

For Models:

RHFE-308FTR

RHFE-309FT / FT2

RHFE-556FTR / FDT

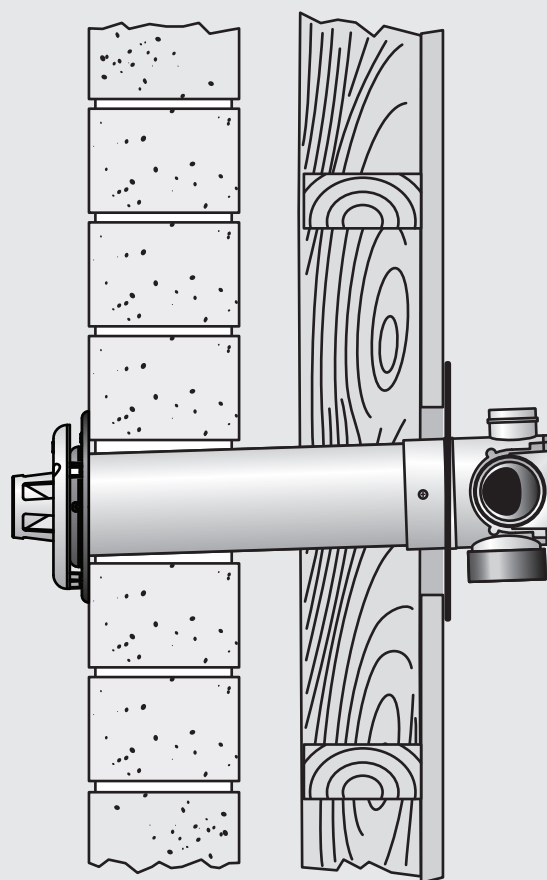
RHFE-557FTR

RHFE-559FT / FDT / FT2 / FDT2

RHFE-561FT / FT2

RHFE-1004FT / FDT

RHFE-1005FT / FDT / FT2 / FDT2



USE ONLY RINNAI GENUINE PARTS

Energysaver Co-axial Flue System

Installation Manual

Rinnai



Before proceeding with an installation read this manual thoroughly and gain a full understanding of the installation requirements, to ensure a safe and correct installation.

The Rinnai Energysaver® Co-Axial flue is certified as part of the Rinnai Energysaver space heaters that have the designation 'RHFE' in the model number.

ONLY the Rinnai flue system components specified in this manual MUST be used. Components NOT specified in this manual, whether manufactured by Rinnai or otherwise, are NOT compatible and MUST NOT be used!

Rinnai appliance warranty conditions may be voided if non Rinnai flue components are fitted.

ONLY an authorised person MUST install, service and remove the Rinnai Energysaver® space heater & flue system.

This appliance must be installed in accordance with:

- Manufacturer's Installation Instructions
- Current AS/NZS 3000, AS/NZS 3500 & AS/NZS 5601
- Local Regulations and Municipal Building Codes including local OH&S requirements

This appliance must be installed, maintained and removed by an Authorised Person.

For continued safety of this appliance it must be installed and maintained in accordance with the manufacturer's instructions.



**The Australian
Gas Association**
All Rinnai gas products
are A.G.A. certified.

INSTALLATION TABLE OF CONTENTS

Warnings & Important Information	4
Before Using Installing Flue Components	4
Regulatory Information	4
Notice to Victorian Consumers	4
Graphical Conventions Used In This Manual	5
Regulations & Clearances	6
Flue Transition Connections	7
Location	7
Lubricating Components	7
Wall Penetrations	8
Installation Configurations	10
Flue Kit Components	12
Installation methods	13
Direct Flue Installation Method	13
Direct Extended Flue Installation Method	14
External Wall Flue Installation Method	15
Sideways Flue Installation Method	17
Under Floor Flue Installation Method	19
Cutting ~ ESDFK, ESPIPE900 & ESROOFCOWL	21
Cutting components to achieve a desired length:	21
Cutting components at a wall penetration:	21
Component Assembly & Connection ~ ESPIPE900	21
Component Assembly & Connection Wall Terminal ~ ESDFK & ESWTERM	22
Component Assembly & Connection ~ ESBEND	22
Component Assembly & Connection ~ ESCONDK	23
Component Assembly & Connection ~ ESROOFCOWL	23
Component Assembly & Connection "On-Wall" Terminal ~ ESWTKIT2	24
Component Assembly & Connection "In-Wall" Flue ~ ESFKIT03 & ESKITIW	25
Connecting Heater Exhaust	28
Connecting Combustion Air Hose (Air Supply)	29
Connecting Condensate Drain Tube To Heater	30
Contacts	32

WARNINGS & IMPORTANT INFORMATION



BEFORE USING INSTALLING FLUE COMPONENTS

Before proceeding with the installation of an Energysaver co-axial flue system, read this manual thoroughly to gain a full understanding of the installation requirements.

Always comply with the following precautions to avoid dangerous situations and to ensure optimum performance.

Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in personal injury or death.

WARNINGS: Indicates a potentially hazardous situation which, if not avoided, could result in personal injury or death.

CAUTIONS: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to the appliance. It may also be used to alert against unsafe practices.



REGULATORY INFORMATION

Your Rinnai gas heater flue has been certified by the Australian Gas Association. The A.G.A. Certification Number is shown on the data plate.

These flueing components MUST be installed in accordance with:

- **Current AS/NZS 3500 and AS/NZS 5601**
- **The installation MUST comply with all relevant instructions supplied by Rinnai.**
- **Service and removal MUST be carried out by an authorised person.**
- **Local regulations and municipal building codes including local OH&S requirements**

Flue components MUST be installed correctly by an appropriately licensed tradesperson. The installation of gas, water, and electricity MUST conform to local regulations.

All dimensions referred to in these instructions are in millimetres, unless otherwise specified.

These instructions ONLY apply to the Rinnai Energysaver co-axial flue system. This flue system utilises pipe components with a aluminium inner pipe and a white plastic outer pipe.

Before commencing installation, please read the Installation Instructions provided with all Rinnai Energysaver models. The Rinnai Energysaver MUST ONLY be installed with a Rinnai Energysaver co-axial flue system as referred to in these instructions.

A Rinnai Energysaver heater correctly fitted with an FFU flue system is room sealed as defined in AS/NZS 5601. No ventilation in the space where the Energysaver heater is installed is required.

The outer plastic section of the coaxial flue complies with temperature hazard requirements and can be installed with zero clearance to combustible material.

Notice to Victorian Consumers

The appliance and flue components MUST be installed by a person licensed with the Victorian Building Authority. ONLY a licensed person will have insurance protecting their workmanship. So make sure you use a licensed person to install this appliance and ask for your Compliance Certificate.

For further information contact the Victorian Building Authority on 1300 815 127.

GRAPHICAL CONVENTIONS USED IN THIS MANUAL

The following symbols are used to highlight specific requirements during installation steps.



CLEARANCES

Where required clearances will be provided and **MUST** be observed.



FALL

Ensure that the specified 2° fall is maintained to either the terminal or condensate trap.



MEASURE

Required measurements will be provided and **MUST** be observed for correct installation.



CUT

Cut as required to the specified measurements.



FINISH

Ensure that burrs and swarf are removed from all cut ends.



DISCARD

Denotes items that are not required for the specific installation.



OBSERVE CORRECT ORIENTATION

Where specified ensure that components are installed with the correct vertical or horizontal orientation.



LUBRICATE

Use the supplied container of silicon grease to lubricate components. **DO NOT** use other lubricants as these may damage the flue components.



SECURE

Where specified secure components with either installer provided or component supplied fixings.



DO NOT

Failure to observe **DO NOT** instructions will void the warranty of an appliance and may cause injury or death.



CAUTION

Caution notes and or warnings that **MUST** be observed for safe and correct installations.

IMPORTANT

Important notes that **MUST** be observed for safe and correct installations.

NOTE

General hints and guides provided to ease the installation.

REGULATIONS & CLEARANCES

The heater and the flue system shall be installed in accordance with the following:

- Manufacturer's Installation Instructions
- Current AS/NZS 3000, AS/NZS 3500 & AS 5601
- Local Regulations and Municipal Building Codes
- Any other relevant Statutory Regulation

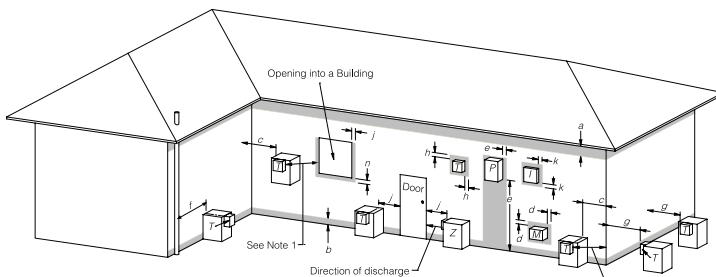


Before commencing an installation, read the installation sections of the 'Customer and Installation Manual' supplied with the heater. Note that AS/NZS 5601 is referred to in this instruction and was current at the time of printing, but may have since been superseded. It is the Installer's responsibility to ensure that requirements of the current version of AS/NZS 5601 are met.

These components **MUST** be installed, serviced and removed by an Authorised Person! **ONLY** the Rinnai flue system components specified in this manual **MUST** be used. Components **NOT** specified in this manual, whether manufactured by Rinnai or otherwise, are **NOT** compatible and **MUST NOT** be used!

Rinnai Energysaver space heater when correctly installed with Rinnai approved flue components are room-sealed appliances and no internal ventilation is required. The Rinnai Energysaver space heater is fan-assisted. Therefore the fan assisted flue clearance dimensions from AS/NZS 5601 extract shown on this page **MUST** be used.

The outer plastic section of the Co-Axial Flue complies with temperature hazard requirements and can be installed with zero clearance to combustible material. Vertical clearances when using a roof terminal (ESROOFCOWL) are shown in Fig.1. If in doubt contact the Rinnai Australia National Helpline (number on the back page).



T = Flue terminal Z = Fan assisted flue appliance only M = Gas meter P = Electricity meter or fuse box I = Mechanical air inlet
Shading indicates prohibited areas for flue terminals

Ref.	Item	Min. clearances (mm)
		Fan assisted
a	Below eaves, balconies and other projections:	
	• Appliances up to 50 MJ/h input	200
	• Appliances over 50 MJ/h input	300
b	From the ground, above a balcony or other surface *	300
c	Front a return wall or external corner *	300
d	From a gas meter (M) (see 5.11.5.9 for vent terminal location of regulator) (see Table 6.6 for New Zealand requirements)	1000
e	From an electricity meter or fuse box (P) †	500
f	From a drain pipe or soil pipe	75
g	Horizontally from any building structure* or obstruction facing a terminal	500
h	From any other flue terminal, cowl, or combustion air intake †	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	• Appliances up to 150 MJ/h input *	300
	• Appliances over 150 MJ/h input up to 200 MJ/h input *	300
	• Appliances over 200 MJ/h input up to 250 MJ/h input *	500
	• Appliances over 250 MJ/h input *	1500
k	• All fan-assisted flue appliances, in the direction of discharge	1500
k	From a mechanical air inlet, including a spa blower	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	• Space heaters up to 50 MJ/h input	150
	• Other appliances up to 50 MJ/h input	500
	• Appliances over 50 MJ/h input and up to 150 MJ/h input	1000
	• Appliances over 150 MJ/h input	1500

* - unless appliance is certified for closer installation

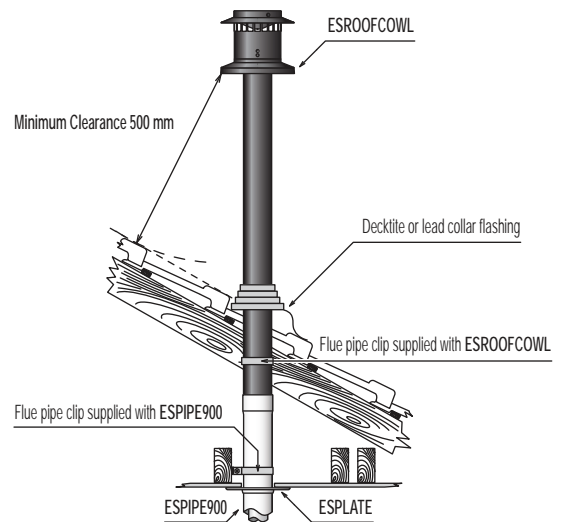
† - Prohibited area below electricity meter or fuse box extends to ground level.

NOTES:

- Where dimensions c, j or k cannot be achieved an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to comply.
- See Clause 6.9.4 for restrictions on a flue terminal under a covered area.
- See Figure J3 for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.
- For appliances not addressed above acceptance should be obtained from the Technical Regulator.

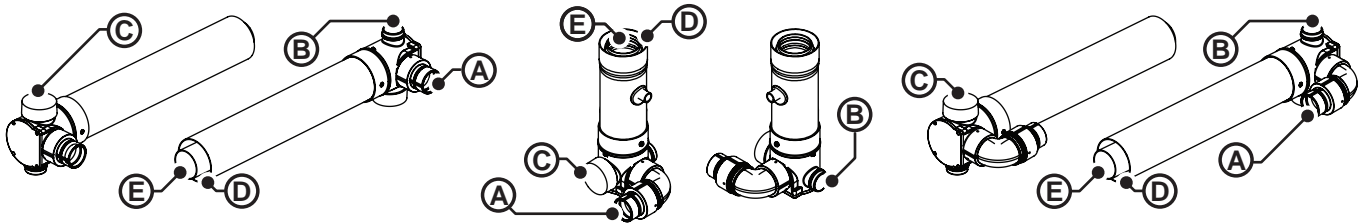
FIGURE 6.2 (in-part) MINIMUM CLEARANCES REQUIRED FOR BALANCED FLUE TERMINALS, FAN-ASSISTED FLUE TERMINALS, ROOM-SEALED APPLIANCE TERMINALS AND OPENINGS OF OUTDOOR APPLIANCES

Horizontal Clearances (Extract AS/NZS 5601 Fig. 6.2)



All Rinnai Energysaver space heaters are fan assisted (forced exhaust) appliances.

FLUE TRANSITION CONNECTIONS



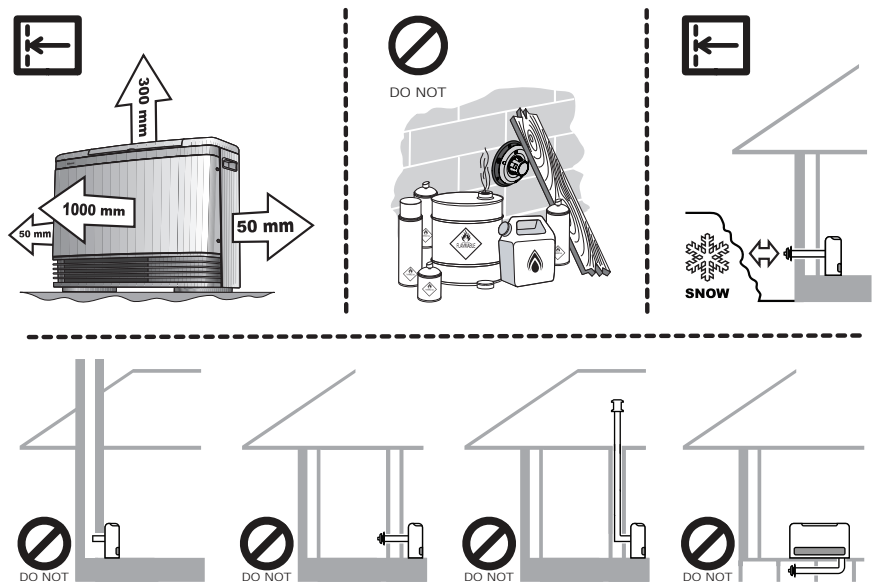
(A) Flue exhaust connection to heater. (B) Combustion air inlet connection to heater (Right hand ~ Small connection for models 308, 309, 556, 557, 559, 561 heaters. Left hand ~ Large connection for model 1004 & 1005 heaters). (C) Rubber combustion air inlet cap (when fitted) is designed to fit both the large and small combustion air inlet and **MUST** cover the air inlet not in use. (D) Combustion air inlet. (E) Exhaust outlet.

