

24CDi RSF and 28CDi RSF

WALL MOUNTED COMBINATION APPLIANCE FOR CENTRAL
HEATING AND MAINS FED DOMESTIC HOT WATER

INSTALLATION INSTRUCTIONS FOR THE OPTIONAL VERTICAL BALANCED FLUE SYSTEM

IMPORTANT: THIS BOOKLET MUST BE READ IN CONJUNCTION WITH THE
APPLIANCE INSTALLATION AND SERVICING INSTRUCTIONS

IMPORTANT: THESE INSTRUCTIONS APPLY IN THE U.K. ONLY

THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER OR AT THE GAS METER

1. Flue Terminal Position

The Vertical Balanced Flue System must be installed in accordance with BS 5440: Pt 1 1990 where applicable.

The flue terminal must be positioned such that the products of combustion can disperse freely at all times.

When installed the minimum clearance between the terminal and any adjoining vertical walls or obstructions must be at least 500mm.

The terminal must not be installed within 600mm (24in.) of an openable window, air vent or any other ventilation opening.

If the flue is required to be taken through a wall next to the appliance adequate space must be allowed for the flue bend to be fitted.

When the flue is taken through the ceiling and into the roof space, or room above there must be a minimum air gap of 25mm (1in.) between any part of the flue system and any combustion material.

Note: It is absolutely essential to ensure, that in practice, products of combustion discharging from the flue terminal cannot re-enter the building or any other adjacent building through ventilators, windows, doors, other sources of natural air infiltration, or forced ventilation/air conditioning. If this eventuality should occur, the appliance **MUST** be turned off immediately and the local Gas Region called in to investigate.

The Vertical Balanced Flue System must be supported by the support brackets such that the weight of the flue system is not resting on the appliance flue location position.

The Vertical Balanced Flue System is suitable for installation in dwellings with pitched or flat roofs.

Before installation, the roof must be inspected and the following noted:

- i) the angle of roof pitch, or
- ii) the type of flat roof.

Note: The minimum distance the Flue Terminal Assembly shall extend above the surface of the roof is 300mm. This dimension is measured from the outside surface of a flat roof or the highest point on a pitched roof to the underside of the air inlet flange on the terminal assembly. See Figs. 2, 6, 8, 9, 10 and 13.

2. Vertical Balanced Flue Options

See Figs. 1 and 2.

Note: All Vertical Balanced Flue items referred to in this section are supplied as optional extras and must be available before the installation is commenced. When ordering the system the items and part numbers shown in Fig. 1 must be quoted.

2.1. NOMINAL FLUE HEIGHT (NO OFFSET).

To determine the flue height required, measure the height from the top of the appliance cabinet to the underside position where the flue terminal will be fixed.

This must not exceed 4000mm (24CDi) or 3500mm (28CDi) and must not be less than 100mm. See Fig. 2 – Frame 1.

Before finalising the height of the flue refer to Fig. 2 – Frame 1.

2.2. FLUE WITH OFFSET USING TWO FLUE BENDS.

To provide an offset in the flue, two flue bends may be used, either two 45° bends or two 90° bends.

The flue system may be any length providing the total of the straight lengths does not exceed 2000mm. See Fig. 2. Frames 2 and 3.

When measuring between the centre lines of the flue ducts allow 83mm for each flue bend. See Fig. 2.

2.3. FLUE HEIGHT FROM 100 TO 500mm.

For installations that require a short section of vertical height (up to a maximum of 500mm above the top of the appliance casing) an air and flue duct each 500mm long is supplied with the Vertical Balanced Flue Terminal Assembly. See Fig. 1.

IMPORTANT: The flue terminal assembly must always be vertical at the roof outlet.

3. Installation of the Flue System

3.1. IMPORTANT. The Vertical Balanced Flue System is an optional extra and must be ordered separately after surveying the site and appliance installation.

Refer to the appliance Installation and Servicing Instructions and Fig. 2 of these instructions to determine the height of the flue system and whether a flue offset is required.

From this information it must be decided how many flue extension pieces are required. If a flue offset is fitted two flue bends are required.

The appliance must be positioned so that the flue system will clear ceiling and roof joists and any other building obstructions.

The flue may be offset (using two flue bends) to clear any obstruction. When using an offset the overall length of the flue is reduced. Refer to Section 2.2 and Fig. 2 – Frames 2 and 3 for further information.

Note: The vertical section or sections of the flue system and the terminal assembly must remain vertical.

The flue must be installed as specified in BS 5440 Pt 1 where applicable.

The appliance is supplied suitable for fitting to a sealed system. If it is to be fitted to an open vent system refer to the Installation and Servicing Instructions.

3.2. GENERAL FITTING.

Refer to the appliance Installation and Servicing Instructions and mark the wall with the vertical centre line and floor with the base outline of the appliance.

Important: The restrictor ring supplied with the appliance must not be used for flue lengths over 1000mm.

Ensure the flue system will clear ceiling and roof joists and any other building obstructions.

Drill the six mounting plate holes 60mm deep for the No. 12 plugs supplied. Plug the holes.

Fix the appliance mounting plate and manifold assembly to the wall. Check that the assembly is horizontal before tightening the screws.

Continue following the appliance Installation and Servicing Instructions and thoroughly flush the central heating system and the mains cold water supply pipe.

3.3. MOUNTING THE APPLIANCE.

Continue following the appliance Installation and Servicing Instructions and fix the appliance to the mounting plate and manifold assembly.

Note: Disregard references to Internal Flue Fitting Kit.

3.4. GENERAL NOTES. See Figs. 1, 2, 3 and 4.

Check the contents of the extension flue kit (or kits) and flue terminal assembly. Remove all the packing from the ducts, flue terminal assembly and flue bends.

WARNING: The air duct, flue duct, flue bends and flue terminal assembly are manufactured from aluminium and must be handled appropriately.

Measure and cut the air and flue ducts to length. Ensure the cuts are square and free from burrs. Always check the dimensions before cutting the duct.

Do not cut the expanded end of the ducts unless specifically instructed to do so.

The expanded end of the air or flue ducts must always face upwards.

The final section of air and flue duct that connects to the terminal must be a plain section without expanded ends. See Figs. 3, 12 and 14.

For Flue Options 1 and 2 (See Fig. 2 – Frames 1 and 2) a flue adaptor must be fitted into the spigot on top of the appliance casing.

Fix the flue adaptor in position with the clamping screw and ensure that it is correctly located against the stop.

When sealing this joint refer to Fig. 4.

If a flue bend is to be fitted directly to the top of the appliance the flue adaptor is not required. See Fig. 2 – Frame 3.

Measure the length of the air and flue ducts from the end that will be fixed into the flue bend or flue adaptor. See Figs. 3 and 4.

Before cutting the air or flue ducts, ensure the final expanded section is at least 100mm clear of the flue terminal assembly or flue bends. If it is not, reduce the length of the adjacent air or flue duct, by cutting off from the undrilled end the amount necessary to give the minimum clearance. See Fig. 3. Care must be taken to seal all the flue joints where indicated. See Figs. 3, 4, 11, 12 and 14. If the flue assembly is longer than 2000mm it must be adequately supported using the wall band.

Note: The minimum distance the balanced flue terminal shall extend above the surface of the roof is 300mm. This distance may vary depending on the type of roof and surrounding structure. For these instructions the distance will be referred to as F. See Figs. 2, 6, 8, 9, 10 and 13.

The roof flashing is not supplied. This is available, (as a proprietary item “Selkirk” or similar) from local building suppliers to suit a flue size of 125mm (5in.) diameter and to suit pitched or flat roof installations.

3.5. FITTING THE FLUE SYSTEM (NO OFFSET)

Refer to Section 2.1 and Fig. 2 – Frame 1.

Note: It may be necessary to deviate from the following method of installing the flue system because of site conditions. Joints must be sealed and fixed where applicable.

The length of the air duct must not be less than 100mm and not exceed 4000mm (24CDi) or 3500mm (28CDi). Refer to Section 3.4 – General Notes.

Using a plumb line or spirit level, align the centre of the flue spigot with the ceiling and mark the centre position. See Fig. 5.

Cut a hole 175mm (7in.) diameter in the ceiling.

Working within the roof space and using the plumb line or spirit level, align the centre of the flue spigot and mark the centre position of the flue on the inside surface of the roof. See Fig. 5.

Using the centre position mark a 125mm (5in.) diameter circle on the inside surface to represent the outside diameter of the air duct.

This procedure is the same whether pitched or flat roofs.

Measure the distance from the top of the flue spigot to the outside edge of the hole diameter marked on the inside surface of the roof. This is dimension E – See Fig. 6.

Note: For a pitched roof, dimension E must be to the highest point of the hole diameter. See Fig. 6.

LENGTH OF AIR AND FLUE DUCTS.

See Fig. 6.

Dimension G	=	(1100 – F)	mm
Dimension H	=	(E – G)	mm
Length of Air Duct	=	H	mm
Length of Flue Duct	=	H + 25	mm
Maximum Air Duct length	=	4000	mm (24CDi)
		or 3500	mm (28CDi)
Minimum Air Duct length	=	100	mm

POSITION THE FIRE STOP SPACER.

See Figs. 1 and 7.

Fit the fire stop spacer centrally over the hole in the ceiling. Ensure the hole aligns with the flue spigot on top of the appliance casing. Mark at least three fixing hole positions for No.10 x 30mm wood screws (not supplied) fix either into the existing joists or into reinforcement nogs, which may be fixed to the joists. See Fig. 7. Alternatively, the plate may be fixed to the ceiling using plasterboard toggle screws. A minimum of four fixing positions is recommended.

POSITION THE SUPPORT BRACKET (Flue Duct).

See Figs. 1 and 7.

