

Rinnai

Assembly Instructions For Energysaver Back Spacer Kits

To suit the following Rinnai Energysaver heaters:

MODEL		KIT ORDER CODE
Energysaver 308	-	ESBSKA
Energysaver 431	-	ESBSKB
Energysaver 556	-	ESBSKB
Energysaver 557	-	ESBSKC
Energysaver 1004	-	ESBSKD

GENERAL

The back spacer kits described in these instructions are used instead of the back spacer kit supplied with the Energysaver heater only when the heater is installed with the 'sideways' or 'down and out' flue system options. The back spacer kits described in these instructions are not required for any other flueing options.



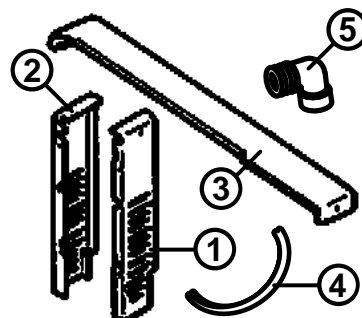
For details regarding flue system options and installation refer to the 'Co-axial Flue System Installation Instructions - Rinnai Energysaver Space Heaters' included with flue components. Only the flue components described in this manual must be used. Other components, whether manufactured by Rinnai or otherwise, must not be used.

These assembly instructions must be read in conjunction with the 'Co-axial Flue System Installation Instructions - Rinnai Energysaver Space Heaters' included with flue components. An extract is provided with this kit for reference.

COMPONENTS

All back spacer kits comprise the components listed below. The dimensions vary to suit the various energysaver heater models.

- ① Left spacer panel
- ② Right spacer panel
- ③ Top spacer panel
- ④ Protective plastic edge
- ⑤ Elbowed flue pipe connection

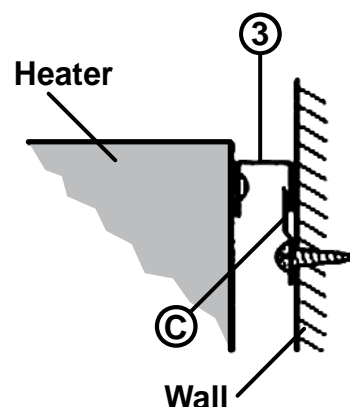
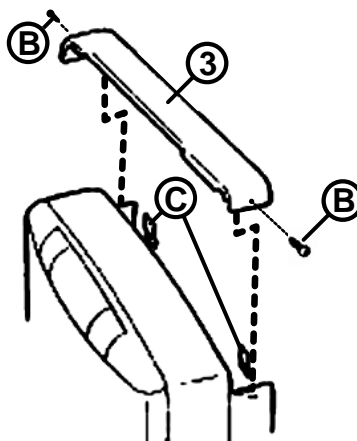
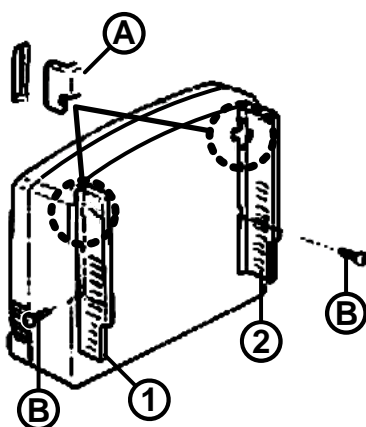


For the correct assembly sequence of this kit refer to the 'Co-axial Flue System Installation Instructions - Rinnai Energysaver Space Heaters'.

The screws and wall brackets provided with the heater are required for assembly of this kit. Do not discard these items.

SIDE PANEL ASSEMBLY

Fit left ① and right ② spacer panels by engaging the tabs of the spacer panels into the slots of the heater (A). Secure to heater using the screws provided with the heater (B).



TOP PANEL AND WALL BRACKET ASSEMBLY

Place the top spacer panel ③ into position as shown. Mark the position of the top edge of the top spacer on the wall. Mark centre lines 30 mm down from the top edge mark and 40 mm inwards from the left and right hand sides of the top spacer panel.

Fix wall brackets (C) to the wall at the marked positions using the screws provided. Clip the top spacer panel into the wall bracket tabs and attach to the side panels using the screws provided (B). The heater should now be secured to the wall.