LOCATION

This appliance is **NOT** suitable for inbuilt installations.

This appliance **MUST NOT** be installed where curtains or other combustible materials could come into contact with it. In some cases curtains may need restraining.

Heat emanating from the front of this appliance may over time affect the appearance of some materials used for flooring such as carpet, vinyl, cork or timber. This effect may be amplified if the air in the room contains cooking vapours or cigarette smoke. To avoid this possibility, it is recommended that a mat be placed in front of the appliance, extending at least 750mm in front of it.



The flue terminal **MUST BE** positioned away from flammable materials.

In areas subject to heavy snowfall, keep snow clear of flue terminal at all times.

DO NOT flue into natural draught flues or fireplaces.

DO NOT flue into other rooms, roof spaces or into under floor spaces.

DO NOT Install the heater in an unusually dusty area.



For other important information regarding the location of the heater refer to the instructions supplied with the appliance.

LUBRICATING COMPONENTS

The inner flue pipe joints are sealed with an "O" ring seal.

To help ensure a good seal and to ease assembly, a small tub of silicone grease is provided with the Direct Flue Kit (ESDFK) and the In-Wall Transition Kit (ESKIT03). Use this silicone grease to lubricate the "O" ring on the inner pipes prior to assembly.

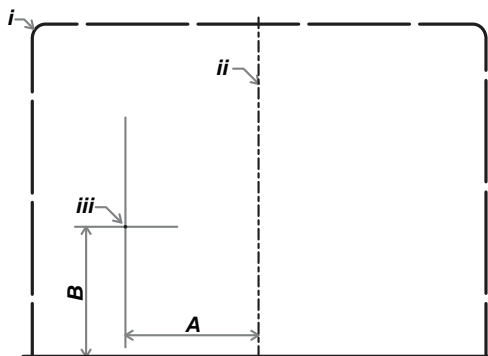


Use ONLY a silicone based "O" ring seal lubricant.

DO NOT use petroleum based lubricants such as petroleum jelly, as such products may cause deterioration.

WALL PENETRATIONS

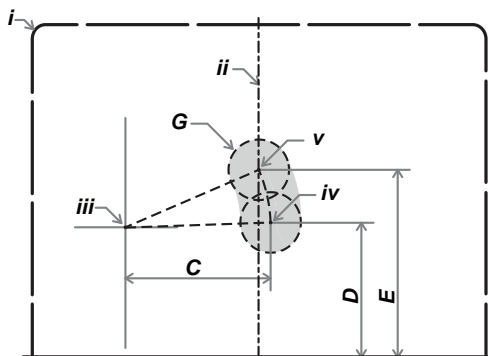
It is CRITICAL that any wall penetrations are located correctly.



1. Select the desired location *i* for the Energysaver Heater.
2. Find the vertical centre line of the appliance *ii* and mark this location on the wall.
3. Using Measurements *A* & *B* from Table 1, mark off the arc centre *iii* on the wall.



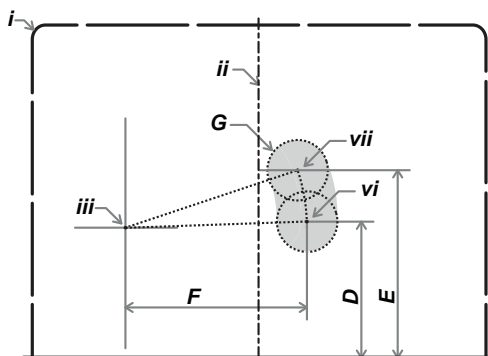
The arc centre *iii* corresponds to the pivot point centre of the telescopic flue elbow on the heater. The RHFE-308 and RHFE-309 heaters have a fixed length non-telescopic flue elbow. Hence accurate marking of the penetration arc and associated area are therefore especially critical.



4. From the arc axis *iii* use the measurements *C*, *D* & *E* from Table 1. to draw an arc on the wall.

The lower end point of the arc *iv* will be the lower limit of the minimum horizontal and vertical centre of penetration *G*.

The upper end point of the arc *v* will be the upper limit of the minimum horizontal and vertical centre of penetration *G*.



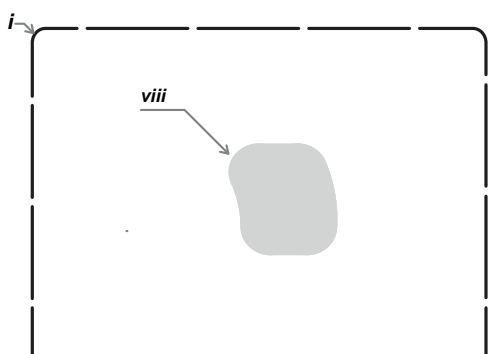
5. From the arc axis *iii* use the measurements *F*, *D* & *E* from Table 1. to draw an arc on the wall.

The lower end point of the arc *vi* will be the lower limit of the maximum horizontal and vertical centre of penetration *G*.

The upper end point of the arc *vii* will be the upper limit of the maximum horizontal and vertical centre of penetration *G*.

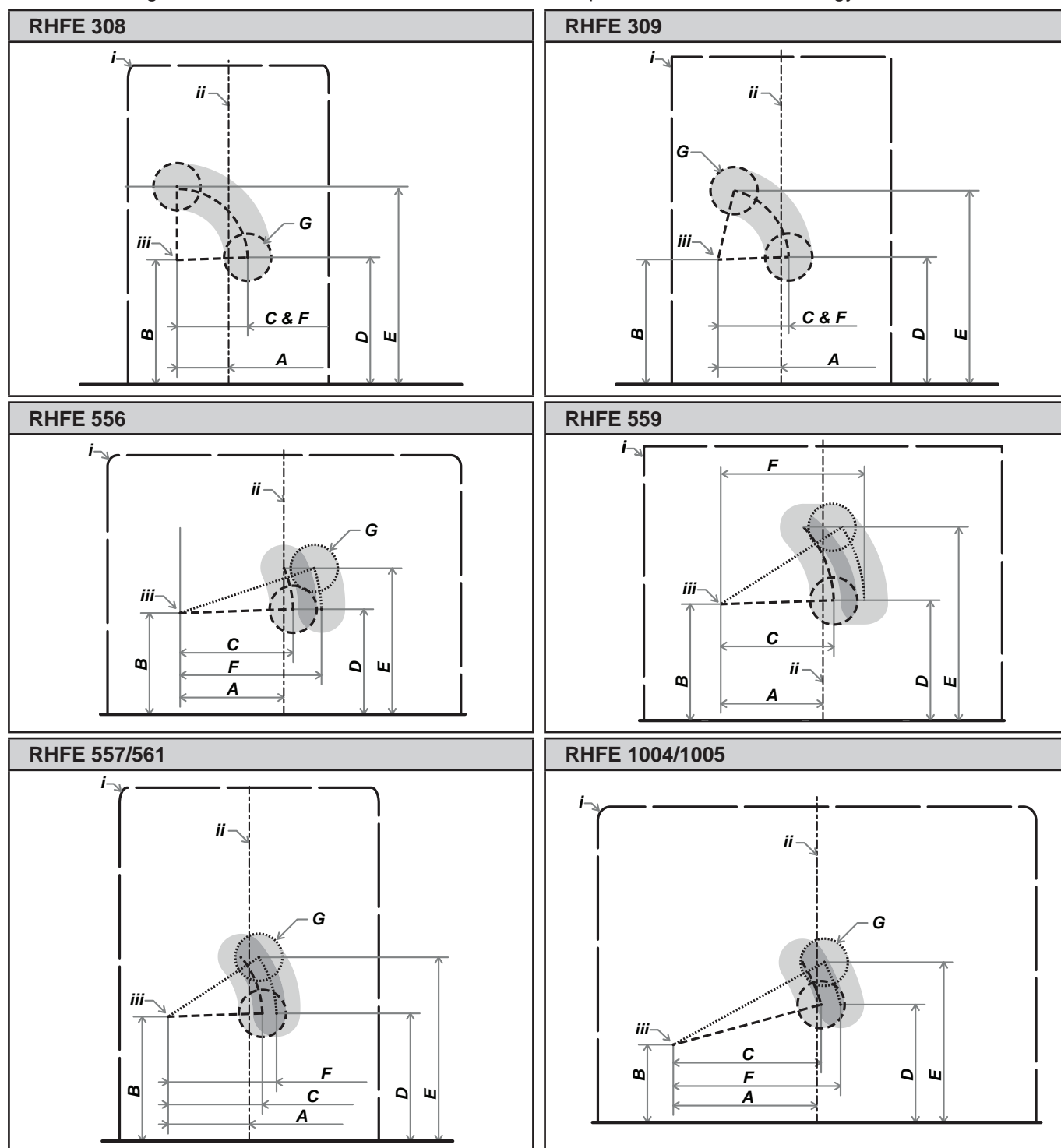


Due to the fixed length non-telescopic flue elbow of the RHFE-308 and RHFE-309 model heaters measurements *C* & *F* are the same for these models only.



6. The penetration may be made anywhere within the confines of the shaded minimum and maximum areas *viii* defined by the two arcs.

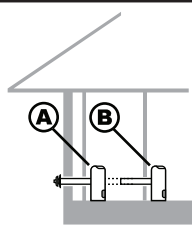
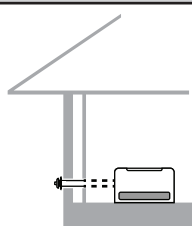
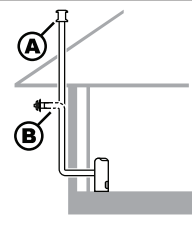
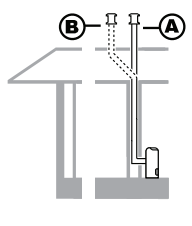
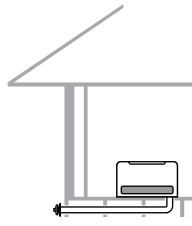
Below are diagrams and associated dimension tables for wall penetrations for each Energysaver heater model.



All dimension are in millimetres		RHFE 308	RHFE 309	RHFE 556	RHFE 557	RHFE 561	RHFE 559	RHFE 1004	RHFE 1005
<i>i</i>	Width of appliance	426	465	750	550	545	760	930	930
<i>ii</i>	Centre-Line of appliance	213	233	375	275	273	380	465	465
<i>iii</i>	Arc axis (Axis point of the flue elbow)	No dimension							
<i>A</i>	Horizontal dim. - Centre-Line to arc centre	110	132	220	172	172	207	305	356
<i>B</i>	Vertical dim. - base to arc centre	265	265	215	264	267	247	165	129
<i>C</i>	Minimum horizontal limit of arc	150	150	240	200	200	240	325	376
<i>D</i>	Minimum vertical limit of arc	270	270	220	269	275	255	250	250
<i>E</i>	Maximum vertical limit of arc	415	410	310	390	393	360	340	340
<i>F</i>	Maximum horizontal limit of arc	150	150	300	230	230	305	365	416
<i>G</i>	Penetration diameter	100	100	100	100	100	100	100	100

INSTALLATION CONFIGURATIONS

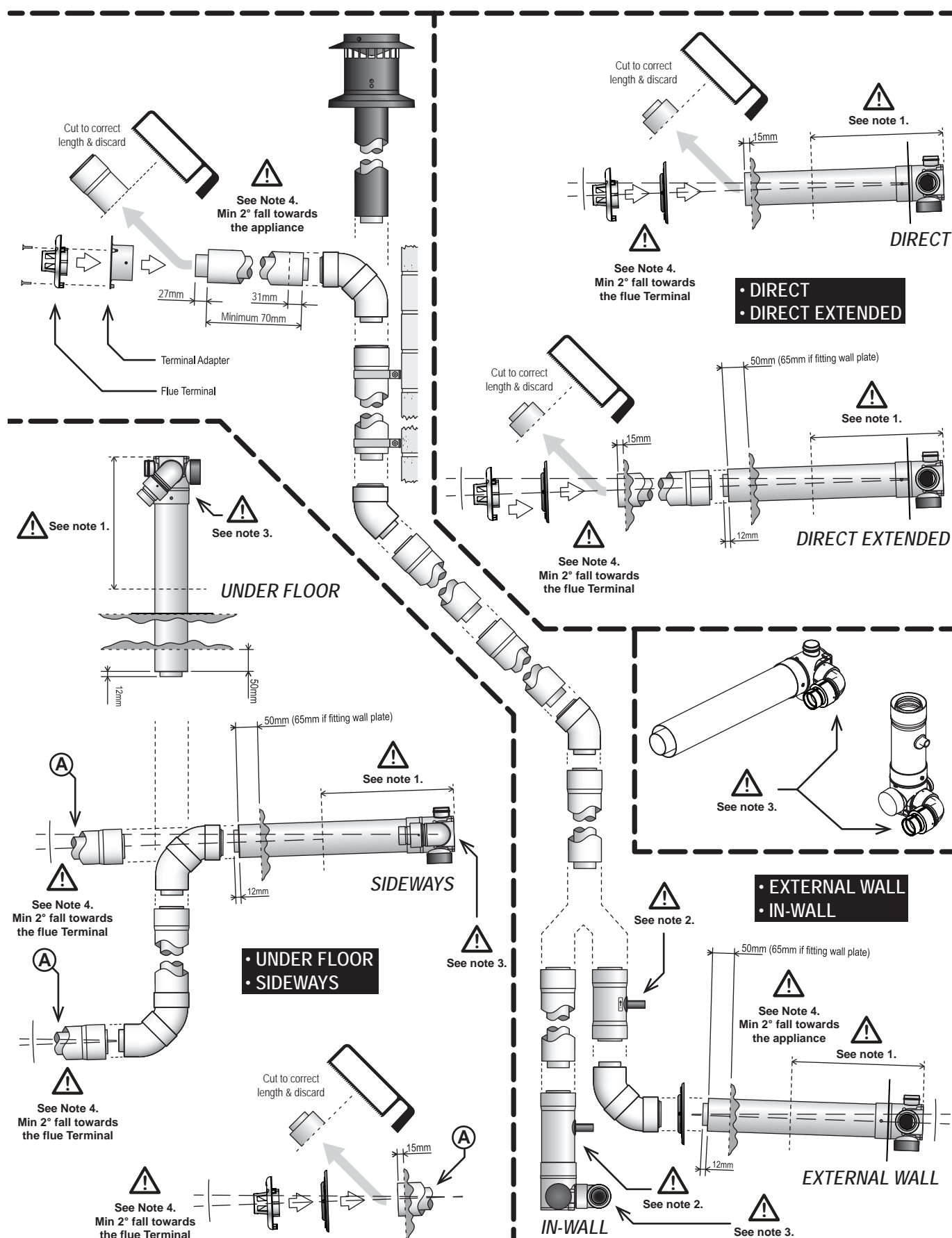
The following configurations are currently available. For alternative configurations contact Rinnai.

