

INSTRUCTION MANUAL

FLUE KIT INSTALLATION

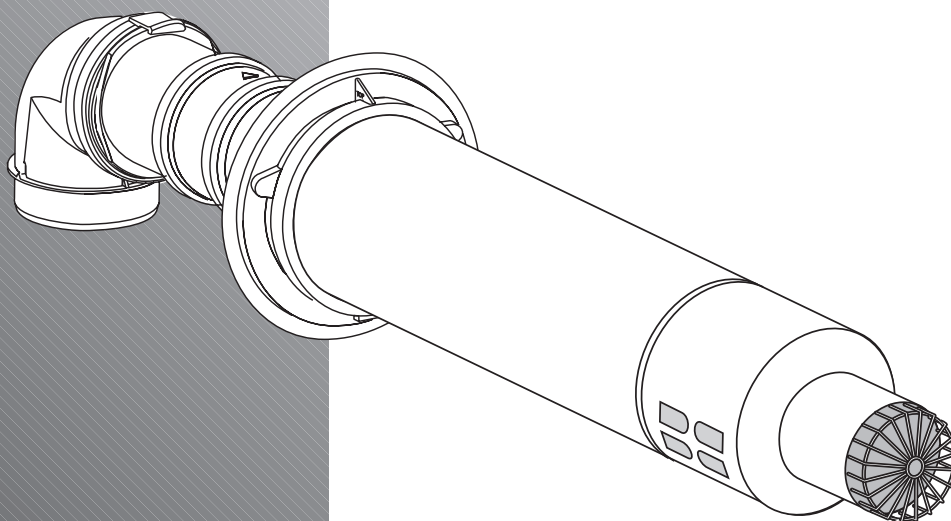
7 716 191 157 ROOM SEALED FLUE

80/125 HORIZONTAL FLUE

FOR USE WITH WORCESTER APPLIANCES:

Greenstar FS 30CDi Regular, Greenstar FS 42CDi Regular, Greenstar Highflow 440CDi, Greenstar Highflow 550CDi.

DO NOT USE WITH ANY OTHER MODEL OF APPLIANCE.



UK/IE

benchmark

 **WORCESTER**
Bosch Group

CONTACT INFORMATION

WORCESTER, BOSCH GROUP:

MAIN RECEPTION: 01905 754624
MAIN FAX: 01905 754619
TECHNICAL SUPPORT: 08705 266241
SERVICE: 08457 256206
SPARES: 01905 752571
LITERATURE: 01905 752556
TRAINING: 01905 752526
SALES: 01905 752640
WEBSITE: www.worcester-bosch.co.uk

INSTALLATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION.

THESE INSTRUCTIONS ARE APPLICABLE ONLY TO THE PRODUCT(S) STATED ON THE FRONT COVER OF THIS MANUAL.

THE INSTRUCTIONS APPLY IN THE UK & EIRE ONLY AND MUST BE FOLLOWED EXCEPT FOR ANY STATUTORY OBLIGATION.

THIS PRODUCT MUST BE INSTALLED BY A CORGI REGISTERED ENGINEER. FAILURE TO INSTALL CORRECTLY COULD LEAD TO PROSECUTION.

IF YOU ARE IN ANY DOUBT CONTACT WORCESTER TECHNICAL SUPPORT.

DISTANCE LEARNING AND TRAINING COURSES ARE AVAILABLE FROM WORCESTER, BOSCH GROUP.

PLEASE LEAVE THESE INSTRUCTIONS WITH THE USER OR AT THE GAS METER AFTER INSTALLATION OR SERVICING.

ABBREVIATIONS:

Ø Diameter
RS Room sealed flue

SYMBOLS:



Cutting required



No cutting required

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SAFETY &
REGULATIONS

PRODUCT
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PRE-
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SAFETY PRECAUTIONS

IF YOU SMELL GAS:

- X** DON'T SMOKE OR STRIKE MATCHES.
- X** DON'T TURN ELECTRICAL SWITCHES ON OR OFF.
- ✓** DO PUT OUT NAKED FLAMES.
- ✓** DO OPEN DOORS AND WINDOWS.
- ✓** DO KEEP PEOPLE AWAY FROM THE AREA AFFECTED.
- ✓** DO TURN OFF THE CONTROL VALVE AT THE METER.
- ✓** DO CALL YOUR GAS COMPANY.

