

Flue kit Installation instructions

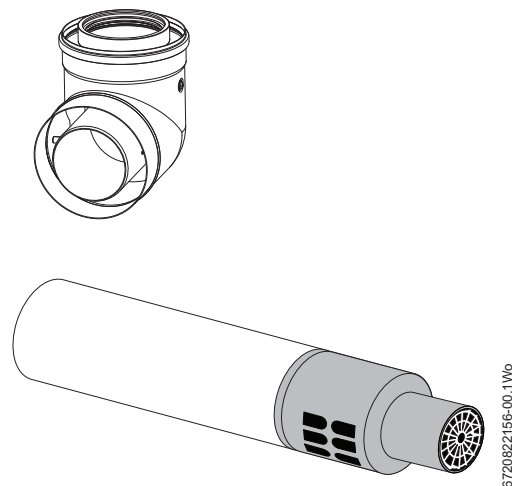
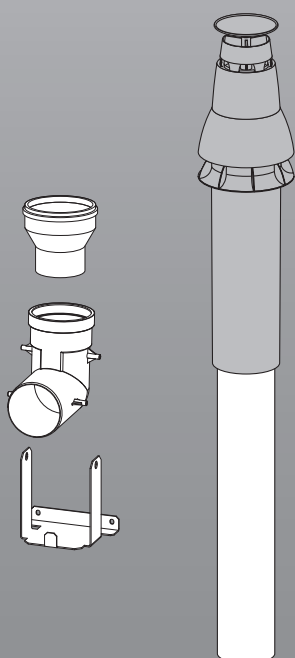
Conventional vertical flue adapter 7 731 600 211

Room sealed vertical flue 7 731 600 210

Room sealed horizontal flue 7 731 600 209

GREENSTAR OILFIT 100/150

For Greenstar Utility 32/50 and 50/70kW ErP+ and 2022+ appliances




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1 Key to symbols and safety instructions

1.1 Key to symbols

Warnings


	Warnings in this document are framed and identified by a warning triangle which is printed on a grey background.
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	Electrical hazards are identified by a lightning symbol surrounded by a warning triangle.
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Keywords indicate the seriousness of the hazard in terms of the consequences of not following the safety instructions.

- **NOTICE** indicates that material damage may occur.
- **CAUTION** indicates that minor to medium injury may occur.
- **WARNING** indicates that serious injury may occur.
- **DANGER** indicates possible risk to life.

Important information

	Important information in cases where there is no risk of personal injury or material losses is identified by the symbol shown on the left. It is bordered by horizontal lines above and below the text.
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Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document or to other related documents
•	a list entry
–	a list entry (second level)

Table 1

1.2 Safety instructions

Oil smells, leaks or fumes from the appliance

- ▶ Extinguish any naked flames
- ▶ Open windows and doors
- ▶ Isolate the electrical supply
- ▶ Isolate the fuel supply to the appliance
- ▶ Rectify the fault.

health and safety

The appliance contains no asbestos and no substances have been used in the construction process that contravene the COSHH Regulations (Control of Substances Hazardous to Health Regulations 1988). Where applicable, the CE mark indicates compliance with relative EU Directives.

COMBUSTIBLE AND CORROSIVE MATERIALS:

Do not store or use any combustible materials (paper, thinners, paints etc.) inside or within the vicinity of the appliance.

The combustion air must be kept clear of chemically aggressive substances, (halogenated hydrocarbons containing chlorine or fluorine compounds) which can corrode the appliance and invalidate any warranty.

FITTING & MODIFICATIONS:

Fitting the appliance and any controls to the appliance may only be carried out by a competent engineer in accordance with these instructions and the relevant Installation Regulations.

Flue systems must not be modified in any way other than as described in the fitting instructions.

Any misuse or unauthorised modifications to the appliance, flue or associated components and systems could invalidate the warranty. The manufacturer accepts no liability arising from any such actions, excluding statutory rights.

2 General installation

2.1 Installation regulations

Failure to install appliances correctly could lead to prosecution.

The appliance must be installed by a competent person. The person installing the appliance should be aware of the Health and Safety at Work Act and take appropriate action to ensure that the regulations are adhered to. In order to give optimum efficiency and trouble free operation the appliance must be commissioned by a qualified OFTEC engineer.


The compliance with a British Standard does not, of itself, confer immunity from legal obligations.

In particular the installation of this appliance must be in accordance with the relevant requirements of the following British Standards and regulations in respect of the safe installation of equipment:

- BS 5410: part 1: Code of practice for Liquid Fuel Firing Boilers.
- The Building Regulations Part J and L1 England and Wales; Part F and Part J Section III Scotland; Part L and Part F Northern Ireland.
- Local water company bye-laws.
- The Control of Pollution (Oil) Regulations.
- OFTEC Standards.

To ensure that the installation will perform to the highest standards, the system and components should conform to those mentioned in these instructions.

Installation instructions

	<p>NOTICE: The appliance is not designed to take the weight of the flue system, this must be supported externally to the appliance.</p>
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Please read these instructions carefully before starting the installation.