DIRECT	Components				
	Option A (Direct)		Option B (Direct Extended)		
	Direct Flue Kit	ESDFK	Direct Flue Kit Co-Axial Pipe 900mm (Optional) #	ESDFK ESPIPE900	
SIDEWAYS	Components		Back Cover Kit		Depth
	Direct Flue Kit Co-Axial Pipe 900mm # Back Cover Kit	ESDFK ESPIPE900	308	ESBSKA	200 mm
			309	ESBSKE	205 mm
			556	ESBSKB	200 mm
			557	ESBSKC	200 mm
			559	ESBSKF	205 mm
			561	ESBSKG	200 mm
			1004	ESBSKD	200 mm
			1005	ESBSKH	205 mm
	A Back Cover Kit is required when the flue system is installed in a sideways configuration.				
EXTERNAL WALL	Components				
	Option A (Vertical Termination)		Option B (On Wall Termination)		
	Direct Flue Kit Co-Axial Pipe 900mm # Bend (2 x 45°) Condensate Trap Roof Cowl	ESDFK ESPIPE900 ESBEND ESCONDK ESROOFCOWL	Direct Flue Kit Co-Axial Pipe 900mm # Bend (2 x 45°) Condensate Trap Wall Terminal Kit	ESDFK ESPIPE900 ESBEND ESCONDK ESWTKIT2	
IN-WALL	Components				
	Option A (Direct) - ESFKITIW		Option B (Offset) - ESFKITIW + ESBEND		
	In-Wall Adaption Kit § Co-Axial Pipe 900mm x 4 Roof Cowl	ESKIT03 ESPIPE900 ESROOFCOWL	In-Wall Adaption Kit § Co-Axial Pipe 900mm x 4 Bend (2 x 45°) Roof Cowl	ESKIT03 ESPIPE900 ESBEND ESROOFCOWL	
UNDER FLOOR	Components		Back Cover Kit		Depth
	Direct Flue Kit Co-Axial Pipe 900mm # Bend (2 x 45°) Wall Terminal Kit Back Cover Kit	ESDFK ESPIPE900 ESBEND ESWTKIT2	308	ESBSKA	200 mm
			309	ESBSKE	205 mm
			556	ESBSKB	200 mm
			557	ESBSKC	200 mm
			559	ESBSKF	205 mm
			561	ESBSKG	200 mm
			1004	ESBSKD	200 mm
			1005	ESBSKH	205 mm
	A Back Cover Kit is required when the flue system is installed in a under floor configuration.				

Order lengths as required § Includes Condensate Trap (ESCONDK) Refer "Flue Kit Components" on page 12 for Kit contents

Note 2. A Condensate trap MUST be used at this point.

Note 4. Where stipulated a Minimum 2° fall is required to ensure correct drainage of condensation formed in the discharge flue.



FLUE KIT COMPONENTS

ESDFK (Direct Flue Kit)

Internal Wall Plate

External Wall Plate

Flue Terminal

Flue Transition

This Manual

Silicon Grease

22mm x6

7mm x2

Mounting/Securing Screws

ESFKITIW (Flue Kit In Wall)

Top Plate Bracket

Pipe Locating Spacer

Wall Spacer Plate

Drain Tube

Left Vermin Plate

Flue Transition / Condensation Trap

This Manual

Mounting Strip

Grommet (Use with 1004/1005)

Silicon Grease

Wall Clip

Right Vermin Plate

Vermin Plate Mounting /Securing Screws x9

Co-Ax Vertical Terminal

Co-Ax Pipe x4

ESKIT03 (In-Wall Adaption Kit)

Drain Tube

Top Plate Bracket

Pipe Locating Spacer

Wall Spacer Plate

Left Vermin Plate

Flue Transition / Condensation Trap

This Manual

Grommet (Use with 1004/1005)

Mounting Strip

Wall Clip

Silicon Grease

Right Vermin Plate

Vermin Plate Mounting/Securing Screws x9

ESPIPE900

Co-Ax Pipe

Wall Clip

ESROOFCOWL

Co-Ax Vertical Terminal

Wall Clip

ESBEND

Co-ax Bends & Pipe Locating Spacer x2 (BOTH spacers are required for all offset and extended offset installations!)

ESCONDK (Condensate Trap Kit)

Condensation Trap

Drain Tube

ESPLATE

External Wall Plate

22mm x3

7mm x2

Mounting/Securing Screws

ESWFG

Flue Guard

ESWTERM

Flue Terminal

External Wall Plate

Mounting/Securing Screws

22mm x6

7mm x2

ESWTKIT2 (On-Wall Terminal Kit)

External Wall Plate

Terminal Adaptor

Flue Terminal

Terminal/Adaptor Mounting/Securing Screws

M4 x 25mm S/S x3

8g x 10mm x2

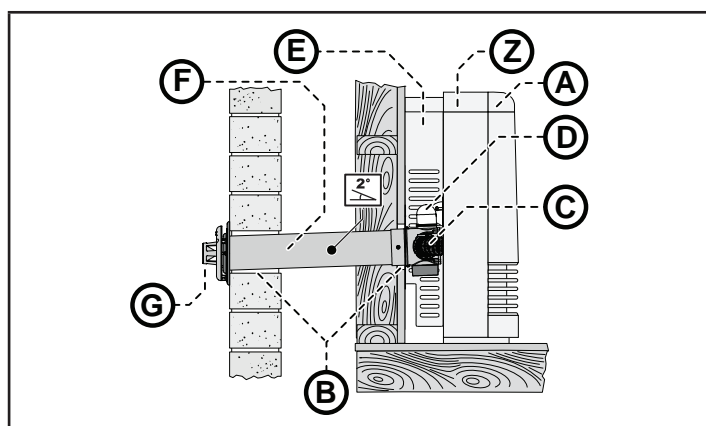
8g x 22mm x3

6g x 10mm x2

External Wall Plate Mounting/Securing Screws

INSTALLATION METHODS

DIRECT FLUE INSTALLATION METHOD

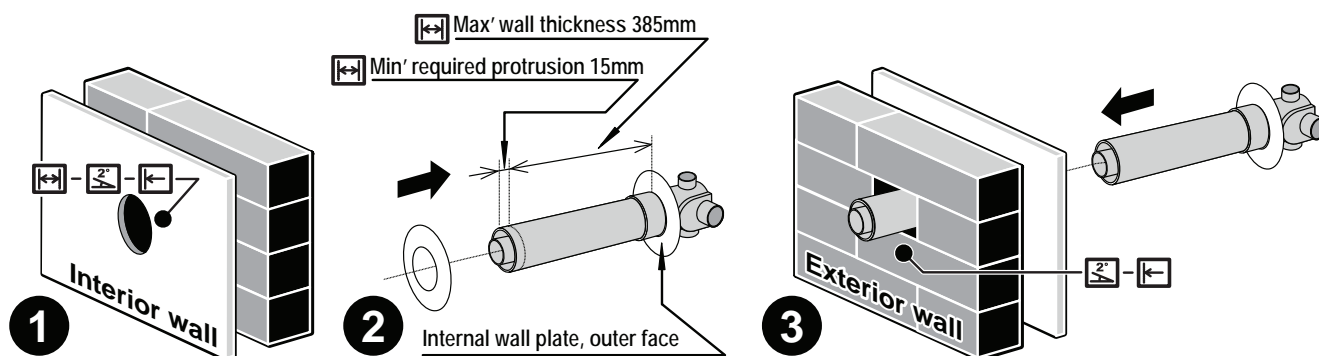


Activities for creating a Direct flue installation:

- Ⓐ Locate Heater.
- Ⓑ Create Wall Penetration.
- Ⓒ Connect Heater Exhaust. ⚠
- Ⓓ Connect Combustion Air Hose. ⚠
- Ⓔ Installation and fastening of Back Cover Kit.
- Ⓕ Cut Components (as required). ⚠
- Ⓖ Assemble Wall Terminal.
- Ⓙ Finalise Installation & Commissioning of Heater.

The Direct flue kit (ESDFK) is suitable for walls up to 385mm thick. ESDFK can be cut to length to suit wall thickness's less than 385mm thick. For wall thickness's greater than 385mm Co-Axial Pipe(s) (ESPIPE900) can be fastened onto ESDFK to extend the flue length. Refer to the section "Direct Extended Flue Installation Method" on page 14 for details.

Steps for creating a Direct flue installation are as follows:



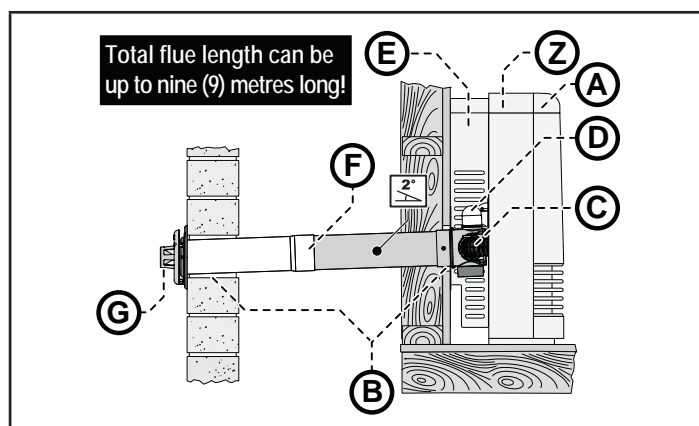
1. Create the wall penetration(s) in accordance with the section "Wall Penetrations" on page 10.
 - Ⓜ Ⓜ The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm to non combustible surfaces such as brick and 100mm to combustible surfaces such as plaster.
 - Ⓩ Allow 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 ESDFK pipe until it is nested on the raised ring of the flue transition.
3. Pass the ESDFK through the internal wall penetration until the internal wall plate is flush with the wall.
4. Create the wall terminal in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23.
5. Make the heater exhaust and combustion air hose connections in accordance with the section "Connecting Heater Exhaust" on page 28.



Air hose and heater exhaust connections at the Energysaver heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

6. Install the correct back cover kit and fasten the heater and back cover kit to the internal wall surface.
7. Commission the heater in accordance with the manufacturer instructions supplied with the heater.

DIRECT EXTENDED FLUE INSTALLATION METHOD

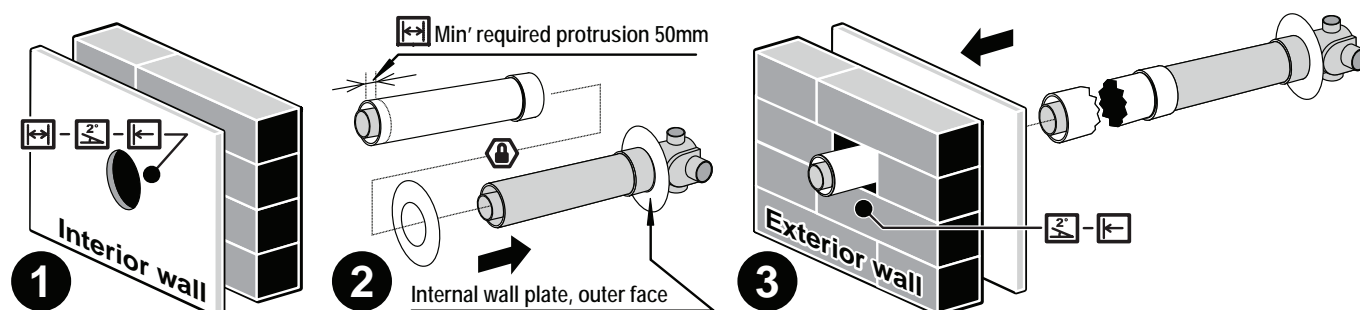


Activities for creating a Direct Extended flue installation:

- Ⓐ Locate Heater.
- Ⓑ Create Wall Penetration.
- Ⓒ Connect Heater Exhaust. ⚠
- Ⓓ Connect Combustion Air Hose. ⚠
- Ⓔ Installation and fastening of Back Cover Kit.
- Ⓕ Cut Components (as required). ⚠
- Ⓖ Assemble Wall Terminal.
- Ⓙ Finalise Installation & Commissioning of Heater.

The Direct flue kit (ESDFK) is suitable for walls up to 385mm thick. For wall thickness's greater than 385mm Co-Axial Pipe(s) (ESPIPE900) can be fastened onto ESDFK to extend the flue length.

Steps for creating a Direct Extended flue installation are as follows:



1. Create the wall penetration(s) in accordance with the section "Wall Penetrations" on page 10.
 - Ⓜ Ⓜ The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm to non combustible surfaces such as brick and 100mm to combustible surfaces such as plaster.
 - Ⓩ 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 ESDFK pipe until it is nested on the raised ring of the flue transition.

Join ESPIPE900 to ESDFK. Fit additional lengths of ESPIPE900 as required.



⚠ The joints between ESDFK and ESPIPE900 and any additional ESPIPE900 lengths **MUST** be secured by a pop rivet or screw through the outer Co-Axial pipes to prevent accidental or erroneous dislodgement. ESDFK and ESPIPE900 **DO NOT** require cutting to be joined.

Cutting of components is not required for the purposes of joining and ESPIPE900 to ESDFK or other ESPIPE900.

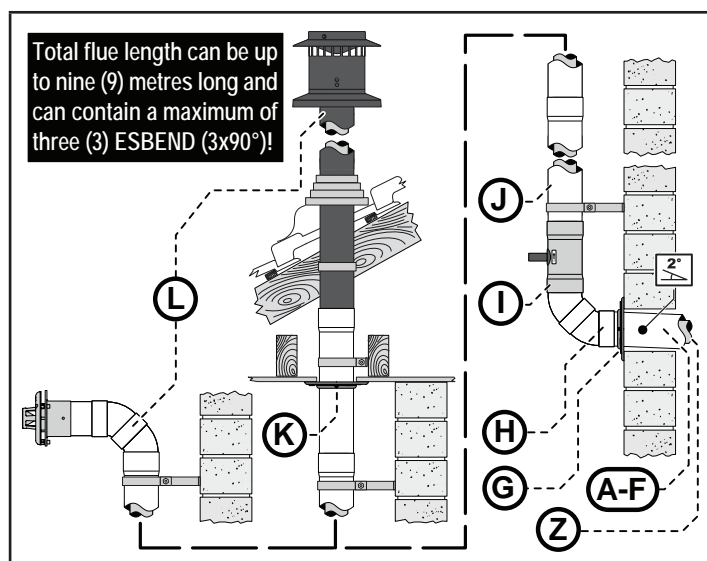
3. Pass the flue assembly through the internal wall penetration until the internal wall plate is flush with the wall.
4. Create the wall terminal in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23.
5. Make the heater exhaust and combustion air hose connections in accordance with the section "Connecting Heater Exhaust" on page 28.



Air hose and heater exhaust connections at the Energysaver heater **MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.**

6. Install the correct back cover kit and fasten the heater and back cover kit to the internal wall surface.
7. Commission the heater in accordance with the manufacturer instructions supplied with the heater.

