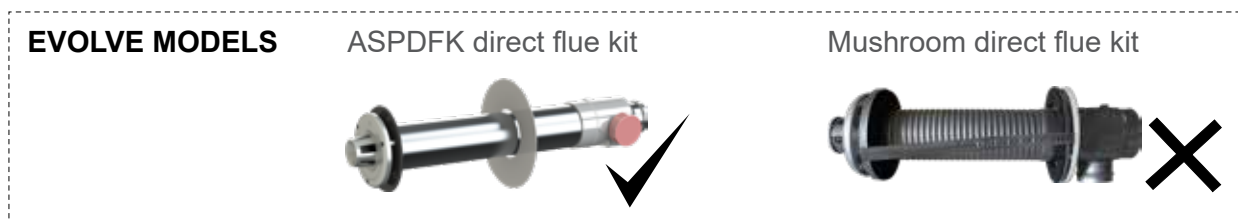
# About this guide

This guide is to outline the most common types of flue installations and to provide an overview of how to assemble the various flue components. If you have an installation that varies from this guide, please contact Rinnai.

## Flue installation differences between the Arriva and Evolve

- **Direct flue kits differ**

Due to the size of the Evolve unit and the cavity dimensions, the only direct flue kit available for the Evolve is the ASPDFK. The direct mushroom flue kits that can be used for the Arriva are not suitable as the telescopic exhaust section of the Evolve is not long enough to connect to the flue transition of the mushroom flues.



- **Adaption flue kits differ**

- Arriva uses the ASPKIT03, refer p.8
- Evolve uses the EVOKIT03, refer p.8

- **How condensate is handled differs**

For the Arriva a condensate drain kit needs to be installed, refer p.24. For the Evolve the condensate drain tube is connected directly to the condensate pipe on the heater, refer appendix 1 on p.25.

# Flueing options



For lowest cost, optimal performance, ease of installation and servicing, Rinnai recommend direct flued installations are considered before all other options.

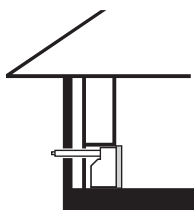
## Maximum flue length and number of bends

Maximum flue length = 8.5 m<sup>1</sup>  
Maximum number of bends = three

For every 90° bend, the overall length must be reduced by 1 m. For example, if an installation has three 90° bends, the maximum flue length can be 5.5 m.

## Adaption flue kits

Arriva: use ASPKIT03  
Evolve: use EVOKIT03



### Direct and direct extended flueing

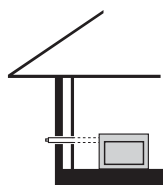
Direct through the wall flueing for walls up to 385 mm thick. Flue can be extended if the wall thickness is greater than 385 mm by using the ASPDFK flue kit and additional lengths of ESPIPE900.

### Arriva

- Direct mushroom A flue (R2731), or
- Direct mushroom B flue (R2732), or
- Direct flue (ASPDK)

### Evolve

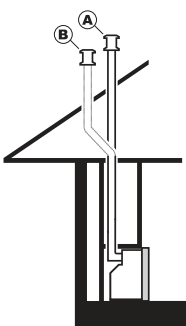
- Direct flue (ASPDK)



### Sideways flueing

The sideways flue installation can run along the left or right hand side of an internal wall behind the fire. When considering the location of the fire, ensure the flue path is free from obstructions such as noggins, wiring, joists etc.

- Adaption flue kit
- Flue pipe (ESPIPE900)
- Wall terminal (ESWTERM)



### Vertical in-wall flueing

The in-wall vertical flue is installed against an internal wall within a false fireplace or other suitable cavity, and is run vertically upwards towards a termination point.

### Vertical in-wall direct (A)

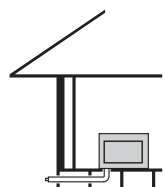
- Adaption flue kit
- Flue pipe (ESPIPE900)
- Roof cowl (ESROOFCOWL)

### Vertical in-wall offset (B)

Above list + 45° bends (ESBEND)

### Vertical in-wall horizontal (C)

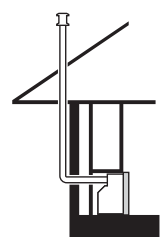
- Adaption flue kit
- Flue pipe (ESPIPE900)
- 45° bends (ESBEND)
- Wall terminal (ESWTERM)



### Down and out flueing

This flue option allows for the adaption flue kit to face downwards and for the flue to run vertically through a hole in the floor, and then terminate horizontally outside, flue termination must be 300 mm above ground level.

- Adaption flue kit
- Flue pipe (ESPIPE900)
- Wall plate (ESPLATE)
- 45° bends (ESBEND)
- Wall terminal (ESWTERM)



### Through wall vertical flueing

For the small number of instances where the fire cannot be directly flued or flued via an internal wall. In some cases a large portion of the flue may be visible from the outside.

- Direct flue (ASPDK)
- 45° bends (ESBEND)
- Flue pipe (ESPIPE900)
- Condensate trap (ESCONDK)
- Roof cowl (ESROOFCOWL)

<sup>1</sup> For systems requiring a flue length greater than 8.5 m, an extended flue system with an increased diameter is available. When used with a LFADAPT long flue adapter, the flue length can extend to 20 m. Contact Rinnai for more information.

# General flueing guidelines

## Flue clearances to combustibles

Due to the heat from the flue components, maintain a 25 mm clearance to combustibles for the first 500 mm of flue.

## Flashings

Flashings are not included with the flue kits, these must be specified.

## Flue support



The weight of the flue system must not be supported by the appliance, it must be self-supporting. Supporting the flue is usually completed during the framing stage with flue supports or straps within the cavity. Wall straps are included with most Rinnai flue components.

## Securing the flue



To prevent the flue from moving or coming apart:

- Joints between the flue components **MUST BE** secured by short<sup>1</sup> screws (max. length 6 mm) through the outer pipes (easier to undo if necessary).
- Flue components must be secured to the wall using the flue straps provided in each flue kit, refer image above.

## Lubricate o-ring seals before connecting

The inner pipe joints are sealed with an o-ring seal lubricant. A small plastic tub of silicone grease is provided with the main flue kits. Use this silicone grease to lubricate the o-rings on the inner pipes prior to assembly. This is important as o-rings can dry out and break, and replacing o-rings is difficult.

Do not use petroleum based lubricants as these will cause deterioration of the o-ring seals.

## Flue sections located outside

Sections of the flue located outside require the following:

- Only use PVC cement between the joints of the outer PVC pipes to secure and seal the joints against ingress of dust and water.
- Only use non-acidic silicone sealant between the joints of the outer PVC pipe and any mating aluminium components to seal the joints against ingress of dust and water. Silicone containing acetic acid or other acids as the curing agent may cause the aluminium to corrode.

## Shared flues

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

## Condensate

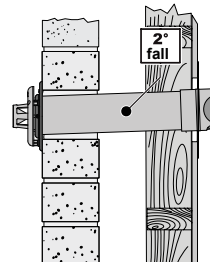
The Arriva and Evolve will produce flue condensate when running. The amount will vary depending on climatic conditions and flue configuration. Condensate is mildly acidic and can damage decorative finishes, prized petunias, concrete, and other building materials. Please consider the customer as to how the condensate will drain and what it may drain into.

<sup>1</sup> Screws must not touch the inner pipe—could cause a transfer of heat to the plastic outer and potentially melt the plastic.

## 2° fall to the horizontal flue terminal

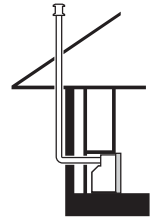
There must be a continuous fall of at least 2° to the horizontal wall termination. This is so any condensate and rain water exits the flue naturally.

The Arriva Direct A and B flue kits have an inbuilt 2° fall.



## 2° fall back to the fire

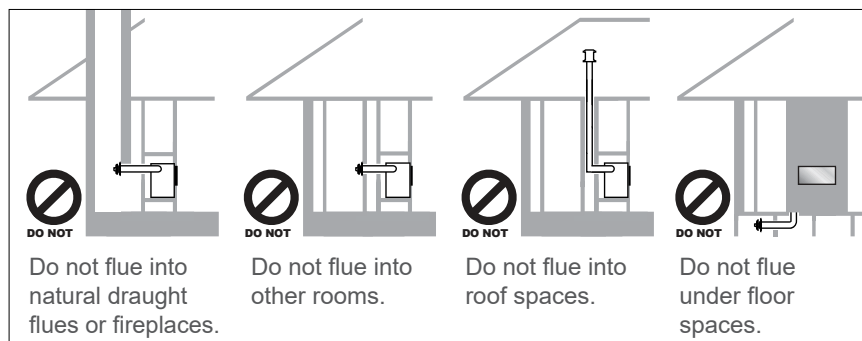
A fall back to the fire is required when any part of the flue system goes horizontally and then vertically.



