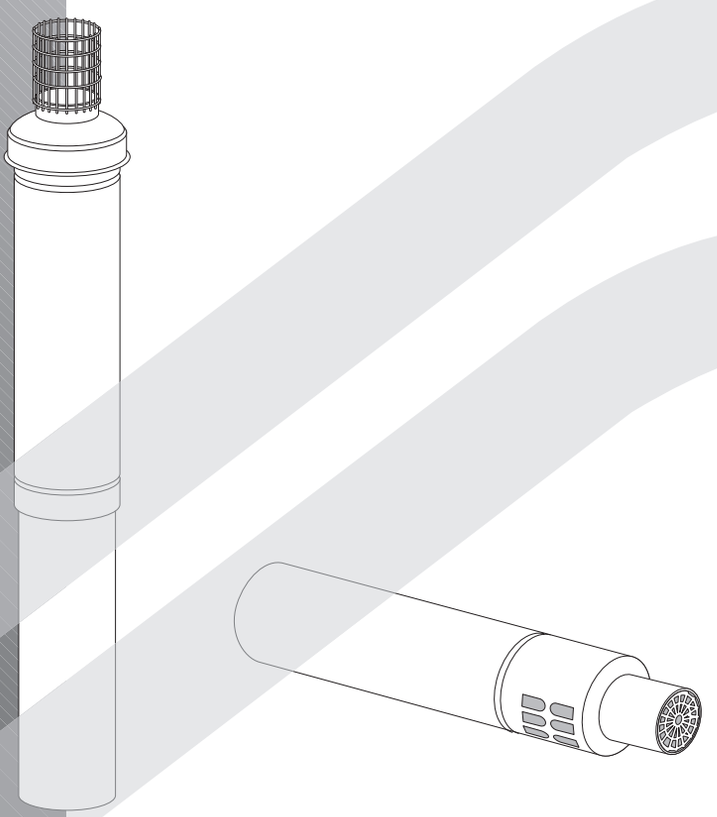
GREENSTAR OILFIT

CONVENTIONAL FLUE & ROOM SEALED FLUE

FOR GREENSTAR UTILITY 32/50kW & 50/70kW BOILERS



Greenstar™ Oilfit

GB/IE

WORCESTER
Bosch Group

INSTRUCTION MANUAL
FLUE DUCT KIT INSTALLATION

8-716-109-802a (03.05)

CONTACT INFORMATION

WORCESTER BOSCH:

MAIN RECEPTION: 01905 754624
MAIN FAX: 01905 754619
TECHNICAL: 08705 266241
SERVICE: 08547 256206
SPARES: 01905 752571
LITERATURE: 01905 752556
TRAINING: 01905 752526
SALES: 01905 752640
WEBSITE: www.worcester-bosch.co.uk

FLUE TERMINAL GUARDS:

TOWER FLUE COMPONENTS
VALE RISE, TONBRIDGE, TN9 1TB

OIL FIRING TECHNICAL ASSOCIATION:

OFTEC 0845 6585080
www.oftec.org

CONVENTIONAL FLUE MANUFACTURERS:

INTERACTIVE (Flue Systems) Ltd.
sales@interactive-uk.com
Selkirk Manufacturing Ltd.
www.selkirk.co.uk

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

INSTALLATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING 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 UK & EIRE 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 TECHNICAL HELPLINE.

DISTANCE LEARNING AND TRAINING COURSES ARE AVAILABLE FROM WORCESTER BOSCH.

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
RS	Room sealed flue
SEDBUK	Seasonal Efficiency for Domestic Boilers in the United Kingdom
OFTEC	Oil Firing Technical Association for the Petroleum Industry

CONTENTS

SAFETY PRECAUTIONS

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 boiler
- Contact boiler engineer.

HEALTH & 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.

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& 2: Code of practice for Oil Fired 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.

CONVENTIONAL VERTICAL FLUE COMPONENTS

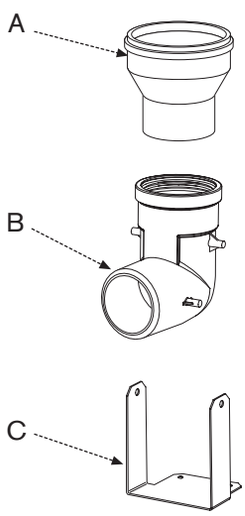
CF VERTICAL FLUE KIT:

Part Number: 7-716-190-049 including:

A ADAPTOR 100mmØ to 130mmØ

B ELBOW

C ELBOW SUPPORT BRACKET

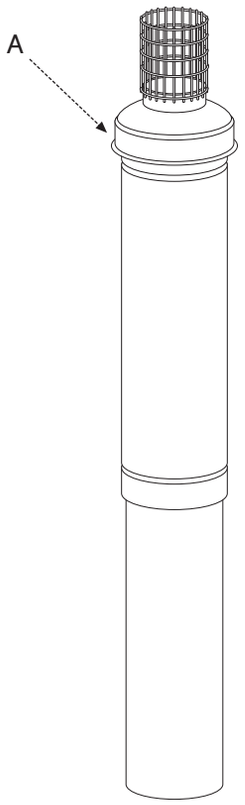


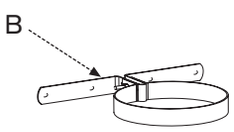
ROOM SEALED VERTICAL FLUE COMPONENTS

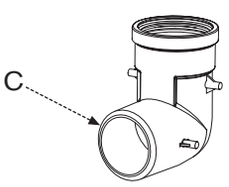
RS VERTICAL FLUE KIT:

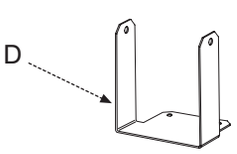
Part Number: 7-716-190-044 including:

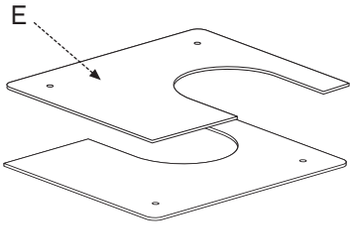
A TERMINAL ASSEMBLY
B WALL SUPPORT BRACKET
C ELBOW
D ELBOW SUPPORT BRACKET
E FIRE STOP PLATES
F FLUE SPIGOT
G GASKET - AIRBOX x5
H BLANKING PLATES x3
J AIRBOX ASSEMBLY
K CLIP - AIR HOSE x2
L AIR HOSE

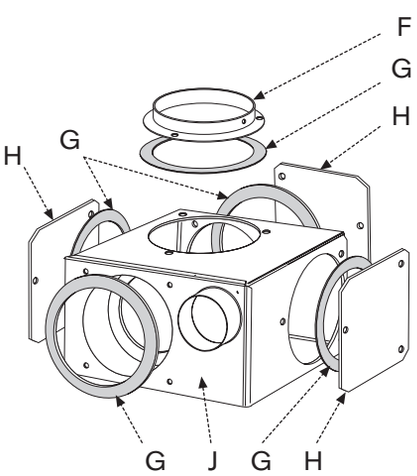


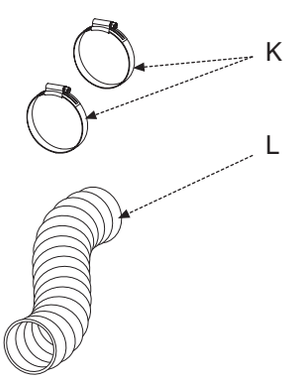










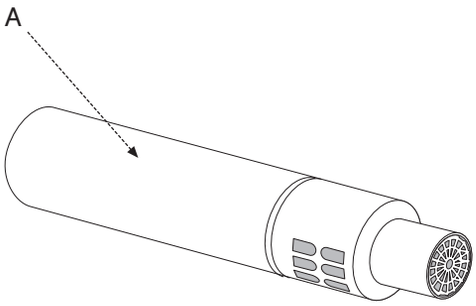


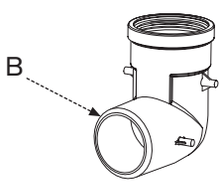
ROOM SEALED HORIZONTAL FLUE COMPONENTS

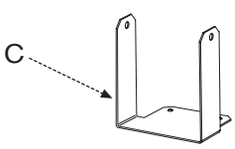
RS HORIZONTAL FLUE KIT:

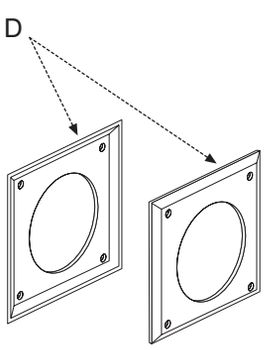
Part Number: 7-716-190-043 including:

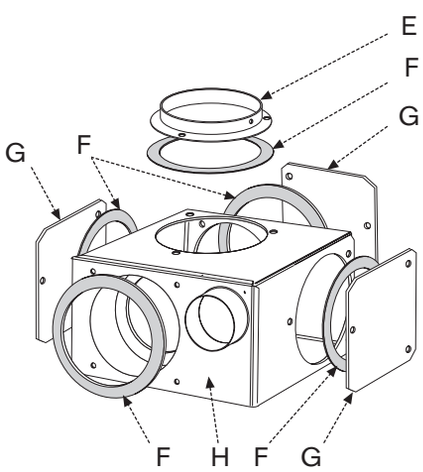
A TERMINAL ASSEMBLY
B ELBOW
C ELBOW SUPPORT BRACKET (for high level horizontal only)
D WALL PLATES
E FLUE SPIGOT
F GASKET - AIRBOX x5
G BLANKING PLATES x3
H AIRBOX ASSEMBLY
J CLIP - AIR HOSE x2
K AIR HOSE

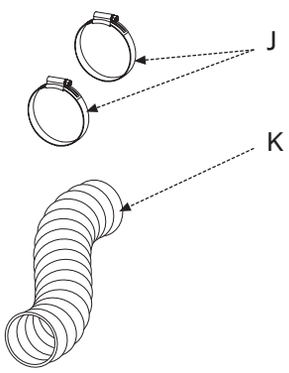




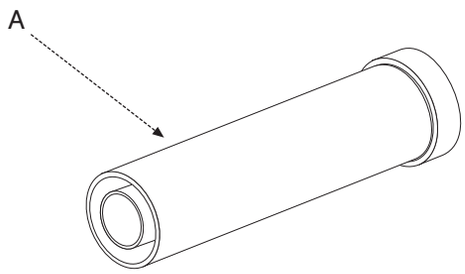


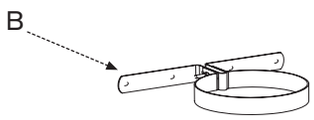


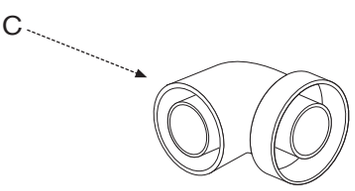


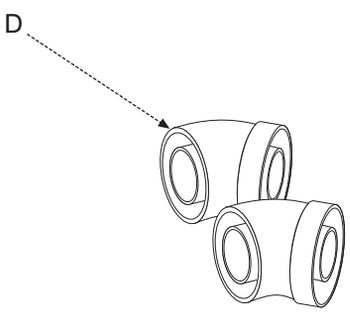


ROOM SEALED FLUE EXTENSION
COMPONENTS & SPARE PARTS









RS FLUE EXTENSION:

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

A EXTENSION TUBE

B WALL SUPPORT BRACKET

RS 90° ELBOW:

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

C 90° ELBOW

RS 45° ELBOW:

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

D 45° ELBOW x2

SPARE PARTS:

Flue Seal 100mm

Part Number: 8 716 109 801 0

Air Duct Seal 150mm

Part Number: 8 716 110 085 0

Air Box Gasket

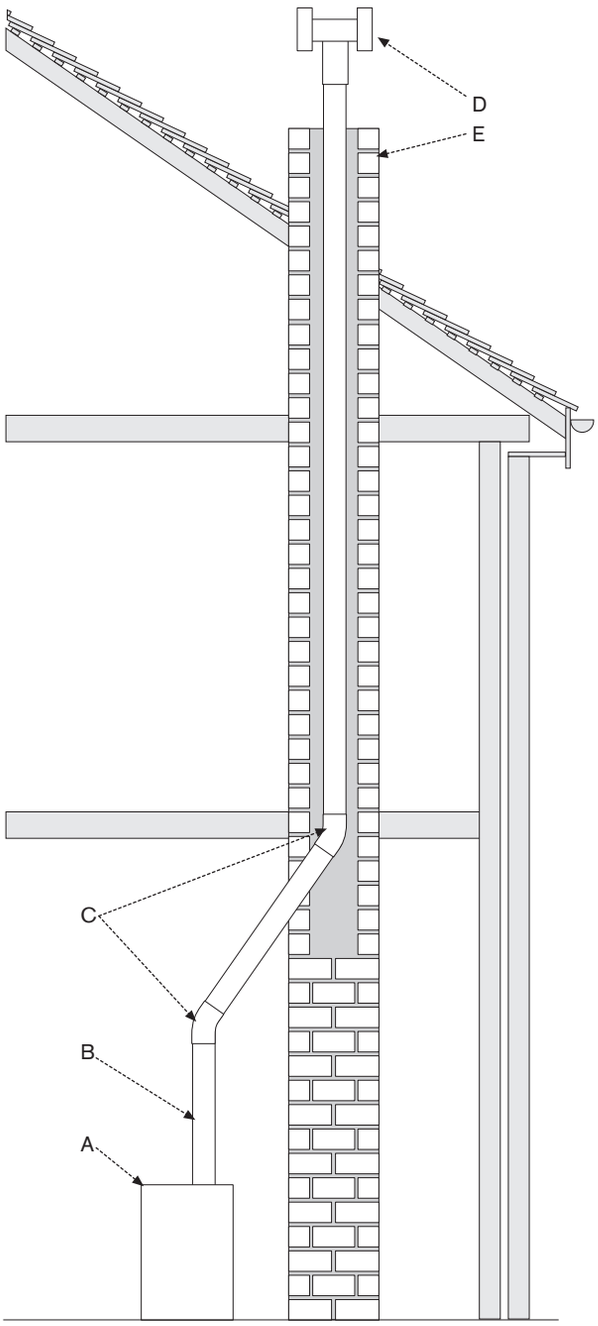
Part Number: 8 716 110 084 0

CONVENTIONAL FLUE

- Open (conventional) flued appliances must not be installed in a bedroom, bathroom or bedsitting room
- The flue system must be in accordance with BS5410 : Parts 1 & 2 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

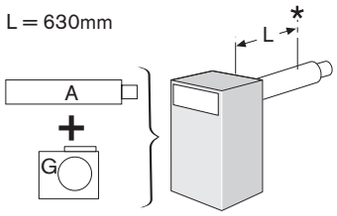
NOTE: The flue can be increased in size from the boiler take off point providing the joint is correctly sealed. Never reduce the flue diameter from the boiler take off point

- 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.

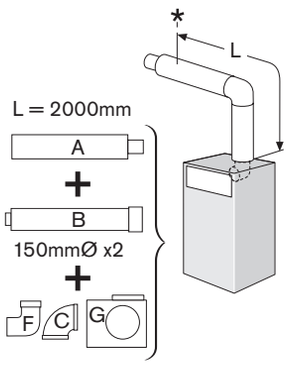


A - Boiler
B - Flue
C - Max. 2 bends at 135°
D - Anti down-draught terminal
E - Chimney

