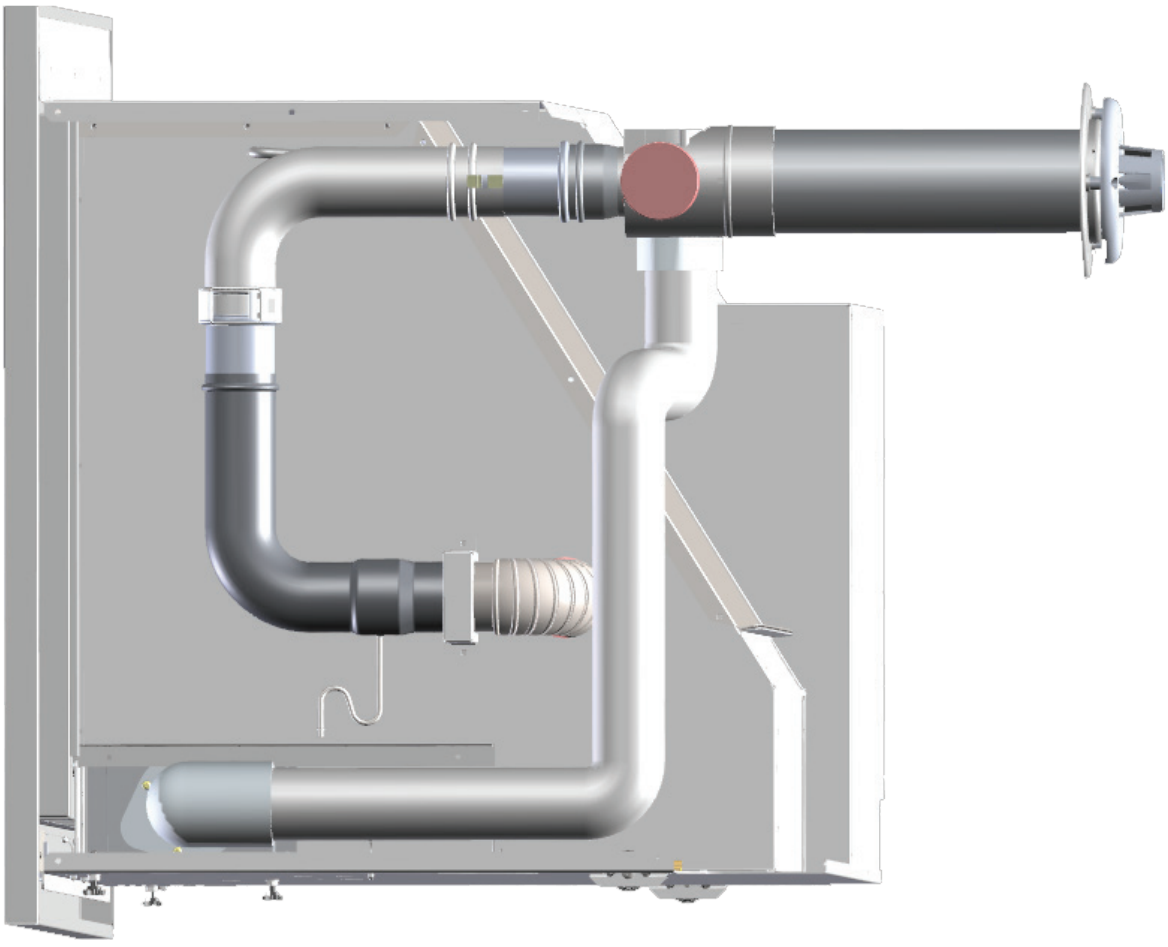
Flue installation guide

Arriva and Evolve gas fireplace flueing

Models: RHFE750ETR / RHFE752ETR / RHFE950ETR / RHFE1250ETR



Important:

Rinnai Arriva and Evolve gas fireplace flueing shall be installed in accordance with.

- Manufacturer's installation instructions
- 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.

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

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contents:

About this guide

The intention of 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 that detailed in this guide, please contact Rinnai.

Evolve vs. Arriva installation

There are some flue installation differences between the Evolve and the Arriva. The main points of difference are the flue kits and the way in which condensate is handled.

- **Direct flue kit for the Evolve**
  Due to the size of the Evolve unit and the cavity dimensions the only direct flue kit the Evolve can use is the ASPDFK. The direct mushroom A and B flue kits (R2731 and R2732) are not suitable as the telescopic exhaust section of the fire is not long enough to connect to the flue transition.

- **Adaption flue kit**
  Arriva uses ASPKIT03 and Evolve uses EVOKIT03, refer p. 8 for more information.

- **Condensate**
  A condensate trap is required for all vertical flue installations to ensure condensate generated during combustion is trapped and prevented from entering the combustion chamber. For the Arriva a condensate drain kit needs to be installed (p. 22). For the Evolve the condensate drain tube is connected directly to the condensate pipe on the heater—refer to the Evolve installation guide, section 'Install heater into enclosure'.

Help us to help you

Is there information missing that you feel would be helpful to other installers? If yes, please contact us and we will look to include in future updates.

Important

IMPORTANT

For all flue installations there are some important 'must-dos' to ensure the flue is installed correctly. These are summarised below.

Flue must be secure

To prevent the flue from moving or coming apart:

- The joints between the flue components MUST BE secured by screws (easier to undo if necessary) through the outer pipes.
- The flue components MUST BE clipped to the wall using the wall straps provided in each flue kit.

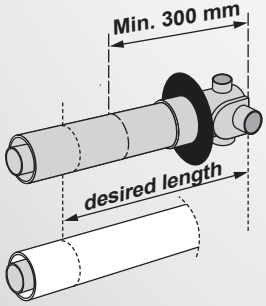
Connecting flue components

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 the o-rings can dry out and break, and replacing o-rings is difficult.

DO NOT use petroleum based lubricants such as petroleum jelly. Petroleum jelly or other similar lubricants will cause deterioration of the o-ring seals.

ASPDFK 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.



Flue sections located outside

Sections of the flue located outside require the following precautions:

- 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 (such as the condensate trap) to secure and seal these joints against ingress of dust and water—silicone containing acetic acid or other acids as the curing agent may cause the aluminium to corrode.

ESBEND installation and connection

If installed incorrectly there is potential for the outer bend to overheat. A separate installation sheet is provided with each ESBEND kit to ensure correct alignment of the bend component.

Condensate trap

A condensate trap is required for all vertical flue installations to ensure condensate generated during combustion is trapped and prevented from entering the chamber of the heater.

In vertical installations the condensate trap MUST BE installed in a vertical position.

2° fall to the wall terminal

For direct, sideways and down-and-out flue installations, there must be a continuous fall of at least 2° to the wall terminal. This equates to 20 mm per metre to the termination point to drain the condensate. The Arriva Direct A and B flue kits (R2731/R2732) have an inbuilt 2° fall.