These instructions are applicable to the Worcester Bosch appliance model(s) stated on the front cover of this manual only and must not be used with any other make or model of appliance.

The instructions apply in the U.K. only and must be followed except for any statutory obligation.

This appliance must be installed by a competent person. Failure to install correctly could lead to prosecution.

If you are in any doubt contact Worcester, Bosch Group technical helpline.

Distance learning and training courses are available from Worcester, Bosch Group.

Please leave these instructions with the user or with the appliance after installation or servicing.

Abbreviations used in this manual

Ø	Diameter
CF	Conventional flue
RSF	Room seal flue
SEDBUK	Seasonal Efficiency for Domestic Boilers in the United Kingdom
OFTEC	Oil Firing Technical Association for the Petroleum Industry

3 Product information

3.1 Conventional vertical flue

Part Number: 7-731-600-211 including:

1. Adaptor 100mmØ to 130mmØ
2. Elbow 93°
3. Elbow support bracket
4. Flue kit installation instructions
5. Accessories

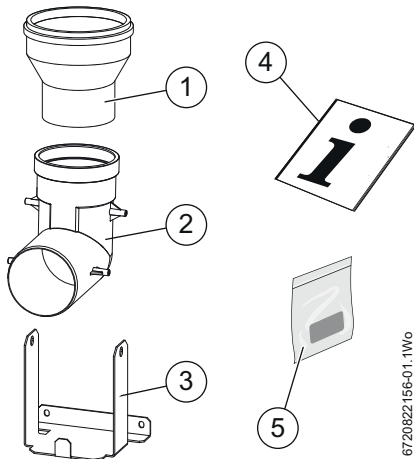


Fig. 1 Conventional flue kit

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3.2 Room sealed vertical flue

Part Number: 7-731-600-210 including:

1. Terminal assembly
2. Elbow 93°
3. Outer flue seal 150mm
4. Flue kit installation instructions
5. Accessories
6. Wall support bracket

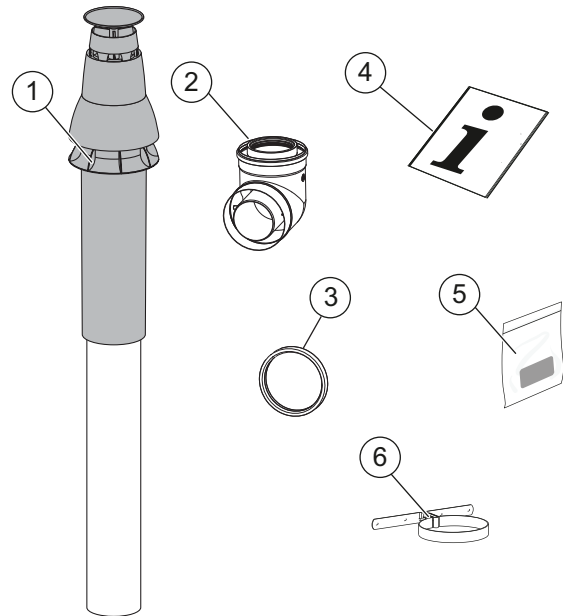


Fig. 2 Room sealed vertical flue

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3.3 Room sealed horizontal flue

Part Number: 7-731-600-209 including:

1. Terminal assembly
2. Outer flue seal 150mm
3. Wall plates
4. Flue kit installation instructions
5. Accessories

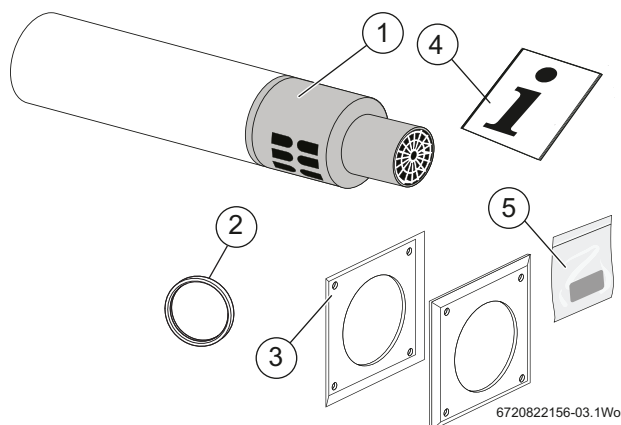


Fig. 3

3.4 Room sealed flue extensions

RS Flue extension

Part Number: 7-716-190-045 including:

1. Extension tube
2. Wall support bracket

RS 93° elbow

Part Number: 7-716-190-046 including:

3. 93° Elbow

RS 45° elbow

Part Number: 7-716-190-047 including:

4. 45° Elbow x2

Spare parts

5. Flue seal 100mm part number 8-716-109-801-0
6. Air duct seal 150mm part number 8-716-110-085-0

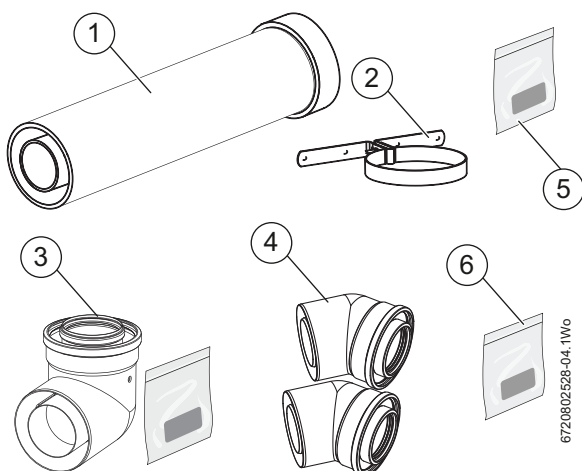


Fig. 4

4 Pre-installation

4.1 Conventional flue

- ▶ Open (conventional) flued appliances must not be installed in a bedroom, bathroom, bed-sitting room or garage.
- ▶ The flue system must be in accordance with BS5410: Part 1 and the current Building Regulations.
- ▶ The flue must be constructed of materials suitable for the use of condensing combustion products.
- ▶ External flue systems must be of the insulated type.
- ▶ Brick and masonry chimneys must be lined with a suitable non-combustible material and properly jointed to withstand the effects of the working temperature (min. 120°C) of the appliance and any condensate which may form.
- ▶ All flue joints must be sealed to prevent the leakage of condensate and combustion products.
- ▶ Ensure that joints are made so that the condensate runs away and is not collected within the joint.



The flue can be increased in size from the appliance take off point providing the joint is correctly sealed. Never reduce the flue diameter from the appliance take off point.

- ▶ The flue should be vertical and contain as few bends as possible, a maximum of two 135° bends should be used.
- ▶ The flue outlet must be extended beyond the eaves of the building and where possible, above the apex.
- ▶ Fit a suitable anti down-draught terminal where the flue outlet is below the building apex and where down draughts are experienced.

Conventional flue maximum flue length

Appliance	Flue diameter [Ø]	Maximum flue length
32/50	130mm	15000mm
50/70	130mm	15000mm

Table 2 Conventional Flue (CF) maximum flue length

Conventional Flue (CF) installation example

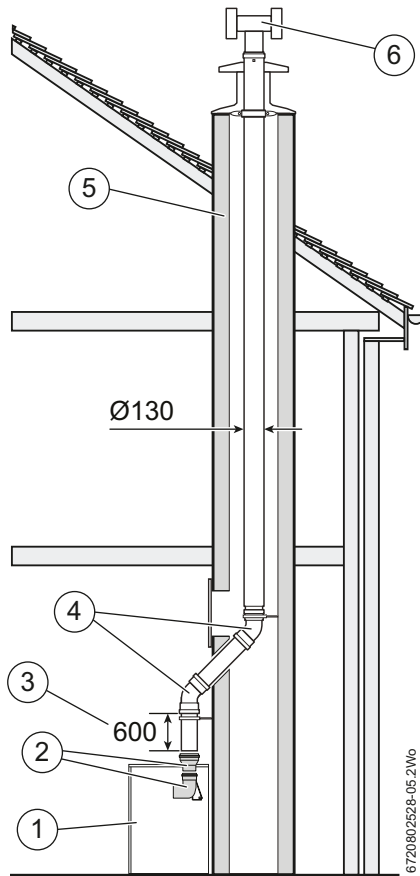


Fig. 5

- [1] Appliance
- [2] Conventional vertical flue
- [3] Height to first bend from top of the appliance (minimum of 600mm stainless steel flue attached to the appliance).
- [4] Maximum 2 bends at 135°
- [5] Chimney
- [6] Anti down draught terminal

4.2 Room sealed flue (RSF) options

Figure 6 shows the components used and table 3 gives maximum flue length [L] from the appliance outlet to the outside wall/roof of the building for each flue configuration.

- To achieve the maximum flue length (L), a flue section will have to be reduced in length.
- Only the flue terminal or straight flue extensions can be reduced in length by cutting.



All horizontal sections must rise away from the appliance by 52mm per metre (3°).

Calculating the flue length

Measure the total flue length required, noting that the maximum straight flue length including the terminal is:

- Horizontal 100/150mmØ: 6400mm (excluding 270mm of terminal extending outside the building).
- Vertical 100/150mmØ: 10000mm.

Then reduce the total straight flue length for each extra flue bend (excluding the flue elbow) by:

- 1000mm for 90°
- 500mm for 45°

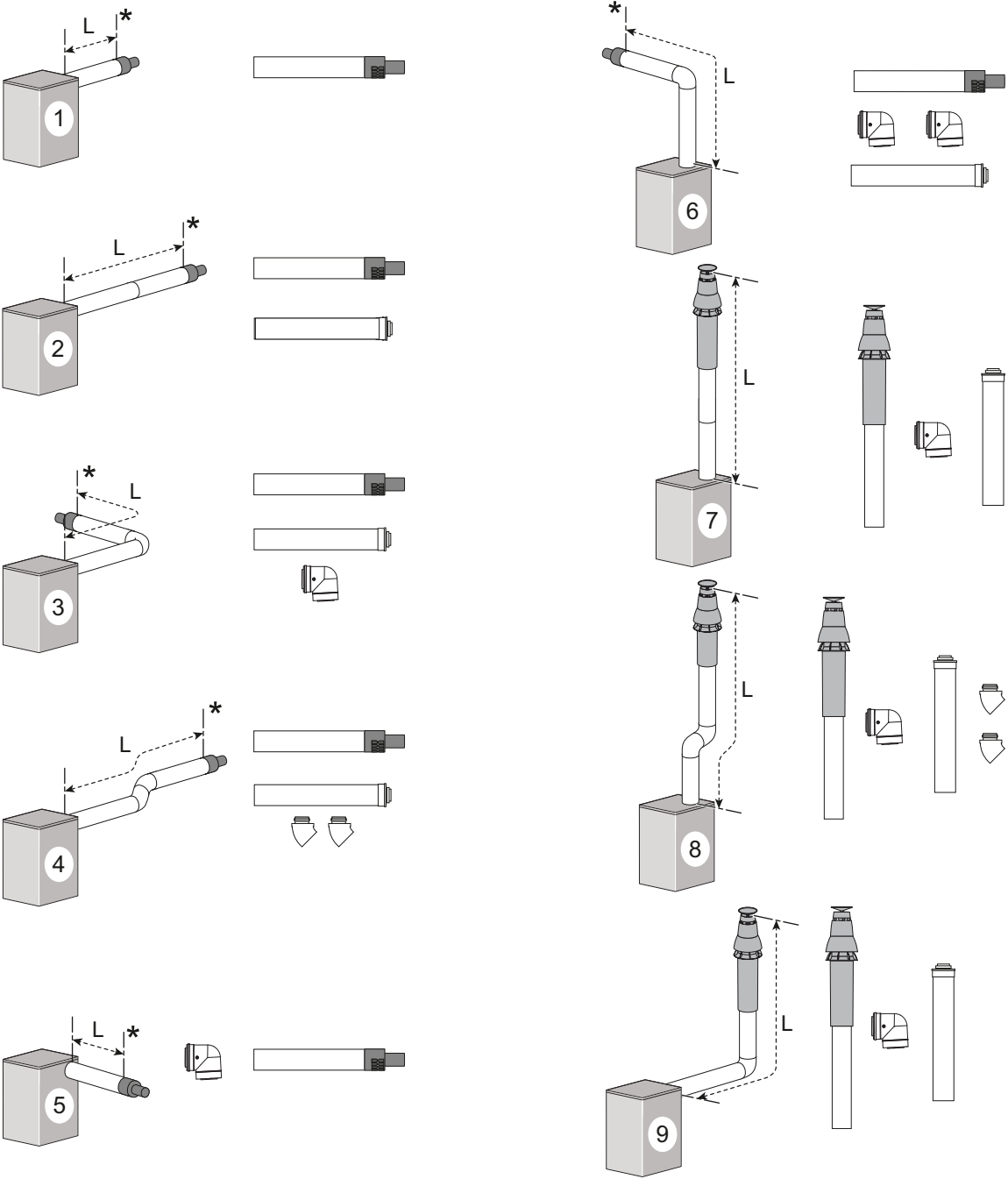
Flue extension lengths:

- Horizontal & Vertical 100/150mmØ: 1000mm

Flue terminal lengths:

- Horizontal 100/150mmØ: 1090mm (effective length 820mm)
- Vertical 100/150mmØ: 1740mm

Required components



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Fig. 6 Room sealed flue configurations

	Flue type	Total flue length L (mm)	
		32/50	50/70
1	Horizontal flue assembly	630	630
2	Horizontal flue extension	6400	6400
3	Horizontal flue with 1 x 90° bend	4400	5400
4	Horizontal flue with 2 x 45° bends	4400	5400
5	Horizontal side exit flue	4400	5400
6	High level horizontal flue	6400	6400
7	Vertical flue	10000	10000
8	Vertical flue with 2 x 45° bends	10000	10000
9	Rear exit with vertical flue	12000	12000

Table 3 Maximum flue length

* to outside wall.

5 Installation

5.1 Conventional vertical flue

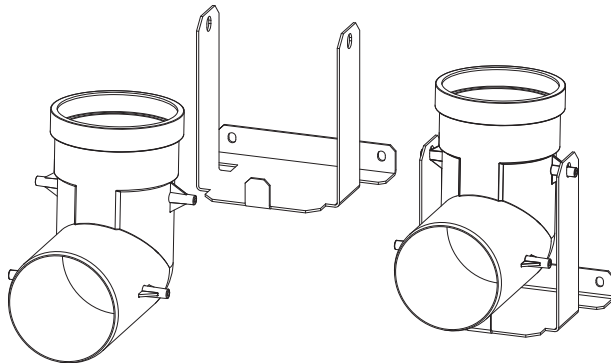


To ease assembly of the flue components, grease lightly with a solvent-free grease.

Ensure that all seals are in good condition, replace if necessary.