From inside the roof space fit the support bracket (flue duct) centrally over the hole in the ceiling. Ensure the hole aligns with the fire stop spacer and flue spigot on top of the appliance casing.

Mark and fix into position as previously described for the fire stop spacer.

Remove the fire stop spacer and support bracket (flue duct).

ASSEMBLE THE AIR DUCTS.

Continue the installation by following the procedure as described in Section 3.4 – General Notes and the following instructions.

If necessary, reassemble and check the air duct length and cut to size. Drill two holes through the holes in the expanded end of each air duct with the drill provided. Disengage each air duct and apply a smear of silicone sealant around the air duct to seal the joint. See Fig. 3. Reassemble and fix the air ducts together with the screws provided.

ASSEMBLE THE FLUE DUCTS.

Follow the procedure for measuring, cutting, sealing and fixing, as described in Section 3.4 – General Notes and the reassembly of the air ducts as detailed in the previous paragraph.

Note: If the extension is longer than 1500mm, a flue spacer must be fitted before the ducts are finally assembled. The flue spacer must be fitted half-way along the flue duct for effective support. See Fig. 3.

Assemble the flue duct into the air duct.

PREPARE THE ROOF.

Remove sufficient roof tiles, or if a flat roof, cut a hole approximately 175mm (7in) diameter for the flue terminal assembly.

FIX THE FLUE DUCT ASSEMBLY TO THE APPLIANCE.

Fit the fire stop spacer loosely to the air duct. From inside the building, pass the flue duct assembly through the hole in the ceiling. Align the flue assembly with the flue adaptor fitted on top of the appliance casing. Apply sealant to the inside of the air duct and outside the flue duct. Drill two holes through the air duct and flue adaptor and fix with the screws provided. See Figs. 3 and 4. The flue duct does not require fixing with screws.

Fix the fire stop spacer to the ceiling using the locations already prepared. See Fig. 7.

Fix the support bracket (flue duct) to the ceiling joists using the locations already prepared. See Figs. 1 and 7.

Before proceeding any further it is advised to check the position of the air and flue ducts.

CHECK DIMENSION G.

Measure the distance from the top of the air duct to the underside edge of the roof where the flue assembly will pass through. See Fig. 6.

Note: The flue duct will extend nominally 25mm above the air duct. See Fig. 3.

FIX THE VERTICAL BALANCED FLUE TERMINAL ASSEMBLY.

Fit the roof flashing loosely to the roof.

From outside, pass the terminal assembly through the roof flashing. See Figs. 8 or 9.

From inside the roof space align the assembly with the air and flue ducts. If required, loosely fit the support bracket (flue terminal). Ensure the assembly is located correctly. See Figs. 8 or 9.

Drill two holes through the holes in the air duct. Disengage the assembly and apply a smear of silicone sealant to the outside of the air duct.

Re-engage the assembly and fix with the screws provided.

Note: Sealant and fixing screws are not required for the flue duct. See Figs. 3, 8 or 9.

Tighten the support bracket (flue terminal).

SEAL THE FLUE TERMINAL ASSEMBLY TO THE ROOF.

From outside the building make good the roof structure and (if necessary) replace the roof tiles. Ensure the roof is weather sealed by fixing roof flashing.

Apply sealant around the air duct at the top of the roof flashing. Lower the weather sealing collar over the roof flashing and tighten the clamping screw. Finally apply sealant around the top edge of the weather sealing collar. See Figs. 8 or 9.

3.6. FITTING THE FLUE SYSTEM WITH AN OFFSET AND VERTICAL SECTION DIRECTLY OFF THE TOP OF THE APPLIANCE.

Refer to Section 2 – Fig. 2 - Frame 2.

Note: The three flue lengths when added together must not exceed 2000mm maximum.

Continue the installation by referring to Section 3.4 – General Notes and Section 3.5. Use a plumb line or spirit level to align the centres of the flue system. See Fig. 5.

AIR AND FLUE DUCT LENGTHS.

First Vertical Section.

Measure the distance from the top of the flue spigot to the centre line of the offset section of the horizontal duct. This is dimension J. See Fig. 10.

$$\begin{aligned}\text{Air duct length} &= J - 83\text{mm} \\ \text{Flue duct length} &= J - 76\text{mm}\end{aligned}$$

Note: The air duct length must not be less than 100mm.

Offset Section.

Measure the distance from the centre of the flue spigot on top of the appliance casing to the centre line of the offset section. This is dimension D mm. See Fig. 10.

$$\begin{aligned}\text{Air duct length} &= D - 166\text{mm} \\ \text{Flue duct length} &= D - 152\text{mm}\end{aligned}$$

Note: Dimension D must not be less than 210mm.

Second Vertical Section.

Measure the distance from the centre line of the offset section to the outside edge of the hole diameter marked on the inside surface of the roof. Dimension K mm. See Fig. 10.

Note: For a pitched roof dimension K must be to the highest point of the hole diameter. See Fig. 10.

$$\begin{aligned}\text{Dimension G} &= 1100 - F \text{ mm} \\ \text{Dimension L} &= K - G \text{ mm} \\ \text{Length of Air Duct} &= L - 83 \text{ mm} \\ \text{Length of Flue Duct} &= L - 50 \text{ mm}\end{aligned}$$

Note: The air duct length must not be less than 100mm and (when the three lengths are added together) must not exceed 2000mm.

POSITION THE FIRE STOP SPACER.

See Figs. 2 and 7.

Continue the installation by following the procedure as described in Section 3.5.

POSITION THE SUPPORT BRACKET (FLUE DUCT).

See Figs. 2 and 7.

Continue the installation by following the procedure as described in Section 3.5.

ASSEMBLE THE AIR AND FLUE DUCTS.

Continue the installation by following the procedures as described in Section 3.4 – General Notes and Section 3.5 following paragraphs: "ASSEMBLE THE AIR DUCT" and "PREPARE THE ROOF".

FIX THE FIRST VERTICAL SECTION (a) OF FLUE ASSEMBLY.

Continue the installation by following the instructions in Section 3.5 paragraph: "FIX THE FLUE DUCT ASSEMBLY TO THE APPLIANCE". See Figs. 3, 4 and 7.

ASSEMBLE THE OFFSET SECTION (b) OF FLUE DUCT.

Fit the horizontal flue duct into the first flue bend, ensure it is located correctly against the stop. Drill two holes through the holes in the flue bend into the flue duct. See Figs. 11 and 12.

Fit the air duct over the outside of the flue bend, ensure it is located correctly against the stop. Drill two holes through the air duct and flue bend. Apply a smear of silicone sealant around the outside of the flue duct and the inside of the air duct. See Figs. 11 and 12.

Fit the flue duct into the flue bend and fix with the screws provided.

Fit the air duct over the flue bend and fix with the screws provided. See Figs. 11 and 12.

Fit the second flue bend into the other end of the air and flue ducts ensure it is correctly located against the stop and is facing 180° in the opposite direction. Drill two holes through the air duct and flue bend. See Fig. 11.

Apply a smear of silicone sealant around the outside of the flue duct and inside of the air duct. See Figs. 11 and 12.

Fix the flue bend to the air duct with the screws provided.

Note: The flue duct does not require fixing screws at this end. Ensure the flue bend is correctly aligned. See Figs. 11 and 12.

FIX THE OFFSET SECTION (b) TO THE FIRST VERTICAL SECTION (a) OF FLUE DUCT.

Fit one of the flue bends into the vertical section of flue duct. Ensure it is located correctly against the stop and the second flue bend is aligned with the centre line position of the flue terminal assembly.

Note: The offset section of flue duct must be horizontal. See Figs. 11 and 12.

Drill two holes through the air duct and flue bend with the drill provided. Apply a smear of silicone sealant around the outside of the flue duct and inside of the air duct. Fix the offset section to the first vertical section of flue duct with the screws provided.

Note: The offset section must be adequately supported while installing the remainder of the flue system. See Figs. 11 and 12.

FIX THE SECOND VERTICAL SECTION (c) OF THE FLUE ASSEMBLY.

From inside the building, align the support bracket (flue terminal) with the second section of vertical flue duct. See Figs. 1, 8 or 9.

Pass the flue duct assembly into the roof space or through the hole in the ceiling, if applicable. Align the flue duct assembly with the second flue elbow and ensure it is located correctly against the stop. Apply sealant and fix as described for the offset section.

Note: The second section of vertical flue duct must be supported temporarily before the flue terminal assembly is fitted.

Continue the installation by following the instructions in Section 3.5: "FIX THE FLUE TERMINAL ASSEMBLY" and "SEAL THE FLUE TERMINAL ASSEMBLY TO THE ROOF."

3.7. FITTING THE FLUE SYSTEM WITH AN OFFSET AND VERTICAL SECTION DIRECTLY OFF THE TOP OF THE APPLIANCE.

Refer to Section 2 – Fig. 2 - Frame 3.

Note: The two flue lengths when added together must not exceed 2000mm maximum. Refer to Section 3.4 – General Notes and Section 3.5.

Use a plumb line or spirit level to align the centres of the flue system. See Fig. 5.

AIR AND FLUE DUCT LENGTHS.

Offset Section

Measure the distance from the centre of the flue spigot to the centre-line of the offset section. This is dimension D mm. See Fig. 13.

$$\begin{aligned}\text{Air duct length} &= D - 166\text{mm} \\ \text{Flue duct length} &= D - 152\text{mm}\end{aligned}$$

Note: Dimension D mm must not be less than 210mm.

Vertical Section.

Measure the distance from the top of the flue spigot to the outside edge of the hole diameter marked on the inside surface of the roof. This is dimension E mm. See Fig. 13.

Note: For a pitched roof dimension E must be to the highest point of the hole diameter. See Fig. 13.