## Flue terminal locations

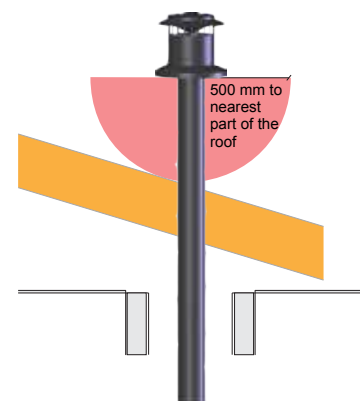
Flue terminals must be compliant with the flue terminal locations shown in AS/NZS 5601.1.

- The flue terminal must be positioned away from any flammable materials.
- Keep snow and other items, such as outdoor furniture well clear of the flue terminal at all times.



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



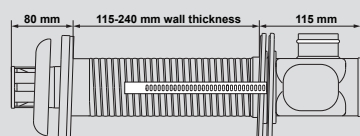
Minimum clearances are shown in AS/NZS 5601.1.

# Flue components

## Direct A flue kit - R2731

**\*\*Arriva only\*\***

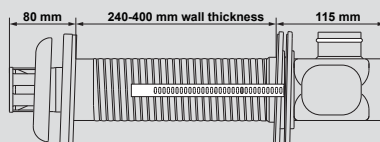
Suitable for walls 115-240 mm thick, typically weatherboard construction. This is a complete stainless steel kit with an inbuilt 2° fall to drain condensate.



## Direct B flue kit - R2732

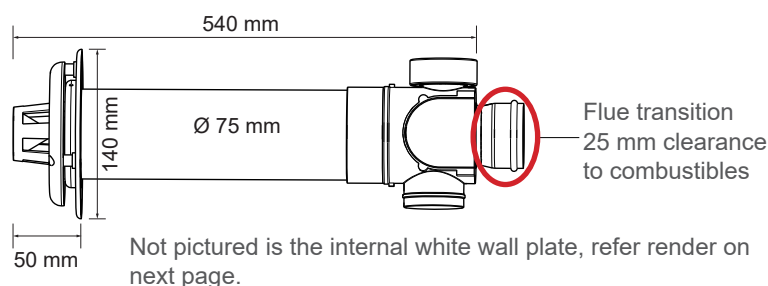
**\*\*Arriva only\*\***

Suitable for walls 240-400 mm thick, typically block construction. This is a complete stainless steel kit with an inbuilt 2° fall to drain condensate.



## Direct flue kit - ASPDFK (aluminium)

Suitable for walls up to 385 mm thick (can be cut to length). Can also be used with ESPIPE900 for longer flueing. The minimum length when measured from the back plate of the transition casting **MUST NOT** be less than 300 mm when joining to other components.



## Flue pipe - ESPIPE900

Extension pipe used for horizontal, vertical, and downwards flueing. Can be cut to size at the non-socketed end.

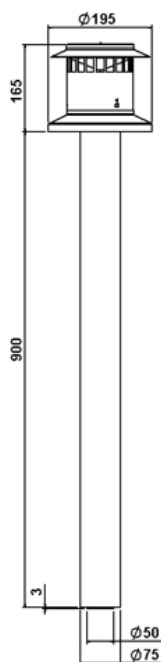
Inner is aluminium, outer white PVC. Comes with a wall bracket, o-ring (4350), and spacer (4351).



## Roof terminal - ESROOFCOWL

Roof cowl and connecting pipe for termination of a vertical flue—can be cut to size. 500 mm clearance required from any part of the building, refer previous page.

Galvanised steel, powder coated black.

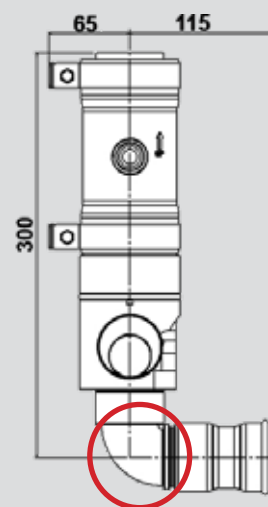


## Arriva adaption flue kit - ASPKIT03

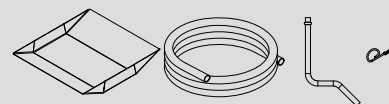
**\*\*Arriva only\*\***

Elbow section of this component (circled) requires a 25 mm clearance from combustibles. Kit includes:

- flue transition (rotates)
- condensate trap
- wall strap
- drain tube (750 mm)
- o-ring silicone grease
- flue clamp (R4822)
- R1970 sub-kit

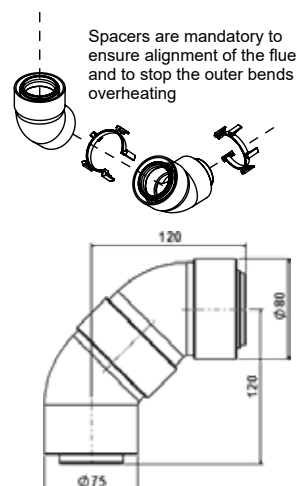


R1970 is the condensate drain kit. This is used for installations that require draining condensate back into the fire.



## 45° flue bends - ESBEND

Two bends in a kit. Can be used separately, or together as a 90° bend. Refer additional images on p.26-27.



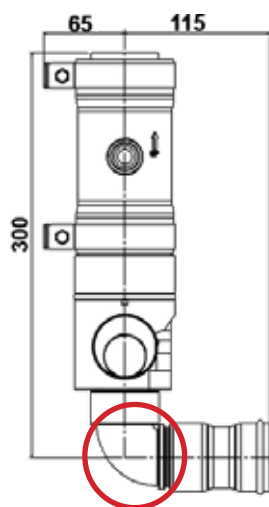


**Evolve adaption flue kit - EVOKIT03**

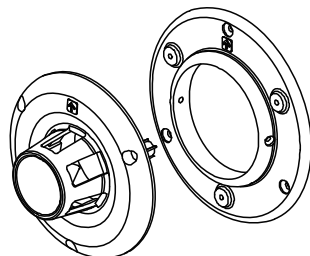
**\*\*Evolve only\*\***

Elbow section of this component (circled) requires a 25 mm clearance from combustibles. Kit includes:

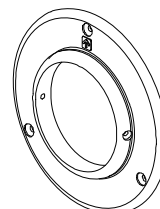
- flue transition (rotates)
- condensate trap
- wall strap
- drain tube (750 mm)
- o-ring silicone grease
- flue clamp (R4822)

**Wall terminal kit - ESWTERM**

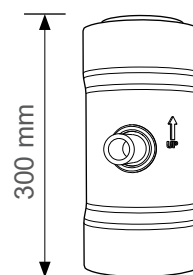
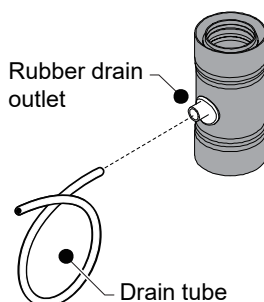
Used to terminate the ESPIPE900 in horizontal flue installations when used with the adaption flue kit.

**Wall plate - ESPLATE**

Used in down and out flueing to cover the floor penetration, and also as an extra wall cover if required, to tidy up an installation. Outer diameter 170 mm.

**Condensate trap - ESCONDK (aluminum)**

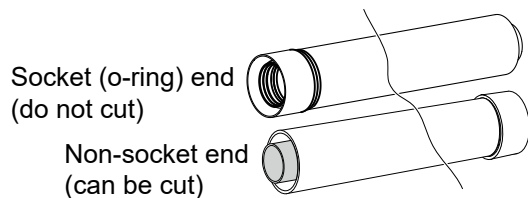
Only ordered as a separate item if doing through wall vertical flueing, refer p.5. Supplied with a 750 mm drain tube. When installed arrow MUST ALWAYS point up.