BENCHMARK: *benchmark*

A Benchmark check list is provided by the manufacturer at the rear of the appliance instruction manual for the installer to complete, including their CORGI registration number, to confirm that the boiler has been installed, commissioned and serviced according to the manufacturer's instructions.

IMPORTANT: The completed Benchmark check list will be required in the event of any warranty work and may be required by the local Building Control Inspector.

FITTING & MODIFICATIONS:

Fitting the flue system 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 flue or associated components could invalidate the warranty. The manufacturer accepts no liability arising from any such actions, excluding statutory rights.

- Flue terminals must be positioned to avoid combustion products entering into buildings.
- The flue must be fitted and terminated in accordance with the recommendations of BS5440 : Part 1.
- The flue must not cause an obstruction.
- Discharge from the flue outlet must not be a nuisance.
- Flue gases have a tendency to plume and in certain weather conditions a white plume of condensation will be discharged from the flue outlet which could be regarded as a nuisance.
- There should be no restriction preventing the clearance of combustion products from the terminal.
- The air inlet/outlet duct and the terminal of the boiler must not be closer than 25mm to any combustible material. Detailed recommendations on protection of combustible materials are given in BS 5440:1
- A protective terminal guard must be fitted if the terminal is 2m or less above a surface where people have access. The guard must be spaced equally (minimum 50mm) around the flue and fixed to the wall with plated screws.

SERVICING:

The appliance and flue system should be regularly serviced by a competent, qualified engineer (such as British Gas or other CORGI registered personnel) using approved spares, to help maintain the economy, safety and reliability of the appliance.

INSTALLATION REGULATIONS

Failure to install correctly could lead to prosecution.

The flue system and associated components must be installed only by a competent person in accordance with, and comply to, the current: Gas Safety (Installation & Use) Regulations 1998, Building Regulations, Building Standards (Scotland) (Consolidation), Building Regulations (Northern Ireland), IS 813 (Eire) and any other local requirements.

The relevant Standards should be followed, including:

BS5440:1 : Flues and ventilation for gas appliances of rated heating not exceeding 70kW (net) : Flues

BS5440:2 : Flues and ventilation for gas appliances of rated heating not exceeding 70kW (net) : Air Supply

BS6798 : Installation of gas fired boilers of rated input up to 70kW (net)

Where no specific instruction is given, reference should be made to the relevant codes of Practice.

Timber framed buildings:

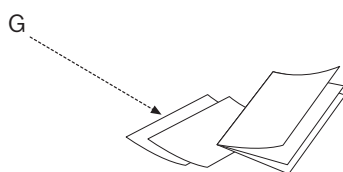
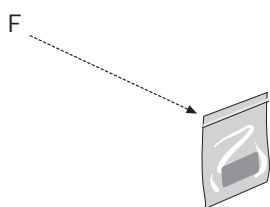
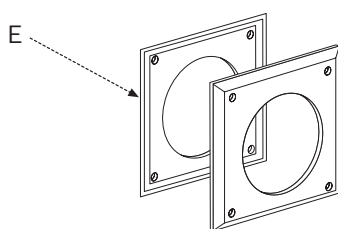
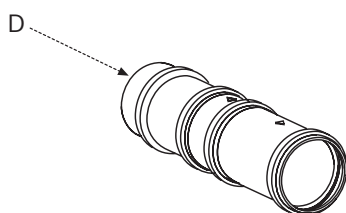
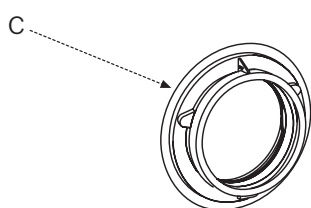
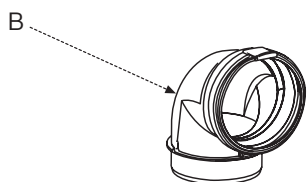
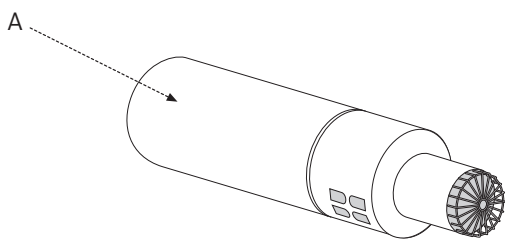
Where the flue system is to be fitted into a timber framed building the guidelines laid down in BS5440: Part 1 and IGE "Gas Installations in Timber Frame Buildings" should be adhered to.