Dimension G	=	1100	-	Fmm
Dimension J	=	E	-	Gmm
Length of Air Duct	=	J	-	166mm
Length of Flue Duct	=	J	-	177mm

Note: The air duct length must not be less than 100mm and (when the two lengths are added together) must not exceed 2000mm.

POSITION THE FIRE STOP SPACER.

See Figs. 2 and 7.

Continue the installation by following the procedure as described in Section 3.5.

POSITION THE SUPPORT BRACKET (FLUE DUCT).

See Figs. 2 and 7.

Continue the installation by following the procedure as described in Section 3.4.

ASSEMBLE THE AIR AND FLUE DUCTS.

Continue the installation by following the procedures as described in Section 3.4 – General Notes and Section 3.5 following paragraphs “ASSEMBLE THE AIR DUCT” and “PREPARE THE ROOF”.

Continue the installation by following the procedure as described in Section 3.6 paragraph “ASSEMBLE THE OFFSET SECTION OF FLUE”. See Figs. 11 and 14.

FIX THE OFFSET SECTION (b) OF FLUE DUCT TO THE SPIGOT ON TOP OF THE APPLIANCE CASING.

Fit one of the flue bends into the spigot on top of the appliance casing. Ensure it is located correctly against the stop and the second flue bend is aligned with the centre line position of the flue terminal assembly.

Note: The offset section of flue duct must be horizontal. See Fig. 14.

Fix in position with the clamping screw.

When sealing this joint refer to Fig. 14.

Note: The offset section must be horizontal and temporarily supported while installing the vertical section.

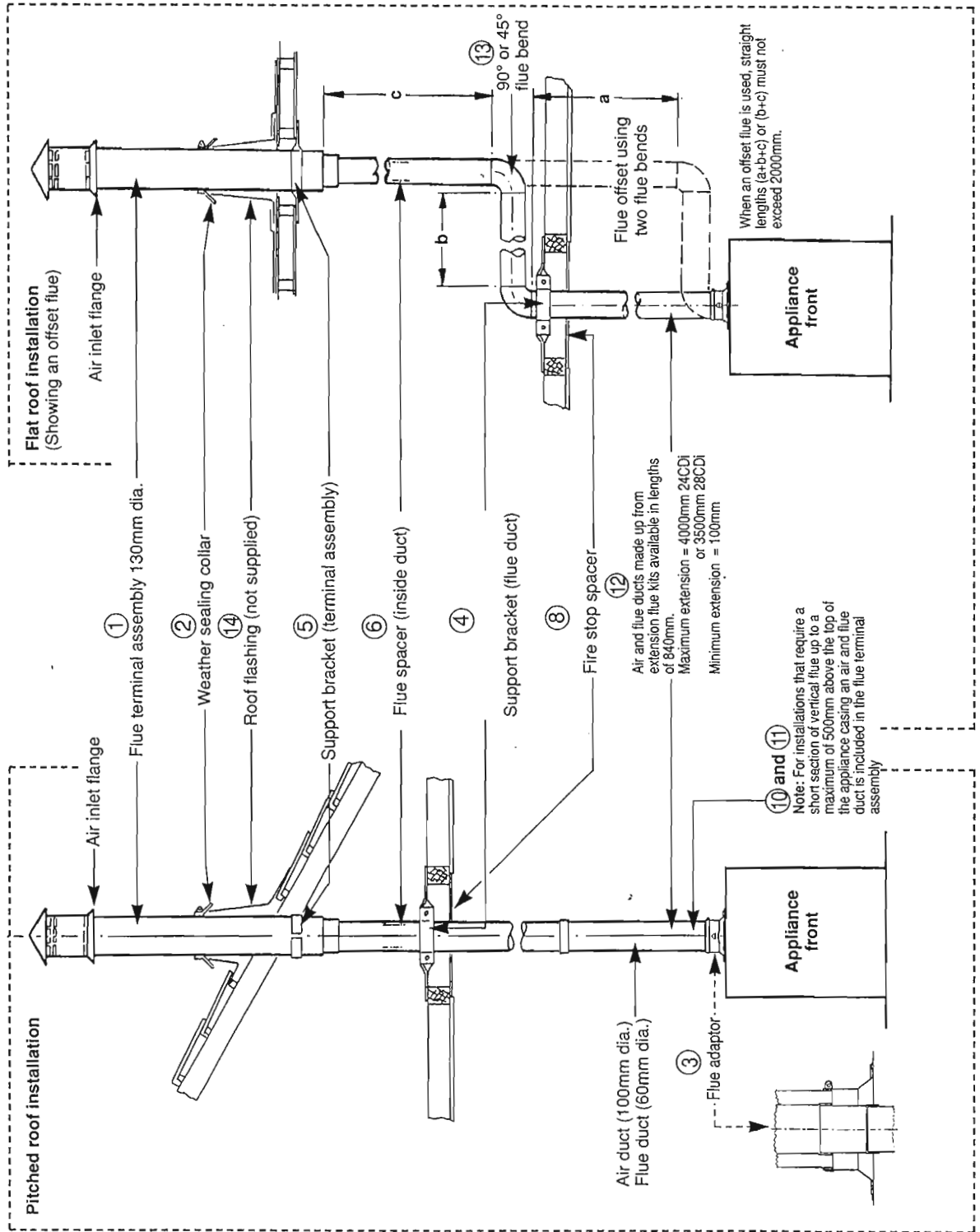
FIX THE VERTICAL FLUE ASSEMBLY (c).

From inside the building, pass the flue duct assembly through the hole in the ceiling. Continue the installation by following the instructions in Section 3.5 and fit the fire stop spacer and support bracket (flue duct).

Align the air duct with the second flue bend and ensure it is located correctly against the stop.

Continue the installation by following the instructions in Section 3.5: paragraphs “FIX THE FLUE TERMINAL ASSEMBLY” and “SEAL THE FLUE TERMINAL ASSEMBLY TO THE ROOF”.

Fig. 1. General Assembly.



Key No.	Item	Quantity	Part Number
1	Flue Terminal Assembly (complete) Included in the package with the complete flue terminal assembly will be the following components	1	7716 191 011
2	Weather Sealing Collar	1	SMP6789/2
3	Flue Adaptor	1	7716 191 012
4	Support Bracket (Flue Duct)	2	SMP6788/2
5	Support Bracket (Terminal Assembly)	2	SMP6759/2
6	Flue Spacer	2	ZGCLP054
8	Fire Stop Spacer	1	SMP6786/3
9	Silicone Sealant	1	ZIADH007
10	Air Duct - 500mm long	1	ZBUNC203
11	Flue Duct - 500mm long	1	8716 120 316
The following items MUST be ordered separately to suit the installation flue length requirements			
12	Extension Flue Kit (840mm long)	As req'd	7716 191 010
13	90° Flue Bend	2	7716 191 013
13	45° Flue Bend	1 pkt	7716 191 014
	Air Duct Support Bracket Kit	1	ZAGAS180
The following item is NOT supplied			
14	Roof Flashing (see following note)	1	-

The roof flashing is not supplied. This is available (as a proprietary item 'Selkirk' or similar) from local building suppliers to suit a flue size of 125mm (5in.) diameter and to suit pitched or flat roof installations.

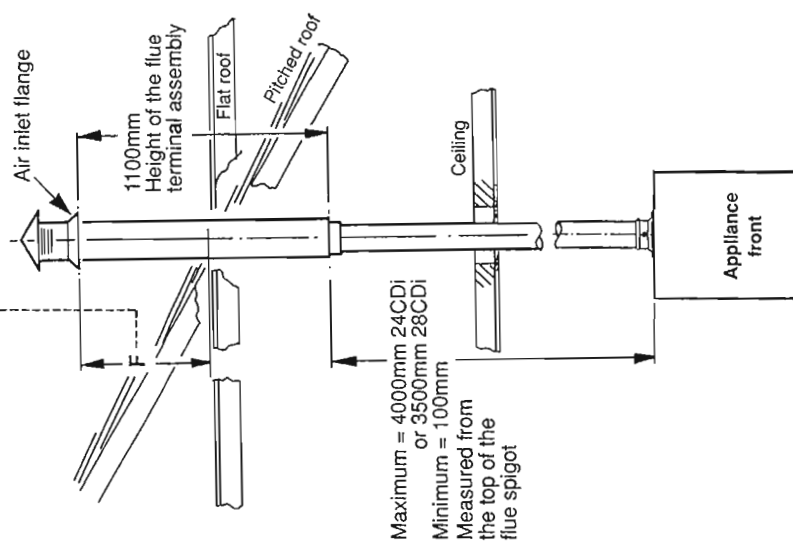
Fig. 2. Flue options.

FRAME 1

Vertical Flue System (No Offset)

IMPORTANT

The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.

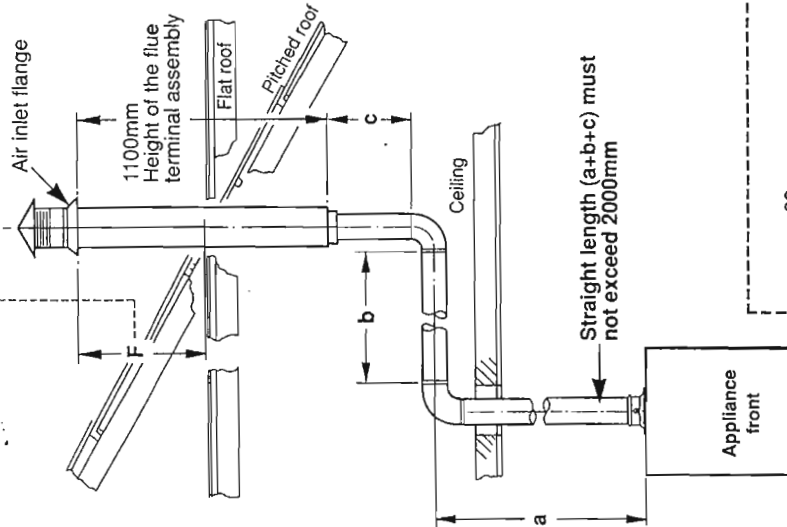


FRAME 2

Vertical Flue System (Offset with straight length at appliance)

IMPORTANT

The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.