All flue joints must be sealed to prevent leakage of condensate and flue products.

- ▶ Attach flue elbow (1) to support bracket (2)

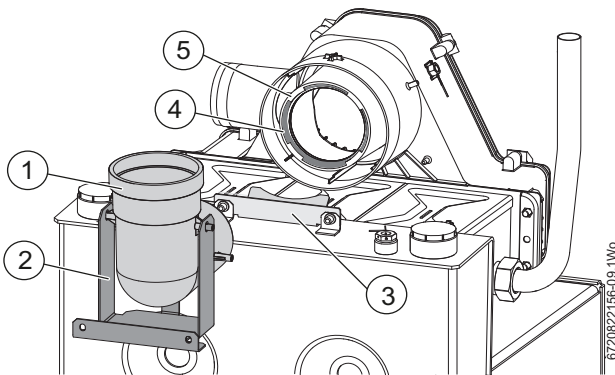


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Fig. 7 Flue elbow and bracket

Refer to figure 8:

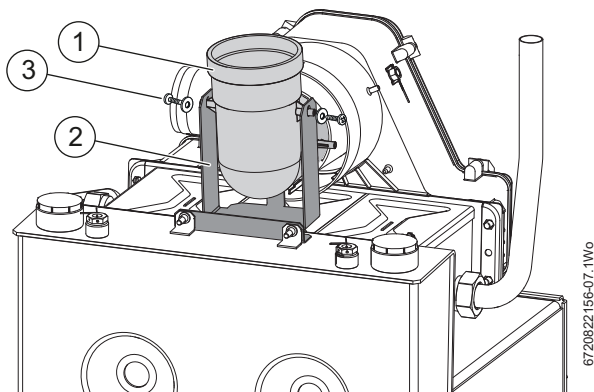
- ▶ Remove the bolts securing the flue support bracket [3] to the appliance, discard the bracket and retain the bolts.
- ▶ Check that the seal [4] is located in the groove of the flue outlet [5].



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Fig. 8

- ▶ Slide flue elbow [1] into the flue outlet [5].
- ▶ Secure the bracket [2] to appliance with the bolts retained earlier.
- ▶ Fit the large washers and screws [3] to retain the elbow.



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Fig. 9

Refer to figure 10:

- ▶ Push fit the vertical flue adaptor [3] into the flue elbow [1] ensuring a good seal.



NOTICE: The appliance is not designed to take the weight of the flue system, this must be supported externally to the appliance.

- ▶ Fit proprietary flue [4], not supplied, according to the manufacturer's instructions.
- ▶ Connect to the flue adaptor [3].

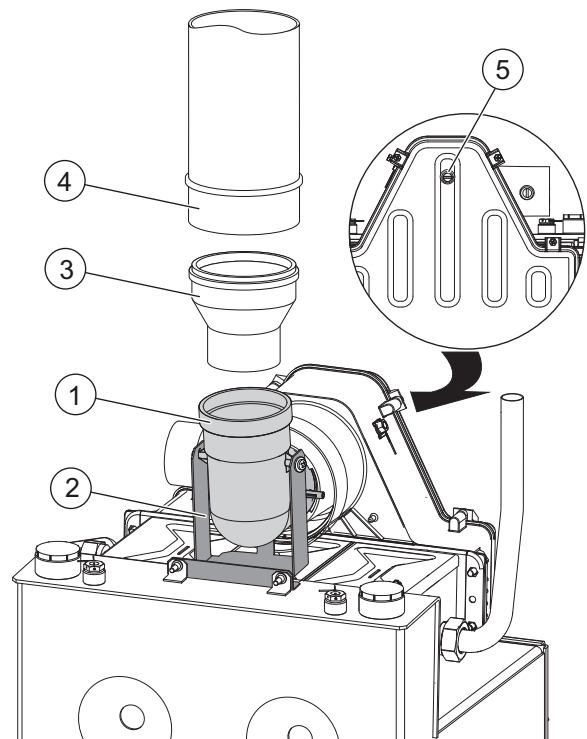


For new appliance installation, the flue manifold cover does not require refitting at this stage, refer to the relevant appliance installation instructions.

- ▶ Check the natural flue draught in the flue pipe using the flue gas sampling point [5], this must be between 0.75 and 5.1 mm W.g.



Where the figure is above 5.1 mm W.g. fit a suitable draught stabiliser into the flue according to the manufacturer's instructions and adjust to achieve a flue draught within the specified range.



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Fig. 10

5.2 Room sealed flue measuring and cutting

All horizontal flue sections must rise by at least 52mm for each meter away from the appliance to ensure that condensate flows back into the appliance for safe discharge via the condensate waste pipe.

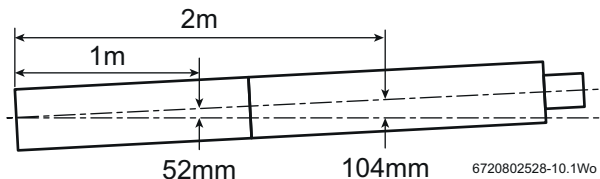


Fig. 11

Measuring the flue

- ▶ Measure the flue length [L] required from the opening outside the building [8] to the outer appliance casing [5] at the required flue outlet position [1, 2, 3 or 4].
- ▶ Add dimension 'X' to the flue length, for flue outlet 1, 2, 3 or 4, refer to table 4 below.
- ▶ Mark out and cut square, taking care not to distort the tubes
- ▶ Remove any burrs.