EXTERNAL WALL FLUE INSTALLATION METHOD



Activities for creating an External Wall installation:

- Ⓐ - Ⓕ Refer to Direct & Direct Extended (as required).
- Ⓖ Assemble Wall Plate.
- Ⓗ Assemble & Fit Bend.
- Ⓘ Fit Condensate Drain.
- ⓵ Cut, Fit & Secure Components.
(seal joints as required) ⚠
- Ⓚ Create Vertical Penetrations (as required).
- Ⓛ Fit & Fasten Roof Cowl or On-Wall Terminal.
- Ⓩ Finalise Installation & Commissioning of Heater.

The creation of the horizontal section of flue installation is the same as creating a DIRECT or DIRECT EXTENDED flue installations with the following exceptions:

- Ⓩ The direction of horizontal fall of the flue pipe is reversed. For External Wall flue installations, a 2° fall is required from the wall penetration towards the heater. This will ensure the small amount of condensation in the short section between the heater and condensate trap will 'burn off' rapidly during normal operation.

For flue runs terminated in the horizontal, an ESWTKIT2 is used (in combination with ESBEND & ESPIPE900).

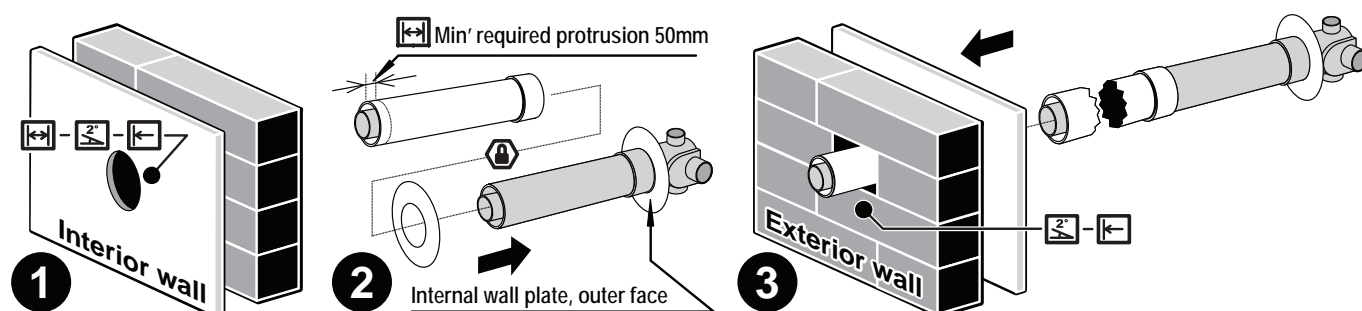


Sections of flue installation located outside require the following precautions:

⚠ ONLY use PVC cement between joints of the 'outer' PVC flue pipes to secure and seal these joints against ingress of dust and water.

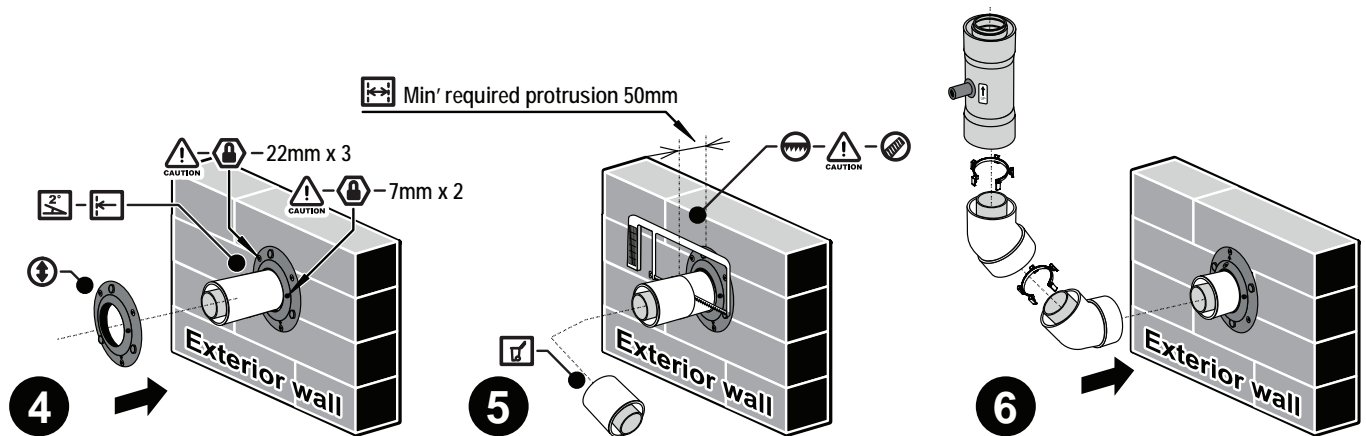
⚠ ONLY use non acidic silicone sealant between the joints of 'outer' PVC flue pipes and any mating aluminium components (such as the condensate trap) to secure and seal these joints against ingress of dust and water. Silicone containing acetic acid (vinegar) or other acids as the curing agent may cause corrosion of aluminium components and MUST NOT be used.

Steps for creating a External-Wall flue installation are as follows:



1. Create the wall penetration(s) in accordance with the section "Wall Penetrations" on page 10.
 - Ⓚ The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm to non combustible surfaces such as brick and 100mm to combustible surfaces such as plaster.
 - Ⓩ Allow for a continuous 2° fall towards the heater connection point from the external wall penetration.
2. Slide the internal wall plate over the terminal end of the assembled flue pipe until it is nested on the raised ring of the flue transition.

Prepare the 'horizontal' section by following step 2 of "Direct Flue Installation Method" on page 13 or from step 2 of "Direct Extended Flue Installation Method" on page 14 depending on wall thickness (note that a direct extended flue installation example is illustrated above).
3. Pass the flue assembly through the internal wall penetration until the internal wall plate is flush with the wall.



4. Slide the external wall plate over the outer pipe protruding through the exterior wall. Align the arrow symbol to point downwards which will result in a 2° fall of the horizontal section of flue pipe towards the appliance as required.
 ⚠️ Once the external wall plate is in the correct position secure it to the wall using the three 22mm screws into the holes provided.
 ⚠️ The wall plate is then secured to the outer pipe of the flue protrusion using the two horizontal holes and the two 7mm screws provided.
5. ✂️ Cut the flue pipe end protruding through the exterior wall in accordance with "Cutting ~ ESDFK, ESPIPE900 & ESROOFCOWL" on page 21.



⚠️ The joints between ESDFK and ESPIPE900 and any additional ESPIPE900 lengths **MUST** be secured by a pop rivet or screw through the outer Co-Axial pipes to prevent accidental or erroneous dislodgement. ESDFK and ESPIPE900 **DO NOT** require cutting to be joined.

6. Now prepare the vertical section of the flue system by assembling, connecting and securing ESBEND, ESCONDK and subsequent ESPIPE900 lengths as required in accordance with the relevant sections under "Component Assembly & Connection ~ ESBEND" on page 22, "Component Assembly & Connection ~ ESCONDK" on page 23 and "Component Assembly & Connection ~ ESROOFCOWL" on page 23.



⚠️ **ONLY use PVC cement between joints of the 'outer' PVC flue pipes to secure and seal these joints against ingress of dust and water.**

⚠️ **ONLY use non acidic silicone sealant between the joints of 'outer' PVC flue pipes 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 (vinegar) or other acids as the curing agent may cause corrosion of aluminium components and **MUST NOT** be used.**

⚠️ **Secure the vertical flue sections to the wall using the clips provided to prevent accidental dislodgement.**

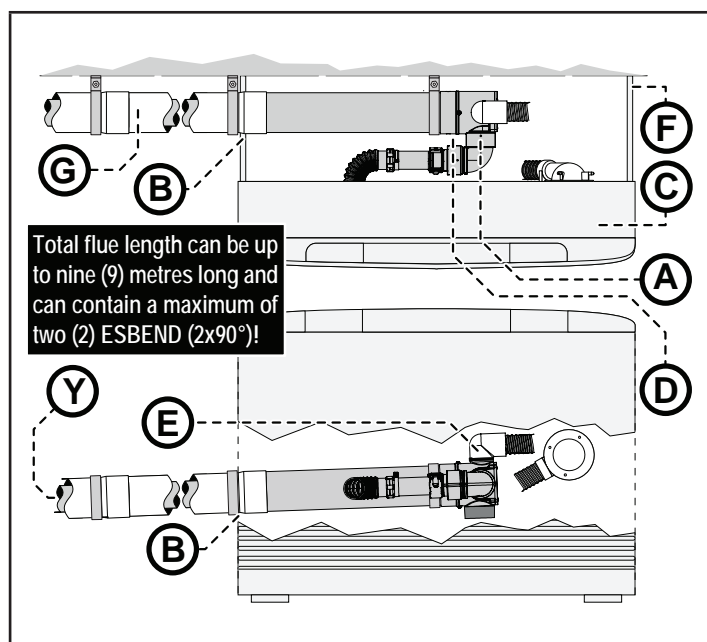
7. If a vertical roof terminal is used cut in accordance with "Cutting ~ ESDFK, ESPIPE900 & ESROOFCOWL" on page 21 and assemble and connect in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23.
 If a horizontal terminal is used cut in accordance with "Cutting ~ ESDFK, ESPIPE900 & ESROOFCOWL" on page 21 and assemble and connect in accordance with "Component Assembly & Connection "On-Wall" Terminal ~ ESWTKIT2" on page 24.
8. Make the heater exhaust and combustion air hose connections in accordance with the section "Connecting Heater Exhaust" on page 28.



Air hose and heater exhaust connections at the Energysaver heater **MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.**

9. Install the back cover kits and fasten the heater and back cover kit to the internal wall surface.
10. Commission the heater in accordance with the manufacturer instructions supplied with the heater.

SIDEWAYS FLUE INSTALLATION METHOD



Activities for creating a Sideways flue installation:

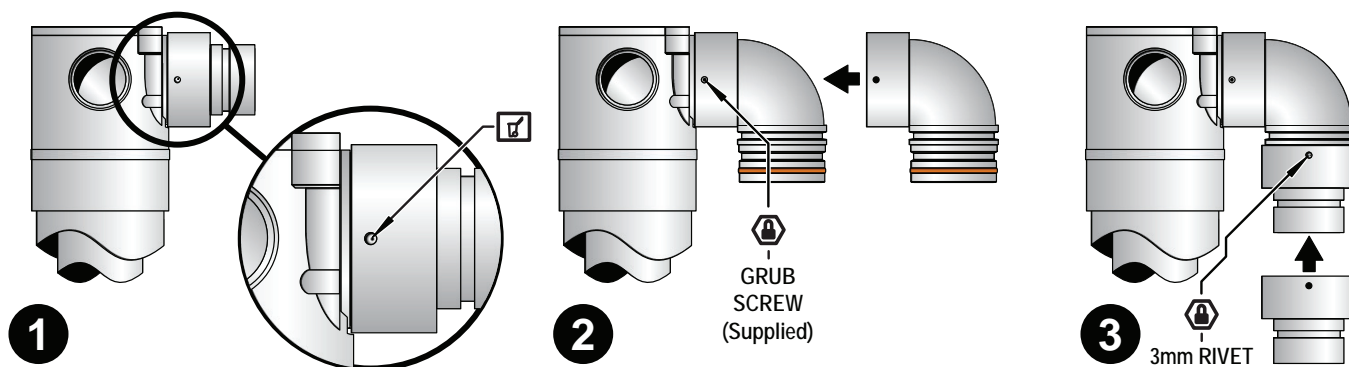
- Ⓐ Modify ESDFK for Sideways Installation.
 - Ⓑ Create Penetration in Side Panel. *
 - Ⓒ Locate Heater.
 - Ⓓ Connect Heater Exhaust. ⚠
 - Ⓔ Connect Combustion Air Hose. ⚠
 - Ⓕ Installation & fastening of Back Cover Kit (ESBSK)
 - Ⓖ Cut, Fit & Secure Components. (seal joints as required) ⚠
 - Ⓗ Refer to steps Ⓕ & Ⓖ of Direct & Direct Extended. (as required)
 - Ⓙ Finalise Installation & Commissioning of Heater.
- * Create penetration only in side panel associated with the direction of the horizontal flue run.

The Sideways flue installation can run along the left or right hand side of the internal wall behind the heater.



⚠ Most components in a sideways flue installation are located indoors and may be in an accessible position after installation. To prevent accidental or erroneous dislodgement, the joints between ESDFK and ESPIPE900 components **MUST** be secured by pop rivet or screw through the outer Co-Axial pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method.

Steps for creating a Sideways flue installation are as follows:



1. Using a drill, remove the pop rivet used to fasten the straight flue pipe connection pipe to the flue transition of ESDFK and remove but **DO NOT** discard the straight flue pipe connection.
2. Fit the elbowed flue pipe connection supplied with the Back Cover kit to the flue transition pushing it fully home and then fasten in place with the grub screw (supplied) using an Allen key. The grub screw terminates in a groove in the flue transition. When fastened this prevents accidental dislodgement of the pipe connections.
3. Refit the straight flue pipe connection to the end of the elbow until it is fully home and then fasten in place with a 3mm rivet.



⚠ Ensure the straight pipe and elbow are securely fastened to the flue transition by the grub screw and rivets.

Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper assembly or fastening can result in products of combustion dispersing into the room being heated which may result in a dangerous condition.

4. Temporarily position the heater in the desired position.

- Attach ESDFK to the flue outlet pipe from the rear of the heater. Align the flue in an almost horizontal manner in the desired direction of discharge (either left or right) with a 2° fall towards the flue terminal.



Ensure the flue components are positioned to have a minimum 25mm clearance from any sensor wires at the rear of the heater.

- Attach the appropriate side spacer panel from the back cover kit (ESBSK ~ A, B, C, D, E, F, G or H) to the rear of the heater in accordance with the assembly Instructions supplied with the back cover kit.
- Mark the location of the flue penetration through the side spacer panel.
- Remove the side cover panel and cut or knock out an 85mm Ø hole for the flue pipe to pass through. Ensure the hole edges are smooth.
- Fit the protective plastic edge supplied with the back cover kit around the circumference of the hole in the side spacer panel.
- Fit a length of ESPIPE900 to ESDFK in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23.

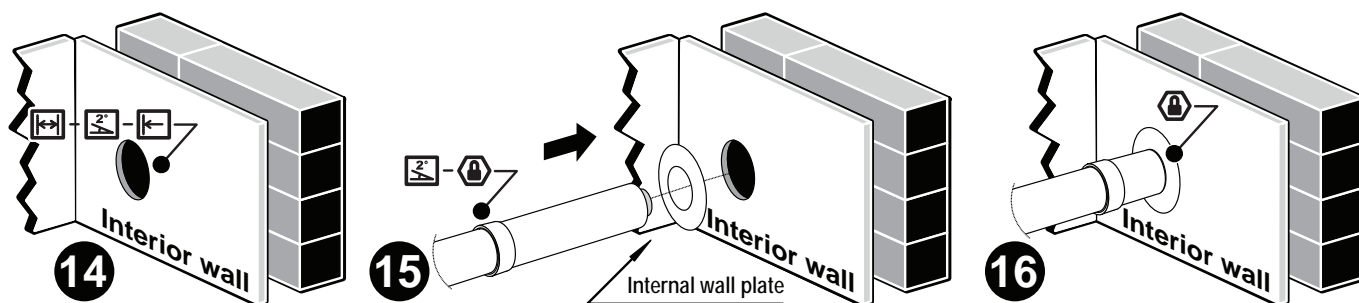


The joint between ESDFK and ESPIPE900 MUST be secured by a pop rivet or screw through the outer Co-Axial pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method. ESDFK and ESPIPE900 DO NOT require cutting to be joined.