2° fall back to the heater

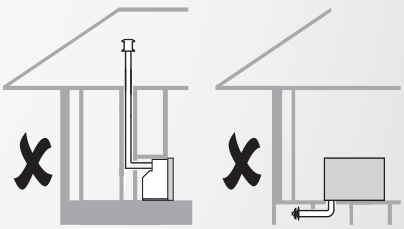
Required when any part of the flue system goes horizontally then vertically.

Down rating the appliance

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

Termination point

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



General flueing guidelines

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

Some guidelines to assist with flue design are listed below. These must be read and modified as necessary with reference to the particular installation.

The Rinnai Arriva/Evolve must be installed with an approved Rinnai flue system. Approved flue components are detailed in this guide.

Clearance to combustibles

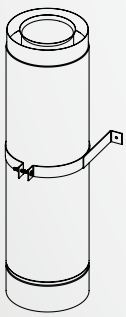
- Flue transition (p. 10) - 5 mm
- Elbow component of adaption flue kit (ASPKIT03/EVOKIT03) - 25 mm

All other flue components have zero clearance.

Flashings

Flashings are not part of the flue kit and must be specified.

Flue support



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.

Horizontal terminations

The flue must terminate in accordance with AS/NZS 5601.1. Especially relevant is the requirement to have a 300 mm minimum clearance between the flue terminal and ground level.

Vertical terminations: Flue cowl clearance

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

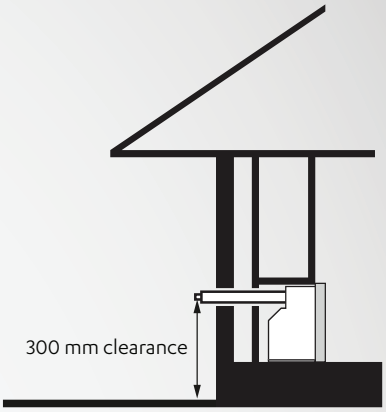
The flue cowl should have a 500 mm clearance from any part of the building. This also applies to steeped and pitched roofs which should be clear of the ridge line. Lesser clearances may provide perfectly adequate flue systems depending on the installation. Minimum clearances are shown in AS/NZS 5601.1

Maximum flue length and number of bends

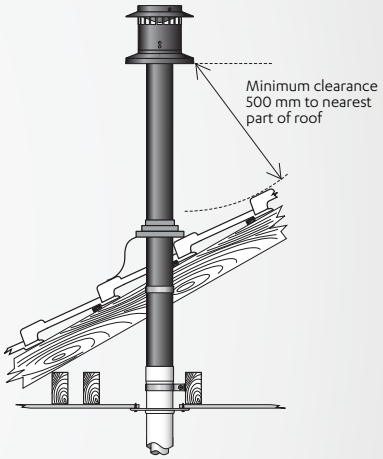
Max. flue length - 8.5 m
Max. number of bends - 3

One 90 ° bend equals 1 m. 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 is 5.5 m.

The elbow component of the ASPKIT03/EVOKIT03 is counted as a 90° bend.



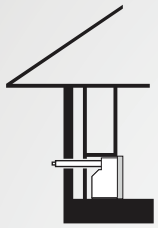
Horizontal terminations



Vertical terminations

Flueing options

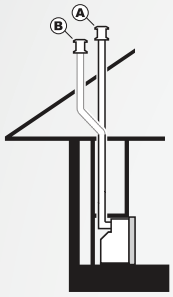
The below options detail the most common types of flue installations. If you have an installation that varies from those below, please contact Rinnai. For further detail on each of the options refer pages 12-18.



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 flue components
- Direct A flue (R2731), or
- Direct B flue (R2732), or
- Direct flue (ASPDFK)

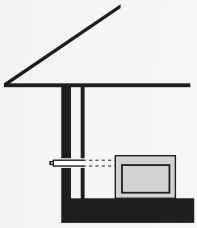
Evolve flue components
- Direct flue (ASPDFK)



In-wall vertical flueing
The 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.

Vertical in-wall direct (A)
- Adaption flue kit*
- Flue pipe (ESPIPE900)
- Roof cowl (ESROOFCOWL)

Vertical in-wall offset (B)
- Adaption flue kit*
- Flue pipe (ESPIPE900)
- 45 ° bends (ESBEND)
- Roof cowl (ESROOFCOWL)

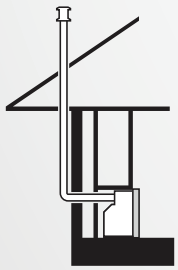


Sideways flueing
The sideways flue installation can run along the left or right hand side of an internal wall behind the heater. When considering the location of the fire ensure the flue path is free from obstructions such as studs, noggins, wiring, joists etc.

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

Down-and-out flueing
The down-and-out flue option allows for the adpation flue kit to face downwards and for the flue to run vertically through a hole in the floor, and then terminate horizontally outside (must be 300 mm above ground).

- 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 appliance 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.

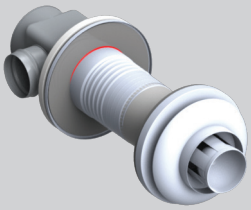
- Direct flue (ASPDFK)
- 45 ° bends (ESBEND)
- Flue pipe (ESPIPE900)
- Condensate trap (ESCONDK)
- Roof cowl (ESROOFCOWL)

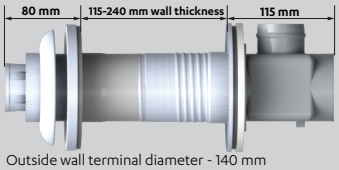
* Adaption flue kit: Arriva use ASPKIT03, Evolve use EVOKIT03

- Maximum flue length - 8.5 m
- Maximum number of bends - three
- One 90 bend = 1 m

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. The ASPKIT03/EVOKIT03 is counted as one 90 ° bend.

Flue components





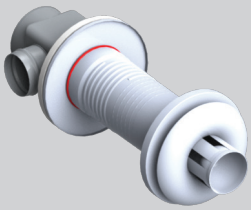
Outside wall terminal diameter - 140 mm

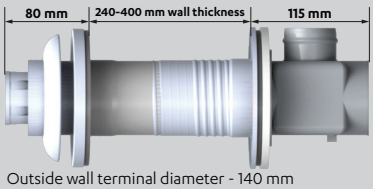
Direct A flue kit (Arriva only)

Code = R2731 (stainless steel)

Suitable for Arriva models only.

For use in walls 115-240 mm thick—typically weatherboard construction. This is a complete kit, no other components are required. This kit has an Inbuilt 2° fall to drain condensate.





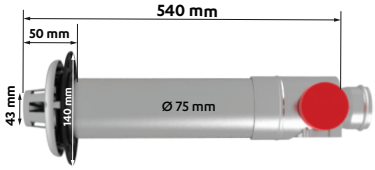
Outside wall terminal diameter - 140 mm

Direct B flue kit (Arriva only)

Code = R2732 (stainless steel)

Suitable for Arriva models only.

For use in walls 240-400 mm thick—typically block construction. This is a complete kit, no other components required. This kit has an Inbuilt 2° fall to drain condensate.