**Renders****Direct A & B flue****Direct ASPDFK flue****45° bend kit****Condensate trap****Roof cowl****Flue pipe****Adaption flue****Adaption flue****Wall plate**

# Flue component connections

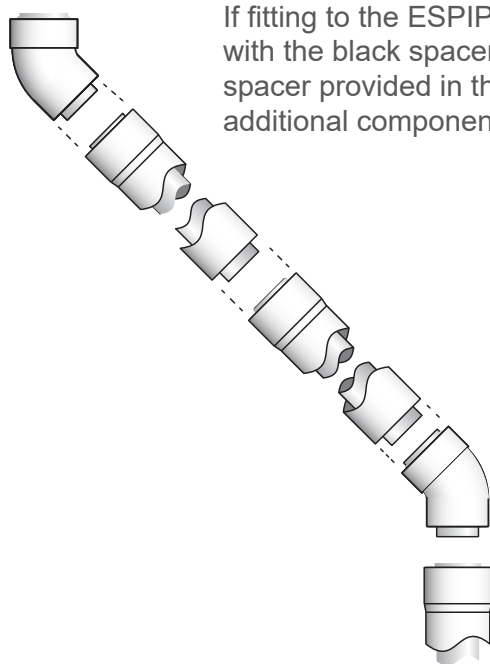
## Connecting the flue pipe (ESPIPE900)

The socket end of the pipe containing the o-ring connects to the non-socketed end of the previous component. If cutting to connect to another component always cut the non-socketed end, never discard the socket o-ring end.



## Connecting the 45° bends (ESBEND)

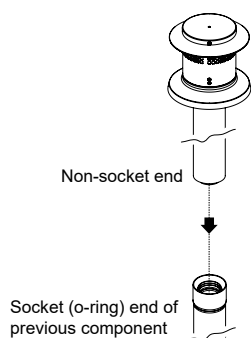
If installed incorrectly there is potential for the outer bend to overheat. The centering spacer is a mandatory component that is required for the correct alignment of the flue components when bends are used. When fitted correctly the inner and outer pipes of the ESBEND will be self centering.



If fitting to the ESPIPE900, lubricate the socket o-ring end of the pipe, the end with the black spacer, and fit to the non-socket end of the bend. Fit the white spacer provided in the ESBEND kit, fit the outer, and then repeat if adding additional components.

## Connecting the roof cowl (ESROOFCOWL)

Connect the non-socketed end to the socketed end of the previous component and secure.

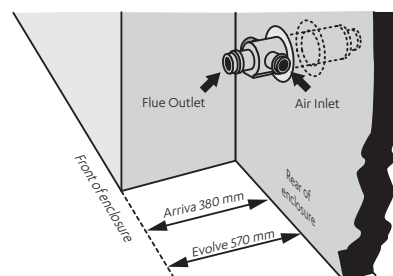


# Flue transition (ASPDFK, ASPKIT03, EVOKIT03)

The flue transition provides a connection between the flue system and the fire flue spigot and air intake. The below images show the flue transition in different flue configurations.

## Horizontal direct flue transition

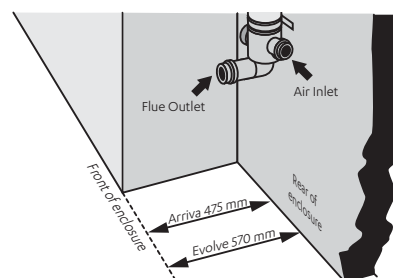
When installed as a horizontal direct flue, the flue transition is pushed hard against the internal wall plate, which is pushed hard against the rear wall of the enclosure.



## Vertical flue transition

When installed as a vertical flue, the flue transition is fastened to the rear wall by the wall straps supplied. Elbow component of the adaption kit requires 25 mm clearance to combustibles.

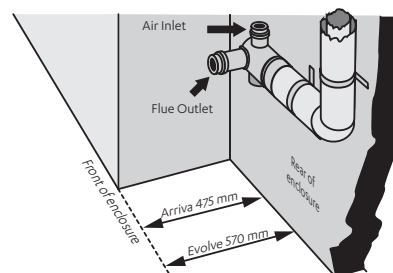
Appliance needs to be down rated—refer commissioning sheet.



## Offset flue transition

When installed as a horizontal or vertical offset flue, the flue transition is fastened to the rear of the wall by the wall straps supplied.

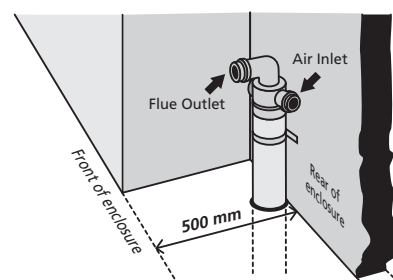
Appliance needs to be down rated—refer commissioning sheet.



## Down and out flue transition

When installed as a down and out flue, the flue transition is fastened to the rear of the wall by the wall straps supplied.

Appliance needs to be down rated—refer commissioning sheet.



# Wall penetration

## Direct flue wall penetration requirements

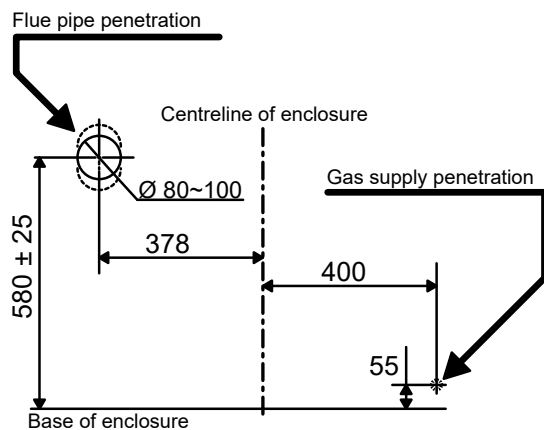
Use the guide pictured to mark the penetration points for the gas supply and flue transition locations. Consideration must be given to the position of any studs, noggins or other components of the wall structure on both sides of the wall. Mark these measurements accurately as this is critical to a successful installation.

The penetration for the flue transition only needs to be made for direct flue installations, where the terminal is directly to the rear of the appliance. If no flue pipe penetration is required the markings are still useful for indicating the correct position of the flue transition within the enclosure for other flue applications.

For weatherboard walls, drill through the centre of the weatherboard from the outside, then drill from the inside through the plaster board.

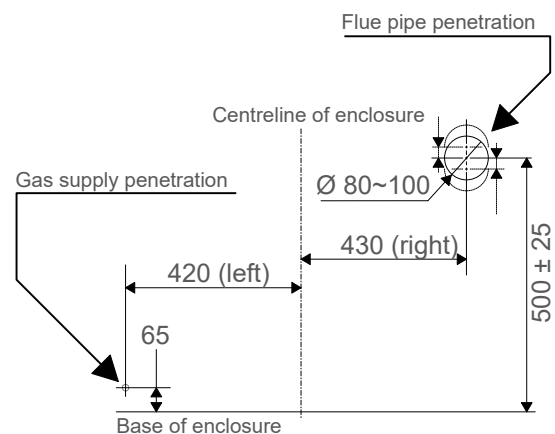
### Arriva flue penetration guide

Dimensions are in mm.



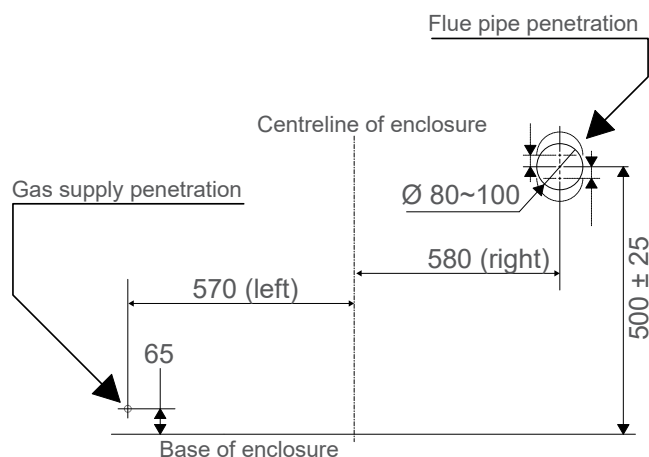
### Evolve 952 flue penetration guide

Dimensions are in mm.



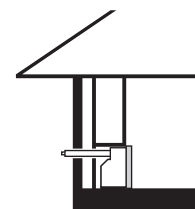
### Evolve 1252 flue penetration guide

Dimensions are in mm.



# Direct flueing - mushroom flue kits

For installations where the unit is mounted directly on the inside of an external wall. This installation requires a 2° fall from the heater connection to the wall terminal to drain condensate and wind blown rain—the Arriva Direct A and B flue kits have an inbuilt 2° fall.

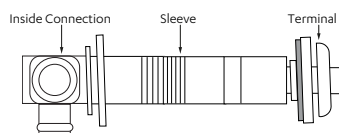


## Direct flueing using the Direct A and B flue kits - ARRIVA models only

Before starting, create the wall penetration. The minimum diameter required is 80 mm to non-combustible surfaces such as brick, and 100 mm to combustible surfaces such as plaster.

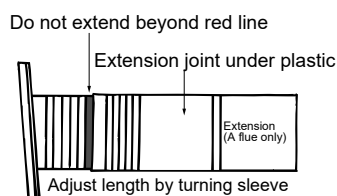
### 1. Disassemble manifold

The flue consists of three parts; sleeve, inside connections and tube, and outside terminal. Disassemble by pulling hard on the outside terminal and inner connections, then pull the sleeve off the outer terminal.