- Re-attach the side spacer panel to the heater with the flue pipe passing through it.
- Locate the heater in the desired position relative to the wall. DO NOT secure the heater at this stage.
- Fit additional lengths of ESPIPE900 as required.



The joints between ESPIPE900 lengths MUST be secured by a pop rivet or screw through the outer Co-Axial pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method. ESDFK and ESPIPE900 DO NOT require cutting to be joined.



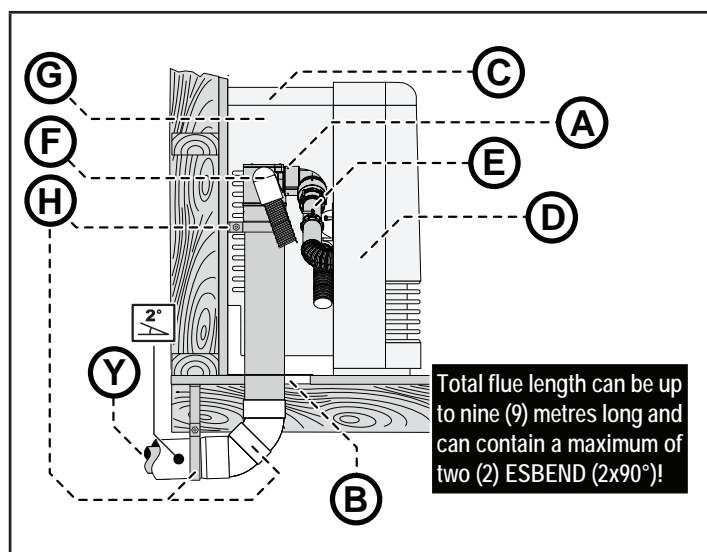
- Create the wall penetration(s) in accordance with the section "WALL PENETRATIONS" refer to page 8.
 - The minimum diameter required for wall the penetration for ESPIPE900 is 80mm.
 - Allow for a continuous 2° fall from the heater connection point from to the wall penetration.
- Slide the internal wall plate supplied with ESDFK over the length of ESPIPE900 penetrating the wall at the internal wall end. Then pass the assembly through the internal wall penetration.
- Fasten the internal wall plate to the internal wall.
- Create the wall terminal in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23. Make the heater exhaust and combustion air hose connections in accordance with the section "Connecting Heater Exhaust" on page 28.



Air hose and heater exhaust connections at the Energysaver heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

- Install the remaining parts of the back cover kit and fasten the heater and back cover kit to the internal wall surface.
- Commission the heater in accordance with the manufacturer instructions supplied with the heater.

UNDER FLOOR FLUE INSTALLATION METHOD



Activities for creating a Sideways flue installation:

- Ⓐ Modify ESDFK for Sideways Installation.
- Ⓑ Create Penetration in floor
- Ⓒ Locate Heater.
- Ⓓ Connect Heater Exhaust.
- Ⓔ Connect Combustion Air Hose.
- Ⓕ Installation & fastening of Back Cover Kit (ESBSK)
- Ⓖ Cut, Fit & Secure Components. (seal joints as required)
- Ⓗ Refer to steps Ⓕ & Ⓖ of Direct & Direct Extended. (as required)
- Ⓙ Finalise Installation & Commissioning of Heater.

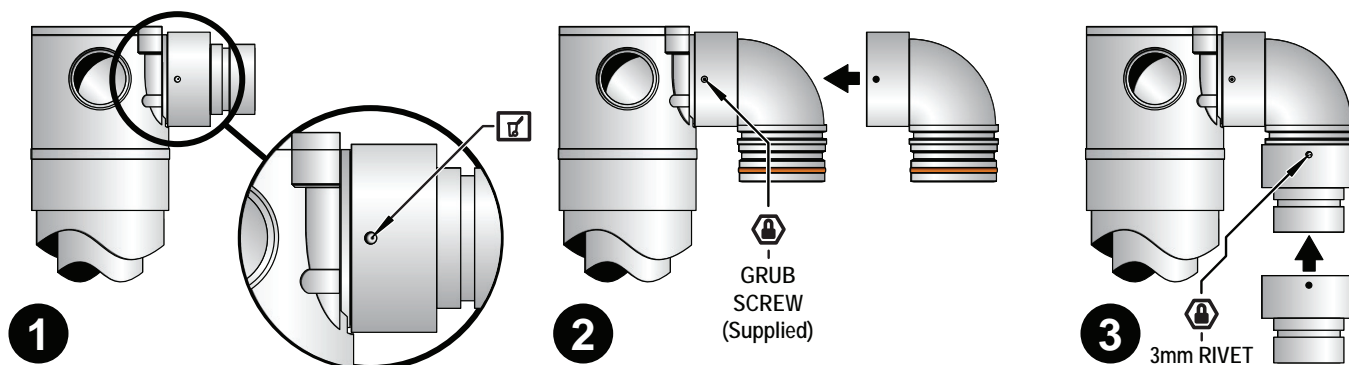
The Down and Out flue option allows for a Direct Flue Kit (ESDFK) to face downwards and the flue to be run vertically through a hole in the floor, and then horizontally to a suitable location outside.



Flue MUST NOT terminate under a building.

Flue terminal is ONLY available in the horizontal format.

Steps for creating a Under Floor flue installation are as follows:



1. Using a drill, remove the pop rivet used to fasten the straight flue pipe connection pipe to the flue transition of ESDFK and remove but DO NOT discard the straight flue pipe connection.
2. Fit the elbowed flue pipe connection supplied with the Back Cover kit to the flue transition pushing it fully home and then fasten in place with the grub screw (supplied) using an Allen key. The grub screw terminates in a groove in the flue transition. When fastened this prevents accidental dislodgement of the pipe connections.
3. Refit the straight flue pipe connection to the end of the elbow until it is fully home and then fasten in place with a 3mm rivet.



Ensure the straight pipe and elbow are securely fastened to the flue transition by the grub screw and rivets.

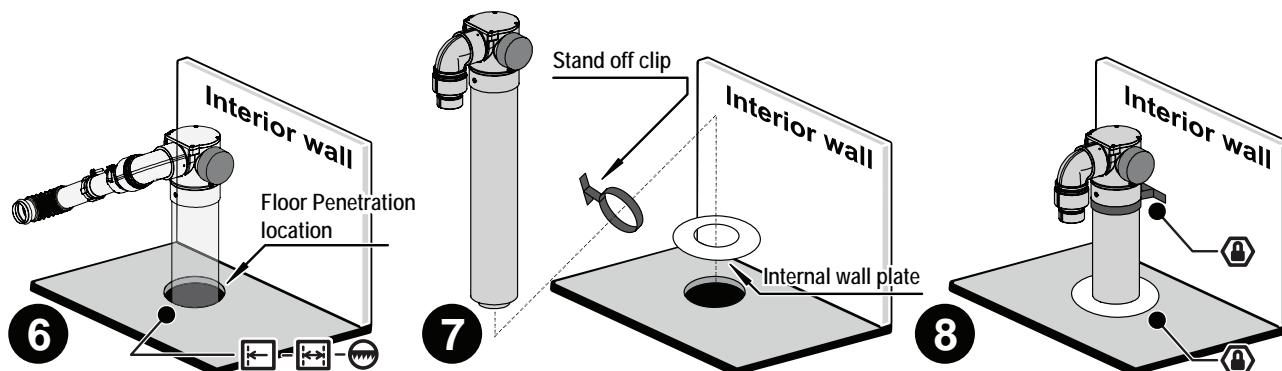
Test soundness of the connections by attempting to 'pull apart' the assembled components. Improper assembly or fastening can result in products of combustion dispersing into the room being heated which may result in a dangerous condition.

4. Attach the side cover panels from the back cover kit (ESBSK A, B, C, D, E, F, G or H) to the rear of the heater in accordance with the assembly Instructions supplied with the back cover kit and temporarily position the heater in the desired position.
Check proposed route of down and out flue to confirm there are no obstructions in the flue path.

- Temporarily attach ESDFK to the flue outlet pipe from the rear of the heater. Align the flue in a vertical manner.



Ensure the flue components are positioned to have a minimum 25mm clearance from any sensor wires at the rear of the heater.



- Mark the location of the flue floor penetration, then cut an 100mm Ø hole through the floor. Ensure the hole edges are smooth.
- Disconnect ESDFK from the heater. Pass ESDFK through both a stand off clip and the internal wall plate, then pass the assembly through the floor penetration.
- Secure ESDFK to the wall with a the stand off clip and fasten the internal wall plate in place to the floor.
- Prepare the horizontal section of the flue system located under floor by assembling connecting and securing ESPIPE900, ESBEND and subsequent ESPIPE900 lengths as required in accordance with the relevant sections under "Component Assembly & Connection ~ ESBEND" on page 22 and "Component Assembly & Connection ~ ESROOFCOWL" on page 23.



The joint between ESDFK and ESPIPE900 MUST be secured by a pop rivet or screw through the outer Co-Axial pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method. ESDFK and ESPIPE900 DO NOT require cutting to be joined.

- Locate the heater in the desired position relative to the wall. DO NOT secure the heater at this stage.
- If required create a wall penetration(s) in accordance with the section "Wall Penetrations" on page 10.
 - The minimum diameter required for wall the penetration for ESPIPE900 is 80mm.
 - Allow for a continuous 2° fall from the heater connection point from to the wall penetration.



Of special relevance to under floor installations is the requirement to have a minimum of 300mm clearance between the flue terminal and the finished ground level. It is NOT permissible to excavate a hole to obtain the required 300mm clearance, unless there is sufficient drainage provision.

- Create the wall terminal in accordance with "Component Assembly & Connection ~ ESROOFCOWL" on page 23.
- Make the heater exhaust and combustion air hose connections in accordance with the section "Connecting Heater Exhaust" on page 28.



Air hose and heater exhaust connections at the Energysaver heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

- Install the remaining parts of the back cover kit and fasten the heater and back cover kit to the internal wall surface.
- Commission the heater in accordance with the manufacturer instructions supplied with the heater.

CUTTING ~ ESDFK, ESPIPE900 & ESROOFCOWL

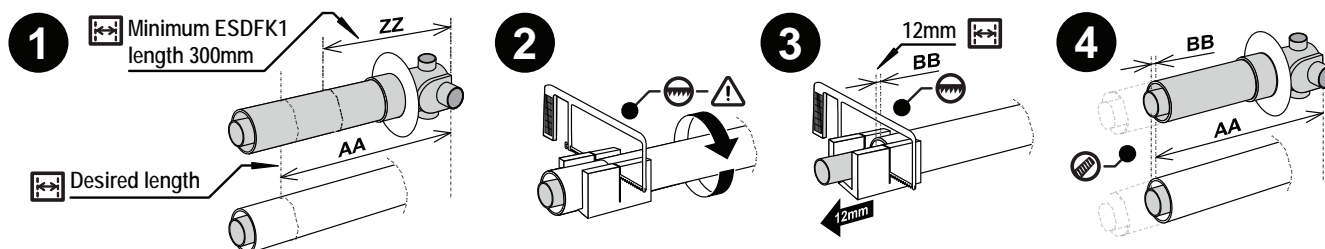


STOP! When terminating a flue run and installing the wall terminal, follow the instructions under "Component Assembly & Connection ~ ESROOFCOWL" on page 23 for pipe cutting procedures.



Cutting is not required for the purposes of joining ESDFK, ESPIPE900 & ESROOFCOWL together. Cutting of the last component in the flue assembly (the component furthest away from the heater) may be required to achieve the required flue system length. Cutting is also required at a wall penetration. Cutting for both purposes is described below:

Cutting components to achieve a desired length:



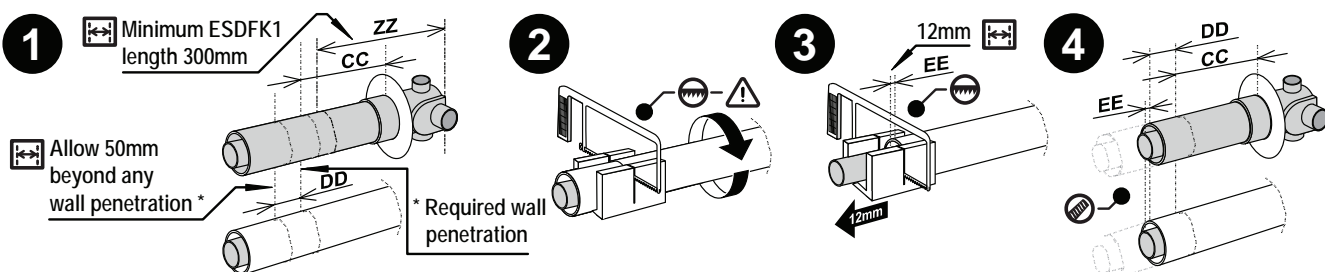
1. Measure and mark off the outer pipe at the desired length (AA).



The minimum length (ZZ) of ESDFK when measured from the back plate of the casting MUST NOT be less than 300mm when joining to other components.

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 (cut in Step 2.), measure and mark off an additional 12mm on the inner pipe (BB). Cut the inner pipe at this mark. Take care to keep the cut parallel with that of the outer pipe.
4. Ensure all burrs and swarf are removed from all cut ends.

Cutting components at a wall penetration:



1. Measure and mark off the outer pipe at a point flush with the surface of the wall penetrated (CC) PLUS an additional 50mm (DD)



The minimum length (ZZ) of ESDFK when measured from the back plate of the casting MUST NOT be less than 300mm when joining to other components.

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 (cut in Step 2.), measure and mark off an additional 12mm on the inner pipe (BB). Cut the inner pipe at this mark. Take care to keep the cut parallel with that of the outer pipe.
4. Ensure all burrs and swarf are removed from all cut ends.

COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900

Lubricate O-Rings with the supplied O-ring grease, then fit the female aluminium inner pipe end over the male inner pipe ends of an adjoining component.



Both the inner and outer pipes of all internal horizontal components MUST be secured with rivets or screws. The joints of PVC outer pipes that are exposed to an outside environment MUST be sealed with an appropriate PVC solvent.

COMPONENT ASSEMBLY & CONNECTION WALL TERMINAL ~ ESDFK & ESWTERM

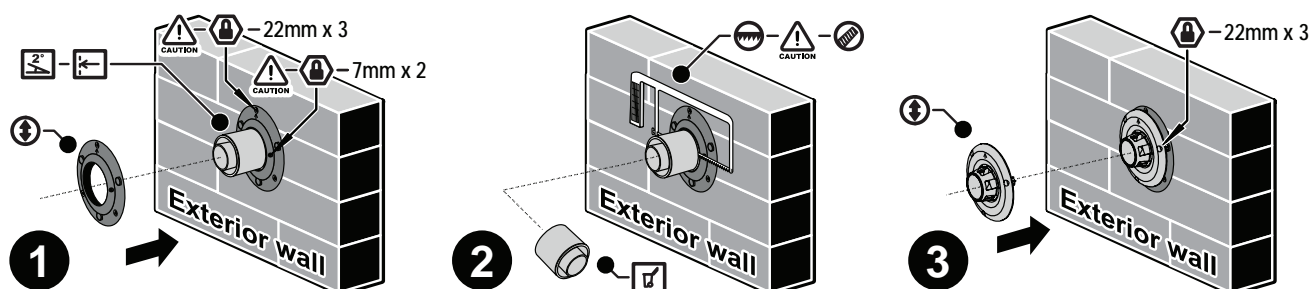


Flue **MUST** terminate in accordance with AS/NZS 5601 Figure 6.2. Especially relevant is the requirement to have a minimum of 300mm clearance between the flue terminal and the finished ground level. It is **NOT** permissible to excavate a hole to obtain the required 300mm clearance, unless there is sufficient drainage provision.