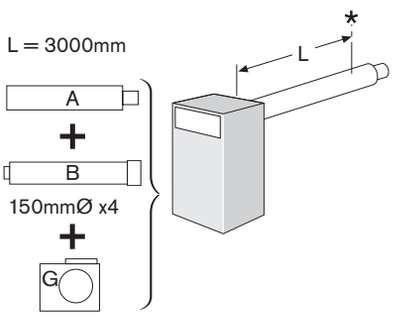
L = 630mm



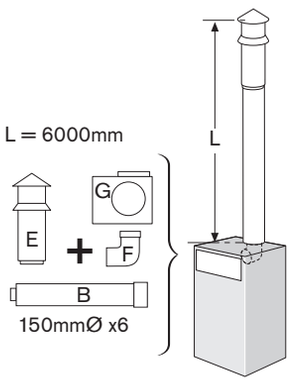
L = 2000mm



L = 3000mm



L = 6000mm



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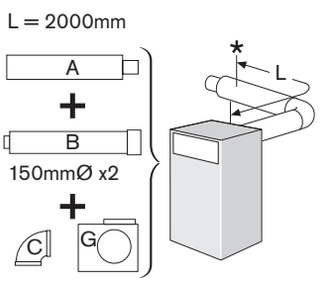
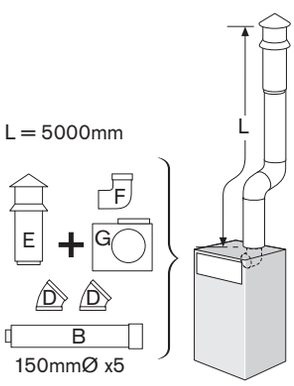


L = 5000mm



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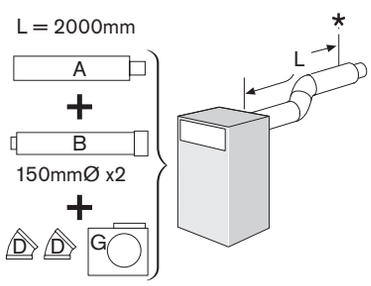
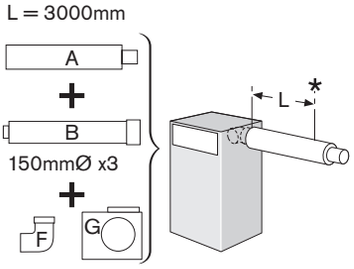
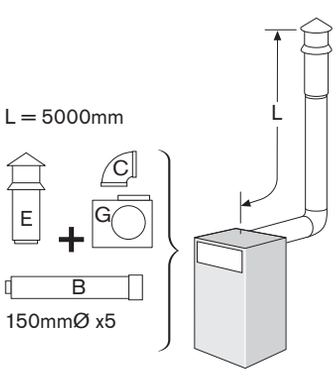


L = 3000mm



L = 5000mm



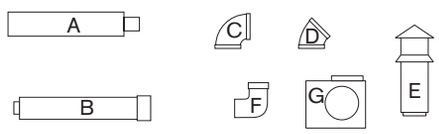
ROOM SEALED FLUE OPTIONS

The diagrams (opposite) show the components used and the maximum flue length (L) from the boiler 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.
- The flue terminal end can be fitted from the inside or outside of the building.

IMPORTANT:

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



A - Horizontal terminal

B - Straight flue extension

C - Flue bend 90°

D - Flue bend 45°

E - Vertical Terminal

F - 90° inner elbow - inner flue to boiler

G - Air intake box

Calculating the flue length:

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

Horizontal 100/150mmØ: 3000mm (excluding 220mm of terminal extending outside the building)

Vertical 100/150mmØ: 6000mm

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:

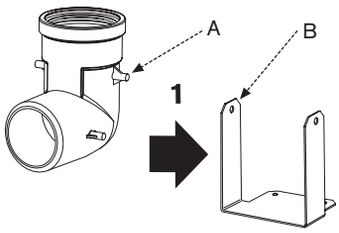
Horizontal & Vertical 100/150mmØ: 1000mm

Flue Terminal lengths:

Horizontal 100/150mmØ: 1100mm

Vertical 100/150mmØ: 1290mm

* to outside wall.



NOTE: to ease assembly of the flue components, greased lightly with a solvent-free grease, such as Vaseline. Check all seals are in good condition.

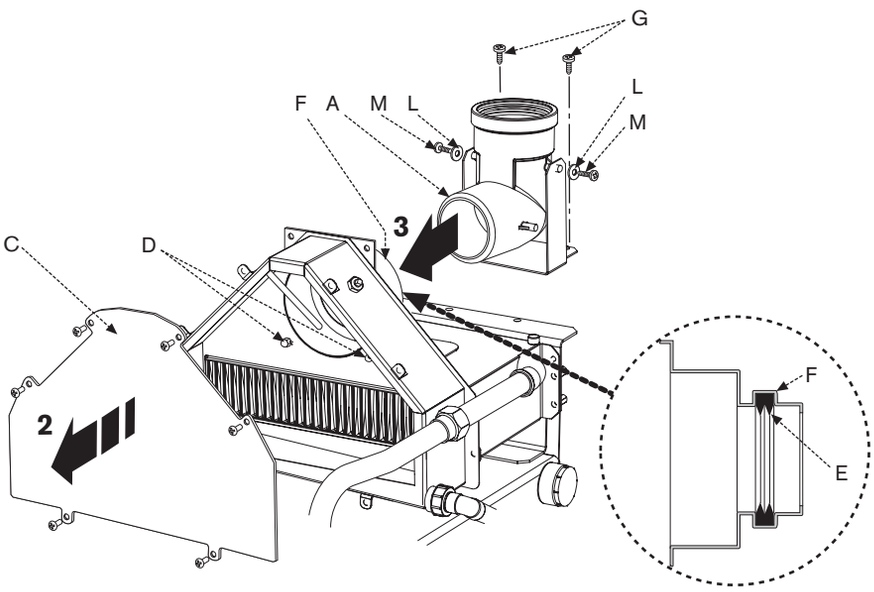
- All flue joints must be sealed to prevent leakage of condensate and flue products