FRAME 3

Vertical Flue System (Offset with 90° bend at appliance)

IMPORTANT

The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.

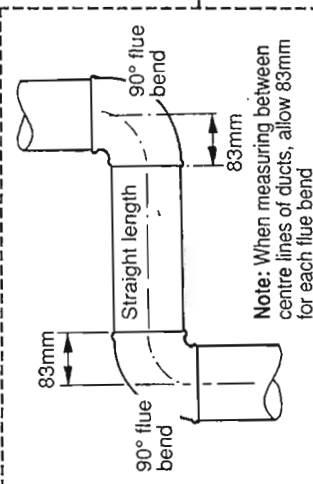
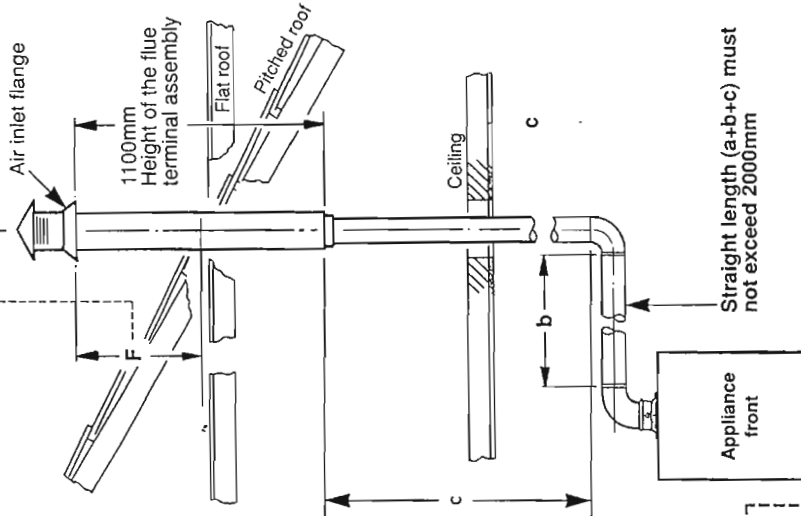


Fig. 3. Typical duct assembly.

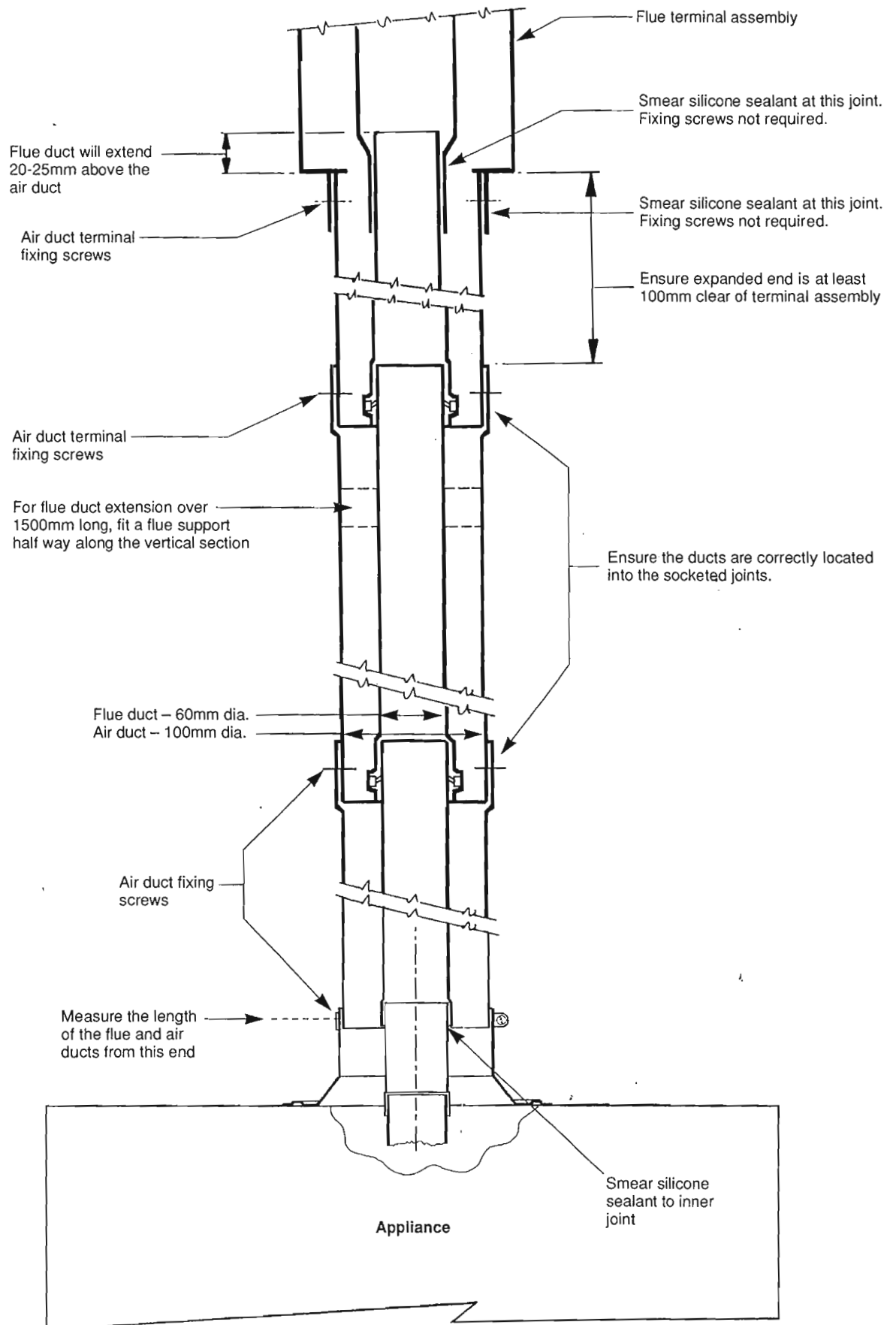


Fig. 4. Fixing the flue adaptor into the appliance spigot.

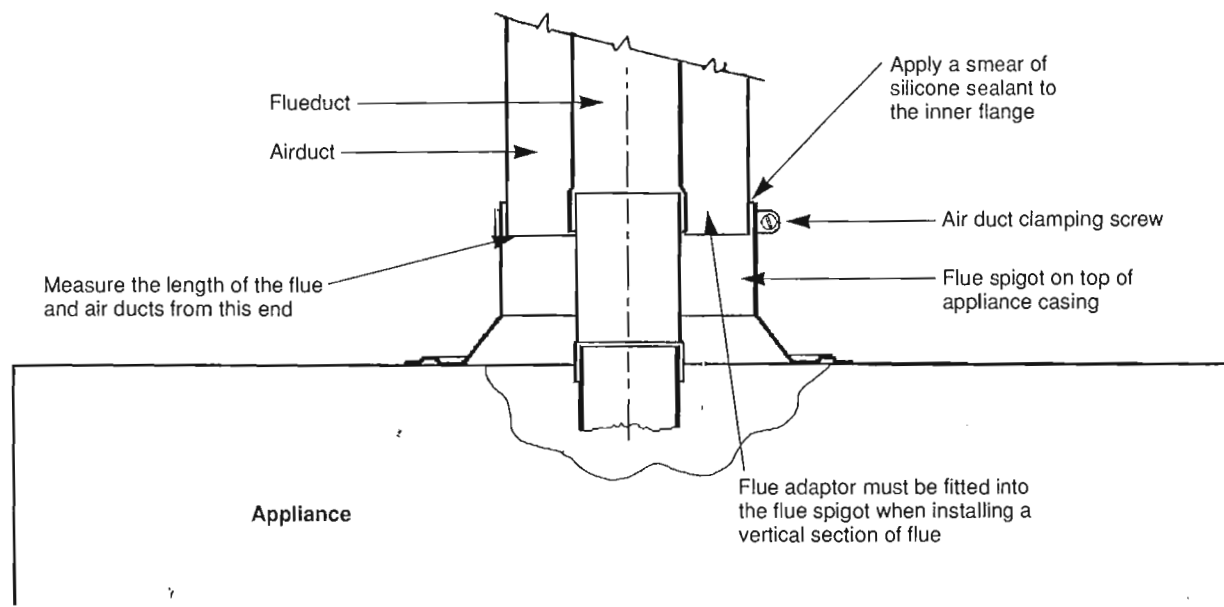


Fig. 5. Marking out the flue assembly position.

