
ROOM SEALED FLUE TERMINAL KIT

For use on the Danesmoor Front Service Room Sealed Oil Appliances

INSTALLATION INSTRUCTIONS



The appliance/flue system should be installed by a competent person

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1. Installation Regulations

1.1. The appliance/flue system should be installed by a competent person. The person installing the appliance/flue system should be aware of the Health and Safety at Work Act and take appropriate action to ensure the regulations are adhered to. In order to give optimum efficiency and trouble free operation the appliance/flue system must be commissioned by an OFTEC registered engineer, as required by the building regulations.

1.2. The manufacturers notes must not be taken, in any way, as overriding statutory obligations.

1.3. The roomed sealed terminal has been designed to discharge the products of combustion without the need for a conventional chimney.

2. General Information

IMPORTANT: In addition to the following notes, reference must be made to the appliance Installation and Servicing instructions.

2.1. The flue system covered in these instructions can only be used with Danesmoor Front Service (FS) Oil Appliances.

2.2. These instructions cover both low level discharge and high level horizontal flue systems.

2.3. The method of installation of the flue system may be varied to suit the actual site conditions. The instructions for connection and fixing the ducts must be adhered to.

2.4. There are three sizes of telescopic flue system available:

1. **Short** RS flue kit for wall thickness of 100mm (4 inch) to 150mm (6 inch)
2. **Standard** RS flue kit for wall thickness of 230mm (9 inch) to 400mm (15 inch)
3. **Long** RS flue kit for wall thickness of 400mm (15 inch) to 730 (28.7 inch)

3. Flue Lengths, Bends and Extensions.

3.1. The maximum flue length allowable is 2.5 metres as shown in Figs 1 and 2.

3.2. Extension kits are available in 500mm and 1000mm sections.

3.3. 90° and 45° bends are available. In addition to the 90° bend supplied with the flue kit one extra 90° bend or two 45° bend may be used.

A 90° bend is equivalent to 1000mm of straight duct.

A 45° bend is equivalent to 500mm of straight duct.

Therefore, if one extra 90° or two 45° bends are used the maximum straight ducting must not exceed 1.5 metres.

It is not recommended to cut the flue extensions.

4. Measurement of the Ducts

Flueing options are shown in figures 1 and 2.

Choose the duct depending on the wall thickness (L) and or the flue length required. L is the distance from the outside of the appliance casing to the outside face of the wall.

4.1. Rear Discharge Low Level Flues as shown in figure 1a and 1b.

Using the **Short** RS flue kit

If L is between 100 – 150mm – (no extensions)

Using the **Standard** RS flue kit

If L is between:

230 – 400mm – (no extensions)

730 – 900mm – (500mm extension)

1230 – 1400mm – (1000mm extension)

1730 – 1900mm – (1000mm and 500mm extensions)

2230 – 2400mm – (2 x 1000mm extensions)

Using the **Long** RS flue kit

If L is between:

400 – 730mm – (no extensions)

900 – 1230mm – (500mm extension)

1400 – 1730mm – (1000mm extension)

1900 – 2230mm – (1000mm and 500mm extensions)

2400 – 2500-(2 x 1000mm extensions)

4.2. Rear Discharge High Level Horizontal flue with one 90° Bend as shown in figure 1c.

L is calculated by taking the dimension from Section 4.1 for Rear Discharge Low Level Flues and subtracting the vertical extension length L1

Fig. 1. Rear discharge flue systems.