1 ▸ Attach flue elbow (A) to support bracket (B)

2 ▸ Release screws to remove the flue manifold cover (C)

▸ Check bolts (D) are fully tightened

▸ Check seal (E) is located in the grove of the flue outlet (F)



3 ▸ Slide flue elbow (A) into the flue outlet (F)

▸ Fix bracket (B) to boiler with screws (G)

▸ Fix large washer (L) and screw (M) to retain elbow

4 ▸ Push fit the vertical flue adaptor (H) into flue elbow (A) ensuring a good seal

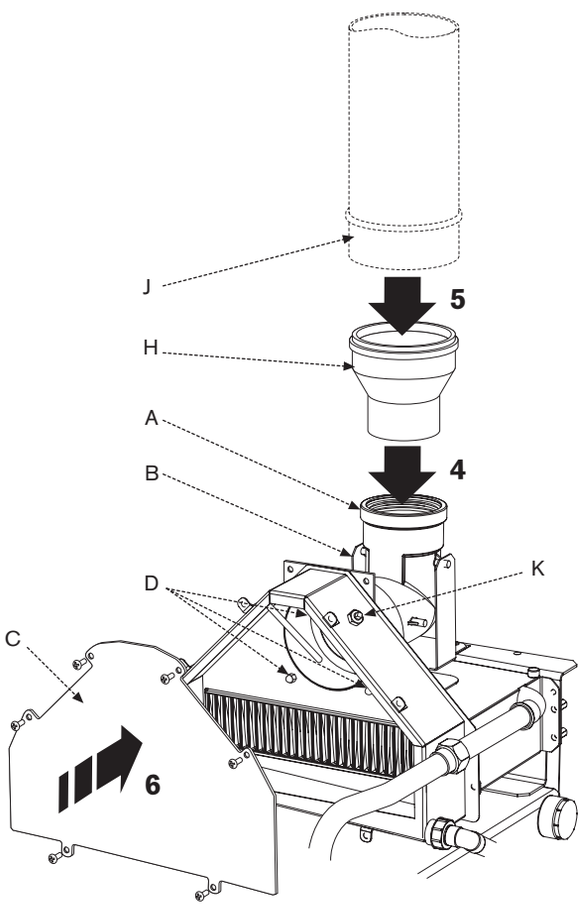
IMPORTANT: The boiler is not designed to take the weight of the flue system, this must be supported externally to the boiler.

5 ▸ Fit proprietory flue (J), not supplied, according to the manufacturer's instructions

▸ Connect to adaptor (H)

6 ▸ Refit flue manifold cover (C) and secure with screws ensuring a good seal to the manifold.

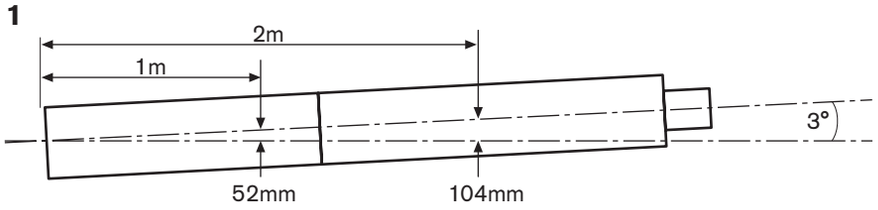
Note: for new boiler installation, the flue manifold cover does not require refitting at this stage, refer to the relevant boiler installation instructions.



▸ Check the natural flue draught in the flue pipe using the flue gas sampling point (K), this must be between 0.75 and 5.1mm W.g.

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

1



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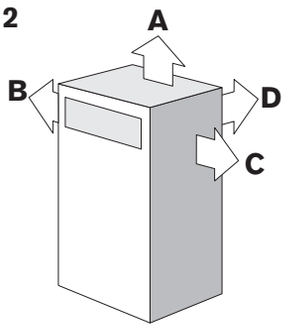
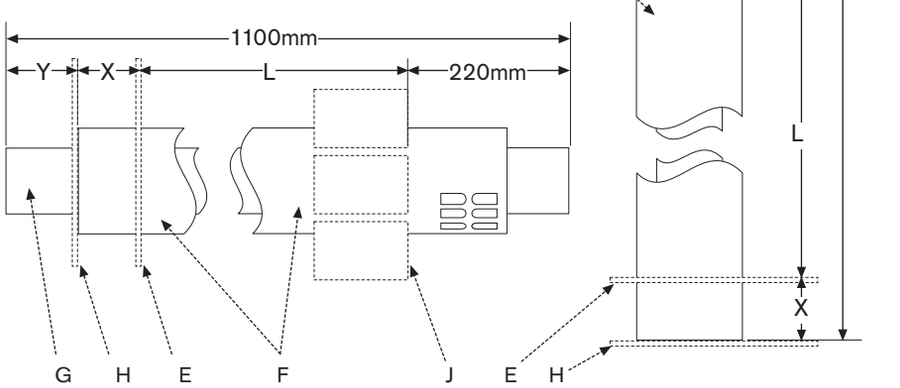


FLUE OUTLET	OUTER X	INNER Y
A	15mm	0mm
B	160mm	20mm
C	85mm	95mm
D	10mm	240mm

E - Boiler outer casing
F - Outer flue tube
G - Inner flue tube
H - Airbox outer casing
J - Outside wall/roof