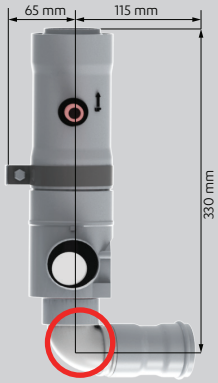
Direct flue kit

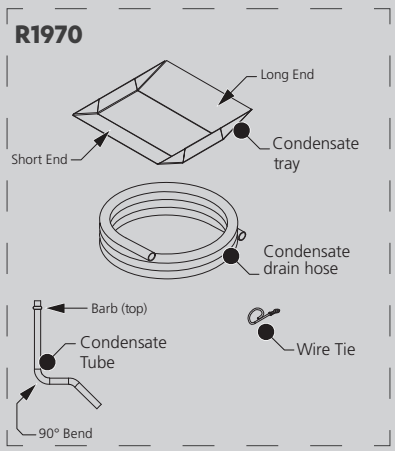
Code = ASPDFK (aluminium)

Suitable for Arriva and Evolve models.

Suitable for walls up to 385 mm (can be cut to length). Can also be used in combination with ESPIPE900 for longer flueing.

Flue terminal section is reusable when making flue longer.





Arriva adaption flue kit

Code = ASPKIT03

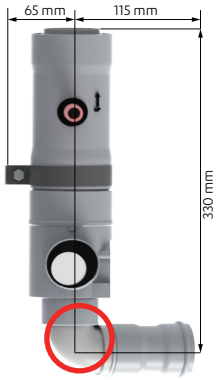
Elbow section of this component (circled) requires a 25 mm clearance from combustibles, the rest is zero clearance.

Kit includes:

- Flue transition (rotates)
- Condensate trap
- Wall strap
- Drain tube (750 mm)
- Silicone grease
- Flue slide stopper (4822)
- R1970 sub-kit

R1970 is a sub-kit called the condensate drain kit. This is used for installations that require draining of condensate back into the heater.

Evolve adaption flue kit



Code = EVOKIT03

Elbow section of this component (circled) requires a 25 mm clearance from combustibles, the rest is zero clearance.

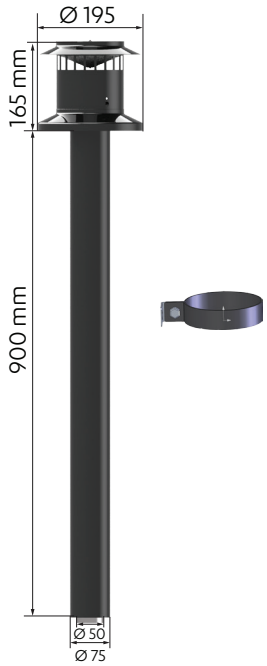
Kit includes:

- Flue transition (rotates)
- Condensate trap
- Wall strap
- Drain tube (750 mm)
- Silicone grease
- Flue slide stopper (4822)

Coaxial flue pipe 900 mm

Code = ESPIPE900

Extension pipe used to construct horizontal, vertical, and down-and-out flueing. Can be cut to size. Inner is aluminium, and outer is white PVC plastic. Comes with one wall bracket, o-ring (4350), and spacer (4351).



Vertical terminal

Code = ESROOFCOWL

Roof cowl and connecting pipe for termination of a vertical flue—can be cut to size.

Galvanised steel, powder coated black.

Wall plate

Code = ESPLATE

Used if an extra wall cover is required to tidy any installation work through the wall, ceiling, or floor. N.B: Currently white, but changing to black.

Flue guard

Code = R1370

Protection against hot flue gases when the flue terminates low to the ground. Colour - warm white.

Dimensions: 220 x 220 mm, Ø 146 mm.

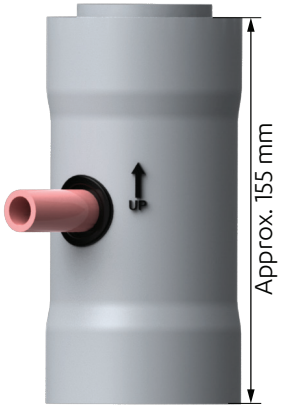
Wall terminal kit

Code = ESWTERM

Used to terminate the ESPIPE900 in horizontal flue installations when used in conjunction with ASPKITO3 and EVOKIT03.

Contains:

- External wall plate (black PVC)
- Flue terminal (aluminium)

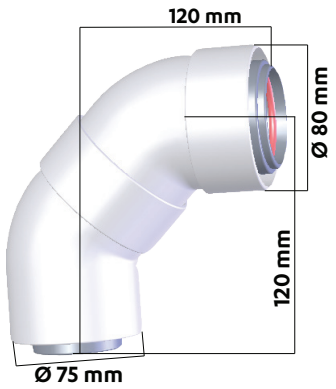


Condensate trap

Code = ESCONDK

Supplied with a 750 mm drain tube (not pictured). Only ordered separately for through-wall vertical flueing combinations, refer p. 18.

In vertical installations the condensate trap MUST BE installed in a vertical position.



45° flue bends (x 2)

Code = ESBEND

Two 45 ° bends used to facilitate between horizontal, vertical, and downwards flueing. Two spacers are included. Can be used separately, or together as one 90 ° bend.

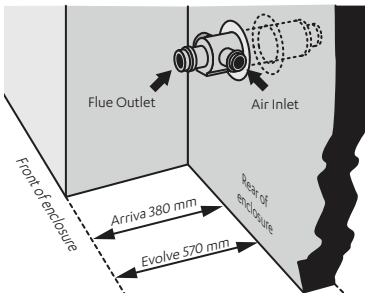
Flue transition (ASPDFK, ASPKIT03, EVOKIT03)

The flue transition (highlighted in the images below) provides a connection between the flue system and the heater's flue spigot and air intake, and requires a 5 mm clearance from combustibles. This clearance is provided automatically when the supplied wall straps are used. All other flue components, except the elbow section of the ASPKIT03 and EVOKIT03, are designed for zero clearance and can be placed against timber or plasterboard.

The following images show the flue transition in different flue configurations.

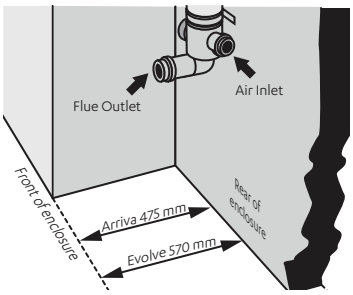
Horizontal direct flue transition

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 a 25 mm clearance to combustibles.

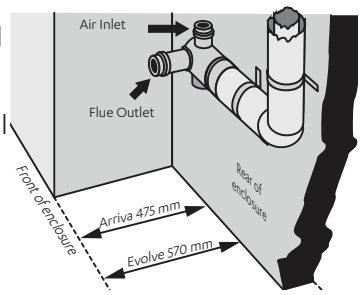


Appliance needs to be down rated—refer commissioning sheet.

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.