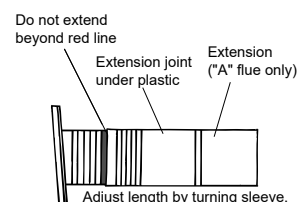
### 2. Adjust flue length

Measure the wall length through the drilled hole. Adjust the sleeve length to the wall thickness plus 5-10 mm (required sleeve protrusion from wall).



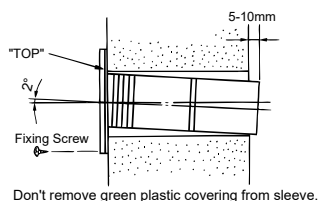
### 3. Remove flue extension

For 'A' flues, depending on wall thickness, the flue extension may need to be removed. There is no extension on the 'B' flues, they can be fully adjusted by turning the threaded section.



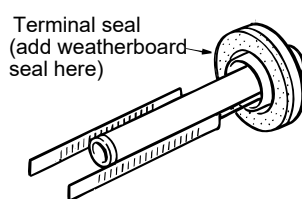
### 4. Fix sleeve

Fix the sleeve to the wall using the three screws provided. The flange is marked 'TOP'. The sleeve must be fitted with this mark up. Check sleeve protrudes 5-10 mm on the outside.



### 5. Check and add rubber seal

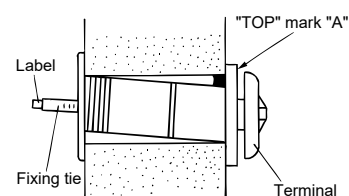
Check the rubber seal is in place on the terminal. For weatherboard walls, add the spare rubber seal provided to compensate for the weatherboard angle.



### 6. Install terminal

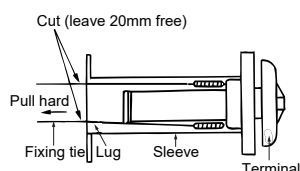
From the outside insert the terminal into the sleeve with the 'A' mark at the top.

The LH fixing tie is marked 'LEFT' (from the inside)



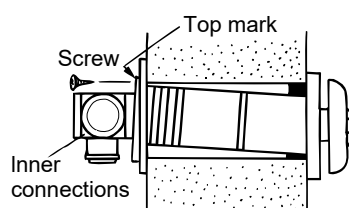
### 7. Attach ties

Pull hard on the LH and RH ties, and clip ties over the lugs inside the sleeve. You should be able to pull the ties two or three slots past the starting point. Cut the ties approx. 20 mm past the lugs and bend so they are parallel with the wall.



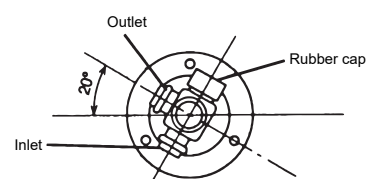
### 8. Insert inner connection

Push the inner connection assembly into the terminal tube. Ensure correct positioning—refer 'TOP' mark. Fix with the three screws provided.



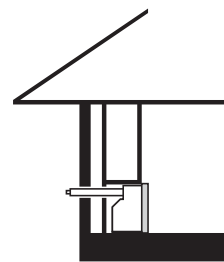
### 9. Adjust manifold

Adjust the manifold as required. The manifold can still be turned after attaching.

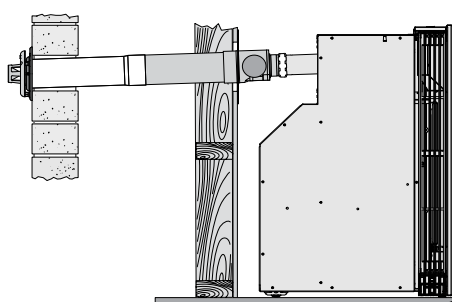
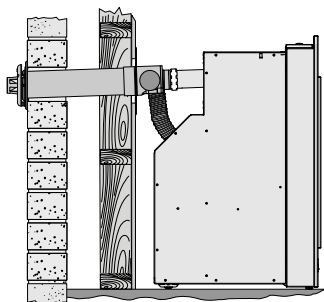


# Direct flueing using the ASPDFK

The ASPDFK is suitable from walls up to 385 mm thick. For the Arriva models it can be used as an alternative to the Direct A and B flue kits. The ASPDFK can be cut to length to suit wall thicknesses less than 385 mm. The ASPDFK can also be used in combination with ESPIPE900 for walls greater than 385 mm, this is called direct extended flueing.



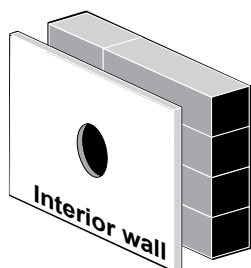
## Direct flueing and direct extended flueing



Refer p.20 if cutting to length for important information about cutting the outer and inner pipes.

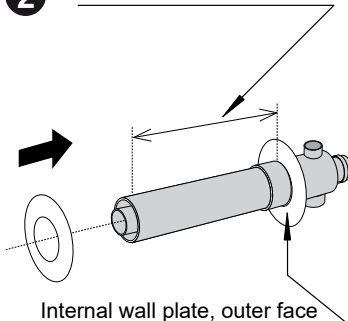
1. Create the wall penetration. The minimum diameter is 80 mm to non-combustible surfaces such as brick, and 100 mm to combustible surfaces such as plaster. Allow for a continuous 2° fall from the fire to the wall terminal.
2. Slide the internal wall plate over the terminal end of the ASPDFK pipe until it is nested on the raised ring of the flue transition.
3. Pass the ASPDFK through the internal wall penetration.
4. Slide the internal wall plate so it is flush with the wall.
5. Create the wall terminal, refer p.21.
6. Move the fire into place and connect the fire flue pipe to the flue. This is done with the flue slide stopper provided with the flue kit.

1



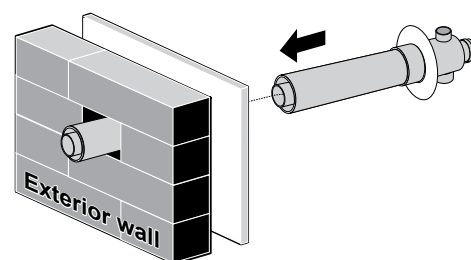
2

Max. wall thickness 385 mm

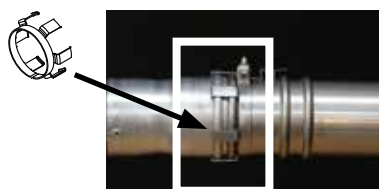


Internal wall plate, outer face

3

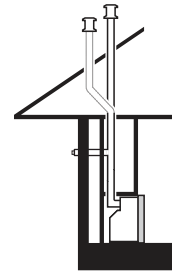


6

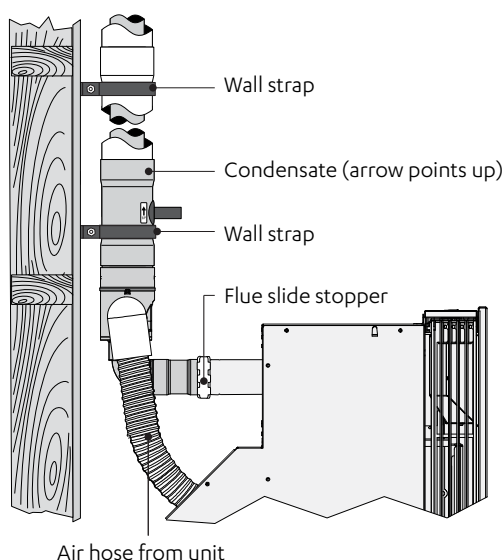


# Vertical in-wall flueing

The vertical in-wall vertical flue installation is installed against an internal wall within a false fireplace or other suitable cavity, and is run vertically upwards to a termination point. When considering the location of the fire ensure the flue path in the roof space is free from obstructions such as studs, wiring, joists etc.



## In-wall vertical flueing showing flue components



Joining the flue transition and condensate



Remember to consider how the wall straps will be secured to the frame—additional packing will be required depending on where the wall straps are positioned.

## Flue length

Total flue length can be 8.5 m. If bends need to be included to offset a stud, noggin etc., the flue length can be up to 6.5 m and contain two 90° bends (two ESBEND kits).

## Steps for creating vertical in-wall flueing

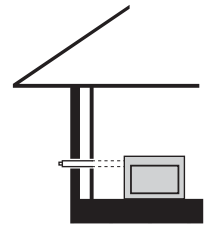
Lubricate all inner pipe o-rings with the silicone grease provided.