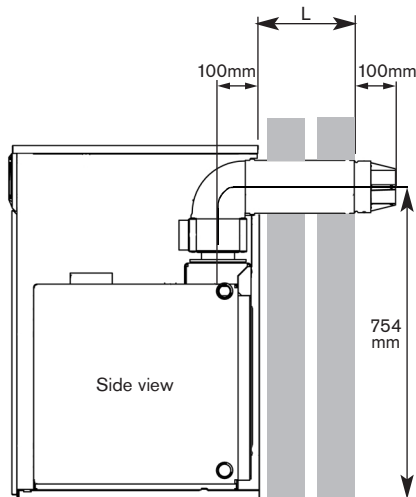


Fig. 1a. Low level horizontal flue with one 90° Bend

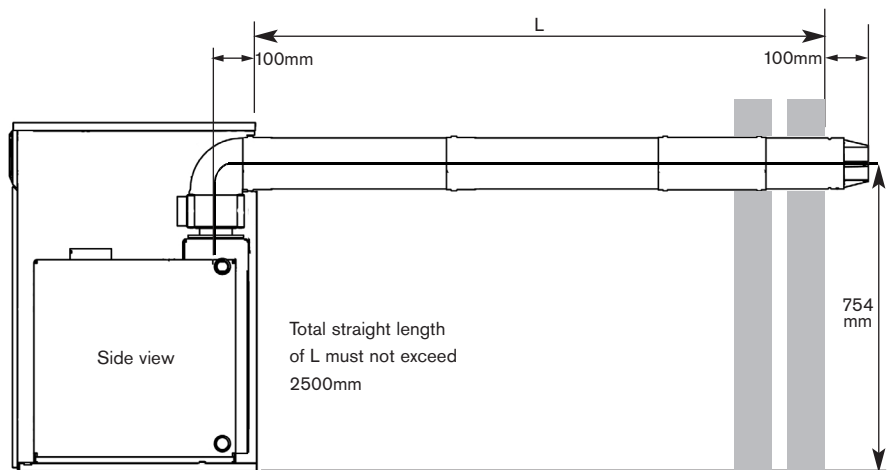


Fig. 1b. Low level horizontal flue with extensions and one 90° bend

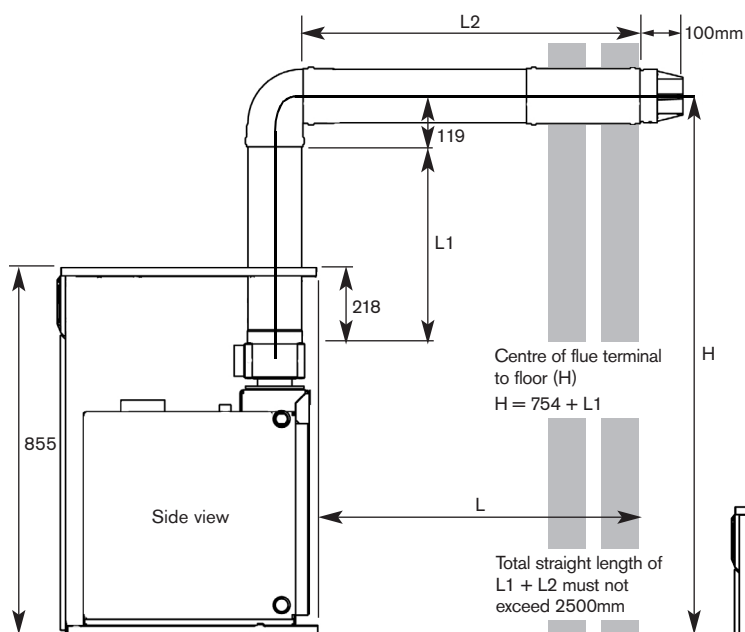