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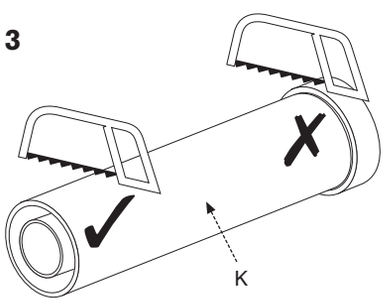


ROOM SEALED FLUE
MEASURING & CUTTING

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

Measuring the flue:

2 ▸ Measure the flue length (L) required from the opening outside the building (J) to the outer boiler casing (E) at the required flue outlet position (A, B, C or D)

- ▸ add dimension 'X' to the flue (F) length, as shown for flue outlet A, B, C or D (to allow the flue to fit to the airbox inside the boiler casing)
- ▸ add an extra dimension 'Y' to the inner flue tube (G) only, as shown for flue outlet A, B, C or D (to allow the inner flue tube to connect to the boiler flue outlet)

▸ Mark out and cut square, taking care not to distort the tubes

▸ Remove any burrs

Reducing the terminal length:

3 ▸ Measure length required from the end of the terminal flue outlet

If fitting directly to the boiler flue outlet/airbox:

- ▸ add dimension 'X' & 'Y' to measure(L)
- ▸ do not reduce the terminal length to less than 900mm for outlet 'A', 510mm for outlets 'B' & 'C' or 570mm for outlet 'D'

▸ Mark out and cut square, taking care not to distort the tubes

▸ Remove any burrs

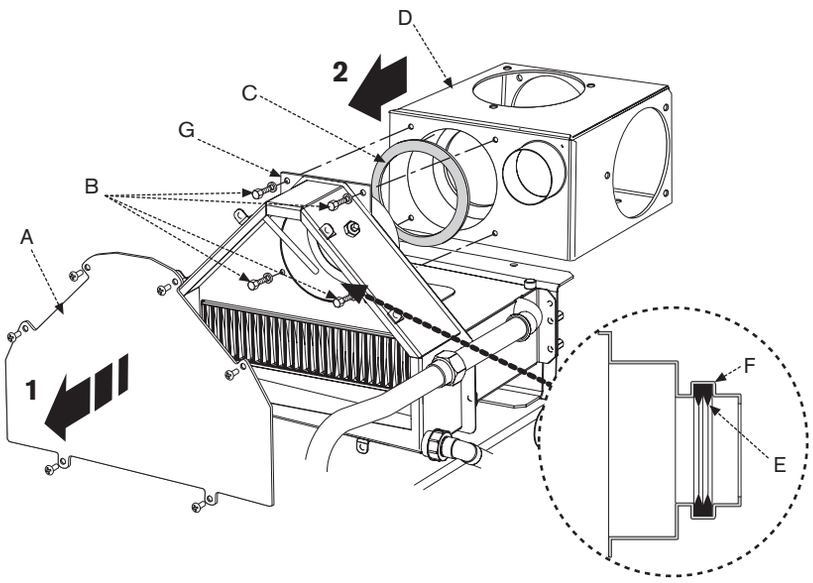
Reducing extended flue tube length:

Only cut straight extension tubes

4 ▸ Mark flue extension (K) to measure 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.

NOTE: 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

1 ▸ Release screws to remove the flue manifold cover (A)

▸ Remove stainless steel bolts and washers (B) and keep safe as these must be refitted

2 ▸ Fix self adhesive gasket (C) centrally to airbox (D)

▸ Fit airbox (D) and secure to the flue manifold (G) with the four stainless steel bolts and washers (B) previously removed

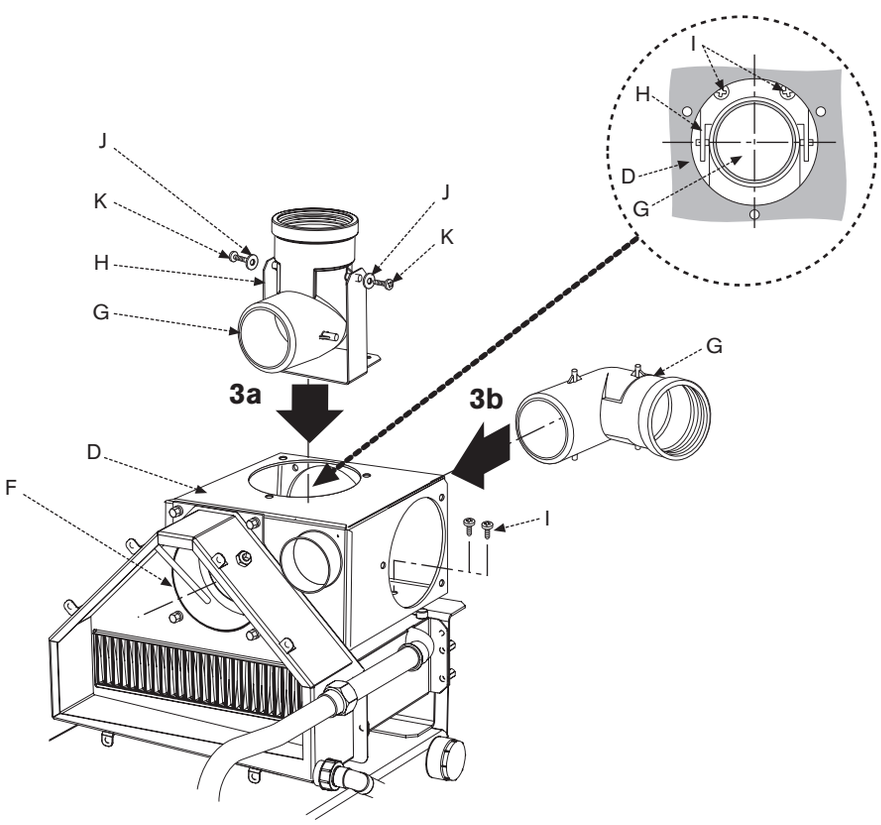
▸ Check seal (E) is located in the grove of the flue outlet (F)