1. Join the flue transition and condensate together ensuring the arrow points upwards.
2. Fit lengths of ESPIPE900 as required.
3. Determine the location of the roof or ceiling penetration point. To avoid obstructions an offset can be created using the ESBEND kit.
4. Create a vertical roof terminal.
5. Secure joints between flue components through the outer pipes with screws and secure the entire flue system using the wall straps supplied.
6. Connect the condensate tube to the heater once it has been installed. Connection points will differ between the Arriva and the Evolve. For the Arriva refer to p.24. For the Evolve refer p.25.



# Sideways flueing

The sideways flue installation can be run along the left or right hand side of an internal wall behind the heater. When considering the location of the heater ensure that the flue path is free from obstructions such as studs, noggins, wiring, joists etc.

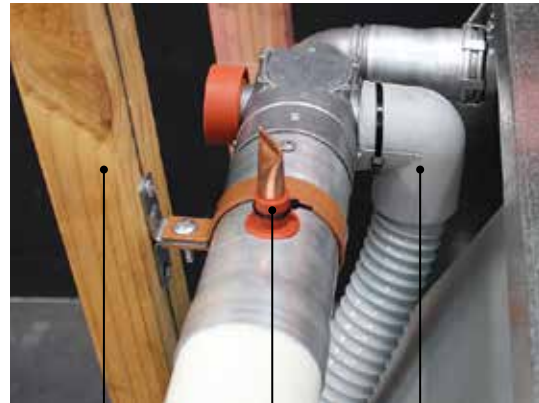


Evolve model showing position of various flue components in a sideways flue installation



ASPKIT03/EVOKIT03  
(DO NOT remove cap)

2° fall to terminal to  
drain condensate



Additional packing  
for wall straps

Air hose secured  
with cable tie

Condensate (should be  
capped or sealed)



Remember to consider how the wall straps will be secured to the frame—additional packing will be required depending on where the wall straps are positioned.

## Flue length

Total flue length can be 8.5 m. If bends need to be included to offset a stud, noggin etc., the flue length can be up to 6.5 m and contain two 90° bends (two ESBEND kits).

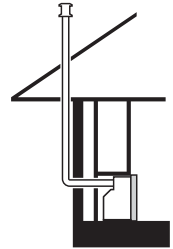
## Steps for creating sideways flueing

1. Lubricate all inner pipe o-rings with the silicone grease provided.
2. Join the flue transition and condensate together ensuring the condensate outlet points upwards. Even though the condensate is not actually connected in this flue arrangement, the condensate component serves as a transition piece between the transition casting and the ESPIPE900. The transition component must not be connected directly to the ESPIPE900, which is plastic, due to the heat of the flue gases.
3. Fit lengths of ESPIPE900 as required. Allow for a 2° continuous fall from the heater connection point to the wall terminal to drain condensate.
4. Create the wall penetration. The minimum diameter is 80 mm to non-combustible surfaces such as brick, and 100 mm to combustible surfaces such as plaster. Allow for a continuous 2° fall from the fire to the wall terminal.
5. Create the wall terminal, refer p. 21.
6. Secure joints between flue components through the outer pipes with screws and secure the entire flue system using the wall straps supplied.

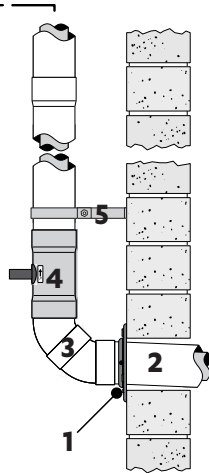
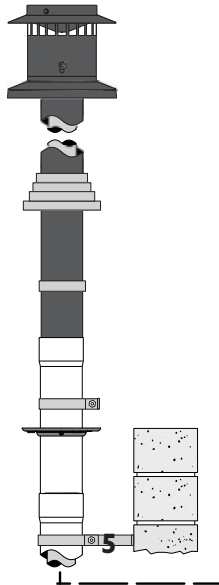


# Through-wall vertical flueing

These types of installations are rare, but have been used on the odd occasion where traditional flueing is not possible. As a large portion of the flue will be visible—check with the homeowner that this is okay. In this example the flue length can be up to 7.5 m long and contain one 90° bend.



## Flue components required for through-wall flueing



### Flue components:

- Direct flue kit (ASPDFK)
- 45° bends (ESBEND)
- Condensate trap (ESCONDK)
- Flue pipe (ESPIPE900)
- Roof cowl (ESROOFCOWL)

1. Wall plate
2. 2° fall back to the heater
3. ESBEND
4. Condensate trap
5. Wall straps

As there is a vertical component in the installation, condensate needs to be drained back towards the fire, this requires the ASPDFK component to be angled 2° back to the unit.

## Condensate trap

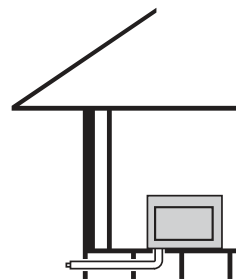
The supplied condensate tube (750 mm) will not be long enough for this type of installation, a separate tube will need to be used. This needs to be connected back through to the heater (separate hole required), which needs to be weathertight. Another option is to drain the condensate to a waste drain / gully trap through a PVC line. For more information please contact Rinnai.

## Steps for creating horizontal through-wall flueing

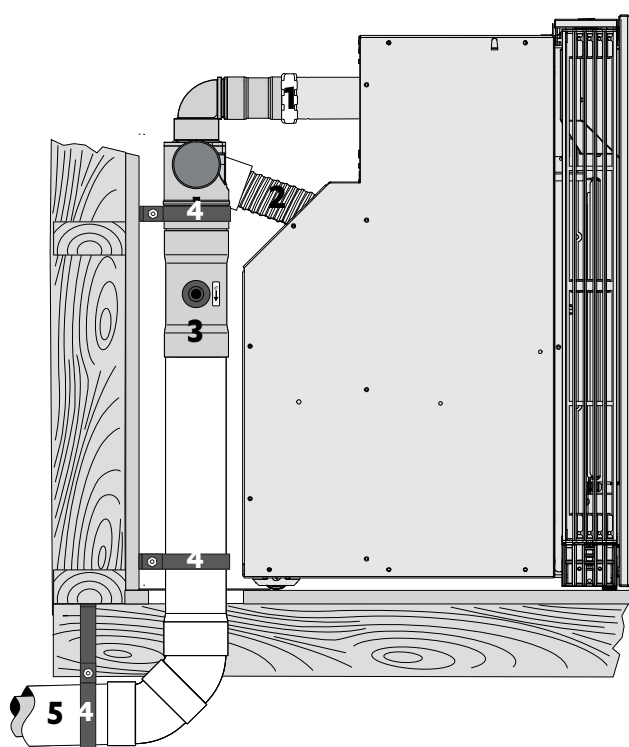
1. Create the wall penetration. The minimum diameter is 80 mm to non-combustible surfaces such as brick, and 100 mm to combustible surfaces such as plaster. Allow for a 2° fall back to the heater.
2. Create the 90° bend using the ESBEND kit.
3. Join the condensate trap to the 90° bend.
4. Fit lengths of ESPIPE900 as required.
5. Create a vertical roof terminal.
6. Secure joints between flue components through the outer pipes with screws.
7. Connect the condensate tube to the heater. You will need to drill a separate hole to run the condensate tube back to the heater. Connection points will differ between the Arriva and the Evolve. For the Arriva refer to p.22 in this guide, for the Evolve refer to p.25.

# Down-and-out flueing

The down-and-out flue option allows for the adaption flue kit to face downwards and for the flue to run vertically through a hole in the floor, and then horizontally to a suitable location outside. When considering the location of the heater due care must be taken to ensure that the flue path under the floor is free of obstructions such as studs, noggins, joists, braces, wiring etc.