Fig. 1c. High level horizontal flue with one 90° bend

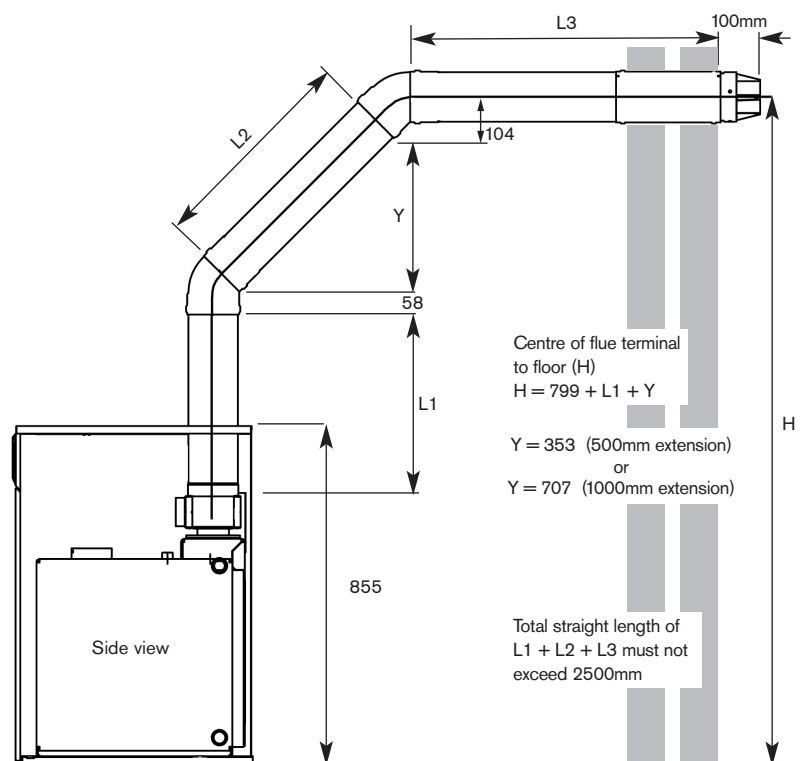


Fig. 1d. High level horizontal flue with two 45° bends

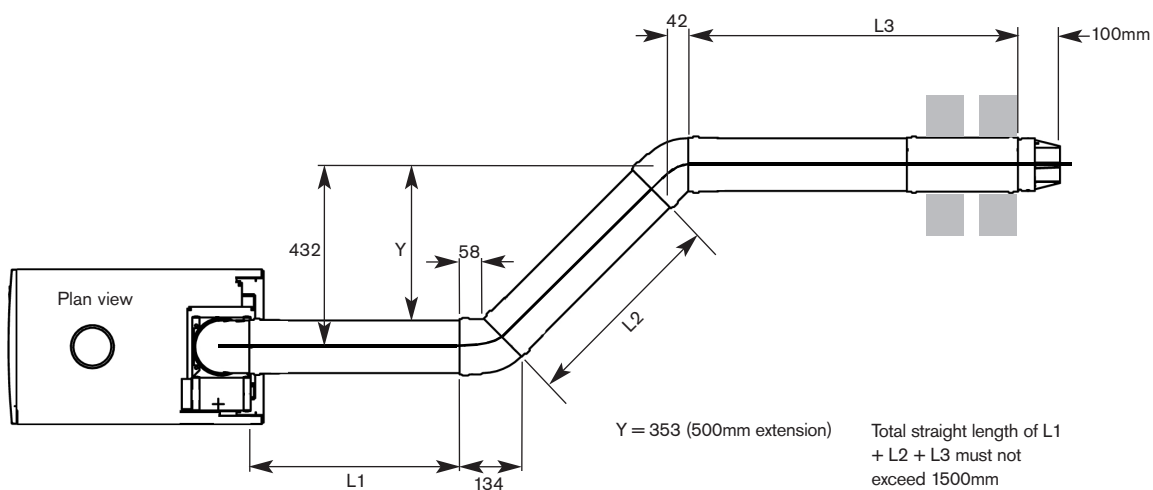


Fig. 1e.

Fig. 2. Side discharge flue systems.