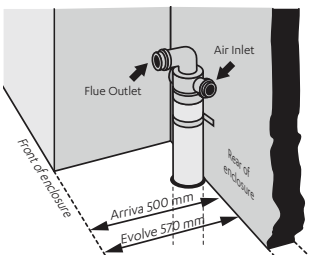
Appliance needs to down rated—refer commissioning sheet.



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.

The Arriva enclosure depth for a down and out installation is 500 mm to allow the flue pipe to clear the base of the appliance.



Appliance needs to be down rated—refer commissioning sheet.

Wall penetration

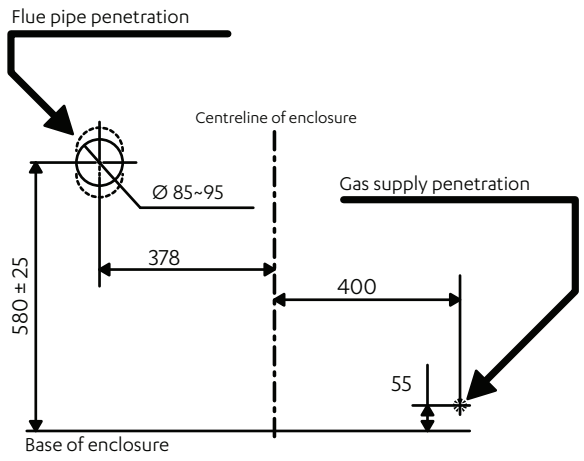
Direct flue wall penetration requirements

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.

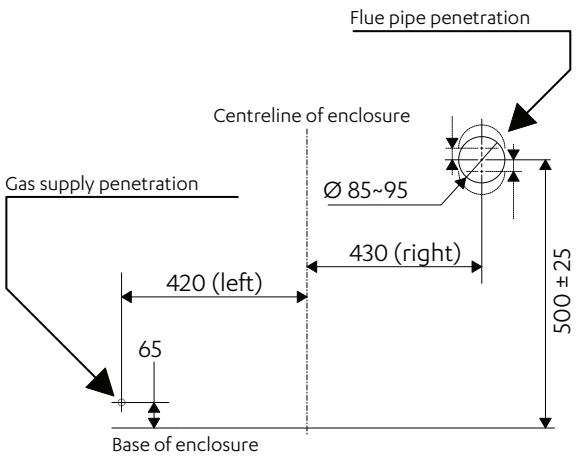
The penetration for the flue transition only needs to be made for direct flue installations, where the terminal is directly to the rear of the appliance. If no flue pipe penetration is required the markings are still useful for indicating the correct position of the flue transition within the enclosure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

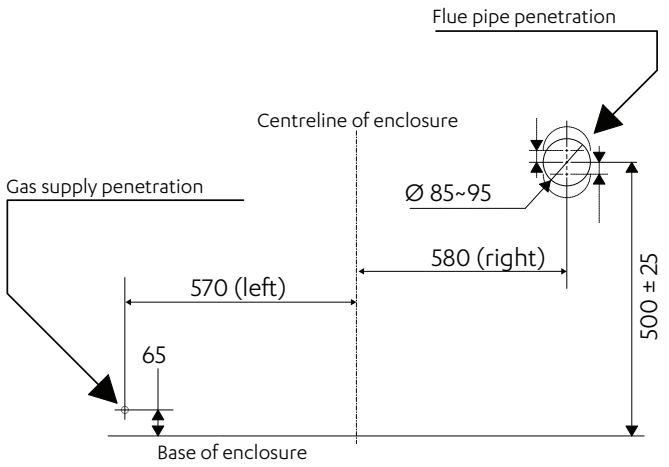
Arriva flue penetration guide
Dimensions are in mm.



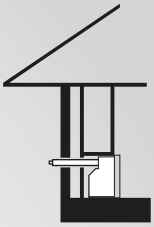
Evolve 950 flue penetration guide
Dimensions are in mm.



Evolve 1250 flue penetration guide
Dimensions are in mm.



Direct flueing

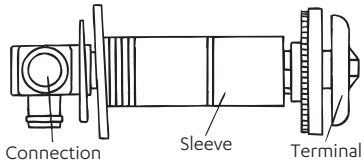


For installations where the unit is mounted directly on the inside of an external wall. This installation requires a 2° fall from the heater connection to the wall terminal—the Arriva Direct A and B flue kits have this fall built in.

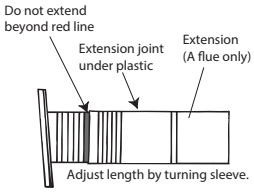
Direct flueing using the Direct A and B flue kits - ARRIVA models only

Before starting, create the wall penetration refer p. 11.

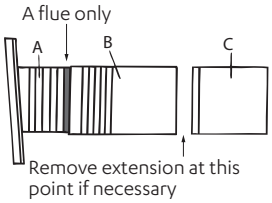
1. Disassemble manifold
The flue consists of three parts; sleeve, inside connections and tube, and outside terminal. Disassemble by pulling hard on outside terminal and inner connections, then pull the sleeve off the outer terminal.



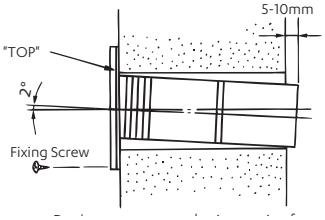
2. Adjust flue length
Measure the wall length through the drilled hole. Adjust the sleeve length to the wall thickness plus 5-10 mm (required sleeve protrusion from wall).



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

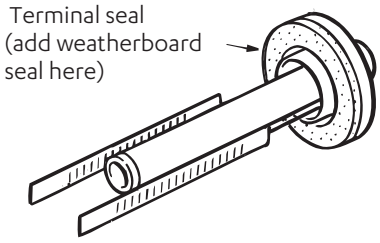


4. Fix sleeve
Fix the sleeve to the wall using the three screws provided. The flange is marked 'TOP'. The sleeve must be fitted with this mark up. Check sleeve protrudes 5-10 mm on the outside.



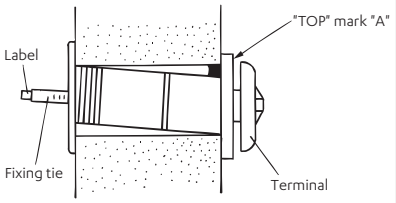
5. Check and add rubber seal
Check the rubber seal is in place on the terminal.

For weatherboard walls, add the spare rubber seal provided to compensate for the weatherboard angle.

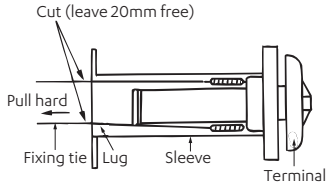


6. Install terminal
From the outside insert the terminal into the sleeve with the 'A' mark at the top.

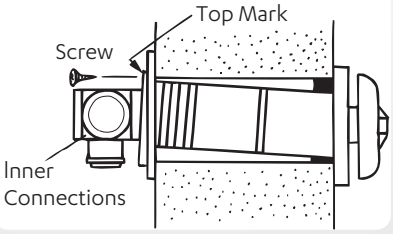
The left hand fixing tie is marked 'LEFT' (from the inside).