## Down and out configuration overview using the Arriva as an example

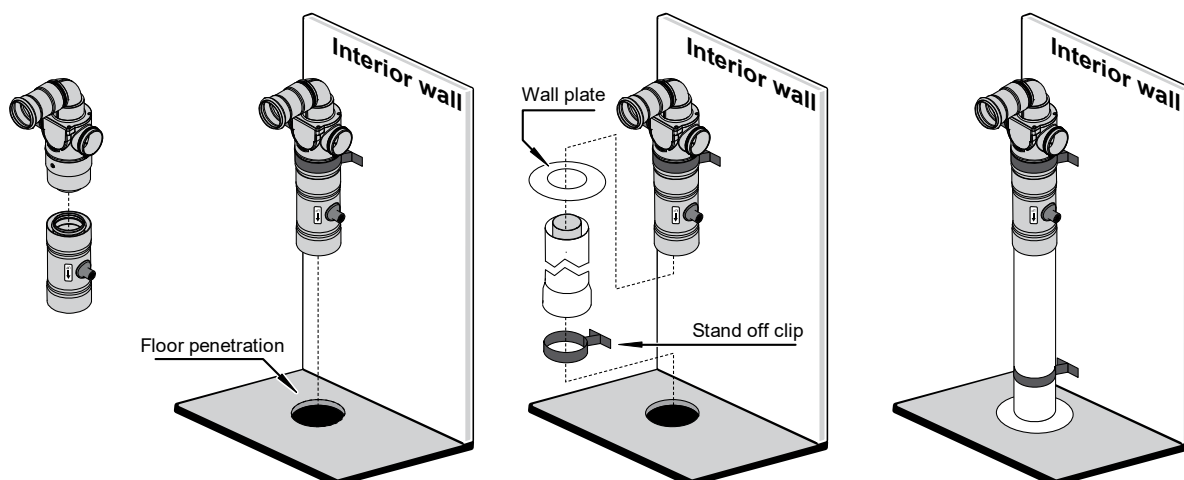


1. Flue slide stopper (provided with the ASPKIT03/EVOKIT03).
2. Air hose from unit.
3. Condensate trap component—acts as a transition piece (arrow points down, and it should be capped or sealed).
4. Wall straps (provided with each flue kit).
5. 2° fall to wall terminal to drain condensate.

### Important

Flue terminal must terminate horizontally 300 mm above ground level. It must not terminate under the building.

## Down and out configuration overview using the Arriva as an example



### **Steps for creating down and out flueing**

1. Lubricate all inner pipe o-rings with the silicone grease provided.
2. Join the flue transition and condensate together ensuring the condensate arrow points downwards. Even though the condensate is not actually connected in this flue arrangement, the condensate component serves as a transition piece between the transition casting and the ESPIPE900. The transition component must not be connected directly to the ESPIPE900 due to heat of the flue gases.
3. Fit lengths of ESPIPE900 as required.
4. Create the floor penetration, ensure the hole edges are smooth. The minimum diameter is 80 mm to non-combustible surfaces such as brick, and 100 mm to combustible surfaces such as plaster.
5. Pass the ESPIPE900 through the wall plate and through the floor penetration and secure wall plate in place to seal the floor.
6. Prepare the horizontal section of the flue system under the floor by connecting ESPIPE900, ESBEND and subsequent ESPIPE900 lengths as required. Allow for a 2° continuous fall from the first section of horizontal pipe to the wall penetration to drain condensate.
7. Create the wall terminal, refer p.21.
8. Secure joints between flue components through the outer pipes with screws and secure the entire flue system using the wall straps supplied.

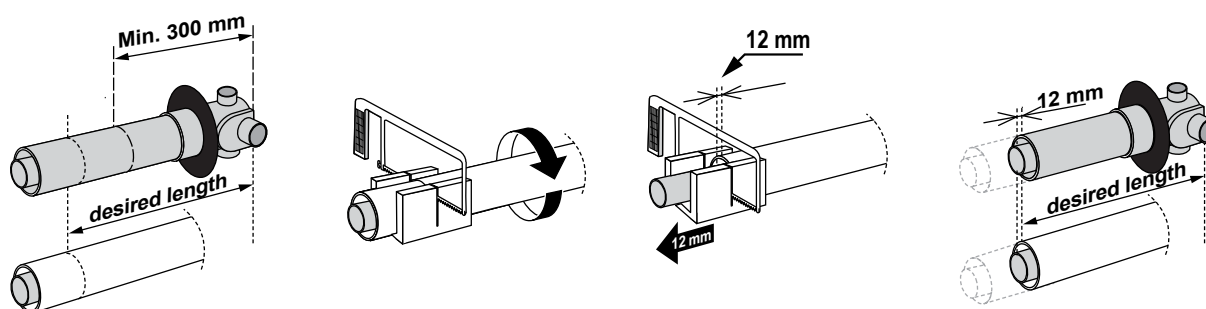
# Cutting the ASPDFK and ESPIPE900 to length to connect to another part

Cutting the ASPDFK or ESPIPE900 may be needed to achieve the required flue length to connect to another component.



- The minimum length of the ASPDFK when measured from the back plate of the transition casting **MUST NOT** be less than 300 mm when joining to other components.
- Ensure all burrs and swarf are removed from any cut ends.
- ESPIPE900 can be cut to size at the non-socketed end

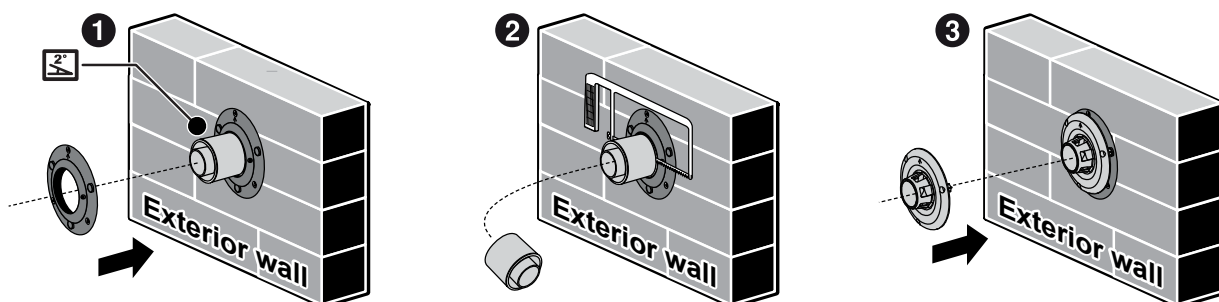
## Cutting components to achieve the desired flue length



1. Measure and mark off the outer pipe at the desired length.
2. Cut the outer pipe to the required length. Take care not to cut the inner pipe.
3. From the new end of the outer pipe measure and mark off an additional 12 mm on the inner pipe. Cut the inner pipe at this mark. Take care to keep the cut parallel to the outer pipe.

The additional 12 mm shown in the diagram above is required to allow the component to be joined to another part.

# Steps to create a wall terminal



1. Fit the supplied external wall plate over the outer pipe of the flue protrusion (arrow points up)

Once the external wall plate is in the correct position secure it to the wall using the three 22 mm screws into the wall plate holes. Secure the wall plate to the outer pipe using the two horizontal holes and the two 7 mm screws provided.

2. Carefully cut through the outer and inner pipes **ensuring the inner and outer are flush with the external wall plate** as shown below. Take care to avoid cutting the external wall plate, and keep the cuts of the internal and external pipes as parallel as possible. Remove all burrs and swarf from the cut ends.

3. Align the arrows of the metal flue terminal and wall plate to point in the same direction (must always point up) and screw the terminal to the external wall plate using the 22 mm screws into the holes provided.



2° fall to the outside—  
arrow points up

## Images showing how final terminal should be installed



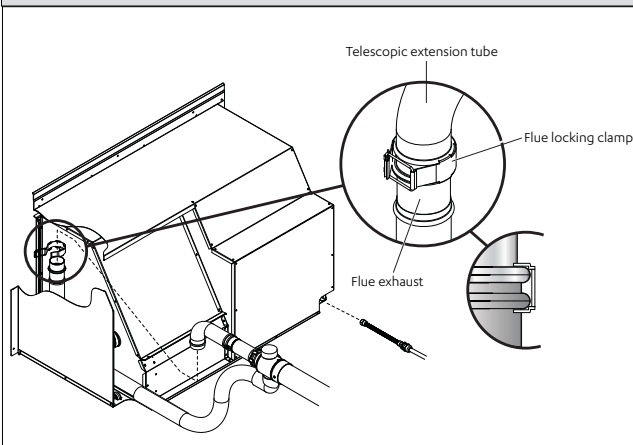
**Please note:** The flue protrusion from the wall is approx. 14-16 mm. It must not be more than this as it will create a gap between the flue and the wall terminal, which will cause operational issues.

# Connecting the heater exhaust pipe



This step in the installation is critical. If this joint is not secured properly, products of combustion could disperse into the room being heated.

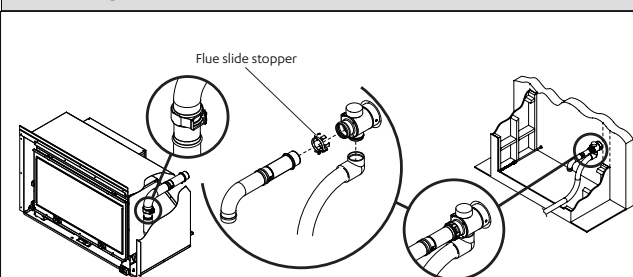
## Attaching the flue lock clamp - Evolve example



The flue lock clamp (4823) is provided with the heater.