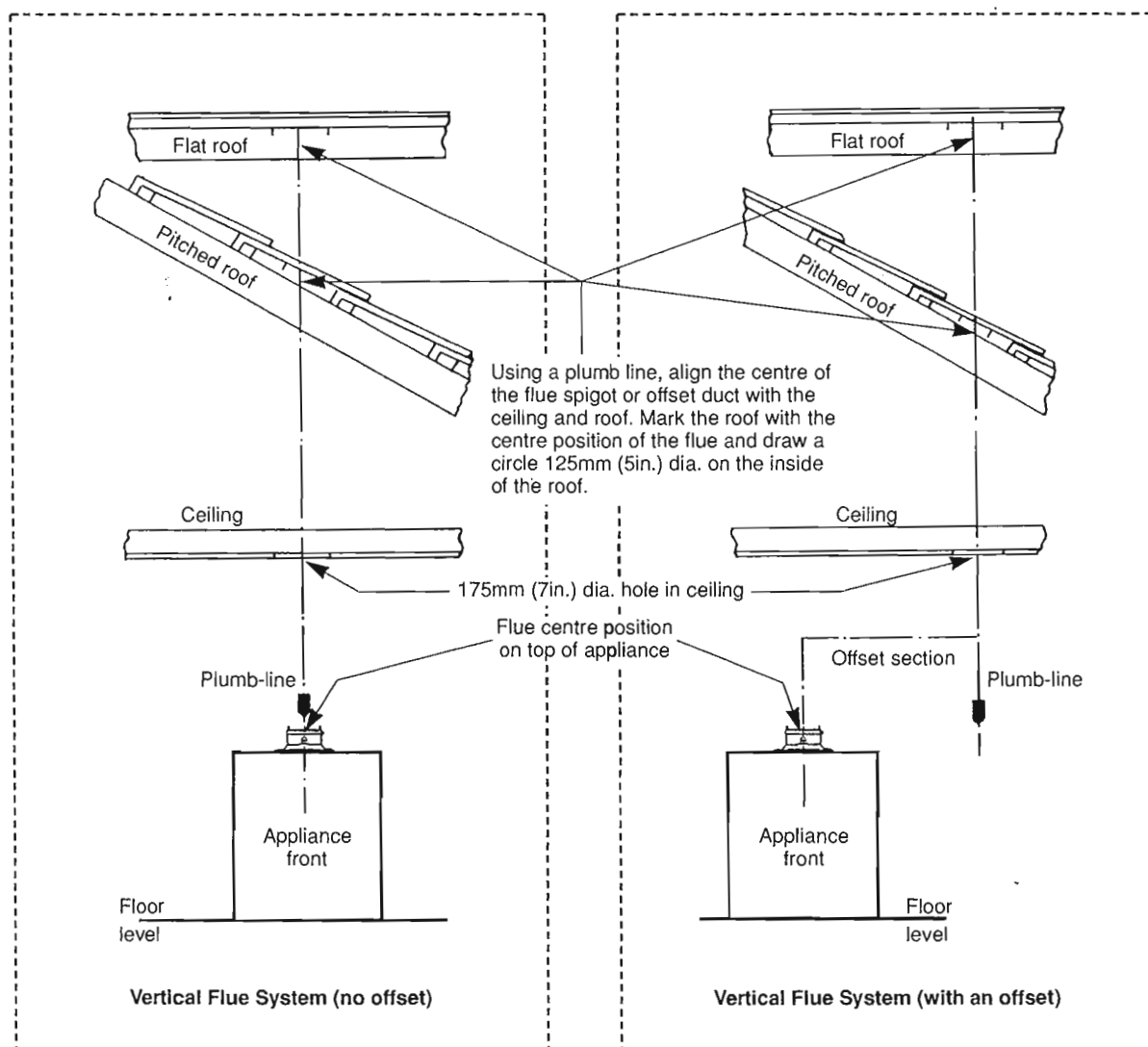


Fig. 6. Calculating duct cutting lengths for flue assemblies without offset.

IMPORTANT: The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.

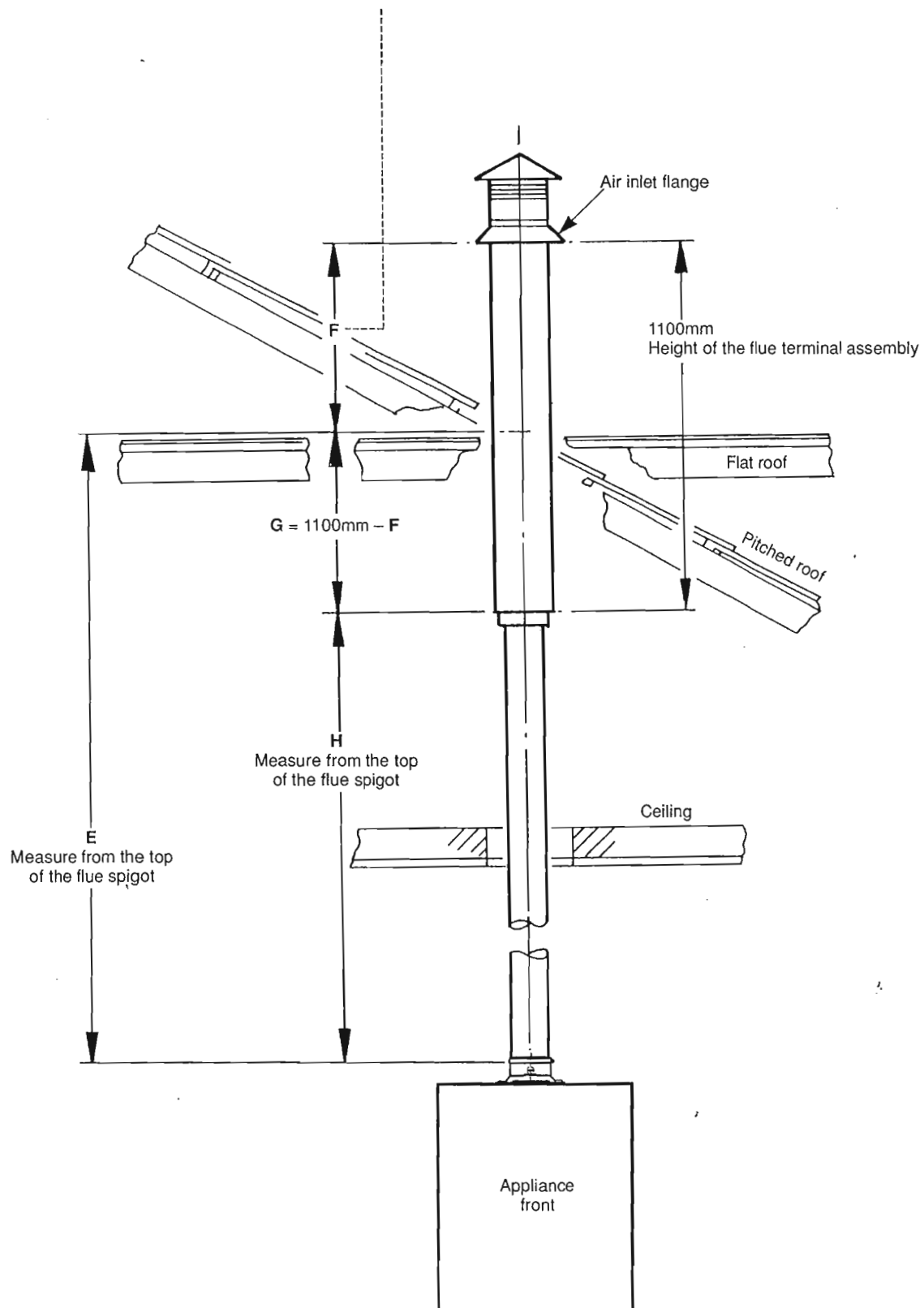
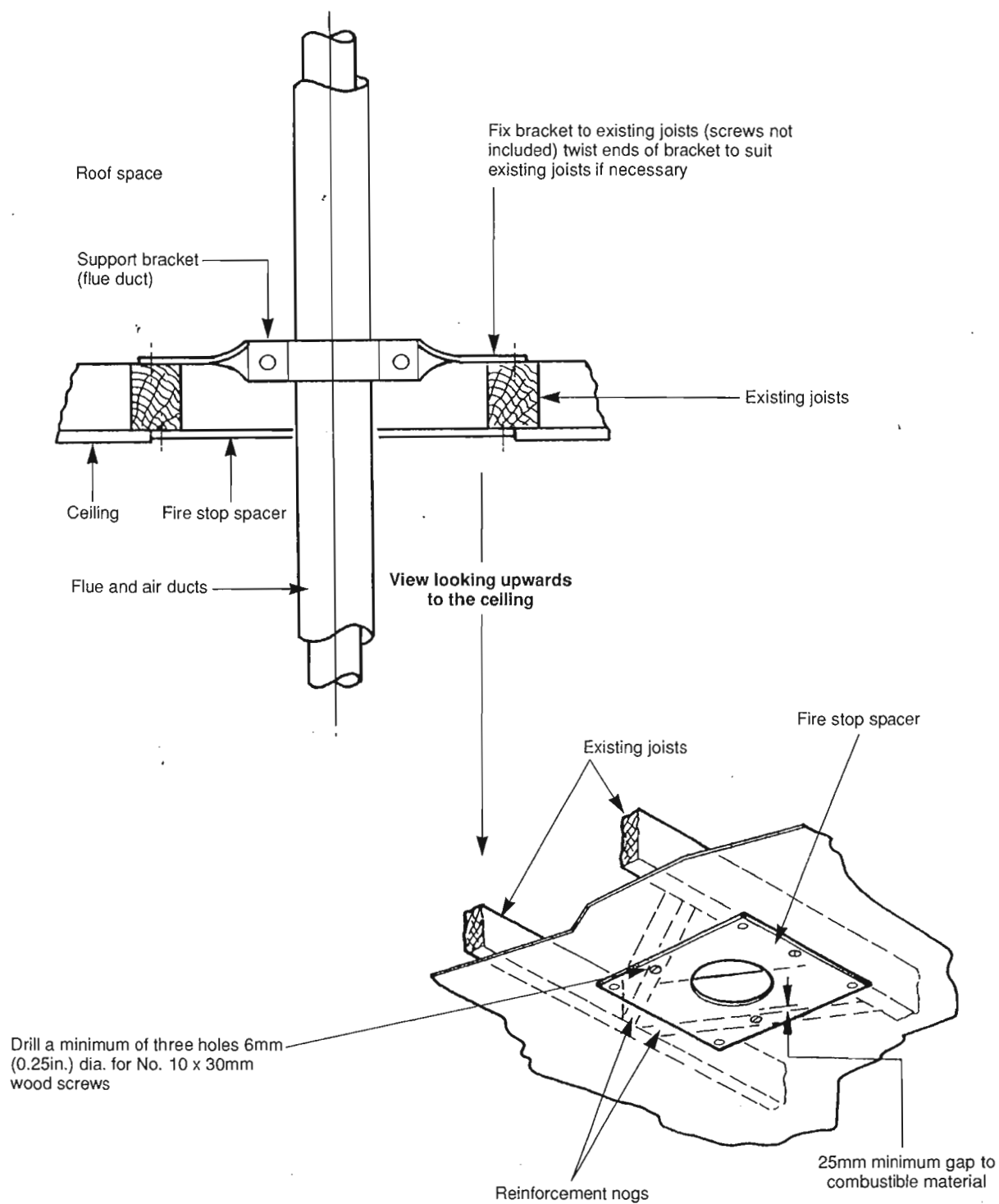


Fig. 7. Fixing the fire stop spacer and support bracket (flue duct) to the ceiling.