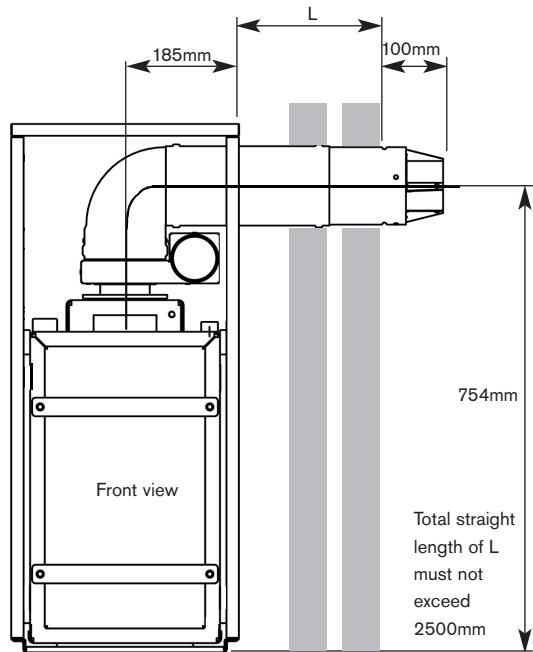


Fig. 2a. Low level horizontal flue with 90° bend

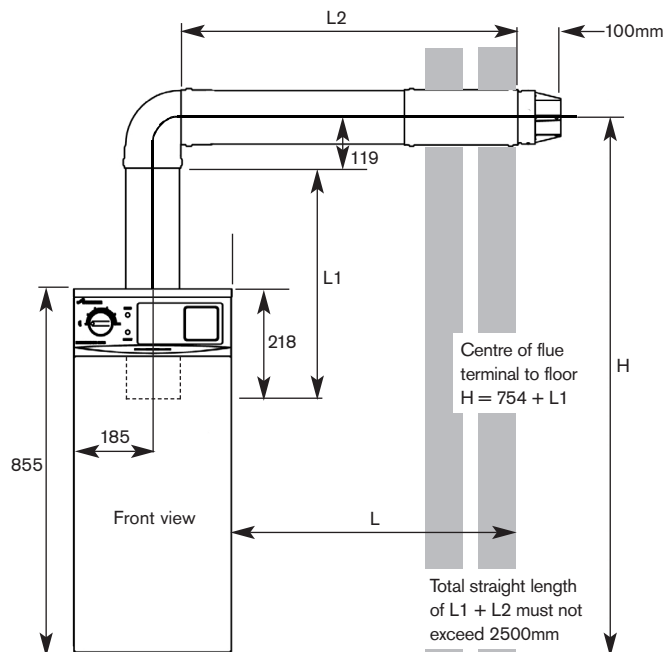


Fig. 2b. High level horizontal flue with one 90° bend

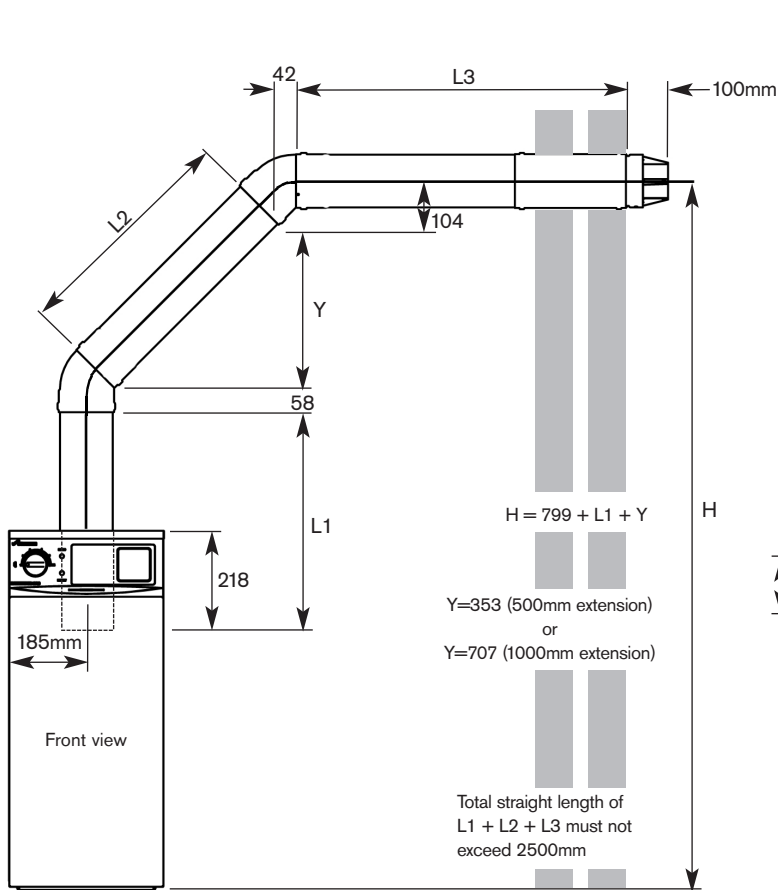


Fig. 2c. High level horizontal flue with two 45° bends

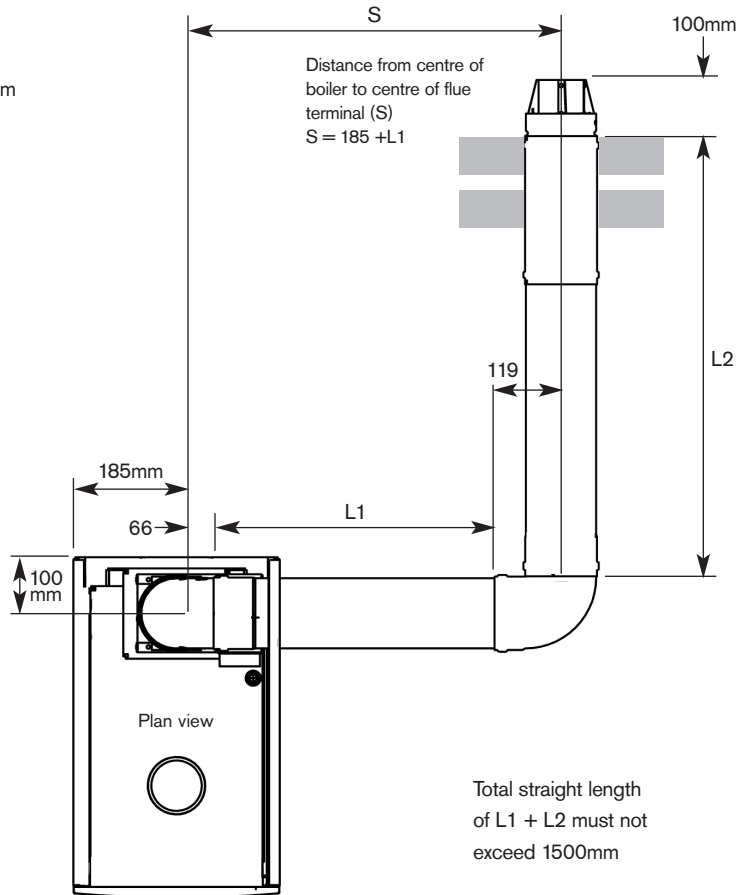


Fig. 2d. Side exit of flue with two 90° Bends

4.3. Left and Right Side Discharge Low Level Flues as shown in figure 2a

Using the **Standard RS** flue kit

If L is between :

145 – 315mm – (no extensions)

645 – 815mm – (500mm extension)

1145 – 1315mm – (1000mm extension)

1645 – 1815mm – (1000mm and 500mm extensions)

2145 – 2315mm – (2 x 1000mm extensions)

Using the **Long RS** flue kit

If L is between:

315 – 645mm – (no extensions)

815 – 1145mm – (500mm extension)

1315 – 1645mm – (1000mm extension)

1815 – 2145mm – (1000mm and 500mm extensions)

2315 – 2500mm – (2 x 1000mm extensions)

4.4. Left and Right Side Discharge High Level Horizontal flue with one 90° Bend as shown in figure 2b.

L is calculated by taking the dimension from Section 4.3 for left and right side Discharge Low Level Flues and subtracting the vertical extension length L1