ONLY ESDFK and or ESPIPE900 can be modified to create a wall terminal.

ONLY use non-acidic silicone sealant between the joints of PVC flue pipe and any mating aluminium components (such as those of ESWTERM) to secure and seal these joints against ingress of dust and water.

Silicone containing acetic acid, (characteristically having a vinegar odour), as the curing agent or other acids may cause corrosion of aluminium components and **MUST NOT** be used.



- Fit the supplied external wall plate over the outer pipe of the flue protrusion.
 - As an installation aid the wall plate has a 2° offset. As such the orientation of the wall plate will set the flue system with either a 2° fall or rise as required. Set the flue system with a 2° fall away from the heater by aligning the arrow symbol so that it is upper most.
 - Once the external wall plate is in the correct position secure it to the wall using the three 22mm screws into the holes provided. The wall plate is then secured to the outer pipe of the flue protrusion using the two horizontal holes and the two 7mm screws provided.
- Carefully cut through the outer and inner pipes of the flue protrusion as close to the external wall plate as possible. Take care to avoid cutting the external wall plate and keep the cuts of both internal and external pipes as parallel as possible. All burrs and swarf are to be removed from all cut ends.
- Align the arrows of the metal mushroom flue terminal and the wall plate to point in the same direction and screw the terminal to the external wall plate using the 22mm screws into the holes provided.

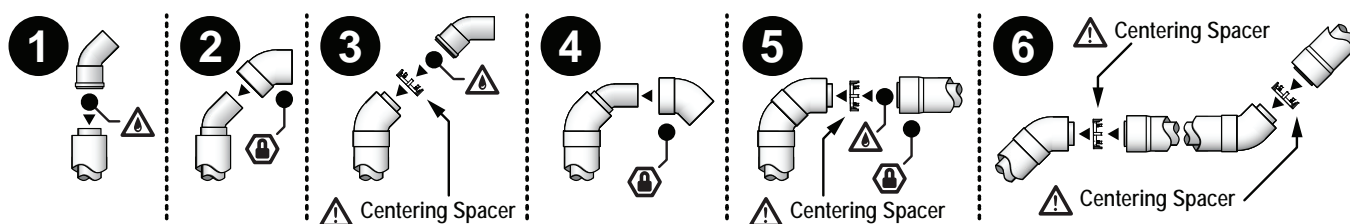
COMPONENT ASSEMBLY & CONNECTION ~ ESBEND



ONLY use PVC cement between externally located joints of PVC pipes to secure and seal these joints against ingress of dust and water. **ONLY** use non-acidic silicone sealant between externally located joints of PVC flue 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, (characteristically having a vinegar odour), as the curing agent or other acids may cause corrosion of aluminium components and **MUST NOT** be used.

On “Direct”, “Direct Extended” and “External Wall” installations **ONLY** 2 X ESBEND (2 X 90°) can be used. On “Sideways”, “Under Floor” and “In-Wall” installations **ONLY** 1 X ESBEND (1 X 90°) can be used.



- Lubricate an ESBEND inner pipe ‘O-Ring’ and fit to the inner pipe of the nominated component. Use **ONLY** the supplied silicone based “O Ring” seal lubricant. **DO NOT** use petroleum based lubricants such

as petroleum jelly. The use of petroleum jelly, vaseline® or similar petroleum based lubricants will cause rapid deterioration of the 'O Ring' seals.

2. Fit an ESBEND outer pipe to the outer pipe of the same nominated component.
3. Insert one of plastic centering spacer provided with ESBEND, then ⚠ Lubricate the a second ESBEND inner pipe 'O-Ring' and fit to previously fitted inner component.



The centering spacer is a MANDATORY component, that is required for the correct alignment of Co-axial components when ESBEND kits are used. When fitted correctly the inner and outer pipes of ESBEND will be self centering.

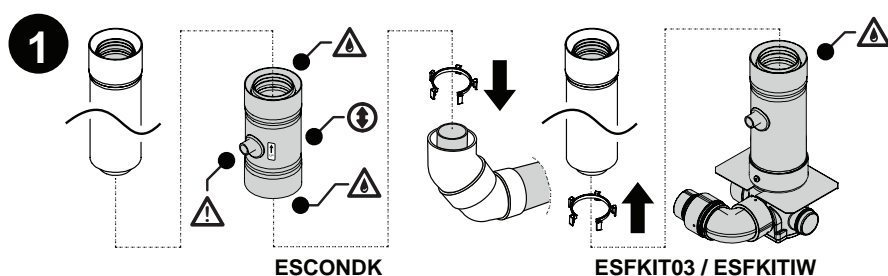
4. Fit a second ESBEND outer pipe to the previously fitted outer component.
5. Insert the remaining plastic centering spacer provided with ESBEND, before connecting further components.
6. For extended offset installations use the same procedure ensuring centering spacers are inserted as shown.

COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK



⚠ ONLY use non-acidic silicone sealant between the joints of PVC flue 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, (characteristically having a vinegar odour), as the curing agent or other acids may cause corrosion of aluminium components and MUST NOT be used.



1. ⚠ All "External Wall" and "In-Wall" flue installations MUST be fitted with ESCONDK.

ⓘ Observe the correct orientation of ESCONDK. The arrow symbol MUST point away from the heater towards the termination of the flue system.

⚠ Lubricate all inner pipe 'O-Rings' with the silicone grease provided.



A condensate drain MUST be connected for all In-Wall installations, for details see "Connecting Condensate Drain Tube To Heater" on page 30.

COMPONENT ASSEMBLY & CONNECTION ~ ESROOFCOWL



⚠ Both the inner and outer pipes of all internal horizontal components MUST be secured with rivets or screws. The joints of PVC outer pipes that are exposed to an outside environment MUST be sealed with an appropriate PVC solvent.

⚠ ONLY use non-acidic silicone sealant between the joints of PVC flue pipe and any mating aluminium components (such as those of ESROOFCOWL) to secure and seal these joints against ingress of dust and water.

Silicone containing acetic acid, (characteristically having a vinegar odour), as the curing agent or other acids may cause corrosion of aluminium components and MUST NOT be used.

1. ⚠ Lubricate O-Rings with the supplied O-ring grease, then fit the male aluminium inner pipe into the female inner pipe of the preceding component.
2. Fit the male aluminium outer pipe end into the female outer pipe of the preceding component.



When shorting components to meet the dimensional limitations of an intended installation route, it is recommended that the preceding component (i.e. ESPIPE900) be cut. However if the cutting of the ESROOFCOWL components is found to be necessary, then refer to "Cutting ~ ESDFK, ESPIPE900 & ESROOFCOWL" on page 21.

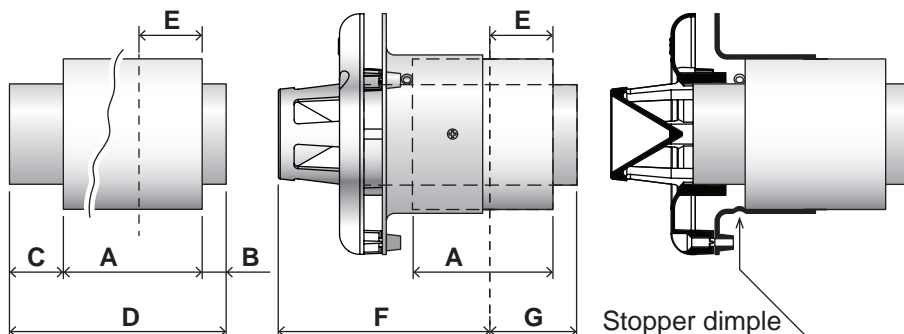


Observe the clearance requirements referenced in "Regulations & Clearances" on page 6.

COMPONENT ASSEMBLY & CONNECTION "ON-WALL" TERMINAL ~ ESWTKIT2



To terminate an ON-Wall terminal a connecting pipe is required, this component is created from sections of ESPIPE900 outer and inner pipes which is then attached to ESBEND and or ESPIPE900 flue components. Use the diagram & table below when creating the connecting pipe sections.



	Dimension (mm)	Min. Dimension (mm)
A	70	70
B	12	-
C	27	-
D	A + B + C	109
E	31	-
F	103	103
G	43 (B + E)	-

1. In accordance with the measurements provided above, measure off and cut the outer pipe to required length A (minimum length is 70mm). Ensure that burrs and swarf are removed from all cut ends.
2. In accordance with the measurements provided above, measure off and cut the inner pipe to required length A + B + C (minimum length is 109mm). Ensure that burrs and swarf are removed from all cut ends.
3. Lubricate the 'O-Ring' of the inner pipe of the preceding component, this should be either an ESBEND or an ESPIPE900.



ONLY use non-acidic silicone sealant between the joints of PVC flue pipe and any mating aluminium components (such as those of ESROOFCOWL) to secure and seal these joints against ingress of dust and water.

Silicone containing acetic acid, (characteristically having a vinegar odour), as the curing agent or other acids may cause corrosion of aluminium components and MUST NOT be used.

Insert the cut section of inner pipe into the female socket of the preceding component, ensuring that it is fully home. Then insert the cut section of outer pipe into the female socket of the preceding component, ensuring it is also fully home. There should **ONLY** be 27mm of inner pipe section protruding when both inner and outer are fitted correctly.



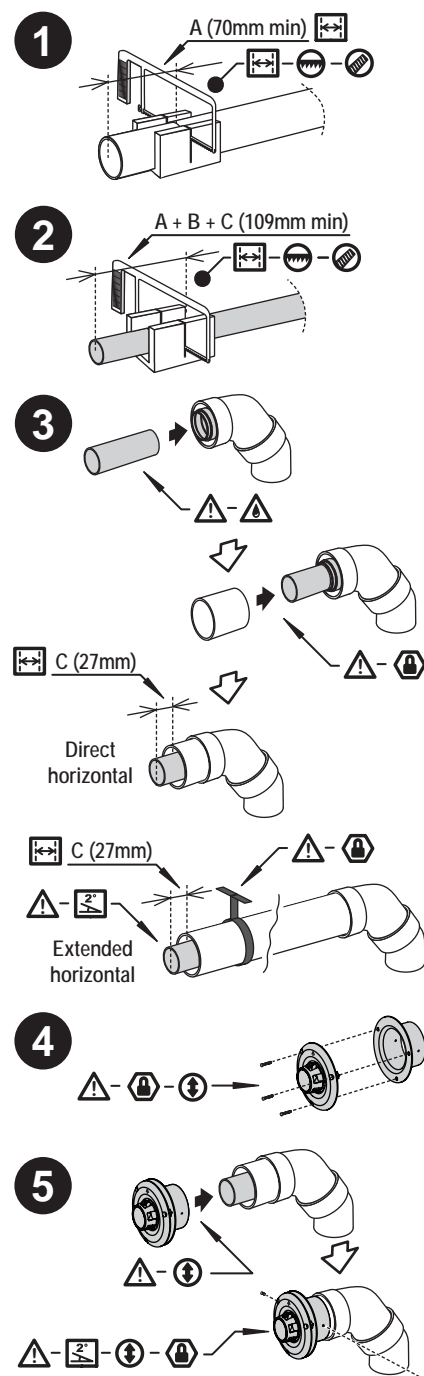
When preparing an on wall terminal ensure a continuous 2° fall from the flue termination point back towards the heater (condensate trap). This is especially important when an ESPIPE900 is used to horizontally extend the terminal location for the clearance considerations.

Additional supports may also be required.

4. Attach the flue terminal to the flue adapter using the three m4 screws supplied.
5. With the orientation arrow is pointing vertically upwards, attach the above terminal assembly to the connecting pipes, ensuring that the outer pipe hits the stopper dimples of the flue adapter. Then secure the terminal in place with the two 8g screws supplied.



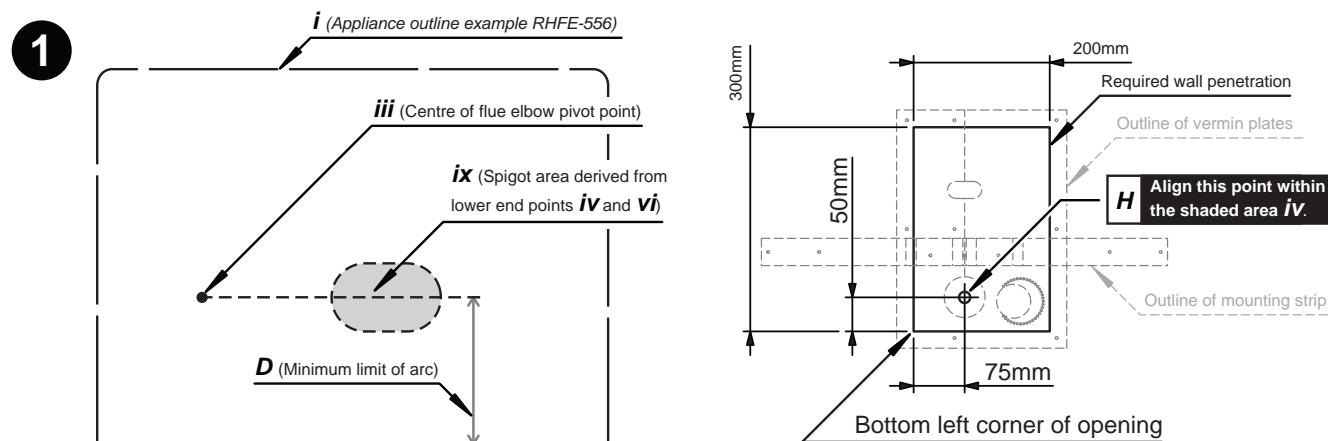
For the on wall terminal it is CRITICAL that the joints of PVC outer pipes are sealed with an appropriate PVC solvent.



COMPONENT ASSEMBLY & CONNECTION "IN-WALL" FLUE ~ ESFKIT03 & ESKITIW

The In-Wall vertical Co-Axial flue system is installed within a stud wall with cavity depth a minimum of 90mm and is run vertically upwards through the stud wall cavity and includes a condensate trap.

When considering the location of the heater due care MUST be taken to ensure that the flue path in the internal wall and roof space are free of obstructions such as studs, noggins, joists, braces, and electricals etc. A top plate bracket is provided to seal the flue penetration through the top plate.