3a ▸ Vertical and high level horizontal outlet only: attach flue elbow (G) to support bracket (H) and fit to flue manifold (F) outlet inside airbox (D)

▸ Fix with large washers (J) and screws (K)

▸ Secure airbox (D) together with support bracket (H), loosely to the boiler with screws (I) provided

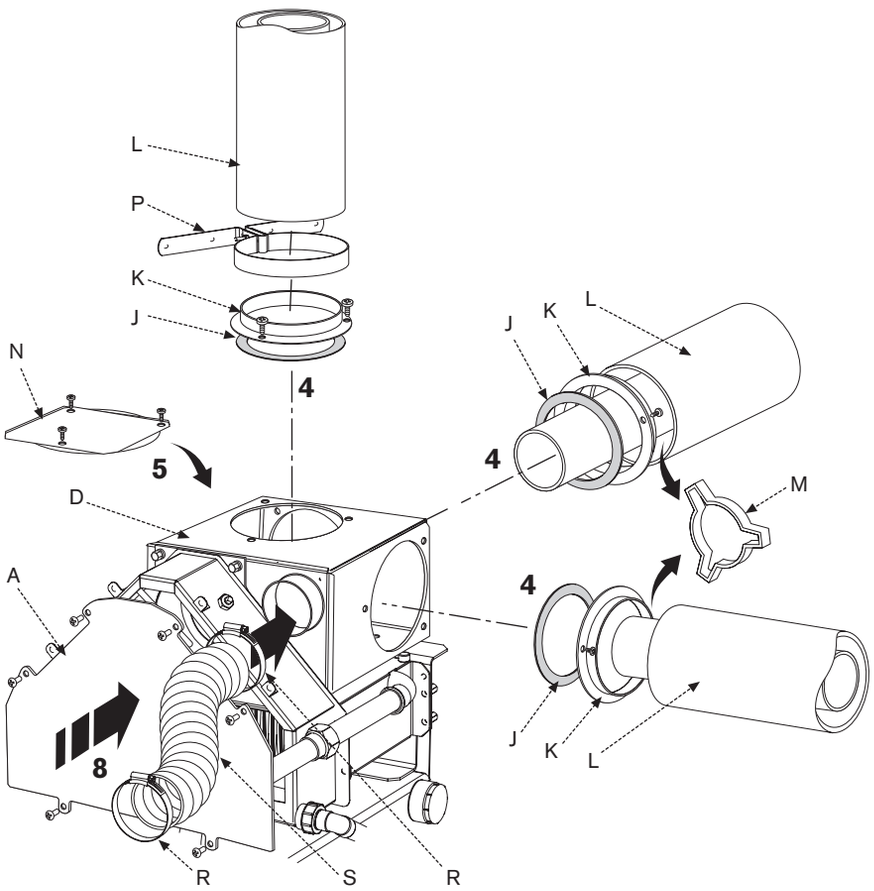
▸ Align flue elbow (G) centrally to airbox (D) outlet and tighten screws (I). Using silicone sealant supplied, seal slots around screws (I)



3b ▸ Side outlets only: fit flue elbow (F) to the flue manifold outlet (F) inside airbox (D)

▸ Secure airbox (D) to the boiler with screws (I) provided. Using silicone sealant supplied, seal slots around screws (I).

Note: the flue elbow (G) is not required for rear exit flues.



4 ▸ Fit gasket (J) and flue spigot (K) to airbox (D) and secure with screws supplied

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

▸ Where applicable, slide wall support brackets (P) onto the flue tube

▸ Side & Rear outlets only: remove centralising ring (M) at the boiler end of flue only

▸ Slide outer flue tube (L) over flue spigot (K) ensuring that the inner flue tube is correctly sealed to the flue outlet

▸ Secure flue support brackets (P)

5 ▸ Fit gaskets (J) and secure blanking plates (M) over the unused outlets in the airbox (D)

6 ▸ Drill two holes (180° apart if possible) through the outer flue tube (L) and flue spigot (K) taking care NOT to drill the inner flue tube and secure with screws supplied

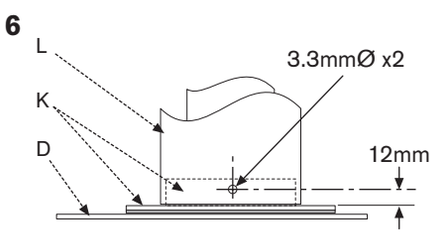
7 ▸ Seal join of outer flue tube (L) to spigot (K) with silicone sealant (T)

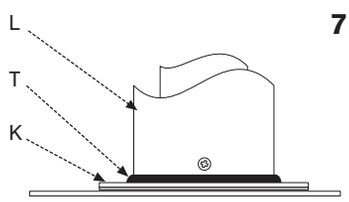
Note: step 8 applies to existing installations and is not required for new boiler installation at this stage (refer to relevant boiler installation instructions).