5. Siting of the Flue Terminal

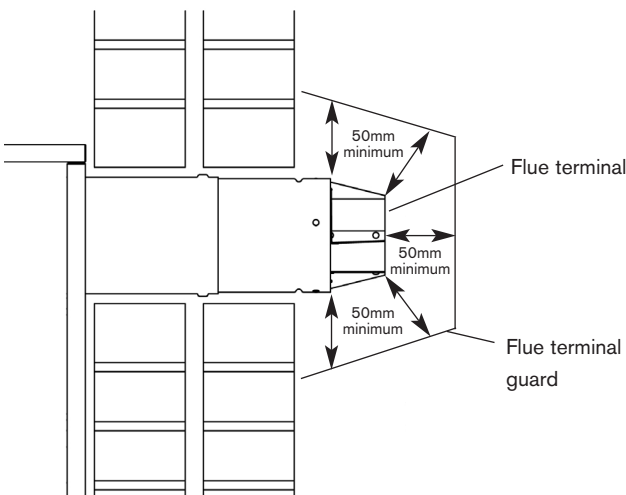


Fig. 3. Flue Terminal Guard

5.1. The flue terminal must be located in a suitable position, such that the products of combustion can be freely dispersed without the possibility of the gases entering the dwelling or that of a neighbouring dwelling.

5.2. Discharge of flue gases into carports or narrow

passageways is not recommended.

5.3. The terminal must not cause an obstruction or the discharge cause a nuisance as a result of either flue gases or terminal noise.

5.4. Where the flue terminal is fitted less than 2 metres above the surface to which people have access, fit a terminal guard. A suitable terminal guard is available from Worcester Heat Systems, Part Number 7 716 190 009, or alternatively a propriety terminal guard may be used provided it leaves at least 50mm clearance between the terminal and terminal guard as shown in Fig. 3.

5.5. If the terminal is fitted within 1 metre of a plastic or painted gutter or within 500mm of painted eaves then an aluminium or stainless steel shield at least 1 metre long should be fitted to protect the surface.