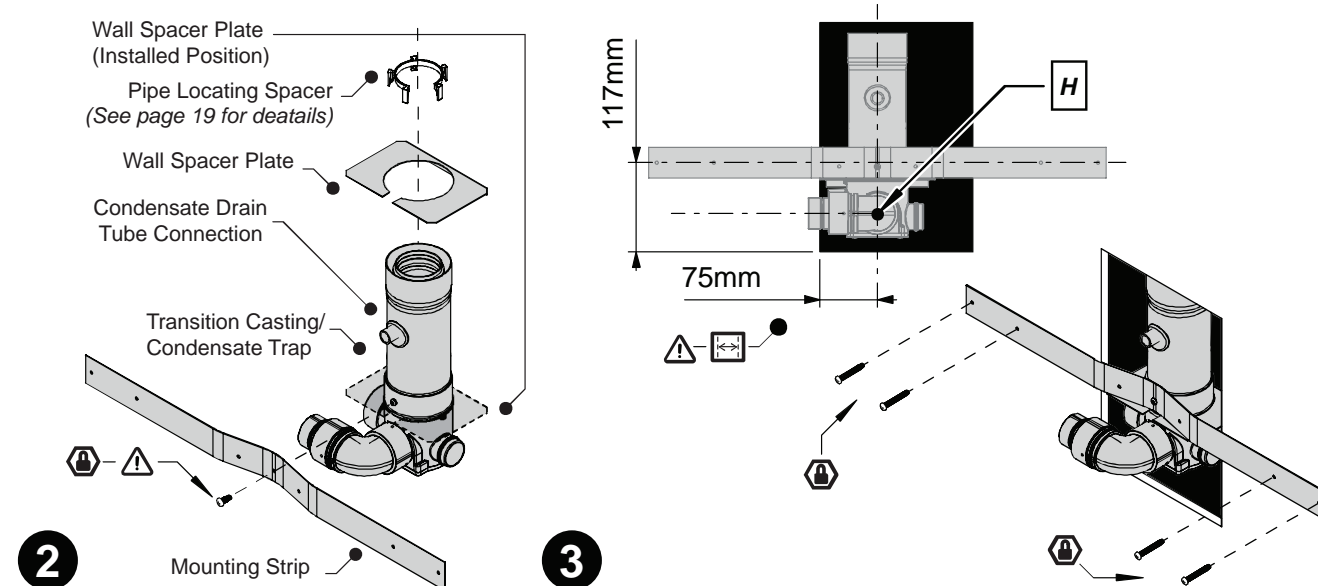


Use in conjunction with section "WALL PENETRATIONS" on page 6.

1. Use the lower end points (iv and vi) of the flue spigot arc from "Wall Penetrations" on page 10 to determine the shaded spigot area ix.

Point H is the centre point of the transition casting and the point from which all measurements are taken. The starting point H may be placed anywhere within the shaded spigot area ix.

Using the dimensions shown above create a 300mm high by 200mm wide opening. The bottom left corner of this opening is 75mm to the left of starting point H and 50mm below starting point H.

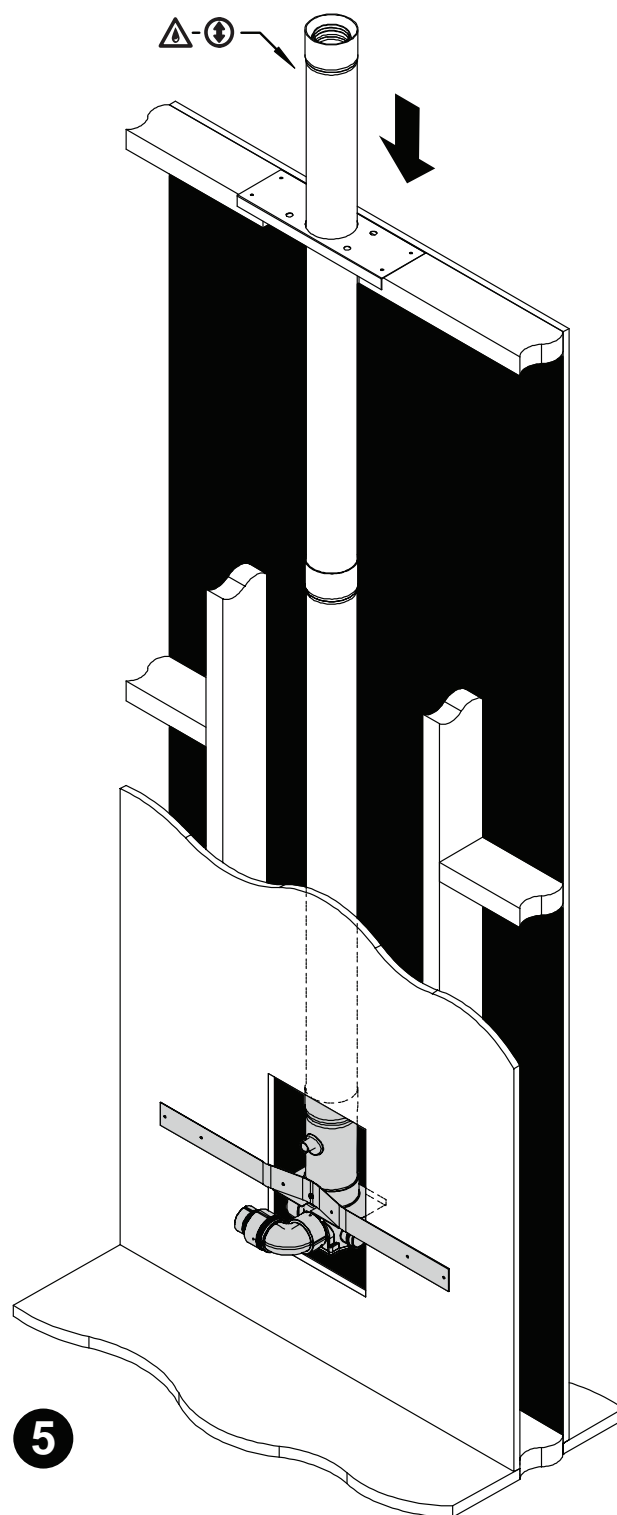
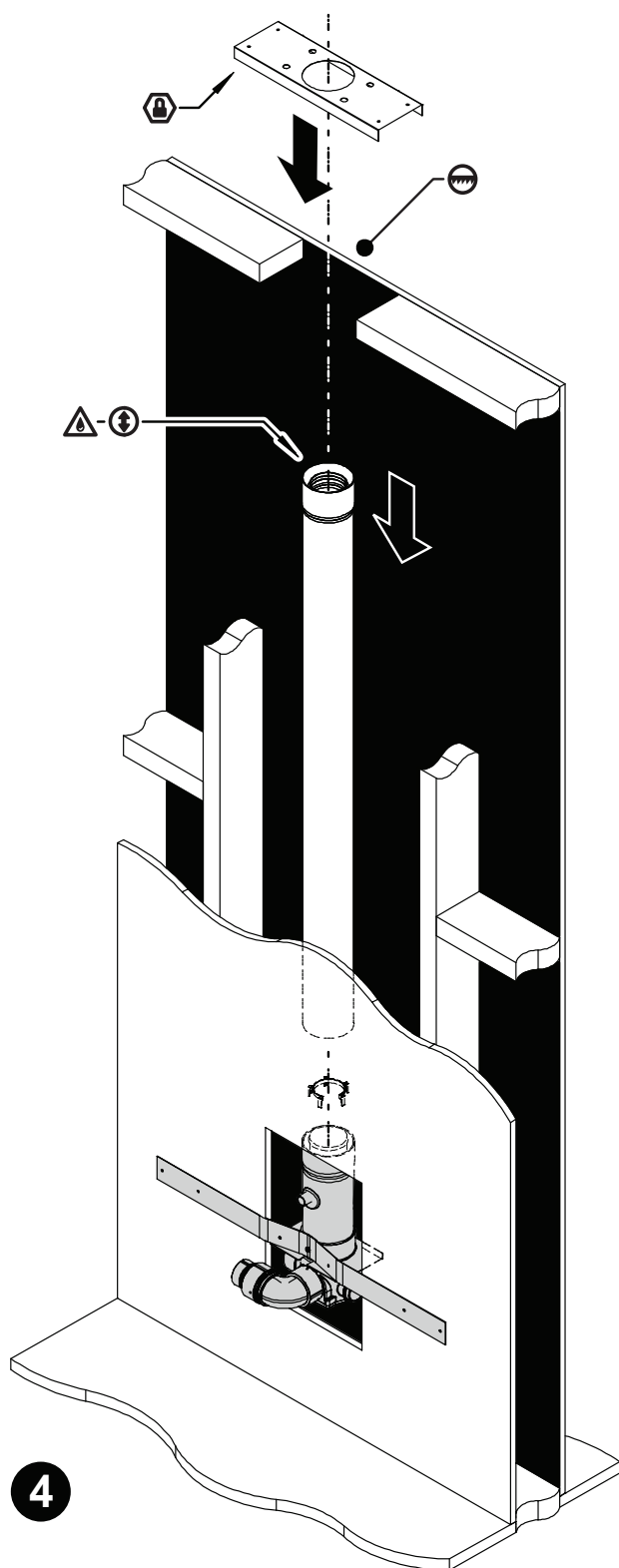








2. ⚠ Remove the screw from the front of the transition casting (retain and DO NOT discard) and slide the wall spacer plate over the transition casting so that the folded tab is facing both down and to the rear.

Using the screw removed from the front of the transition casting attach the mounting strip across the front of the transition casting.

⚠ Lubricate the O-Ring of the condensate trap and attach this to the transition assembly ⚠ ensuring that the drain tube is facing to the front.

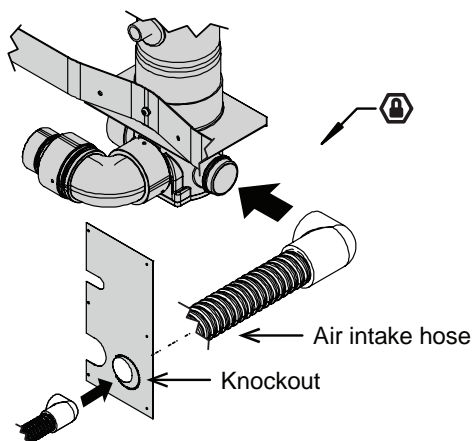
3. Install the above assembly in to the wall cavity ⚠ observing the measurements shown to ensure the correct fitting of heater and other components. 🔒 Secure in place with appropriate fixings.



4.  In the top plate directly above the transition assembly cut a hole for the flue path,  the maximum width MUST NOT exceed 150mm. Ensure that the transition assembly is covered to prevent debris entering.
 Lubricate the O-Ring of the condensate trap and  with the male ends pointing towards the heater fit the required lengths of ESPIPE900 to reach but not pass through the top plate,  lubricating the O-Rings of each additional ESPIPE900 length before fitting. When this point is reached  secure the top plate bracket over the hole in the top plate.
5. Continue Flueing to the termination point and fit an ESROOFCOWL observing the clearances and regulations refer to page 4. To avoid obstructions in the flue path a horizontal offset can be created using ESBEND.

Models:

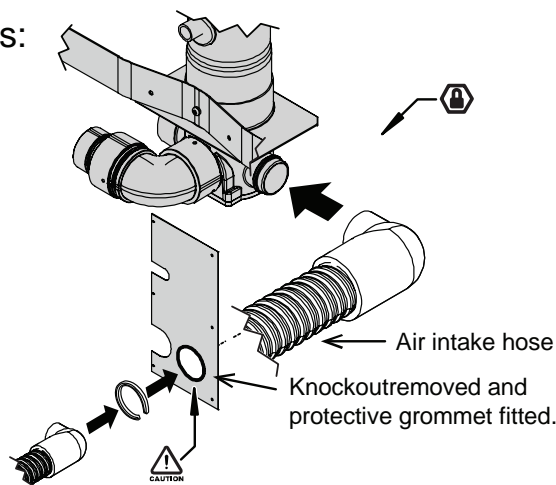
308
309
556
557
559
561



6

Models:

1004
1005



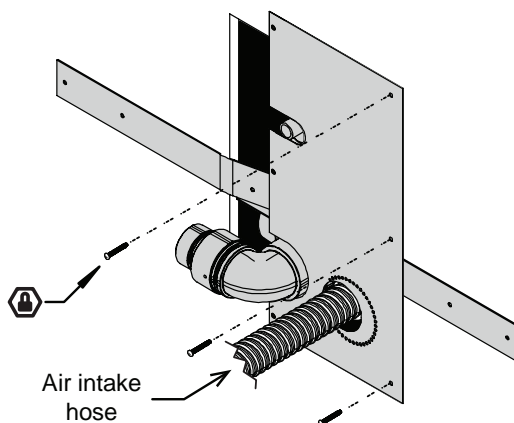
6. Pass the combustion air hose of the heater through the right hand vermin plate. **⚠** When installing Models 1004 and 1005 heater the combustion air hose is of a larger diameter. A knock-out is provided in the vermin plate that **MUST** be removed and a protective grommet fitted **MUST** be before the hose can be passed through the vermin plate. The combustion air hose for the heater is attached to the large diameter combustion air inlet.



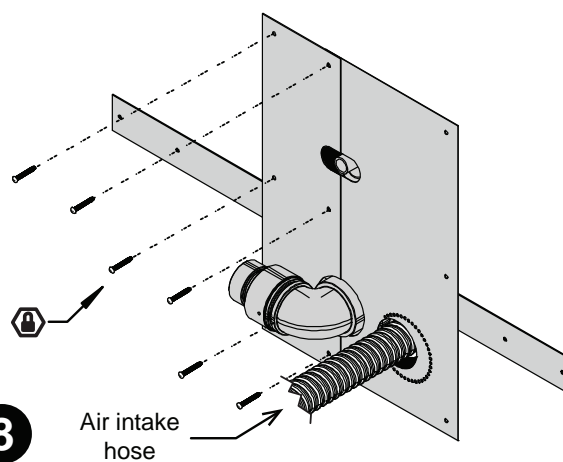
⚠ Secure the combustion air hose to the combustion air inlet with cable tie supplied with the heater. Air hose connections **MUST** be made and checked in accordance with these instructions. Improper connections may result in dangerous situations. The rubber cap (when fitted) is designed to fit both the left and right hand combustion air inlet and **MUST** cover the air inlet not in use.



AT NO TIME MUST THE 'AIR INTAKE' HOSE BE CUT OR SHORTENED.



7



8

7. Move the right hand vermin plate along the hose until it is flush against the wall, then secure in place with three of the nine screws provided.
8. **⚠** Screw the left hand vermin plate to the right hand vermin plate (when overlapped correctly the holes in both plates will be aligned) using three of the nine screws provided. Then use the remaining three of the nine screws provided to fix the remainder of the left hand vermin plate to the wall.
9. Make the heater exhaust connections in accordance with the section "Connecting Heater Exhaust" on page 28. At no time **MUST** the 'Air intake hose' be cut or shortened.

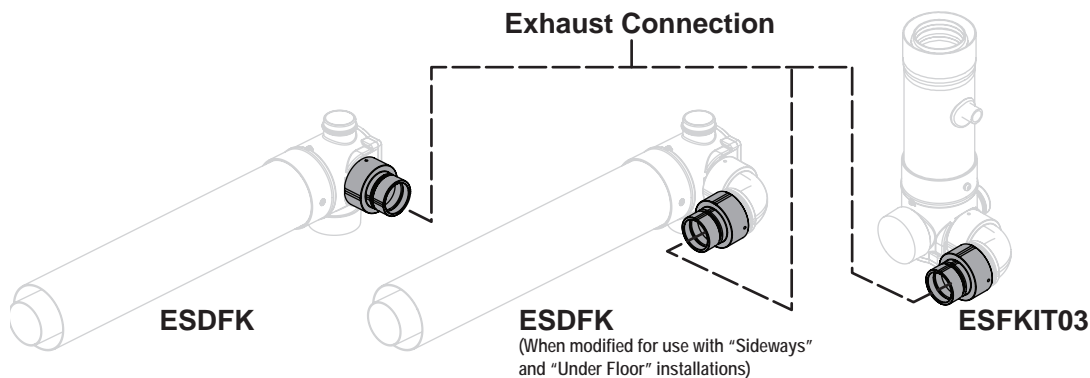


Heater exhaust connections at the heater **MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.**

10. Install the back cover kit and fasten the heater and back cover kit to the internal wall surface.
11. Commission the heater in accordance with the manufacturer instructions supplied with the heater.