Important: Ensure flue system components are assembled and secured in accordance with the 'Co-axial Flue System Installation Instructions - Rinnai Energysaver Space Heaters'. Incorrect assembly could result in products of combustion dispersing into the room being heated which may result in a dangerous condition.

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EXTRACT FROM

CO-AXIAL FLUE SYSTEM INSTALLATION

INSTRUCTIONS - RINNAI ENERGYSAVER[®] SPACE

HEATERS

(Pages 3 and 32 to 39 only)

IMPORTANT:

For full details regarding flue system options and installation refer to the complete 'Co-axial Flue System Installation Instructions' supplied with flue components.

Installation of heater and flue system shall be in accordance with:

- Manufacturers Installation Instructions
- Current AS 5601 'Gas Installations'
- Local Regulations and Municipal Building Codes

Installation, service and removal by an Authorised Person only.

Only the flue system components designated in this manual must be used. Components not designated in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.

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INTRODUCTION

The Rinnai Energysaver Co-axial flue system is certified as part of the Rinnai Energysaver space heater range. Only an authorized person must install, service and remove the Rinnai Energysaver space heater and flue system.

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

- The requirements of the current version of AS 5601 (Gas Installations)
- Manufacturers installation instructions
- Local & Municipal building codes.
- Any other relevant Statutory Regulation.

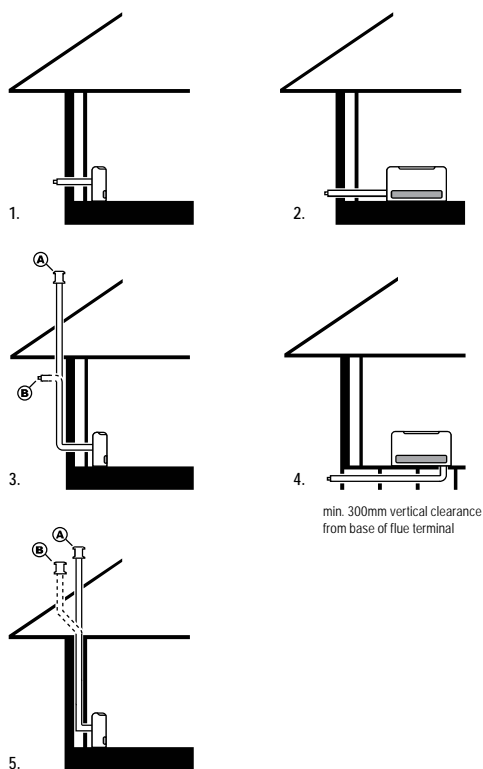
Rinnai appliance warranty conditions may be voided if non Rinnai flue components are fitted.



Only the flue system components designated in this manual must be used. Components not designated in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used.

AVAILABLE CONFIGURATIONS

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



BACK SPACER KITS

The addition of a Back Spacer Kit is required in all installations that are either sideways or down and out (Options 2 & 4).

As Energysaver models have varying body sizes, a specific kit must be ordered to suit the heater model that you are purchasing.

	Description	Order Code
1	Direct Flue Kit	ESDFK
2	Direct Flue Kit Co-Ax Pipe 900mm [†] Back Spacer Kit	ESDFK ESPIPE900 See Below
3A	Direct Flue Kit Co-Ax Pipe 900mm [†] Bend (2 x 45°) Condensate Trap Roof Cowl	ESDFK ESPIPE900 ESBEND ESCONDK ESROOFCOWL
3B	Direct Flue Kit Co-Ax Pipe 900mm [†] 2 Sets of Bends (2 x 45°) Condensate Trap Wall Terminal Kit	ESDFK ESPIPE900 ESBEND ESCONDK ESWTKIT
4	Direct Flue Kit Wall Terminal Kit Co-Ax Pipe 900mm [†] Bend (2 x 45°) Back Spacer Kit	ESDFK ESWTKIT ESPIPE900 ESBEND See Below
5A	Vertical Adaptor Kit* Co-Ax Pipe 900mm [†] Roof Cowl	ESKIT03 ESPIPE900 ESROOFCOWL
5B	Vertical Adaptor Kit* Co-Ax Pipe 900mm [†] Bend (2 x 45°) Roof Cowl	ESKIT03 ESPIPE900 ESBEND ESROOFCOWL