5.6. Take care to ensure the combustion products do not enter ventilated roof voids.

6. Installation

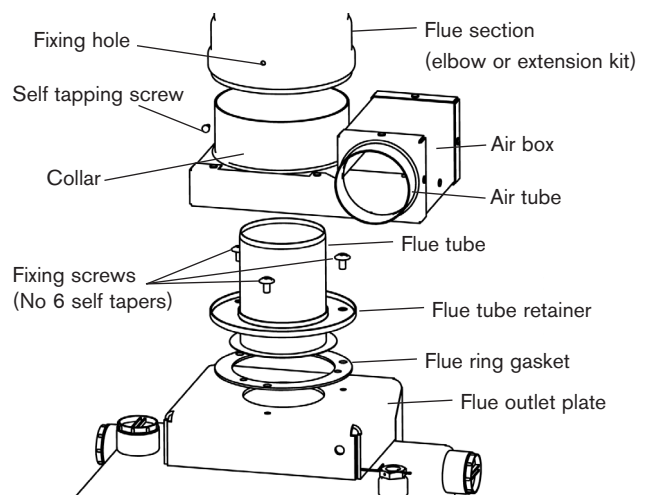


Fig. 4. Air Box Assembly

6.1. The method of installation will depend on the flue system layout, any installation restrictions and the preferred method chosen by the installer.

In all installation methods the basic assembly principle remains the same. The various flue sections push fit together until the flue hits the backstop in the previous flue. The flue/air seals are pre coated with silicon grease to allow easy assembly. Take care to avoid contaminating the grease with dirt as this will make fitting difficult!

Each flue section must be securely fastened together by drilling through the two pilot holes in each sec-

tion and screwing through with the self tapping screws provided.

Fig. 6a. Fitting of rubber sealing gasket

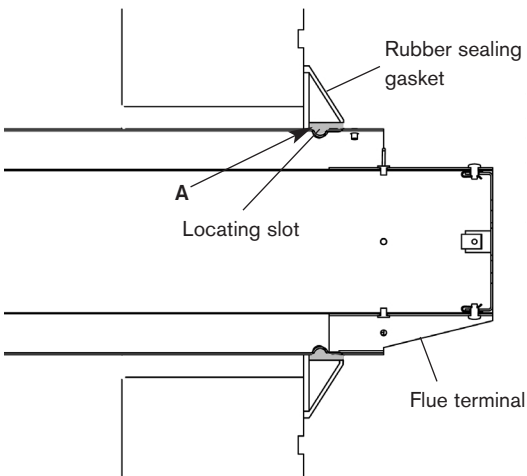
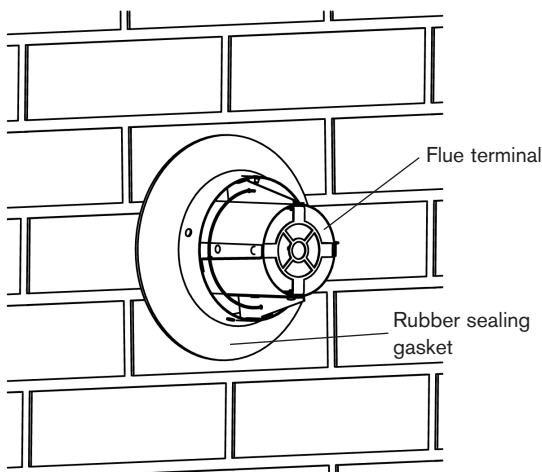


Fig. 6b. Fitting of rubber sealing gasket



6.2. The following guide explains two possible methods of assembly.

The boiler can be fixed in position and the flue fed back through the wall (**Method 1**), or the flue can be assembled onto the boiler and the boiler /flue then pushed back against the wall to feed the flue through the wall (**Method 2**). In both cases the telescopic flue must be securely fastened at the required length using the two self tapping screws provided.

Method 1.

6.3. Remove the 4 inch (103mm) conventional flue spigot and gasket from the flue outlet plate by undo-

ing the three screws.

6.4. Remove the central portion of the new flue ring gasket by cutting the connecting pieces and discard.

6.5. Position the new flue ring gasket on the flue outlet plate and clamp the flue tube in place using the flue tube retainer and screws as shown in fig 4.

6.6. When fitting an elbow directly to the air box, push the elbow fully down on the air box collar and rotate the elbow to the required position (left, rear or right) ensuring that the air tube is pointing to the front of the appliance as shown in fig 4.

6.7. Using the fixing holes as a guide, drill through with the 2.8mm drill bit provided in the kit and fasten the elbow to the air box collar using the two self tapping screws provided. Where access to a fixing hole is not possible (e.g. left and right flue options), drill a new securing hole position, at the same height, as far as possible from the other screw.