Note: The small hole at each corner of the plate is for temporary fixing prior to marking off and drilling

Fig. 8. Fixing the flue terminal assembly to a pitched roof.

IMPORTANT: The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.

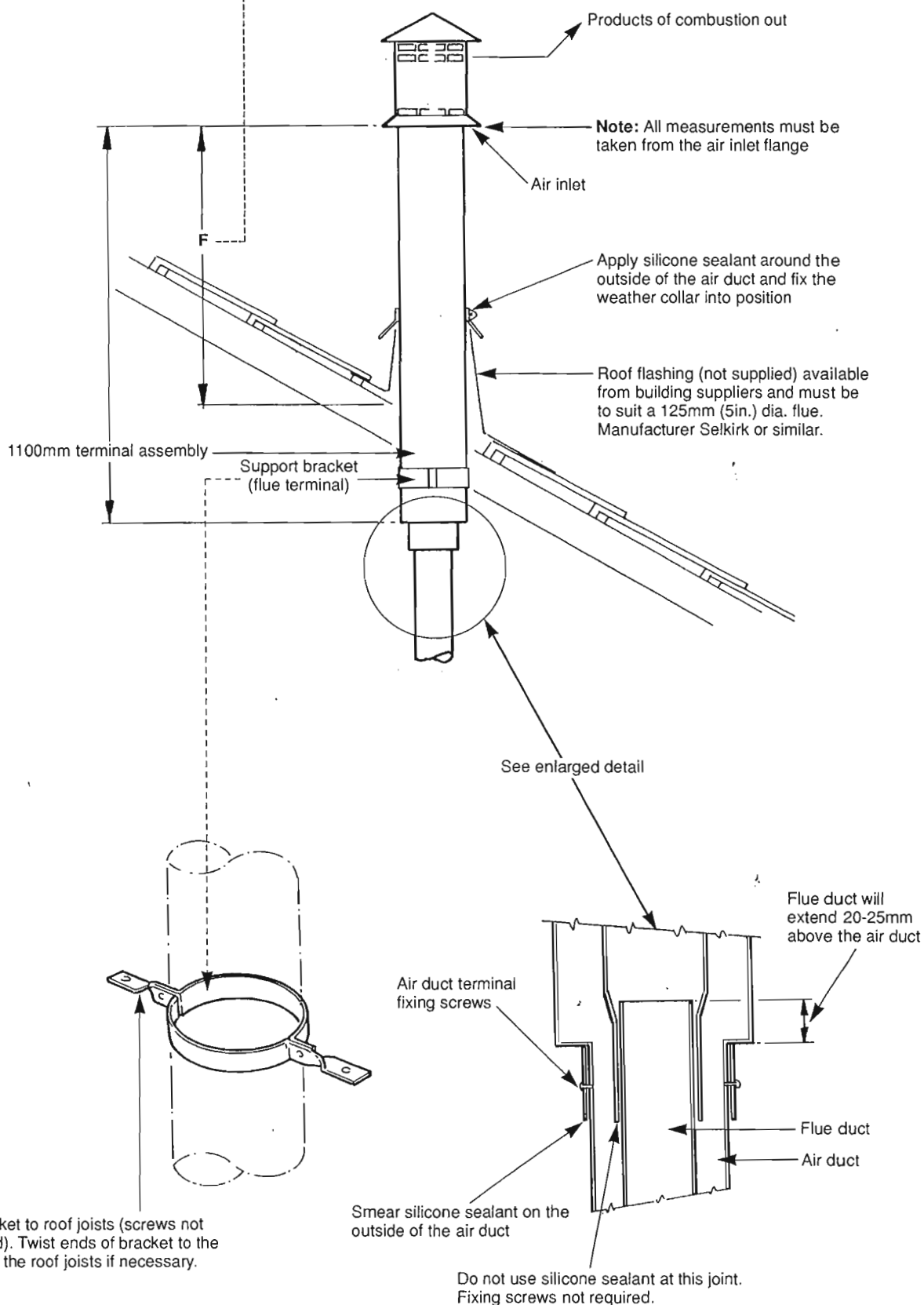


Fig. 9. Fixing the flue terminal assembly to a flat roof.

IMPORTANT: The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension F.

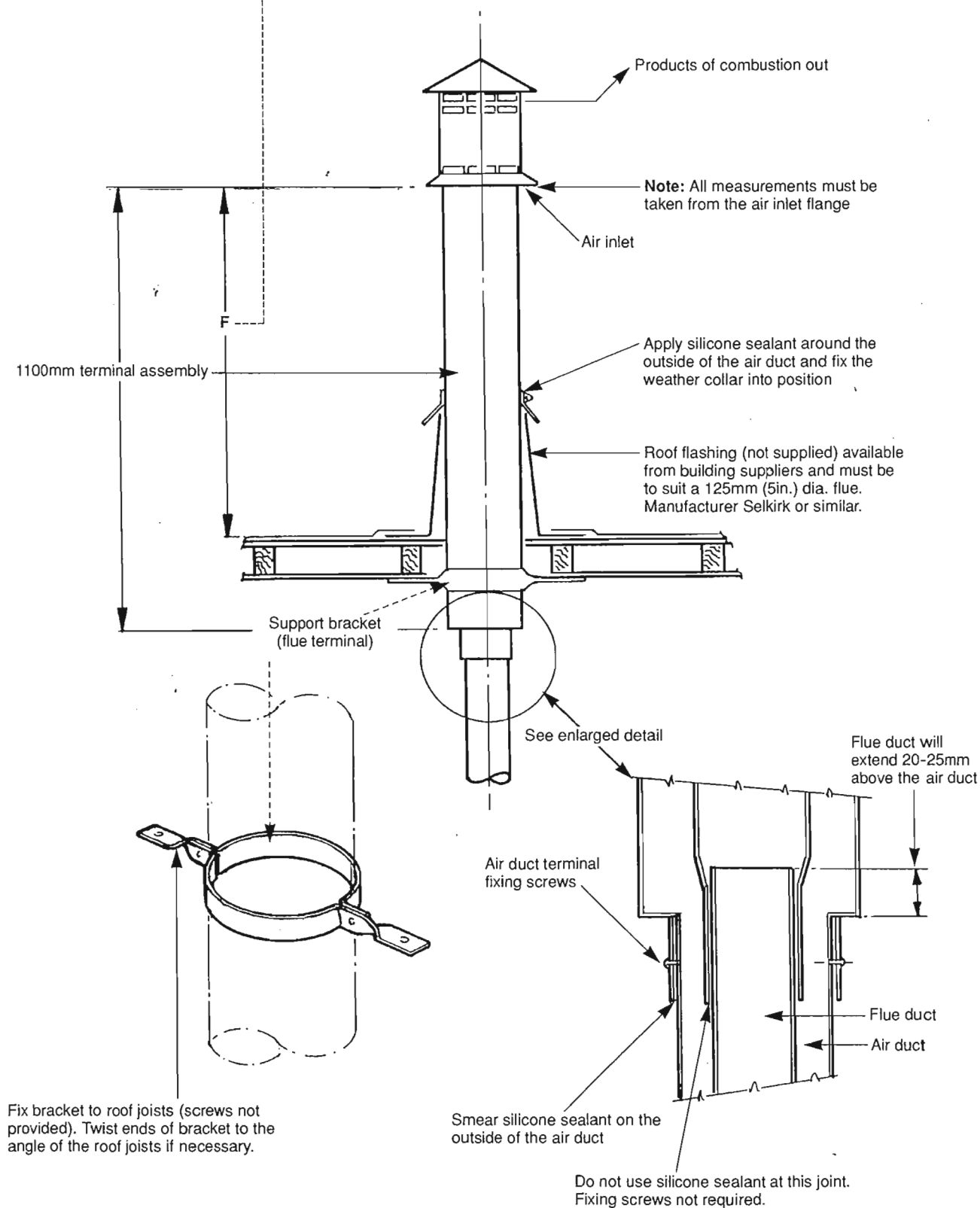


Fig. 10. Calculating the duct cutting lengths for flue assemblies with an offset and vertical straight length at the appliance.

IMPORTANT: The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension **F**.