*includes condensate trap
[†]order lengths as required

Description	Order Code
Energysaver 308 Back Spacer Kit	ESBSKA
Energysaver 431 & 556 Back Spacer Kit	ESBSKB
Energysaver 557 Back Spacer Kit	ESBSKC
Energysaver 1004 Back Spacer Kit	ESBSKD

SIDEWAYS HORIZONTAL FLUE SYSTEM (Page 3 Option 2)

The sideways horizontal flue system is used to run co-axial flue along the left or right hand side of the internal wall behind the heater.

The flue pipes are clipped to the wall using the standoff clips supplied. It is possible to build a decorative cover around the flue pipe exposed inside the building.

NOTE:

The decorative cover is not part of this flue kit and is not covered by these instructions.

IMPORTANT:

There should be a 25mm clearance between the outer co-axial flue pipe and any decorative cover materials.

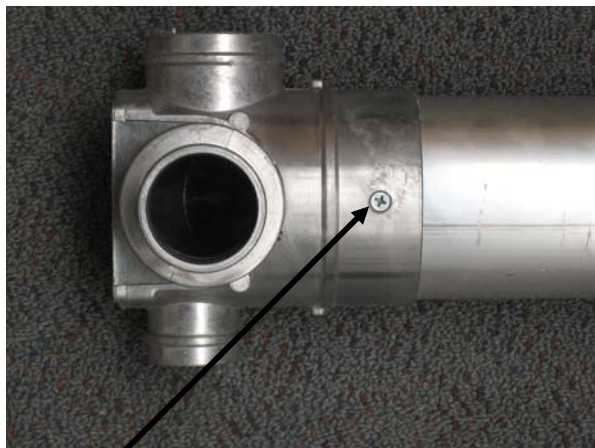
The sideways horizontal flue system comprises the following components:

- Rear spacer kit to match the Energysaver model (ESBSKA, ESBSKB, ESBSKC, ESBSKD). This kit includes left and right side spacers, a top spacer, an elbowed flue pipe connection, edging seal and a stand off mounting clip.
- Direct flue kit (ESDFK). Includes one universal plastic cover plate for the external face of the wall.
- Co-Ax Pipe(s) (ESPIPE900).
- Optional: An additional Universal cover plate (ESPLATE) to cover the flue penetration through the *internal* side of the wall.

INSTALLATION METHOD

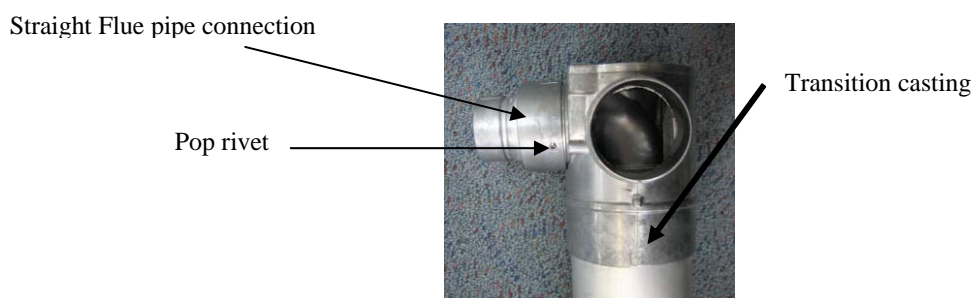
Note: The rear spacer kits contain instructions for assembling the spacers and wall brackets to the heater and wall.

1. Select the desired location for Energysaver heater.
2. Decide the proposed route of the sideways flue and confirm there are no obstructions to this route.
3. Ensure the flue will be able to terminate in accordance with AS 5601 (Refer to Appendix A).
4. Discard the 3 spacer panels that are supplied with the energysaver appliance. The spacer panels included in the Back Spacer Kit are used instead. These have a greater depth and enable accommodation of flue components behind the energysaver appliance with adequate clearances from the heater and the wall behind the heater. NOTE: Do not discard the screws and wall brackets packaged with the spacer panels supplied with the heater. These will be used later.
5. Ensure the fastening screws between the flue pipe and transition casting are secured as shown below.