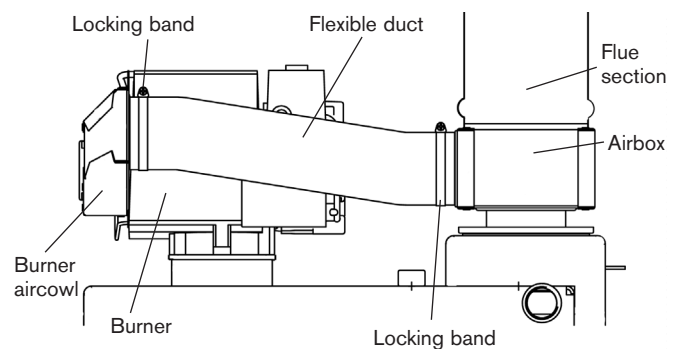


Fig. 7. Connection of the flexible air hose to the burner and air box

6.8. When fitting a vertical extension attach the extension to the air box and then attach the elbow to the extension in a similar manner to 6.6 to 6.7.

6.9. Add any further extensions/elbows in a similar manner to 6.6 to 6.8, until the last section before exiting the wall is reached.

6.10. Slide the air box/flue assembly onto the flue tube and push down until the assembly bottoms out on the flue tube. This must leave a minimum air gap of 15mm between the air box and the flue outlet plate. The nominal air gap will be 27mm when an elbow is fitted directly to the air box and 17mm when an extension is fitted.

6.11. Using the flue as a guide, mark the position of the hole required to accept the flue terminal or measure the flue centre position as shown in figs 1 and 2.

6.12. Remove the air box/flue assembly.

6.13. Cut a round hole in the wall of minimum diameter 150 mm.

6.14. Check that the telescopic flue slides freely.

Fasten together the flue terminal and any extension sections intended to pass through the wall, in a similar manner to 6.7. Do not fix the telescopic length at this stage!

6.15. Push fit the flue terminal assembly onto the last flue section of the air box/flue assembly and drill the two securing holes. Do not screw together at this stage! Consideration must be given to the position of these securing screws on the section which will be fed back through the hole in the wall. Where access to a fixing screw will not be possible when the flue is installed, drill a new securing hole position, at the same height, as far as possible from the other screw.

6.16. Remove the flue terminal assembly and push the telescopic end in to give the shortest length.

6.17. Slide the air box/flue assembly onto the boiler flue tube and push down until the assembly bottoms out on the flue tube.

6.18. Feed the flue terminal assembly back through the hole in the wall from outside the property and push fit onto the flue section within the property. Take care to prevent dirt falling onto the greased seals!

6.19. Align the fixing holes previously drilled in 6.15 and temporarily fix with one screw.

6.20. From outside the property pull the telescopic end to the required length so that the inside edge "A" (See fig 6a) of the terminal seal locating slot is flush with the outside of the wall. Take care to avoid sharp edges- wear gloves!

6.21. Place temporary packing underneath the white section of the flue terminal to support it.

6.22. Remove the fixing screw added in 6.19.

6.23. Remove the flue terminal assembly by pushing the assembly forward, from within the property, to release it from the air box/flue assembly. Take care not to alter the set length!

6.24. Fix the telescopic length. Using the fixing holes as a guide, drill through with the 2.8mm drill bit provided in the kit and fasten the terminal using the two self tapping screws provided.

6.25. Re-fit the flue terminal assembly and secure using two self tapping screws.

6.26. Continue fitting as described in 6.48.

Method 2.

Note: The sliding section of the telescopic flue terminal must be fixed using the self tapping screws provided. The length can be set by measurement as described in 6.38 to 6.45 or by pushing the whole boiler/flue assembly into position and setting the sliding terminal to the correct length. The terminal can then be fixed by pulling the whole boiler/flue assembly back far enough to drill through the pilot holes and fasten with the self tapping screws as described in 6.24. When using this method ignore 6.38, 6.41, 6.44, 6.45.

6.27. Remove the 4 inch (103mm) conventional flue spigot and gasket from the flue outlet plate by undoing the three screws.

6.28. Remove the central portion of the new flue ring gasket by cutting the connecting pieces and discard.

6.29. Position the new flue ring gasket on the flue outlet plate and clamp the flue tube in place using the flue tube retainer and screws as shown in fig 4.