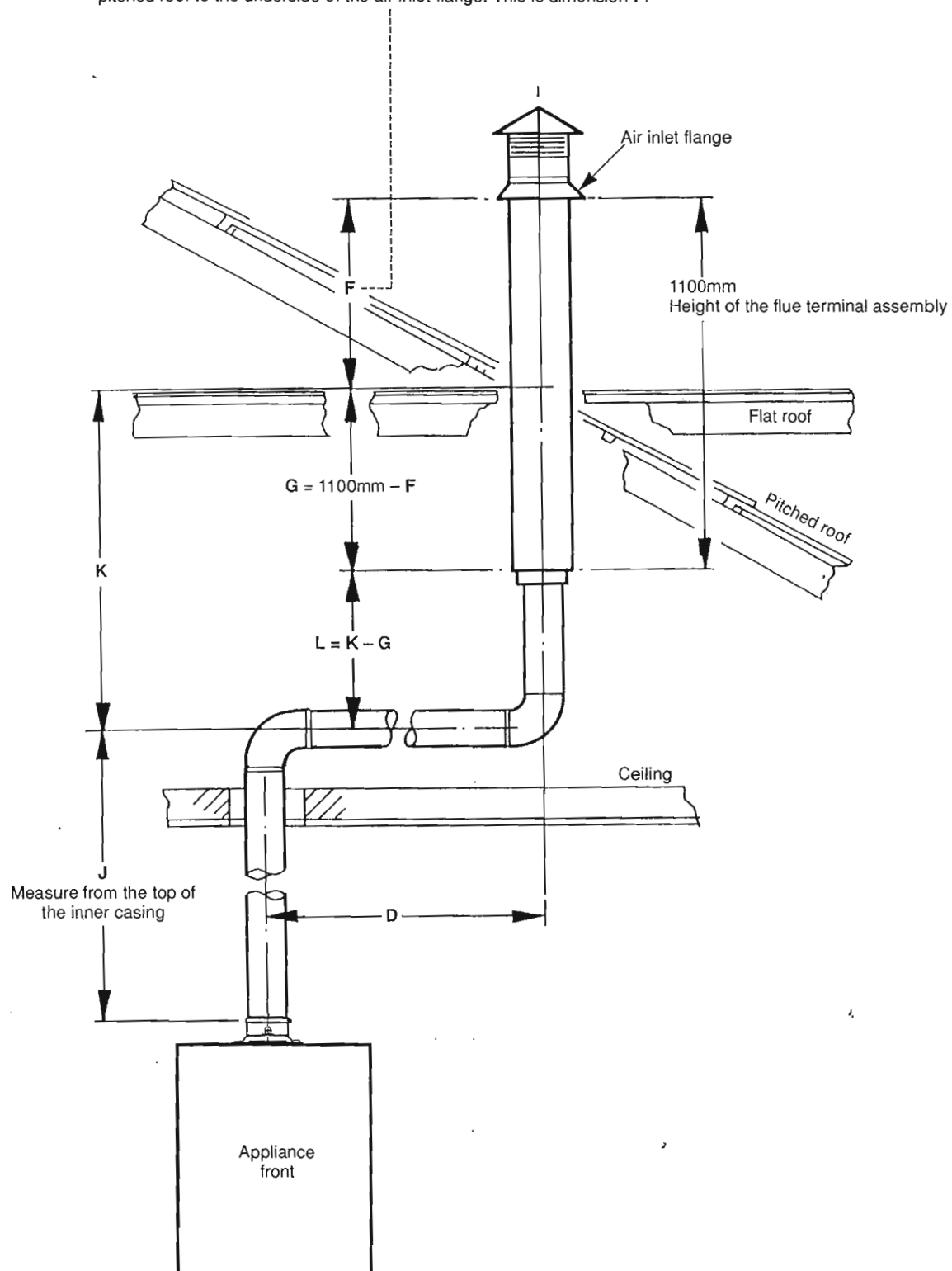


Fig. 11. Fitting the two flue bends to the offset straight length.

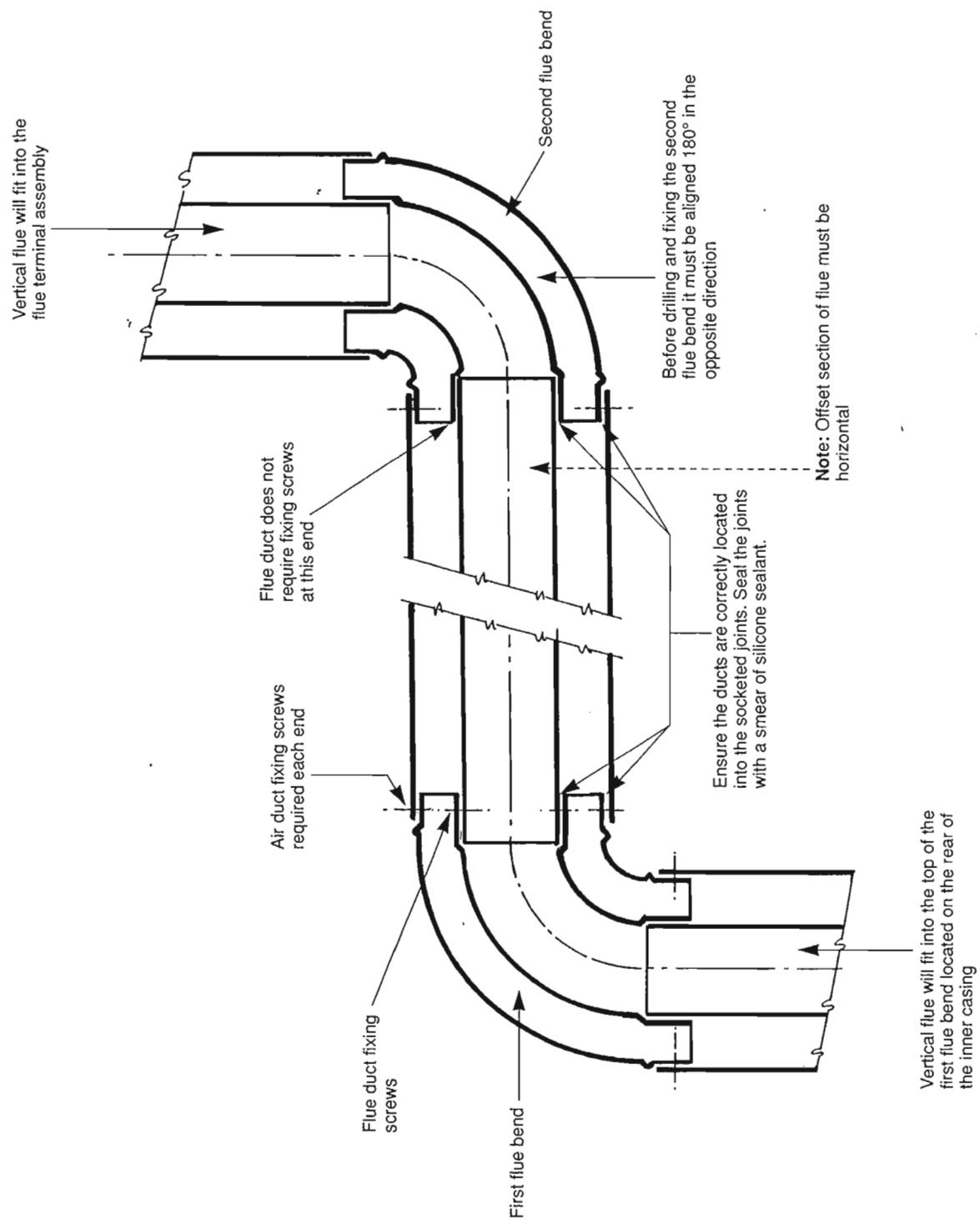


Fig. 12. Typical duct assembly with a horizontal section of duct before the first flue bend, an offset and vertical straight length.