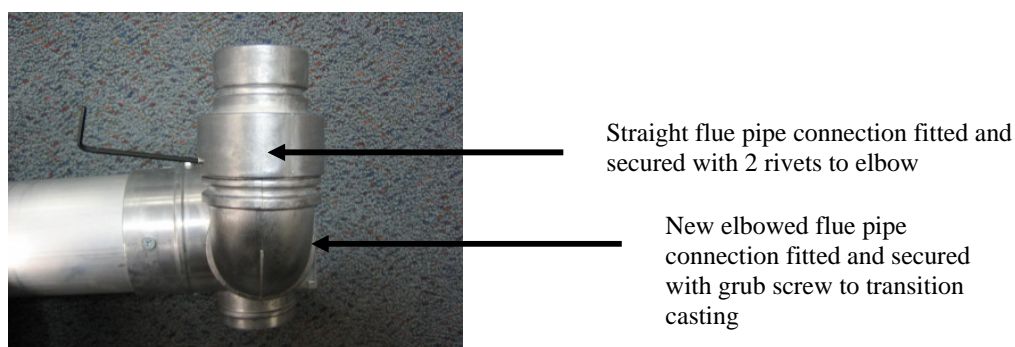


2 Fastening Screws (second screw on opposite side)

6. Using a drill, remove the pop rivet used to fasten the straight flue pipe connection pipe to the transition casting (see photo below) and remove the straight flue pipe connection.



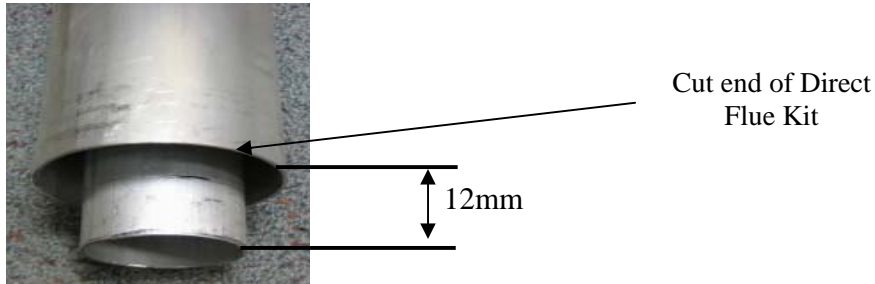
7. Fit the elbowed flue pipe connection supplied with the Back Spacer kit to the transition casting and fasten with the grub screw. Refit the straight flue pipe connection to the end of the elbow and fasten with grub screw. Use an allen key for fastening the grub screws (see photo below). The grub screw terminate in a groove in the transition casting when fastened to prevent accidental dislodgement of the pipe connections.



IMPORTANT

Ensure the straight pipe and elbow are securely fastened to the transition casting using the pop 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.

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8. Remove the black plastic spacer from the end of the Direct Flue kit (do not discard) and trim the length of the inner alloy flue pipe so it protrudes 12mm past the end of the outer alloy flue pipe (see photo below).



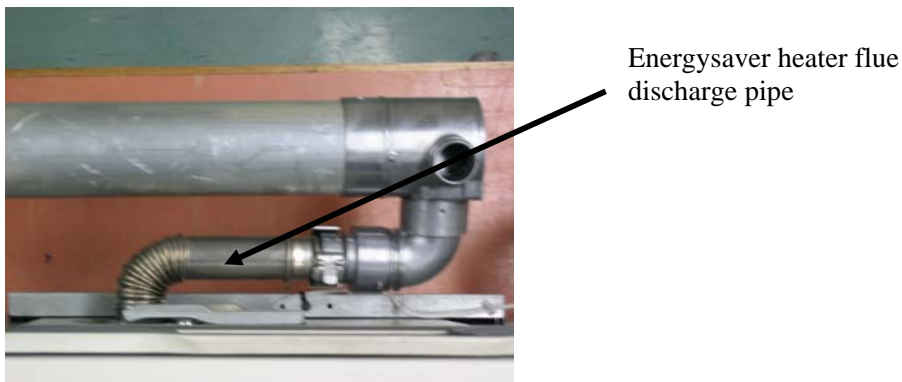
IMPORTANT:

- Ensure the minimum length of the coaxial flue pipe connected to the heater flue pipe is at least 300mm.
- Ensure cuts are square and straight and left with a smooth bevelled edge.