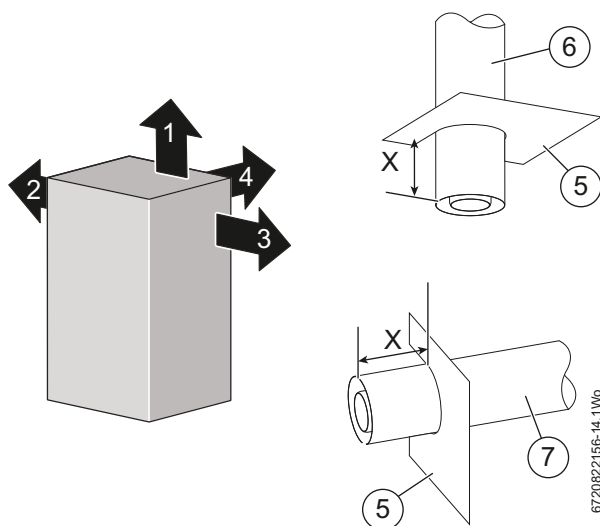


Fig. 12

Position	Dimension "X" (mm)	Exit
1	60	Vertical
2	215	Left
3	215	Right
4	280	Rear

Table 4 X dimension

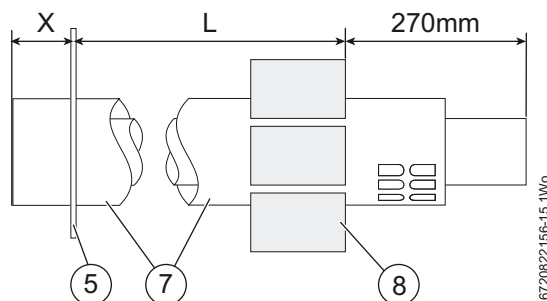


Fig. 13

- [5] Appliance panel
- [7] Horizontal flue
- [8] Fabric of the building

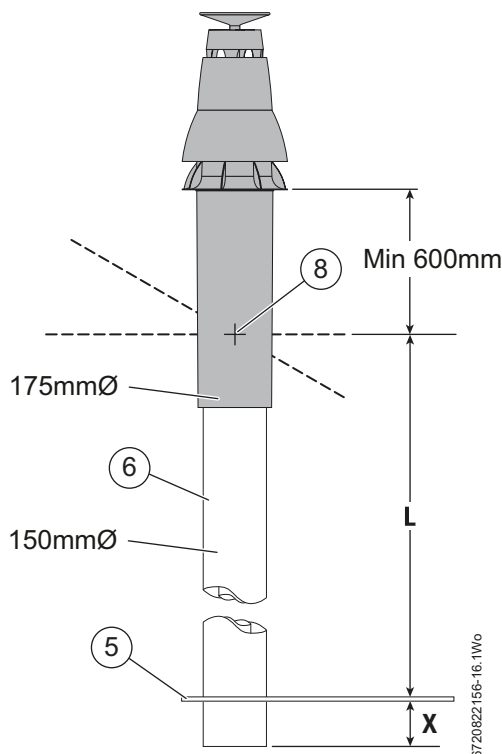


Fig. 14

- [5] Appliance panel
- [6] Vertical flue
- [8] Fabric of the building (minimum 600mm clearance from the air intake to the fabric of the building).

Reducing the terminal length

Measure length required from the end of the terminal flue outlet.

If fitting directly to the appliance flue outlet:

- ▶ Add dimension "X" to measurement "L".
- ▶ Do not reduce the terminal length to less than 900mm for outlet '1', 510mm for outlets '2' & '3' or 570mm for outlet '4'.
- ▶ Mark out and cut square, taking care not to distort the tubes.
- ▶ Remove any burrs.

Reducing extended flue tube length

Only cut straight extension tubes.

- ▶ Mark flue extension to length and cut both inner and outer tubes square (at the opposite end to the seal) taking care not to distort the tubes.
- ▶ Remove any burrs.

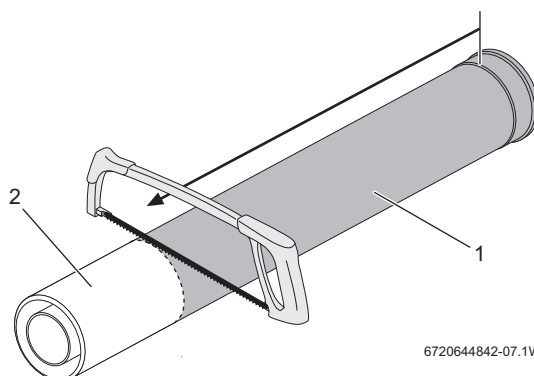


Fig. 15

5.3 Room sealed flue fitting



To ease assembly of the flue components, grease lightly with a solvent-free grease. Check all seals are in good condition.