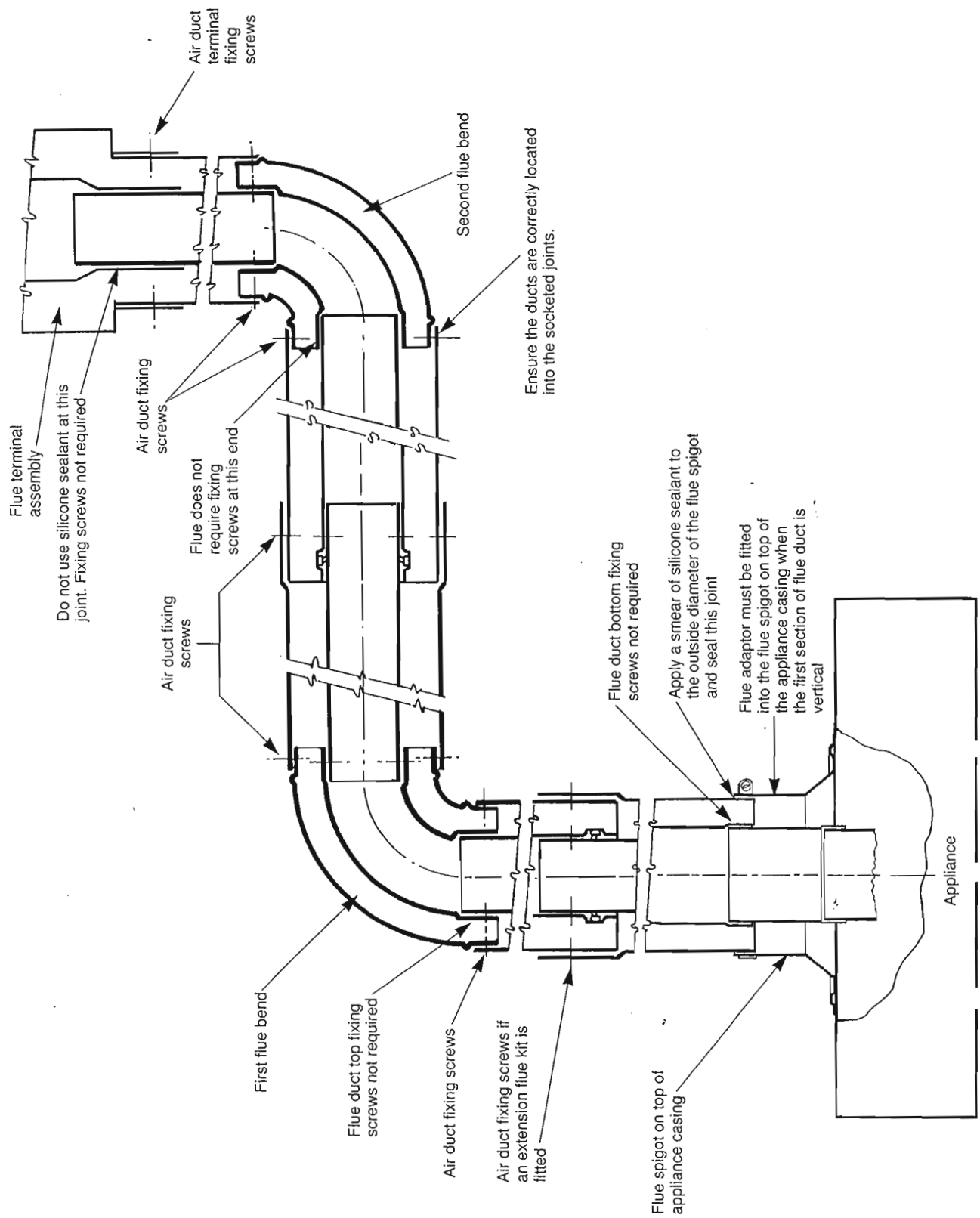


Fig. 13. Calculating the duct cutting lengths for flue assemblies with an offset and 90° bend at the appliance.

IMPORTANT: The minimum distance the flue terminal shall extend above the surface of the roof is 300mm. This distance is measured from the outside surface of a flat roof or highest point on a pitched roof to the underside of the air inlet flange. This is dimension **F**.

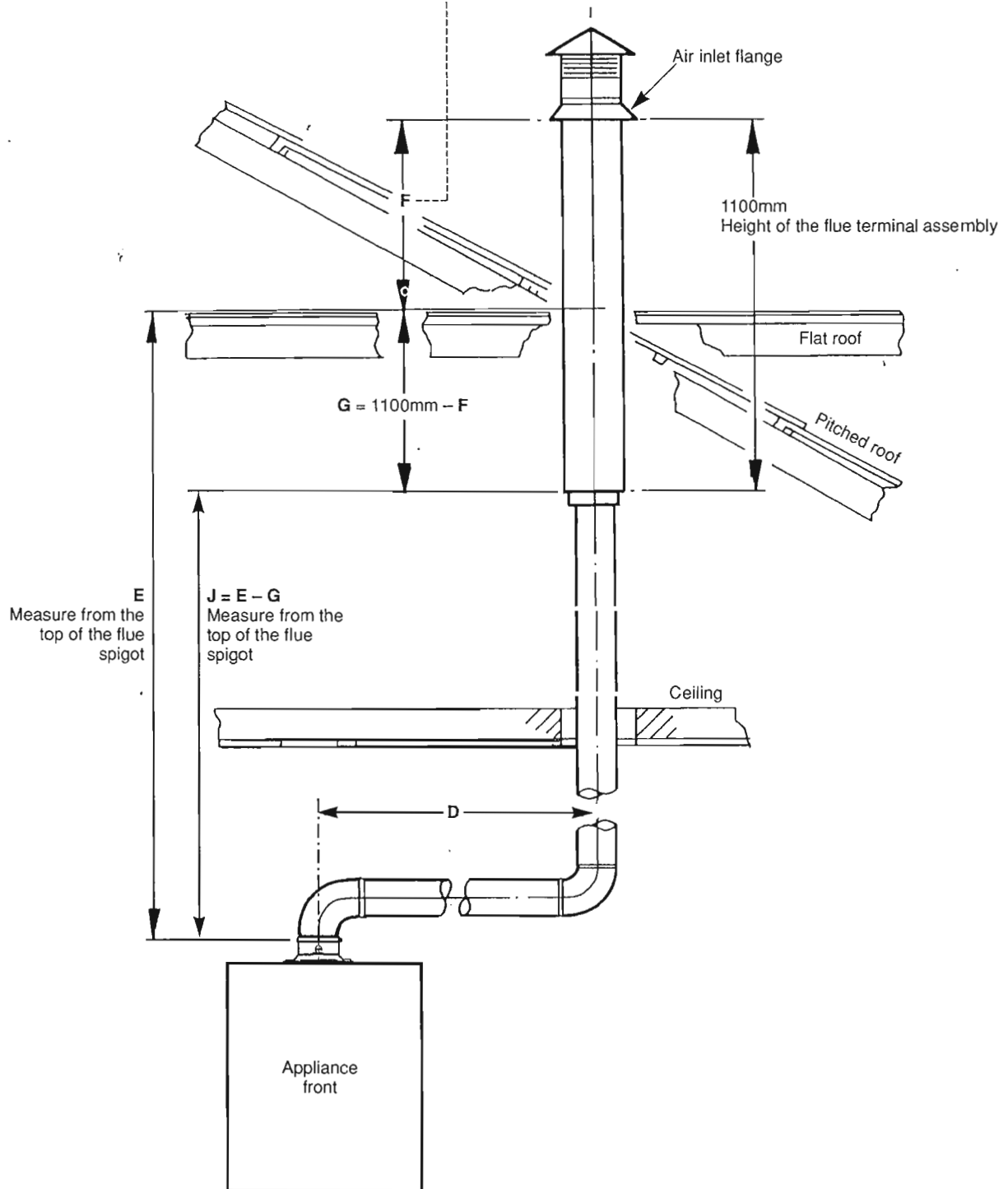
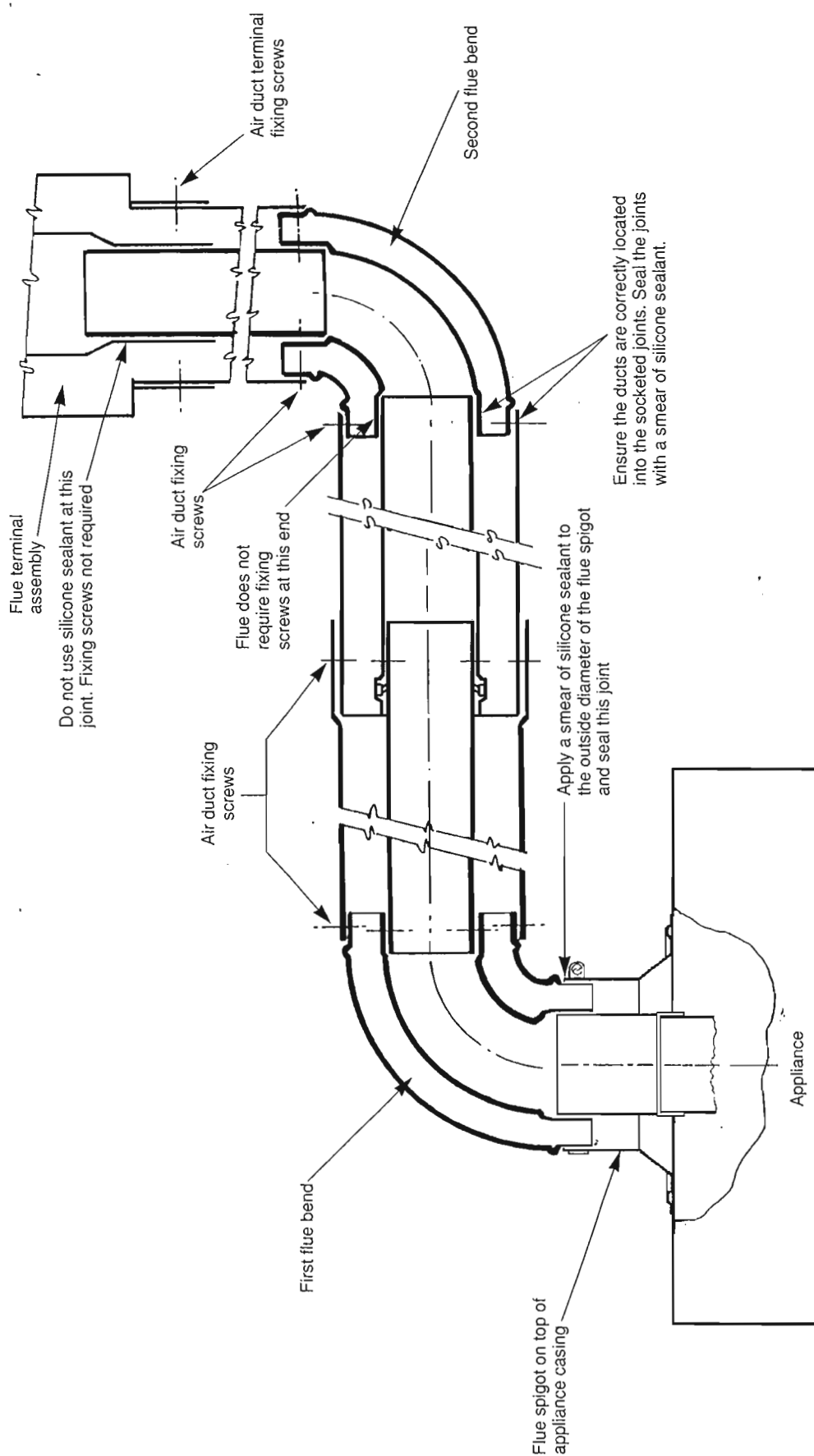


Fig. 14. Typical duct assembly with an offset and 90° bend at the appliance.





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