NOTE:

- Do not discard the black plastic spacer as it will be re-used later.

9. Temporarily attach the 'cut off' Direct Flue kit to the flue outlet pipe from the rear of the Energysaver heater. Align the flue in an almost horizontal manner in the desired direction of discharge (either left or right) with a 2 degree fall towards the flue terminal (see photo below).



NOTE

- A small amount of "O ring" grease applied to the seals will aid assembly.
- The 2 degree fall can be achieved by adjusting (rotating) the stainless steel flue discharge pipe of the Energysaver heater.

IMPORTANT

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

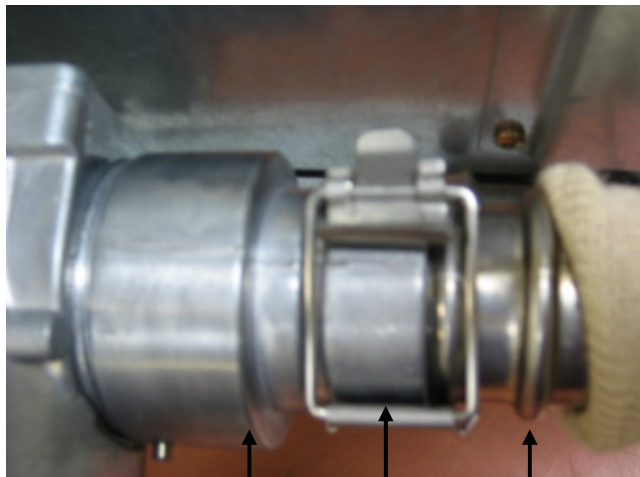
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10. Temporarily attach the appropriate side spacer panel from the back spacer kit to the rear of the heater in accordance with the Assembly Instructions supplied with the spacer kit. Mark the location of the flue pipe penetration through the side spacer panel.
 11. Remove the side spacer panel and cut an 85mm Ø hole through it for the flue pipe to pass through. Ensure the hole edges are smooth.
 12. Fit the protective plastic edge supplied with the back spacer kit around the circumference of the hole in the side spacer panel.
 13. Disconnect the 'cut off' Direct Flue kit from the flue discharge pipe.
 14. Fit a length of Co-ax Flue Pipe to the cut end of the Direct Flue Kit. Secure the Co-ax pipe and Direct Flue Kit assembly onto the wall behind the heater using the 'stand off' mounting clip supplied with the Co-ax pipe.

IMPORTANT: Ensure the weight of the flue pipes behind the heater are supported by the stand off mounting clip and not the connections between the flue pipe and the heater.

NOTE: A small amount of "O ring" grease applied to the seals will aid assembly.

15. Connect the metal flue outlet from the Energysaver heater to the flue pipe connection on the transition casting. Fit the locking clip to secure the connection.

IMPORTANT: Ensure the metal flue outlet from the heater is properly secured to the flue connection on the flue system transition casting using the clip supplied. If this joint is not secured properly products of combustion could disperse into the room being heated which may result in a dangerous condition.



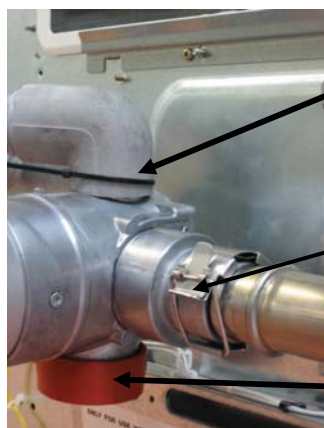
Alloy connection on flue

Flue outlet from Energysaver

Clip supplied with Energysaver to secure flue components together

16. Connect the rubber elbow at the end of the air intake hose from the Energysaver heater onto the air hose connection of the transition casting. Secure with the cable tie supplied.

IMPORTANT: Ensure the elbow of the air intake hose is properly secured to the air connection on the flue system transition casting using a cable tie and that the rubber seal is placed over the unused air intake connection of the transition piece.