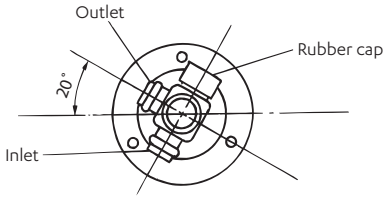
7. Attach ties
Pull hard on the left and right hand ties, and clip ties over the lugs inside the sleeve. You should be able to pull the ties two or three slots past the starting point. Cut the ties approx. 20 mm past the lugs and bend so they are parallel with the wall.



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.



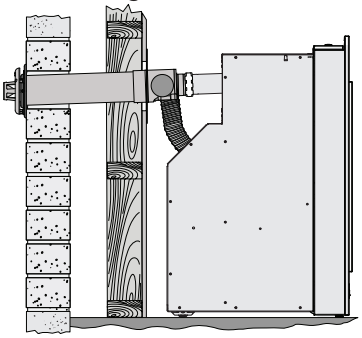
9. Adjust manifold
Adjust the manifold as required. The manifold can be still turned after attaching.



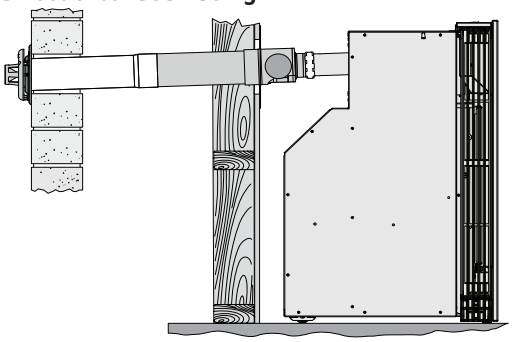
Direct flueing using the ASPDFK flue kit

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



Direct extended flueing



ASPDFK wall terminal

IMPORTANT Refer p. 19 if cutting to length for important information about cutting the outer and inner pipes.

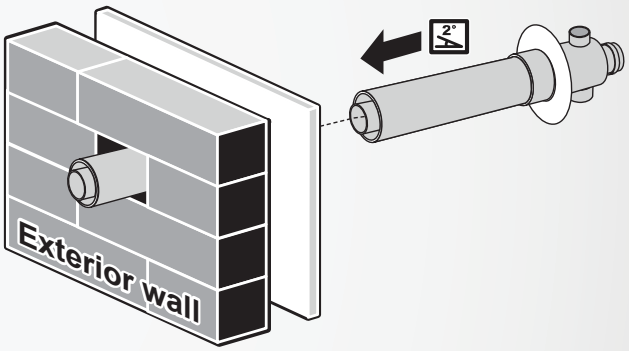
Flue length

Direct extended flueing—flue can be up to 8.5 m (no bends).

Creating a direct flue installation for walls less than 385 mm

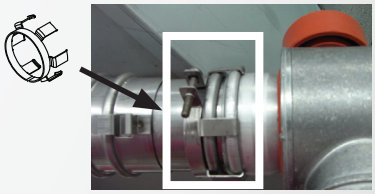
1. Create the wall penetration (p. 11). Allow for a continuous 2 ° fall from the heater connection point to the wall terminal.

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. Pass the ASPDFK through the internal wall penetration until the internal wall plate is flush with the wall.



3. Create the wall terminal (p. 20).

4. Move the heater into place and connect the heater flue pipe to the flue. This is done with the flue slide stopper provided with the flue kit.

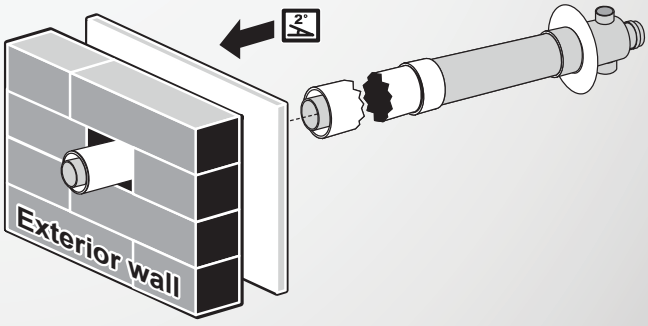


Creating a direct extended flue installation for walls greater than 385 mm

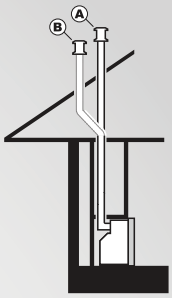
1. Refer step 1 above.

2. Join ESPIPE900 to ASPDFK—cutting is not required to join these components together. The joints between ASPDFK and ESPIPE900 MUST BE secured by screws through the outer pipes to prevent disconnection.

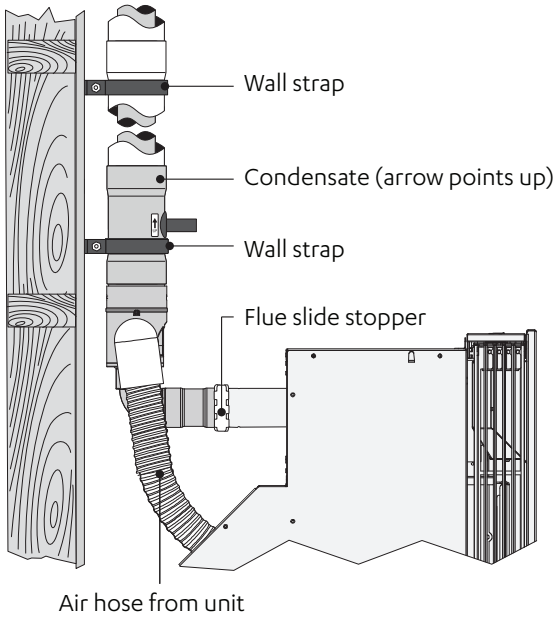
3. Follow steps 2-4 as outlined in the previous section for creating a direct flue installation.



In-wall vertical flueing



The 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 heater ensure that the flue path in the roof space is free from obstructions such as studs, noggins, wiring, joists etc.



In-wall vertical flueing showing flue components

Joining the flue transition and condensate

IMPORTANT

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

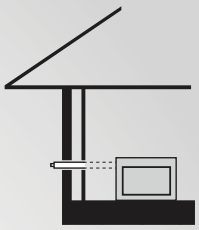
Total flue length can be 7.5 m—the elbow component of the ASPKIT03/EVOKIT03 is counted as a 90° bend.

If bends need to be included to offset a stud, noggin etc., the flue length can be up to 5.5 m and contain two 90° bends (two ESBEND kits).