## Attaching the flue slide stopper and air hose - Evolve



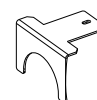
The flue clamp (R4822) is provided with the ASPKIT03/EVOKIT03 flue kits.




## Flue clamp bracket used for the Arriva direct flues



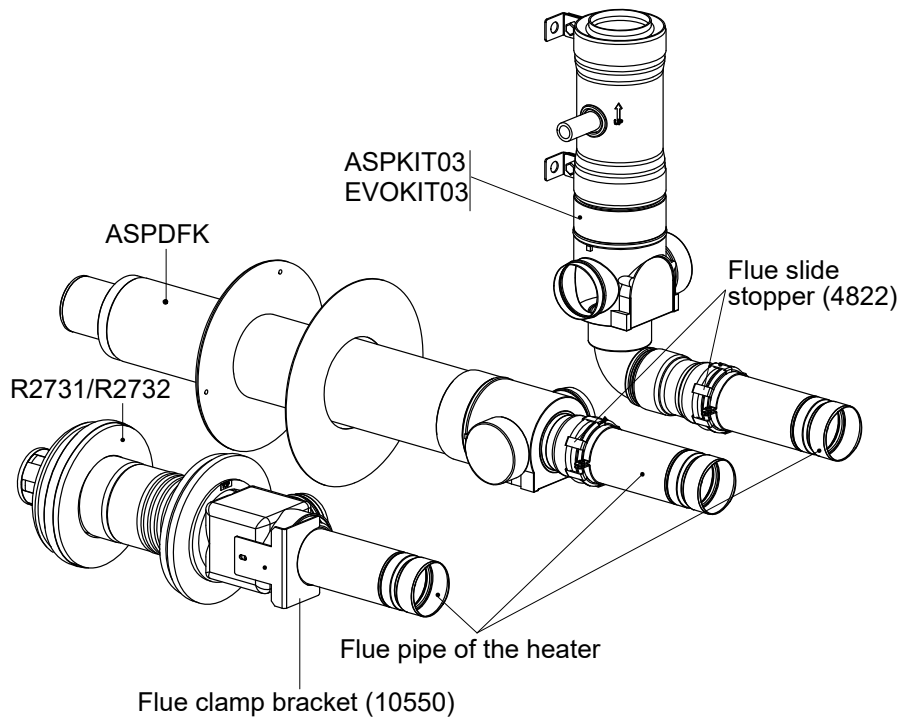
The flue clamp bracket (10550) is provided with the heater in a plastic bag with the remote. It is only needed for Arriva Direct A/B flue kits.



1. Lubricate the o-ring of the exhaust connection and fit the telescopic exhaust pipe of the heater. Push the telescopic tube fully home so the end of the exhaust connection and the collar of the telescopic exhaust pipe are fully mated.
  2. Attach the flue locking clamp provided with the heater over the telescopic exhaust pipe and the exhaust connection of the flue transition. Ensure the teeth of the flue locking clamp engage both the collar of the telescopic exhaust pipe and the collar of the exhaust connection of the flue transition. Close the clamp to secure both components together. Adjust the telescopic exhaust pipe as necessary.
- 

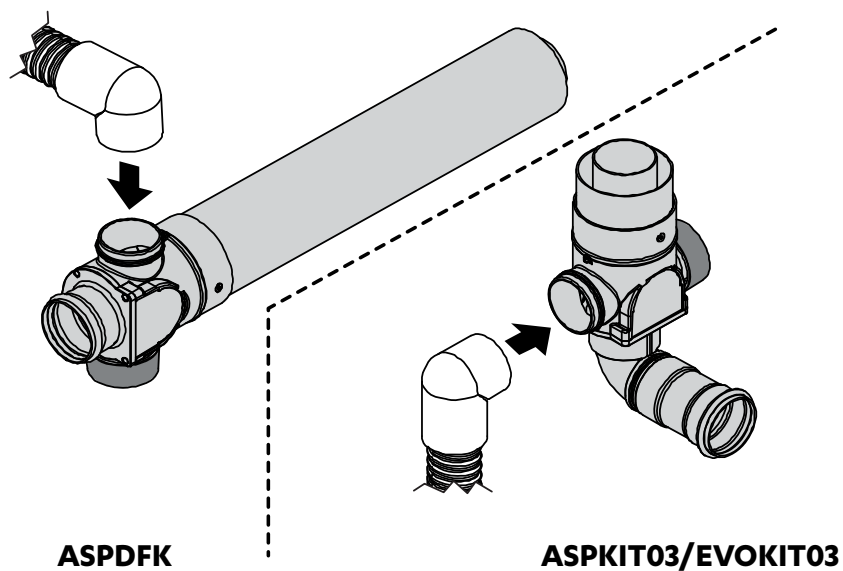
**DO NOT** extend the telescopic exhaust pipe beyond the indicator groove. A red line will show if you have gone too far.
3. Adjust the telescopic exhaust pipe to attain the desired position of the heater.
  4. Fix the telescopic exhaust pipe in place with the flue slide stopper (provided in the ASPKIT03/EVOKIT03) or the flue clamp bracket (provided with the heater for Arriva Direct A/B flues).

## Flue pipe connections on various Arriva and Evolve flue components



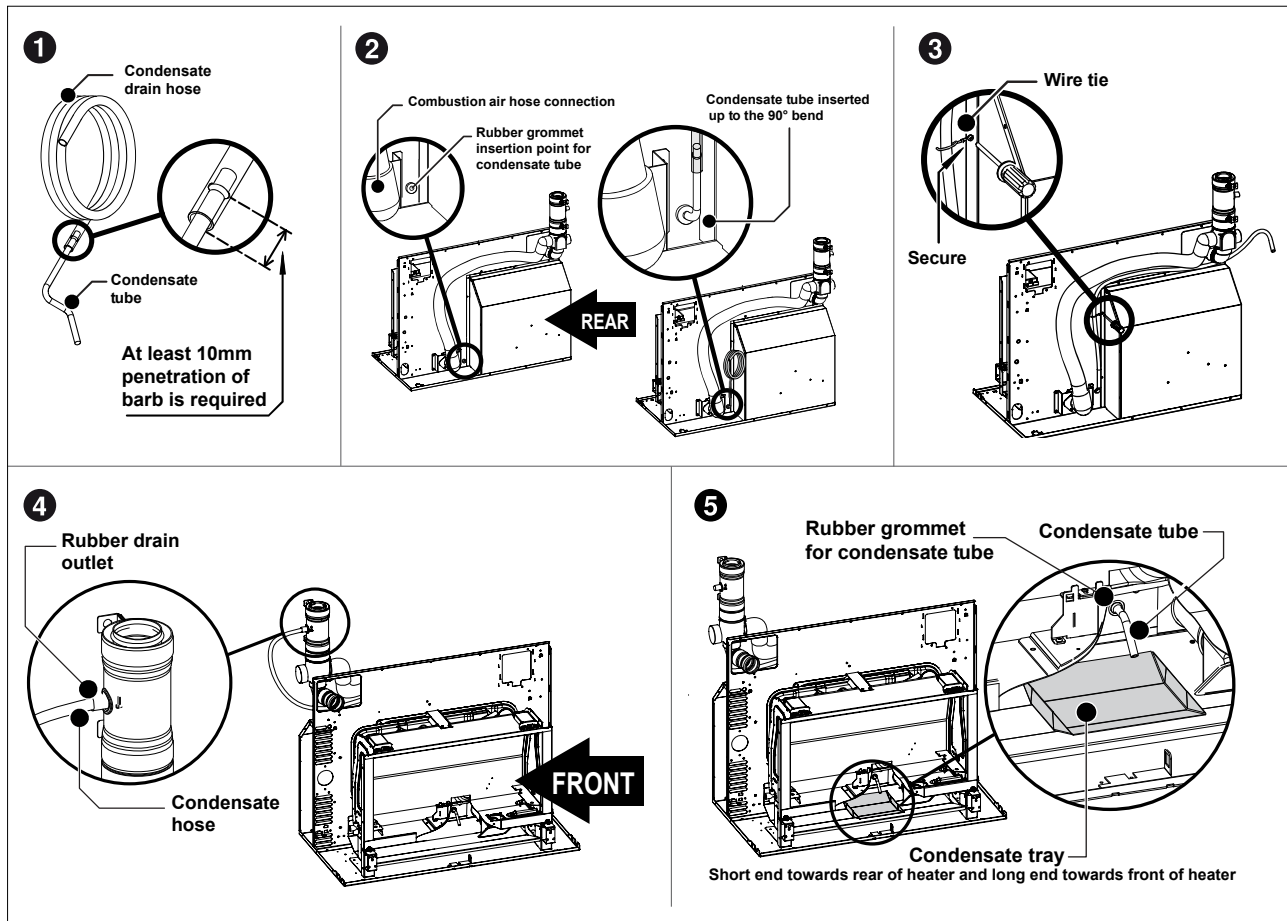
## Connecting the air supply

Ensure the air intake hose of the heater is properly secured to the air connection on the flue system using the cable tie provided (refer image on p.16) and that the rubber cap is in place on the unused air intake.