**Air intake hose elbow
secured with cable tie**

Clip supplied with energysaver heater to secure flue
components together

**Rubber seal placed over unused air
connection**

17. Fit the back spacer panels to the heater and secure the wall brackets and heater to the wall in accordance with the assembly instructions supplied with the back spacer kit.
18. Continue to fit additional lengths of co-axial flue pipe until the required flue length is obtained.

NOTES:

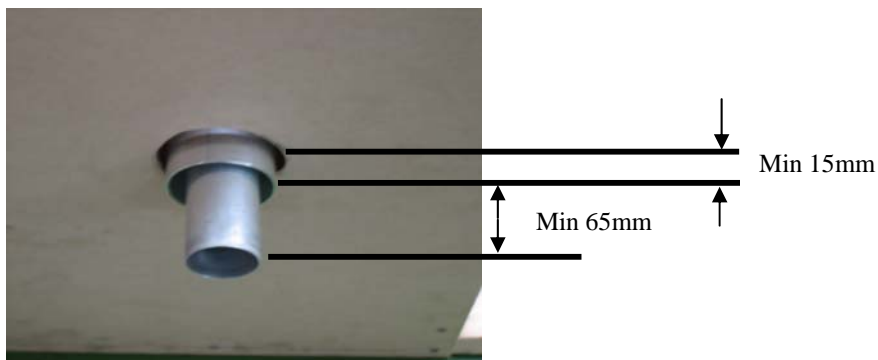
A small amount of “O ring” grease applied to the seals with aid assembly.

Ensure the flue terminal can meet the clearance requirements of AS5601. Refer to Appendix A for details.

19. Mark the last length of the outer flue pipe (larger diameter) allowing 15mm past the edge of the external wall (see photo).
20. Mark the last length of inner flue pipe an additional 65mm in length from the mark on the outer air intake tube (see photo below).
21. Remove the last length of co-ax pipe flue assembly from the the rest of the assembled flue system.
22. Using a hacksaw or similar, cut off excess flue length from both the outer and inner pipes of the last length of co-ax pipe.

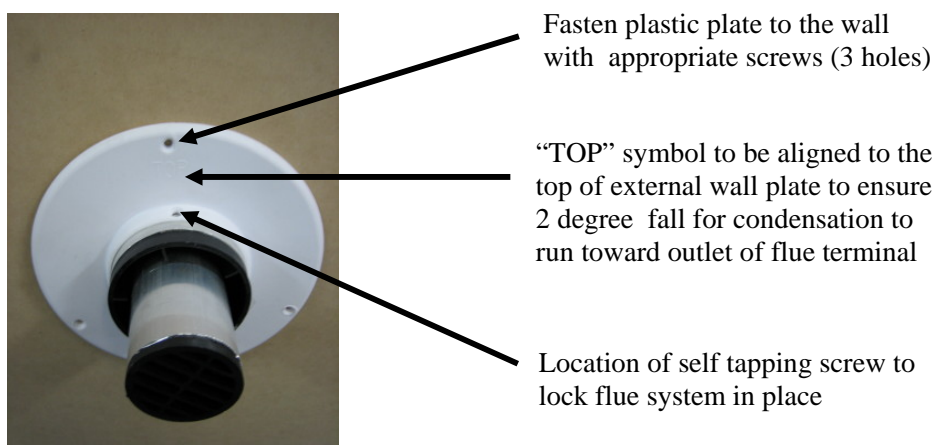
IMPORTANT:

Ensure that pipe cuts leave a clean, square edge on both cuts and that the distances of protrusion are correct



23. Slide the plastic *internal* wall cover plate over the last flue pipe inside the building (if required)
24. Pass the the last flue pipe (now cut off) through the wall and attach to the rest of the flue assembly. Fasten the *internal* wall plate to the wall through the 3 pre-drilled holes in the cover plate using suitable screws.
25. Fit the the black plastic spacer from the Direct Flue kit between the inner and outer pipes of the last length of co-ax pipe (see photo below).
25. Fit small black plastic flue outlet grille to the inner flue pipe with the bars in a horizontal direction (see photo below).
26. Slide the plastic external wall cover plate over the flue pipes on the outside of the wall, ensuring the “TOP” symbol and mounting screw hole is on the top side of the flue. (This will ensure a 2 degree fall for condensation to run towards the outlet) – see photo below.
27. Pull flue terminal firmly through wall to ensure inner metal plate is hard against inside wall.
28. Drill through the hole in the plastic cover plate and into metal air intake pipe. Secure with the stainless steel self-tapping screw supplied to lock the flue terminal in place.
29. Attach the plastic wall plate to the outer wall though the three countersunk holes molded into the plastic wall plate using the screws supplied.