Steps for creating in-wall vertical flueing

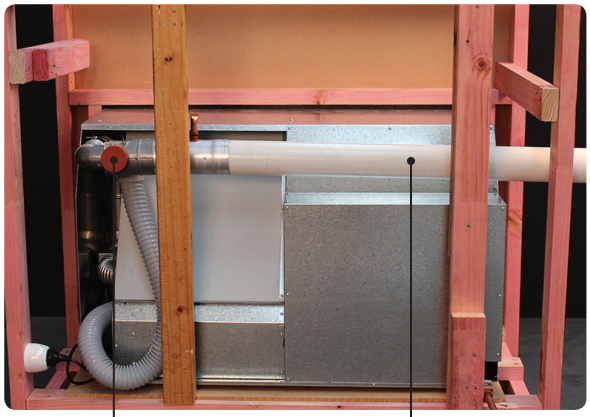
1. Lubricate all inner pipe o-rings with the silicone grease provided.
2. Join the flue transition and condensate together ensuring the arrow points upwards.
3. Fit lengths of ESPIPE900 as required.
4. Determine the location of the roof or ceiling penetration point. To avoid obstructions an offset can be created using the ESBEND kit.
5. Create a vertical roof terminal.
6. Secure joints between flue components through the outer pipes with screws and secure the entire flue system using the wall straps supplied.
7. 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 22 in this guide. For the Evolve refer Evolve installation guide (section ‘ Install heater into enclosure’).

Sideways flueing



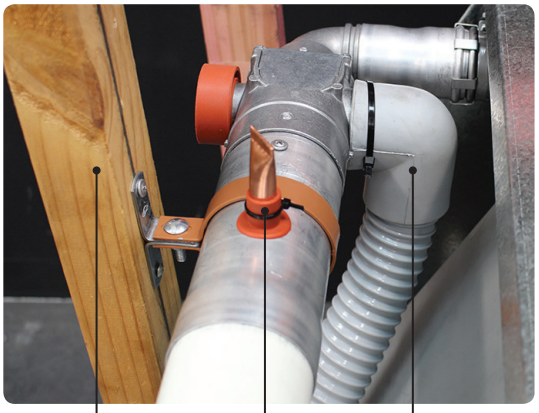
The sideways flue installation can be run along the left or right hand side of an internal wall behind the heater. When considering the location of the heater ensure that the flue path is free from obstructions such as studs, noggins, wiring, joists etc.

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



ASPKIT03/EVOKIT03
(DO NOT remove cap)

2° fall to terminal



Additional packing
for wall straps

Condensate (should
be capped or sealed)

Air hose secured
with cable tie

IMPORTANT

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 7.5 m—the elbow component of the ASPKIT03/EVOKIT03 is counted as a 90° bend.

If bends need to be included to offset a stud, noggin etc., the flue length can be up to 5.5 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.

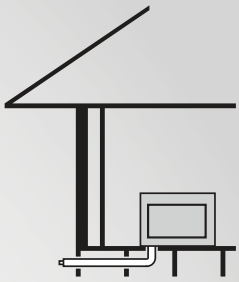
3. Fit lengths of ESPIPE900 as required. Allow for a 2° continuous fall from the heater connection point to the wall terminal.

4. Create the wall penetration.

5. Create the wall terminal, refer p. 20.

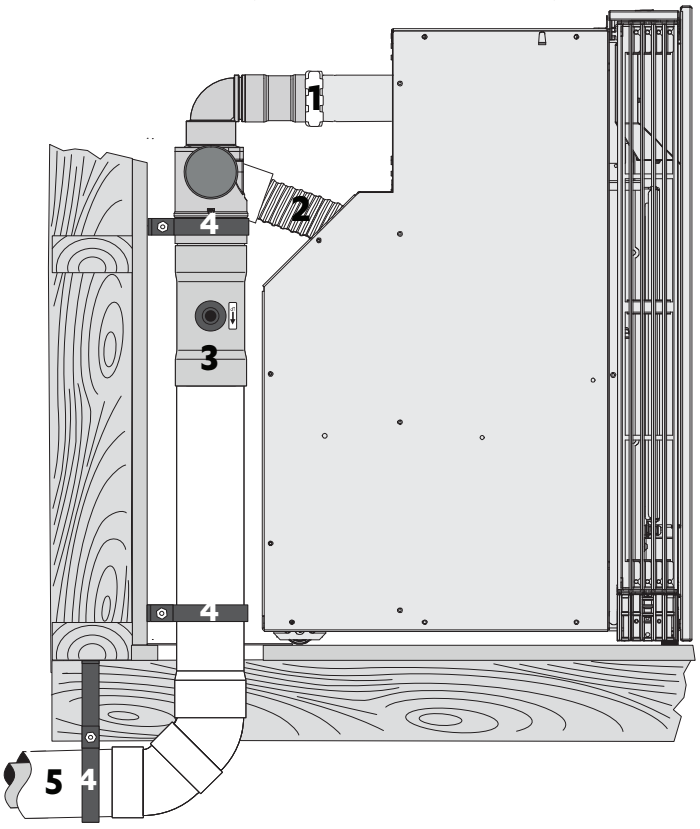
6. Secure joints between flue components through the outer pipes with screws and secure the entire flue system using the wall straps supplied.

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

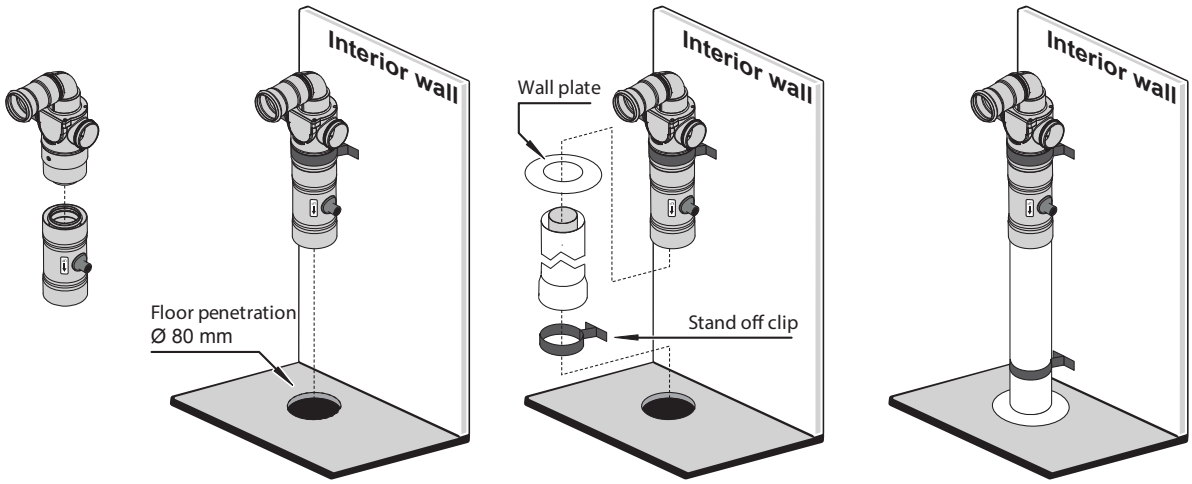


1. Flue slide stopper (provided with the ASPKIT03/EVOKIT03).
2. Air hose from unit.
3. Condensate trap component—acts as a transition piece (arrow points down, and it should be capped or sealed).
4. Wall straps (provided with each flue kit).
5. 2° fall to wall terminal.