All flue joints must be sealed correctly to prevent leakage of condensate and flue products.



NOTICE: The appliance is not designed to take the weight of the flue system, the flue must be supported externally to the appliance.

Preparation for flue fitting

- ▶ To remove the top panel:
 - Pull up at the front of the top panel to release the ball catches.
 - Pull the panel towards you to release from the locating tabs at the rear of the appliance.
- ▶ To replace the top panel after flue installation:
 - insert the rear corners onto the tabs at the rear of the appliance
 - press the top down to locate the ball catches.
- ▶ Ensure that the seal [2] is located in the groove of the flue manifold outlet.
- ▶ Fit the 150mm seal [3], supplied in the flue kit, to the outlet on the flue manifold.

Refer to figure 17:

Vertical and high level horizontal outlets

- ▶ Remove the flue support bracket [1] from the appliance, retaining the items to refit later.

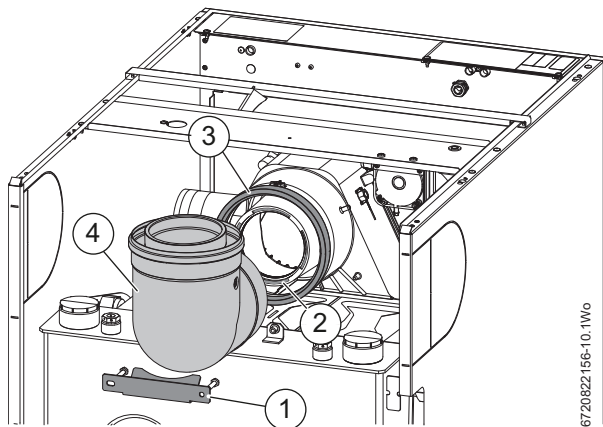


Fig. 16

- ▶ Remove the “knock out” panel for the vertical flue outlet.
- ▶ Lightly grease the flue elbow [4] to ease insertion into the flue manifold.
- ▶ Drill a hole into the outer tube of the elbow, through the hole on the top of the flue manifold, take care NOT to drill into the inner tube of the elbow, and secure with screw supplied.
- ▶ Refit the flue support bracket [1], bolts and washers.



NOTICE: Only supplied screws are to be used to secure flue components.

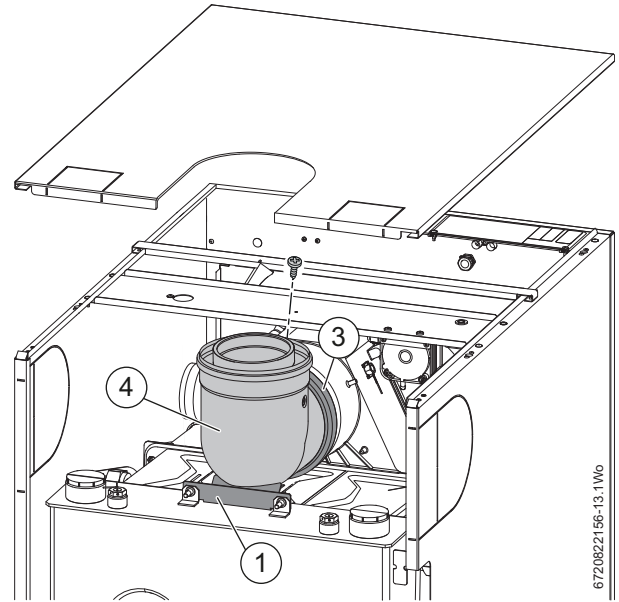


Fig. 17

Refer to figure 18:

Side outlets;

- ▶ Remove the flue support bracket [1] from the appliance, and discard.
- ▶ Remove the left or right “knock out” panel for the required flue outlet.
- ▶ Lightly apply solvent-free grease to the flue elbow [4] to ease insertion into the flue manifold.
- ▶ Drill a hole into the outer tube of the elbow, through the hole in the flue manifold, take care NOT to drill into the inner tube of the elbow, and secure with screw supplied.

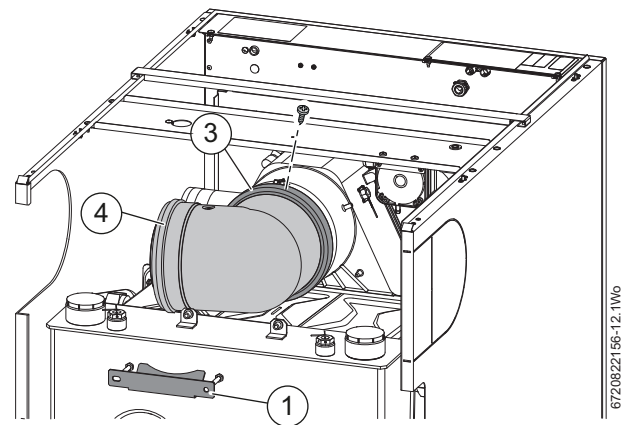


Fig. 18

Rear outlets:

- ▶ Remove the flue support bracket [1] from the appliance, and discard.
- ▶ Lightly apply solvent-free grease to the flue section to ease insertion into the flue manifold.
- ▶ Drill a hole into the outer tube of the elbow, through the hole in the flue manifold, take care NOT to drill into the inner tube of the flue section and secure with screws supplied.