The finished flue terminal assembly should look like the photo below:



30. Fasten the remaining horizontal co-axial flue pipes now joined together against the internal wall using the stand off clip supplied with each co-axial flue pipe.

IMPORTANT

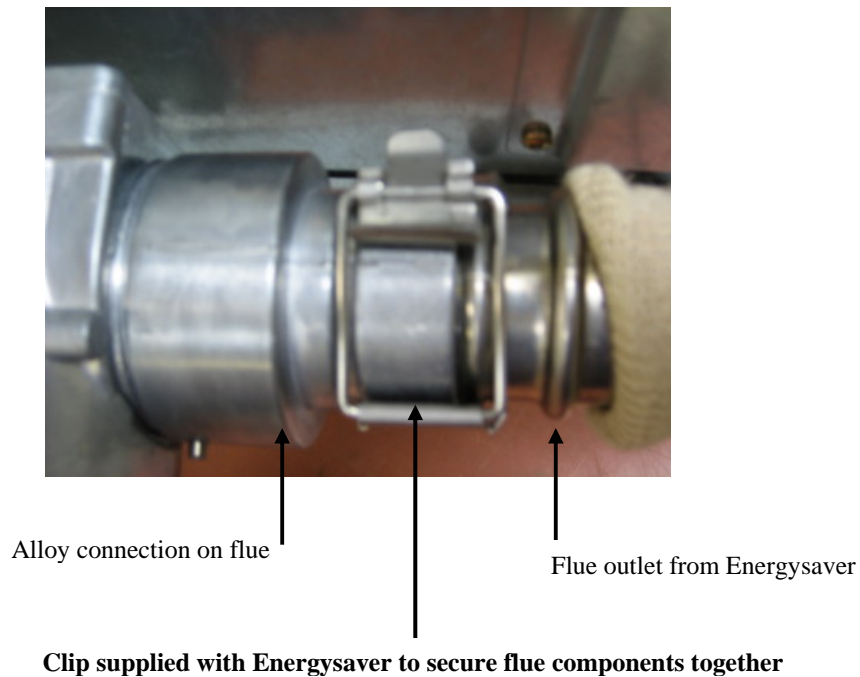
It is important that the horizontal coaxial flue pipes are fastened to the wall using the stand off clips supplied to support the weight of the flue system and prevent accidental dislodgement of pipe joints which could result in a dangerous situation. Accidental or erroneous dislodgement could occur as a result of future servicing the Energysaver heater or as a result of other activities in the vicinity of the heater or flue system.

31. Construct and fit a decorative cover over the horizontal pipe inside the building if required.

IMPORTANT:

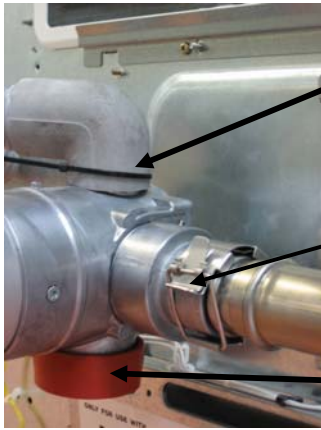
There should be a 25mm clearance between the outer co-axial flue pipe and any decorative cover materials.

Ensure the metal flue outlet from heater is properly secured to the flue connection on the flue system transition piece using the clip 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. See photos below.



IMPORTANT:

Ensure the elbow of the air intake hose from the heater is properly secured to the air connection on the flue system transition casting using a cable tie and that the rubber seal is placed over the unused air intake connection of the transition piece.



**Air intake hose elbow
secured with cable tie**

Clip supplied with energysaver heater to secure flue
components together

**Rubber seal placed over unused air
connection**