Flue length
In this example the flue could be up to 6.5 m long and contain one 90 ° bend.

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

Steps for creating a down-and-out flue installation



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—cut a 80 mm diameter hole through the floor, ensure the hole edges are smooth.

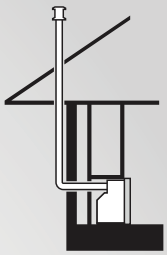
5. Pass the ESPIPE900 through the wall plate and through the floor penetration and secure wall plate in place to seal the floor.

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.

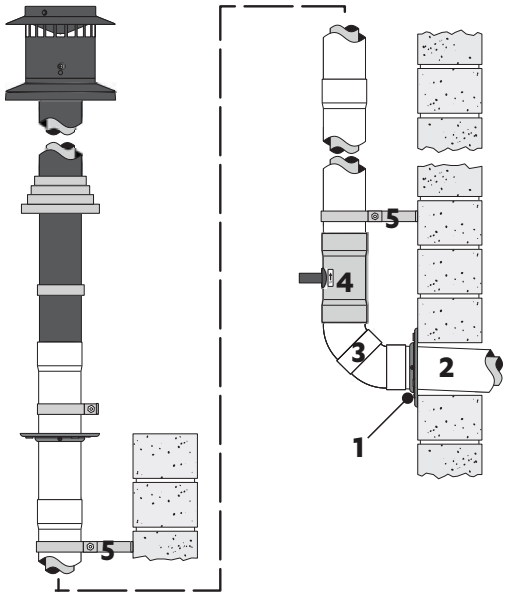
7. Create the wall terminal, refer p. 20.

8. 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.



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

Some 'quirks' associated with this type of installation

- **Condensate trap** attached to the heater from the outside—longer length of condensate pipe required (not supplied). 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.

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

Flue length
In the illustrated example the flue length can be up to 7.5 m long and contain one 90° bend (ESBEND).

Steps for creating horizontal through-wall flueing
1. Create the wall penetration (p. 11). 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 the Evolve installation guide (section 'Install heater into enclosure').

   N.B: Supplied condensate tube (750 mm long) will not be long enough for this type of installation so a separate tube will need to be used. The drilled hole will need to be sealed with a suitable sealant to ensure weathertightness.

Cutting to length (ASPDFK, ESPIPE900)

Cutting of the last component in the flue assembly may be required to achieve the required length. Cutting is also required at a wall penetration. Cutting for both purposes is described below.

IMPORTANT

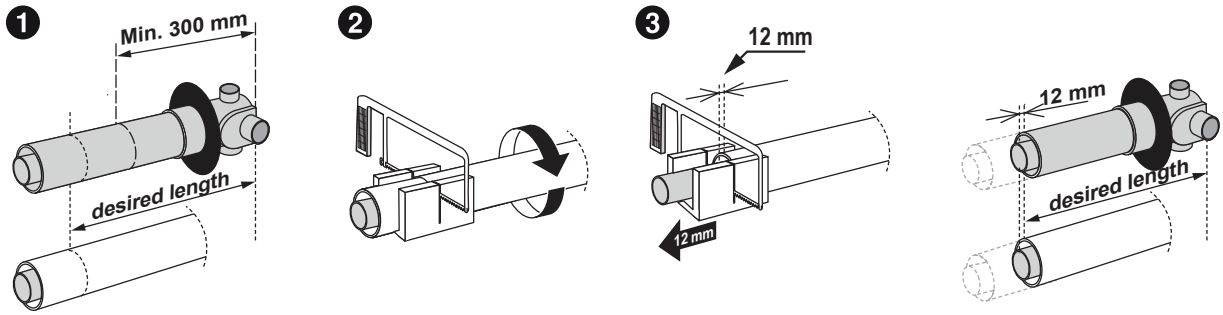
Important

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.

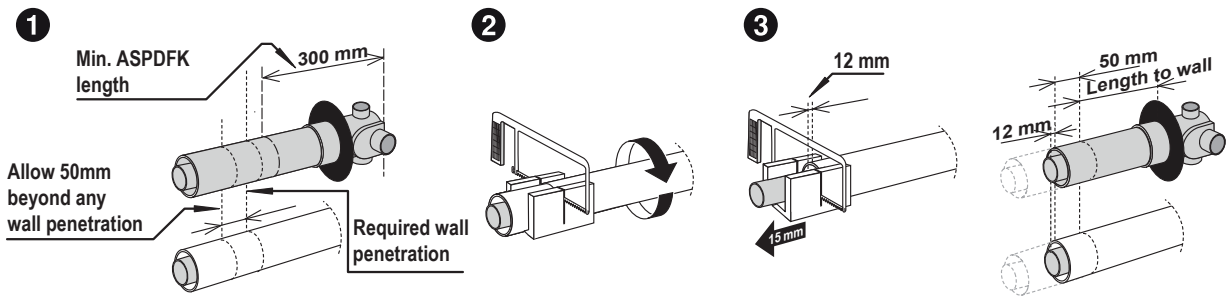
ESPIPE900, can be cut to size at the male end—do not cut the female end.

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.

Cutting components at a wall penetration



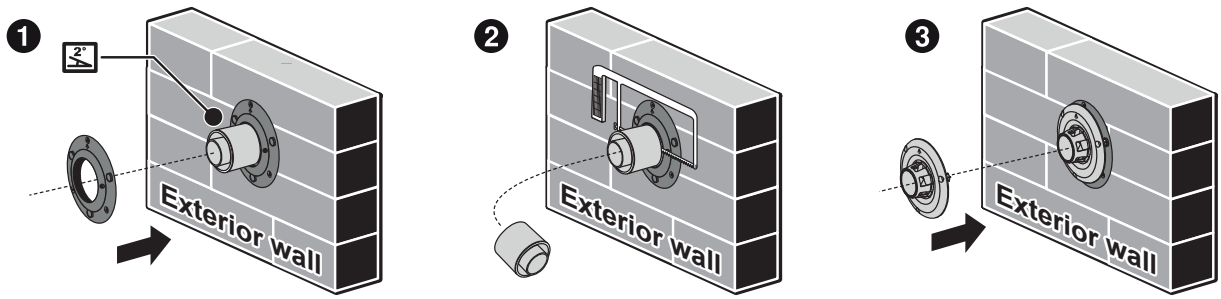
1. Measure and mark the outer pipe at a point flush with the surface of the wall penetrated PLUS an additional 50 mm.
2. Cut the outer pipe to the required length. Take care not to cut the inner pipe.
3. Refer step 3 above.

* The additional 12 mm on the inner pipe is needed to connect to other flue components

Assembling a wall terminal

Only the ASPDFK, and the ESPIPE900 /ESWTERM can be used to create a wall terminal.