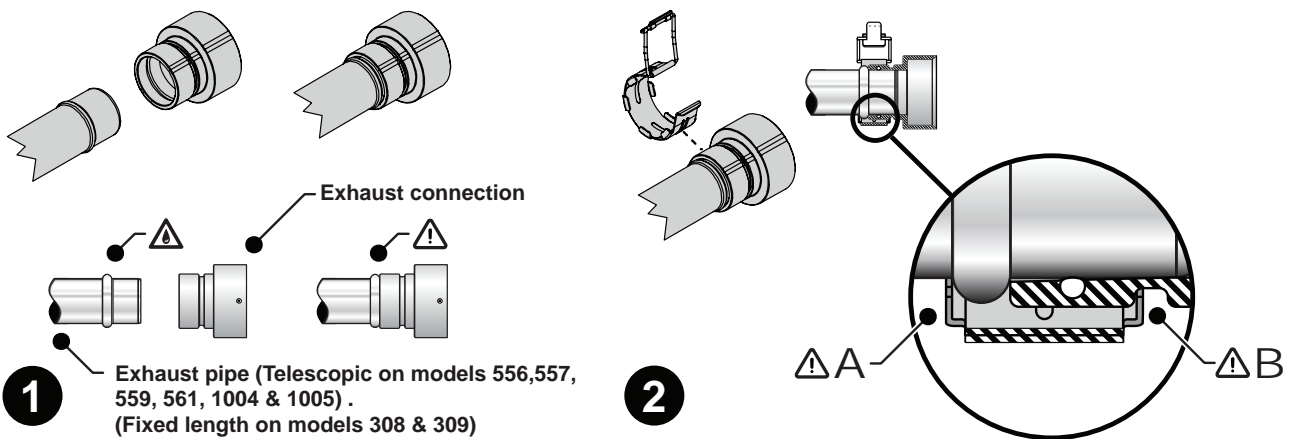
CONNECTING HEATER EXHAUST

This section describes how to connect the exhaust pipe from the Energysaver heater to the exhaust connection onto the flue transitions of ESDFK and ESKIT03.



⚠ This joint MUST be properly secured in accordance with these instructions using the clips provided.

If this joint is not secured properly, products of combustion could disperse into the room being heated which may result in a dangerous condition.

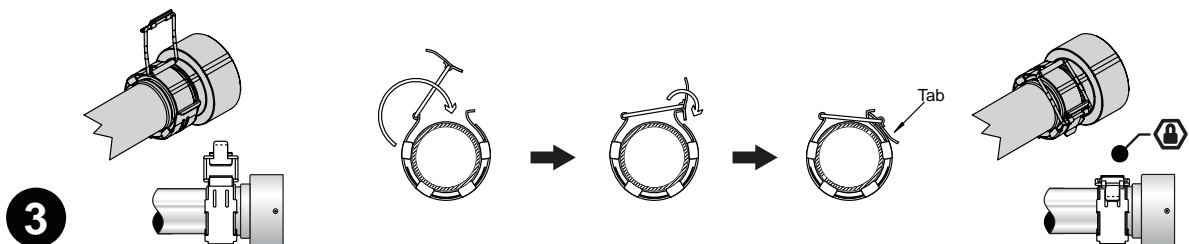


1. ⚠ Lubricate the O-Ring of the exhaust connection and fit to the exhaust pipe of the heater.
⚠ Push the exhaust pipe fully home so that the end of the exhaust connection and the collar of the exhaust pipe are fully mated.



For 1004 and 1005 models an additional flue component “Flue Adaptor” is supplied with the heater which steps down the larger diameter heater exhaust to that used by the exhaust connection on the flue system.

2. Attach the flue locking clamp provided with the heater over the exhaust pipe and transition adaptor. Ensure that the teeth of the flue locking clamp engage both ⚠ A the collar of the exhaust pipe and ⚠ B the channel in the transition adaptor.



3. Close the clamp until the tab locks to secure both components together.

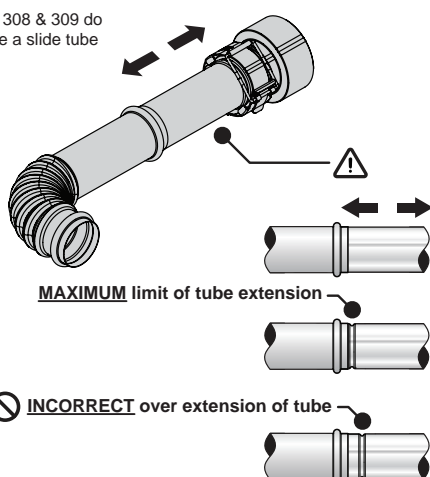


⚠ Models 308 & 309 do not have a slide tube and therefore do not have the retaining mechanism as described in steps 4 & 5.

⚠ Models 559, 561 & 1005 has a retaining mechanism built into the slide tube assembly refer (Step. 4) and do not require the fitting of a fixing clamp described in step 5.

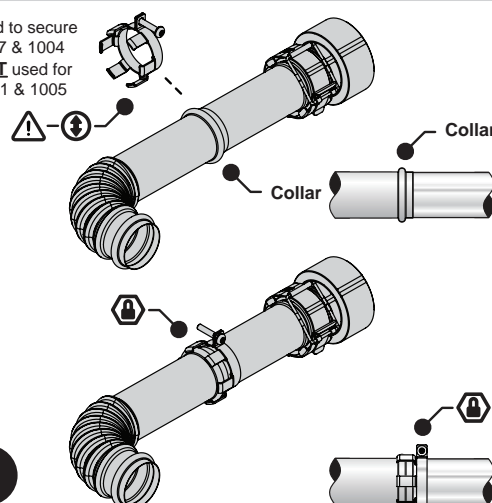
🔒 Models 556, 557 & 1004 require the fitting of the supplied fixing clamp (referred to in Step 5), this is to stop accidental disconnection of the slide tube and **MUST** be fitted to these models.

Models: 308 & 309 do not have a slide tube



4

This clamp is used to secure Models: 556, 557 & 1004
The Clamp is **NOT** used for Models: 559, 561 & 1005



5

4. Use the adjustable telescopic tube of the exhaust pipe to attain the desired position of the heater, ⚠ DO NOT extend the telescopic tube beyond the indicator groove (applies to all models except 308 & 309).
5. 🔒 Fix the telescopic tube of the exhaust pipe in place with the flue lock. ⚡ The clamp of the flue lock is attached to the telescopic tube whilst the finger tabs are secured around the collar of the fixed flue spigot (applies to models 556, 557 & 1004).



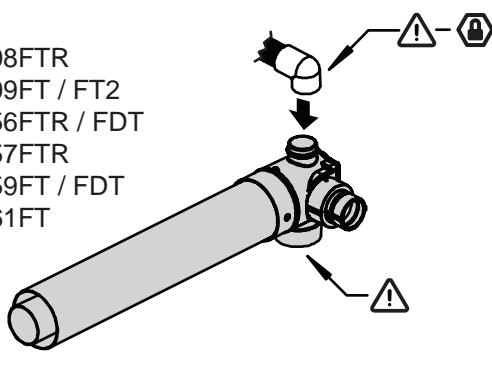
🔒 This joint **MUST** be properly secured in accordance with these instructions using the flue lock provided when applicable. If the joint is not properly secured, products of combustion could disperse into the room being heated. Which may result in a dangerous condition.

CONNECTING COMBUSTION AIR HOSE (AIR SUPPLY)

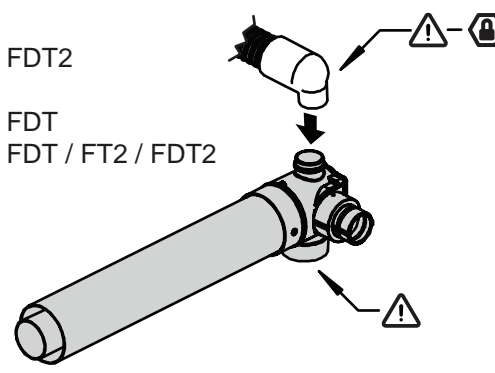


Connection of the combustion air hose for IN-WALL installations is described in the section "Component Assembly & Connection "In-Wall" Flue ~ ESKIT03 & ESKITIW" on page 25.

Models:
RHFE-308FTR
RHFE-309FT / FT2
RHFE-556FTR / FDT
RHFE-557FTR
RHFE-559FT / FDT
RHFE-561FT



Models:
RHFE-559FT2 / FDT2
RHFE-561FT2
RHFE-1004FT / FDT
RHFE-1005FT / FDT / FT2 / FDT2



The combustion air hose of all Energysaver heaters is attached to the small diameter combustion air inlet.



🔒 Secure the combustion air hose to the combustion air inlet with cable tie supplied with the heater.

The air hose **MUST** be properly secured in accordance with these instructions for safe and reliable operation of this heater.

⚠ The rubber cap (when fitted) is designed to fit both the left and right hand combustion air inlet and **MUST** cover the air inlet not in use.

CONNECTING CONDENSATE DRAIN TUBE TO HEATER

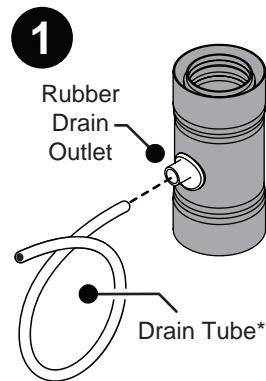
1. Condensate trap "ESCONDK".
2. Carefully mark and drill a 16 diameter mm hole through both the heat shield panel and appliance back panel. DO NOT allow the drill to penetrate further than 10 mm past the back panel as damage to the heat exchanger or internal components will occur.



To insert the condensate drain hose in the appliance drill through both the raised heat shield and the heater back panel.

A 16 mm diameter hole is required for the correct clearance with the condensate drain hose supplied.

DO NOT allow the drill to penetrate further than 10mm past the back panel as damage to the internal components such as the heat exchanger will occur.



*Drain tube & clamp spare part No. 90180944)

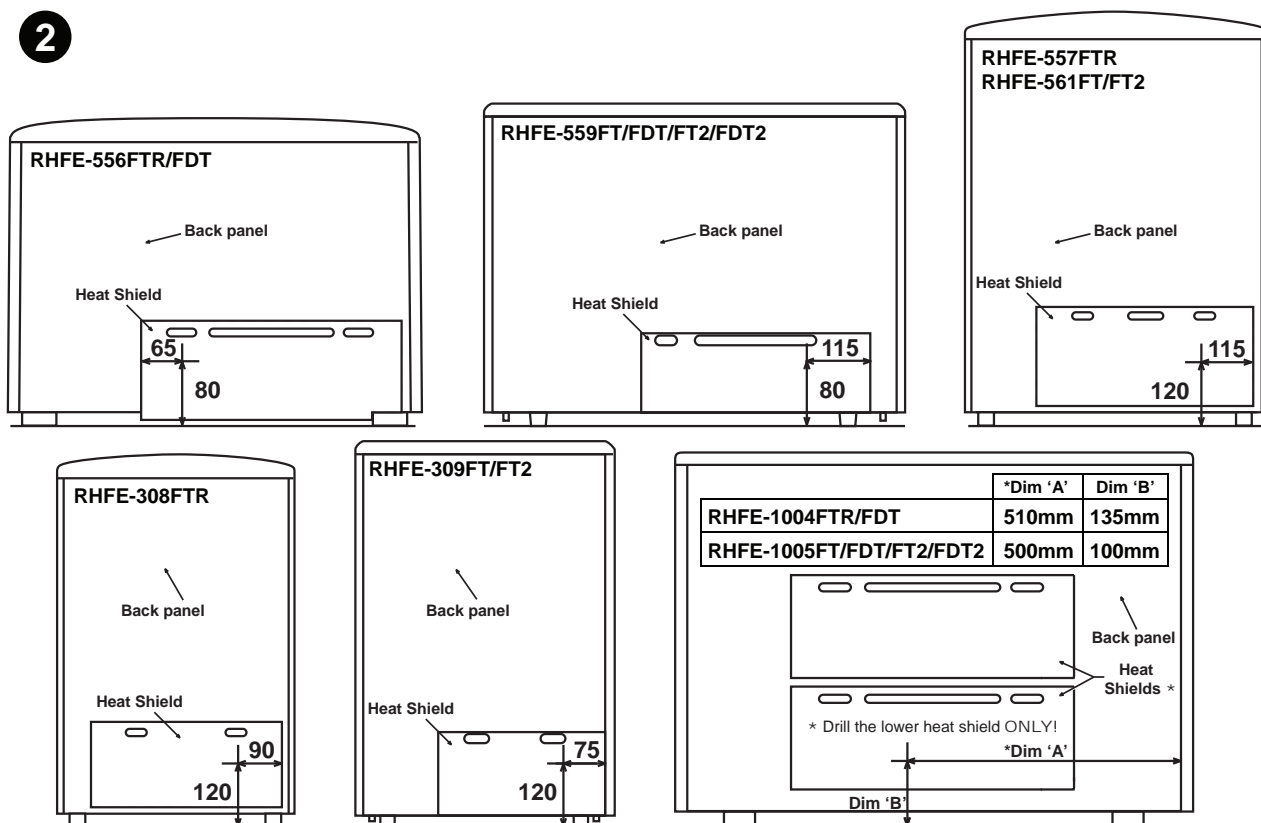


UNDER NO CIRCUMSTANCES MUST THE APPLIANCE BE OPERATED WITH A DAMAGED HEAT EXCHANGER



The condensate drain tube pipe and the pipe clip are available as a spare part from Rinnai, part number 90180944.

2



All vertical measurements are from floor level.

* The horizontal measurements are taken from the edge of the raised back panel.

3. Feed approximately 60mm of the free end of the drain tube through the drilled holes created in step 2. above. Ensure that any condensation can drain into the condensation tray of the heater.



DO NOT allow any portion of the drain tube to come into contact with any part of the heat exchanger.

DO NOT kink, crimp or sharply bend any portion of the condensate drain tube.

4. Secure the drain tube to the rear of the appliance with a pipe clip, (clip not included).

Rinnai Australia Pty Ltd

ABN 74 005 138 769 | AU45204

100 Atlantic Drive, Keysborough, Victoria 3173
P.O. Box 460, Braeside, Victoria 3195
Tel: (03) 9271 6625
Fax: (03) 9271 6622

National Help Line

Tel: 1300 555 545* Fax: 1300 555 655
Monday to Friday, 8.00 am to 5.00 pm EST.

After Hours Hot Water Service Line

Tel: 1800 000 340*

**Cost of a local call higher from mobile or public phones.*

For further information visit **www.rinnai.com.au**
or email **enquiry@rinnai.com.au**

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires service, please call our National Help Line. Rinnai recommends that this appliance be serviced every 2 years.

With our policy of continuous improvement, we reserve the right to change, or discontinue at any time, specifications or designs without notice.