# Arriva condensate drain kit connection

The condensate drain kit is provided with the ASPKIT03. It is used in vertical flue installations for draining condensate back into the heater.



Before connecting the condensate drain hose to the condensate trap ensure that there are no kinks in the condensate drain hose. Also ensure the path of the condensate drain hose is kept away from hot surfaces. Failure to install the condensate kit correctly may cause damage to the heater and flue system.

1. Insert the barbed end of the condensate tube into the condensate drain hose. Ensure that the barb penetrates the hose by at least 10 mm.
2. Locate the condensate tube insertion point, which is a rubber grommet found at the rear of the heater, to the right of the combustion air hose connection.
3. Uncoil the condensate drain hose and secure it to the rear of the heater using the upper screw of the combustion fan cover and the wire tie provided.
4. Connect the free end of the condensate drain hose to the rubber drain outlet of the condensate trap by pushing the hose inside the rubber connection to a minimum of 20 mm, but not greater than 30 mm (this can cause a blockage).
5. Place the condensate tray into the heater (short end first) making sure that the tray is centered under the end of the condensate tube.

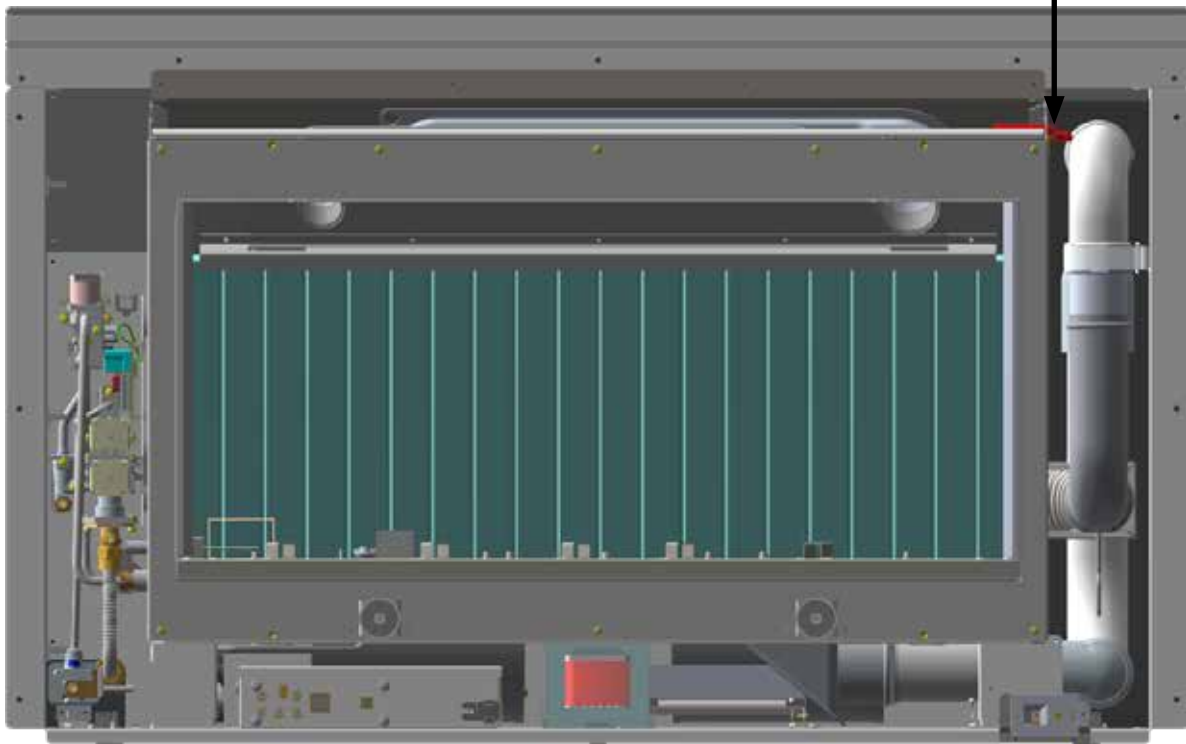


# Evolve condensate drain kit connection

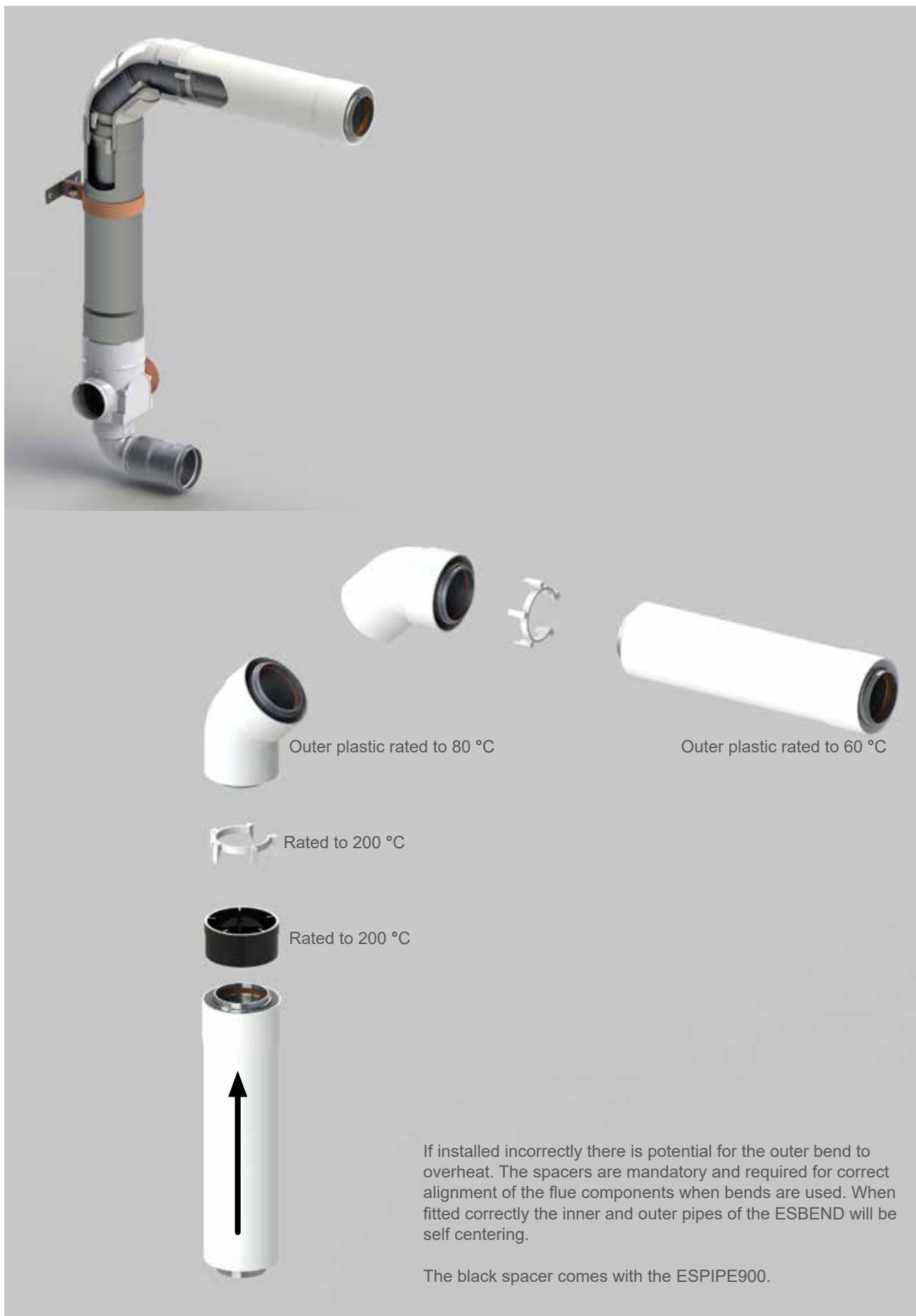
Complete the gas, air hose, and flue connection. If vertically flueing ensure the condensate tube, provided with the EVOKIT03 flue kit, is attached to the condensate pipe on the heater.



Flue condensate pipe connection



## Appendix 1: ESBEND 90°



## Appendix 2: ESBEND 45°



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<http://www.youtube.com/rinnainz>  
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Arriva/Evolve flue installation guide 10726-J