8 ▸ Refit flue manifold cover (A) and secure with screws ensuring a good seal to the manifold

▸ Connect the flexible air hose (S) to the airbox (D) and secure with clip (R)

▸ Connect the other end of the flexible hose (S) to the burner air intake and secure with clip (R).





ROOM SEALED FLUE TERMINAL & EXTENSIONS

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

1 Flue extensions:

- ▶ Slide support wall support bracket/s (G) onto flue tube/s
- ▶ Push-fit all flue extension/s, bend/s together
- ▶ Secure support wall support bracket/s (G) close to each join

2 Vertical terminal only:

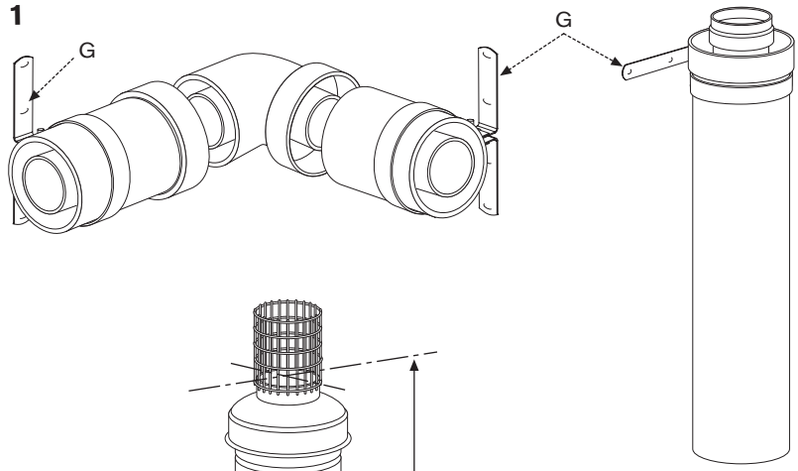
- ▶ Fit flue terminal (A) through the flue opening in the roof to the extend beyond the roof by the distance shown
- ▶ Fit flashing (X not supplied) to weatherproof terminal exit
- ▶ Secure fire stop plates (B) through roof to ceiling with screws supplied

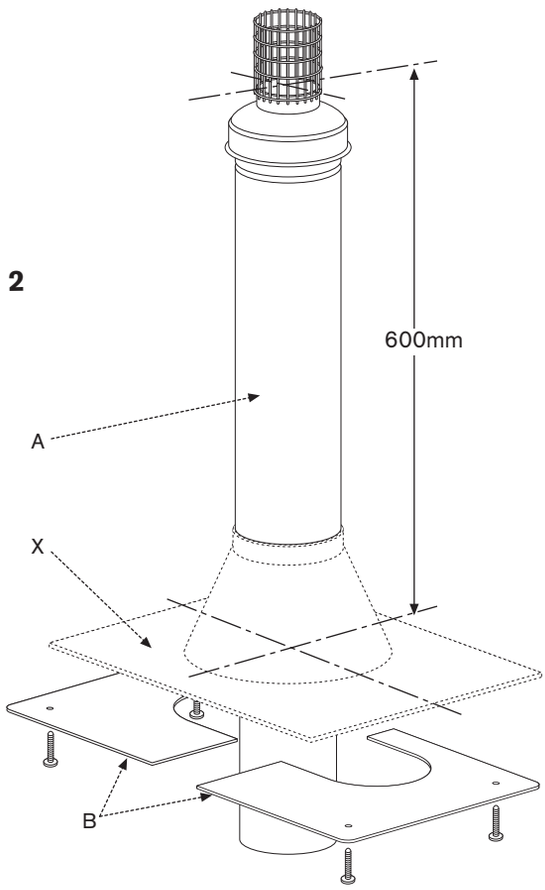
3 Horizontal terminal only:

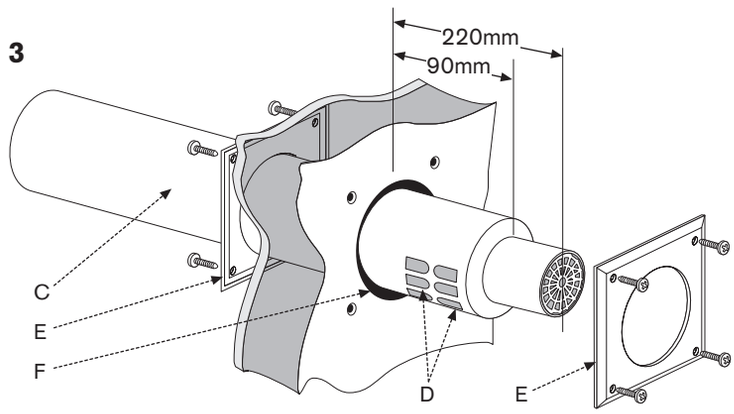
- ▶ Fit inner wall seal (E) onto terminal (C)
- ▶ Fit terminal (C) through the flue opening in the wall (F) to the outside of the building by the distance shown with the air intake vents (D) facing down
- ▶ Secure inner and outer wall seals (E) to wall with screws supplied

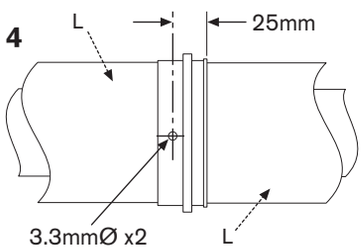
4 ▶ Drill two holes (180° apart if possible) through the outer flue tube (L) on each flue join taking care NOT to drill the inner flue tube and secure with screws supplied

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









INSTRUCTION MANUAL
FLUE DUCT KIT INSTALLATION

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