5.4 Room sealed flue terminal and extensions



To ease assembly of the flue components, lightly apply solvent-free grease to the joints. Check all seals are in good condition.

Flue extensions:

- ▶ Slide the wall support bracket/s [1] onto flue tube/s
- ▶ Push-fit all flue extension/s, bend/s together.
- ▶ Secure the wall support bracket/s [1] close to each joint.
- ▶ Drill two holes (180° apart, if possible) through the outer flue tube on each flue joint taking care NOT to drill the inner flue tube and secure with screws supplied.

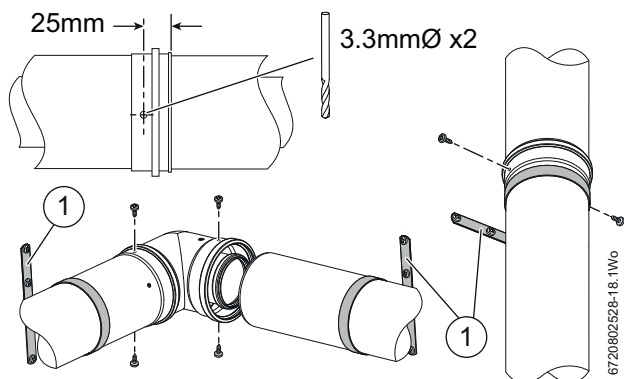


Fig. 19 Securing flue extensions

Horizontal terminals only:

- ▶ Fit the inner wall seal [6] onto the terminal [5].
- ▶ Push the terminal [5] through the flue opening in the wall [7] by the distance shown in the figure below.
- ▶ Ensure that the air intake vents [8] facing down.
- ▶ Secure the inner and outer wall seals [6] to the wall with the screws provided
- ▶ Drill two holes (180° apart if possible) through the outer flue tube on each flue joint taking care NOT to drill the inner flue tube and secure with screws supplied.
- ▶ All flue joints must be sealed to prevent leakage of condensate and flue products.

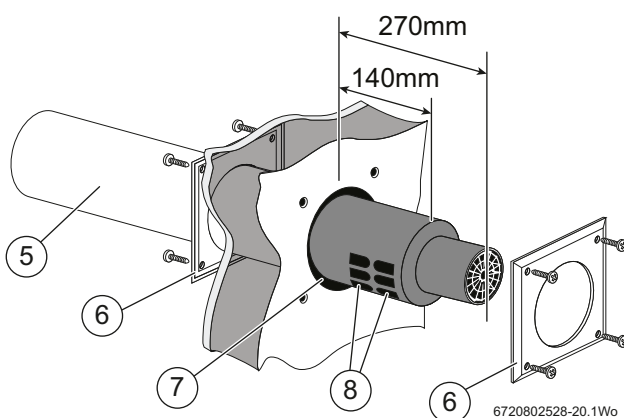


Fig. 20 Horizontal terminal

Vertical terminals only:

- ▶ Fit flue terminal [2] through the flue opening in the roof to extend beyond the roof by the distance shown in the figure below.
- ▶ Fit the flashing [3] (not supplied) to the weatherproof terminal exit.
- ▶ Make good the ceiling to the flue using a suitable fire resistant building material, or provide a fire stop plate to close the gap.



Minimum 600mm clearance from the air intake to the fabric of the building.

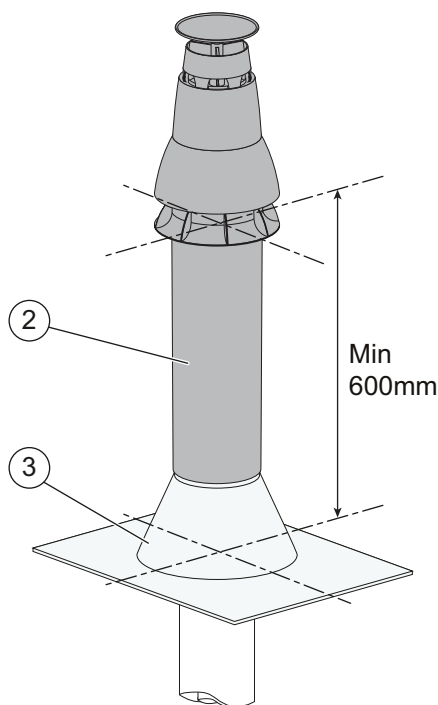


Fig. 21 Vertical terminal

Notes

Notes

Worcester, Bosch Group
Cotswold Way, Warndon, Worcester WR4 9SW.
Tel. 0330 123 9559

Worcester, Bosch Group is a brand name of Bosch Thermotechnology Ltd.
worcester-bosch.co.uk

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