6.30. When fitting an elbow directly to the air box, push the elbow fully down on the air box collar and rotate the elbow to the required position (left, rear or right) ensuring that the air tube is pointing to the front of the appliance as shown in fig 4.

6.31. Using the fixing holes as a guide, drill through with the 2.8mm drill bit provided in the kit and fasten the elbow to the air box collar using the two self tapping screws provided.

6.32. Where access to a fixing hole is not possible (e.g. left and right flue options), drill a new securing hole position, at the same height, as far as possible from the other screw.

6.33. When fitting a vertical extension attach the extension to the air box and then attach the elbow to the extension in a similar manner to 6.30 to 6.32

6.34. Add any further extensions/elbows, in a similar manner to 6.30 to 6.32, until the last section before exiting the wall is reached.

6.35. Move the boiler to the desired position.

6.36. Slide the air box/flue assembly onto the flue tube and push down until the assembly bottoms out on the flue tube. This must leave a minimum air gap of 15mm between the air box and the flue outlet plate. The nominal air gap will be 27mm when an elbow is fitted directly to the air box and 17mm when an extension is fitted.

- 6.37.** Using the flue as a guide, mark the position of the hole required to accept the flue terminal or measure the flue centre position as shown in figs 1 and 2.
- 6.38.** Measure and note the distance from the rear of the boiler to the wall for rear exit flues, or from the appliance cabinet side to the wall for left/right exit flues. This will be used to calculate the flue length "L".
- 6.39.** Pull the boiler forward to allow fitting of the flue terminal.
- 6.40.** Cut a round hole in the wall of minimum diameter 150 mm.
- 6.41.** Measure and note the wall thickness through the hole. This will be used to calculate the flue length "L".
- 6.42.** Fix any further extensions to the elbow in a similar manner to 6.30 to 6.32.
- 6.43.** Check that the telescopic flue slides freely. Push the telescopic terminal section onto the last elbow/extension and fasten in a similar manner to 6.30 to 6.32.
- 6.44.** Calculate the length "L" as shown in figs 1 & 2 in conjunction with Section 4 i.e. distance from rear of appliance to outside face of the wall, or distance from side of appliance cabinet to outside face of the wall.
- 6.45.** Slide the telescopic terminal to set the length "L" from the outside of appliance to the inside edge "A" of the terminal seal locating slot. See fig 6a.
- 6.46.** Using the fixing holes as a guide, drill through with the 2.8mm drill bit provided in the kit and fasten

the telescopic terminal section using the two self tapping screws provided.

6.47. Slide the boiler back into position carefully feeding the flue terminal through the hole in the wall.

6.48. Where vertical flue sections have been fitted raise the air box/flue assembly by 3mm per 1 metre flue extension, to allow for the flue tube expansion, and fix the assembly in place. the wall bracket is provided in the 1 metre extension kit.

6.49. To prevent rain running back into the terminal, it is recommended that the terminal exit slopes down by a few degrees. This can be achieved by holding the terminal strip down at the external end and placing packaging material between the topside of the terminal and the wall, inside the hole. Check the slope using the spirit level.

6.50. Make good the internal and external brickwork or rendering.

6.51. Push the rubber sealing gasket over the terminal. The locating rib of the rubber seal fits into the locating slot of the flue terminal as shown in Fig. 6a and 6b.

6.52. Undo the locking band on the burner air cowl and remove the air inlet silencer tube.

6.53. Fix the flexible duct between the burner and air box using the two locking bands provided within the kit. Tighten sufficiently to form a good seal. See Fig. 7. Note: If the flue assembly is taken apart after the appliance has been running the 80mm flue tube seals within the flue tubes should be replaced.

7. Accessory/spare parts List

Short RS flue kit	7 716 190 027
Standard RS flue kit	7 716 190 023
Long RS flue kit	7 716 190 024
RS 500mm Extension Flue Kit	7 716 190 025
RS 1000mm Extension Flue Kit	7 716 190 026
RS 90° Elbow Flue Kit	7 716 190 028
RS 45° Elbow Flue Kit	7 716 190 029
Wall Bracket Front Service Flue Kit	7 716 190 030
Seal flue tube 80mm	8 716 105 588 0
Seal air tube 125mm	8 716 105 590 0
Seal 80mm Air box	8 716 106 145 0
Flue ring gasket	8 716 142 226 0



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