Steps to create a wall terminal



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

2° fall to the outside—arrows point 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.

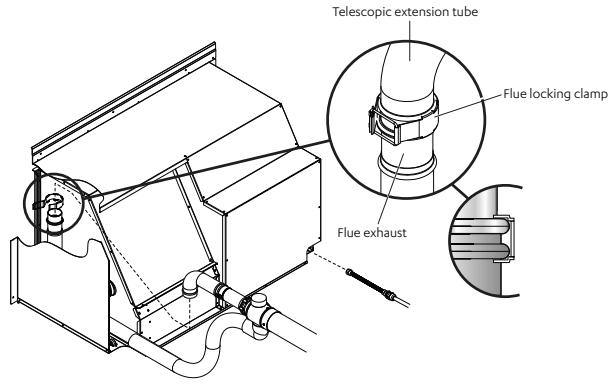
2. Carefully cut through the outer and inner pipes (refer previous page). Take care to avoid cutting the external wall plate, and keep the cuts of the internal and external pipes as parallel as possible. Remove all burrs and swarf from the cut ends.

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.

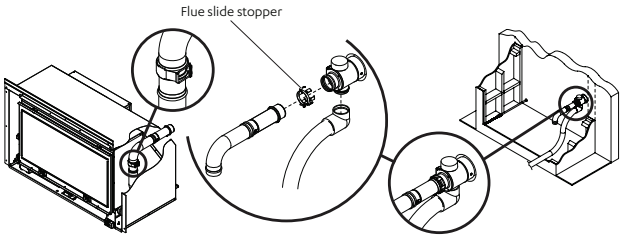
Connecting the heater exhaust pipe

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

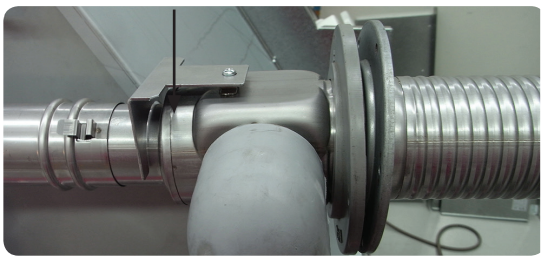
Attaching the flue lock clamp (Evolve example)



Attaching the flue slide stopper and air hose (Evolve example)



Flue clamp bracket used for the Arriva Direct A/B flues



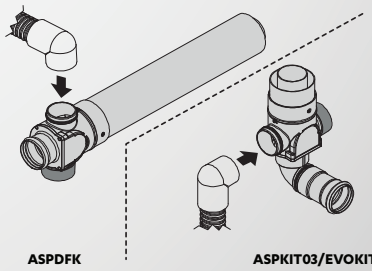
1. Lubricate the o-ring of the exhaust connection and fit the telescopic exhaust pipe of the heater. Push the telescopic tube fully home so the end of the exhaust connection and the collar of the telescopic exhaust pipe are fully mated.
2. Attach the flue locking clamp provided with the heater over the 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.

   IMPORTANT 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).

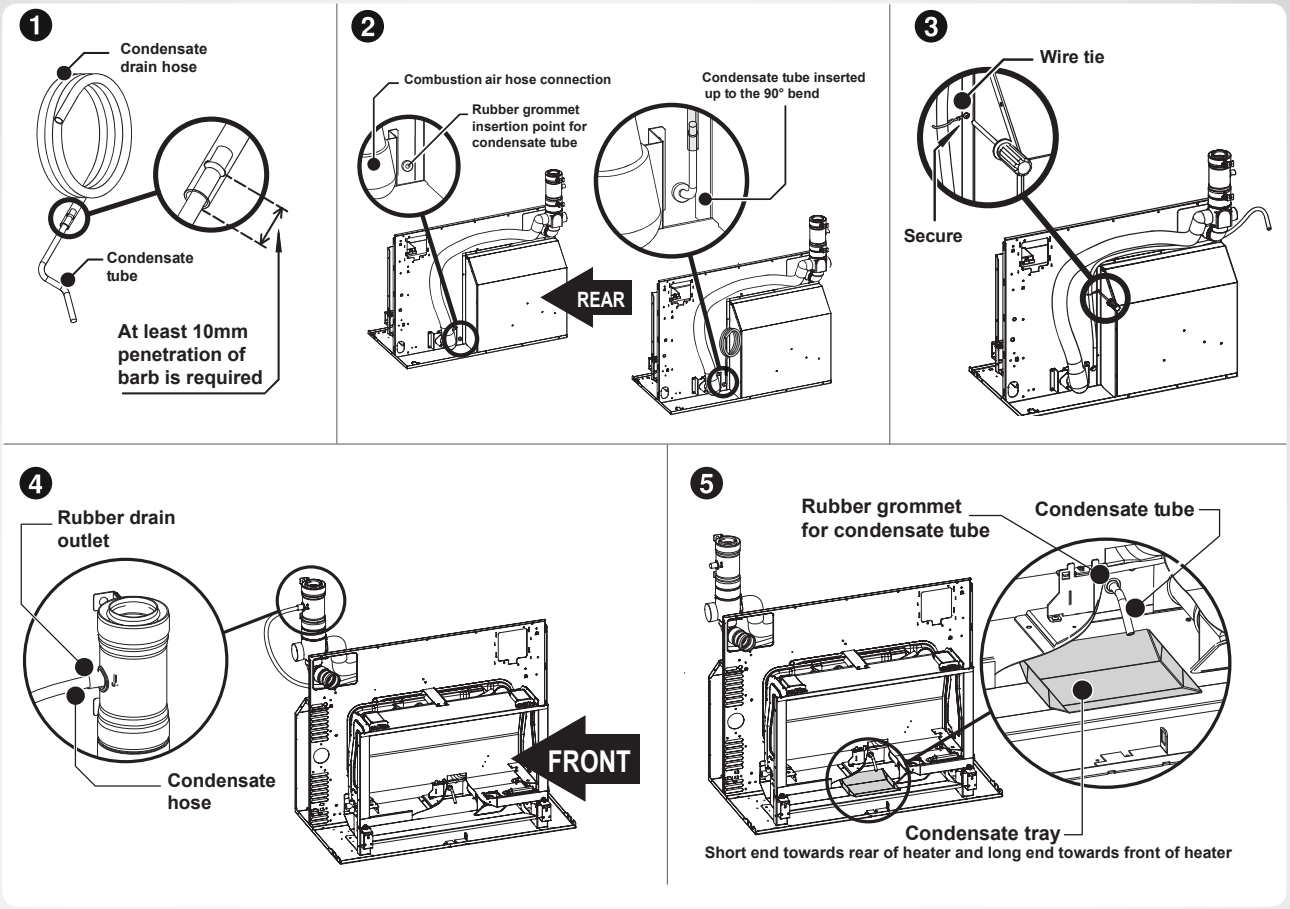
Connecting the air supply

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. 15) 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 (p. 8). 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.

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Arriva/Evolve flue installation guide: 10726-G 07-15