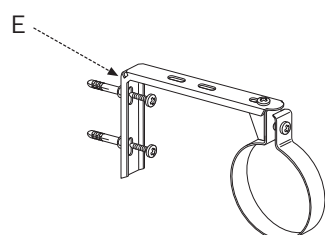
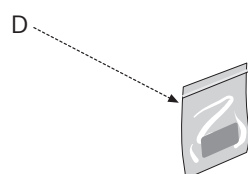
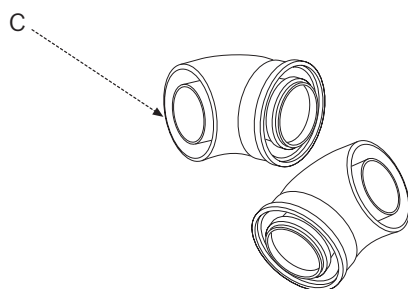
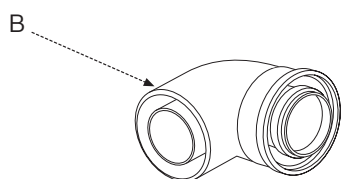
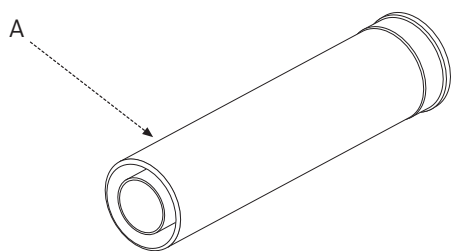
FLUE COMPONENTS

Ø80/125 FLUE KIT:

Part Number: 7 716 191 157 including:

- A FLUE ASSEMBLY:
- B 93° ELBOW.
- C FLUE CONNECTOR.
- D FLUE ADAPTOR.
- E WALL COVER PLATES.
- F ACCESSORY PACK.
- G INSTALLATION INSTRUCTIONS & CHECK LIST.





FLUE EXTENSION COMPONENTS

Ø80/125 990mm EXTENSION KIT:

Part Number: 7 719 001 892 including:

- A EXTENSION TUBE ASSEMBLY
- D GREASE PACK, CONTAINING 2 No.8 SCREWS & GREASE SACHET
- E WALL BRACKET, SWIVEL BRACKET, CLAMP, FIXING SCREWS AND WALL PLUGS

Ø80/125 90° BEND:

Part Number: 7 719 001 891 including:

- B 90° BEND ASSEMBLY
- D GREASE PACK, CONTAINING 2 No.8 SCREWS & GREASE SACHET

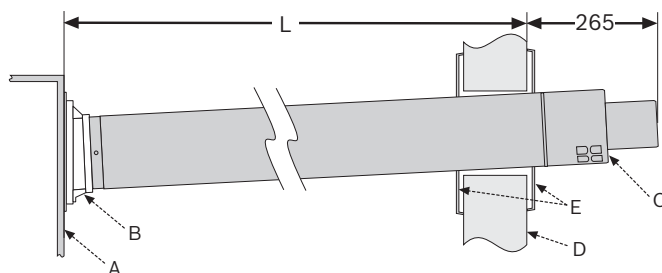
Ø80/125 45° BEND:

Part Number: 7 719 001 899 including:

- C 45° BEND x2
- D GREASE PACK, CONTAINING 2 No.8 SCREWS & GREASE SACHET

1

- A - Boiler inner case.
- B - Flue connector.
- C - Flue terminal.
- D - Outside wall.
- E - Wall cover plates.


**EFFECTIVE MAXIMUM STRAIGHT FLUE
LENGTHS for Ø80/125 flue:**

Appliance description	L max.
Greenstar FS 30CDi Regular	13000mm
Greenstar FS 42CDi Regular	13000mm
Greenstar Highflow 440CDi	13000mm
Greenstar Highflow 550CDi	13000mm

FLUE LENGTHS

The maximum effective straight flue lengths (L) are stated opposite for the relevant appliance and must not be exceeded.

- 1 ▶ Measure the total straight length (L) from the boiler inner case (A) along the flue route to the outside wall (D).

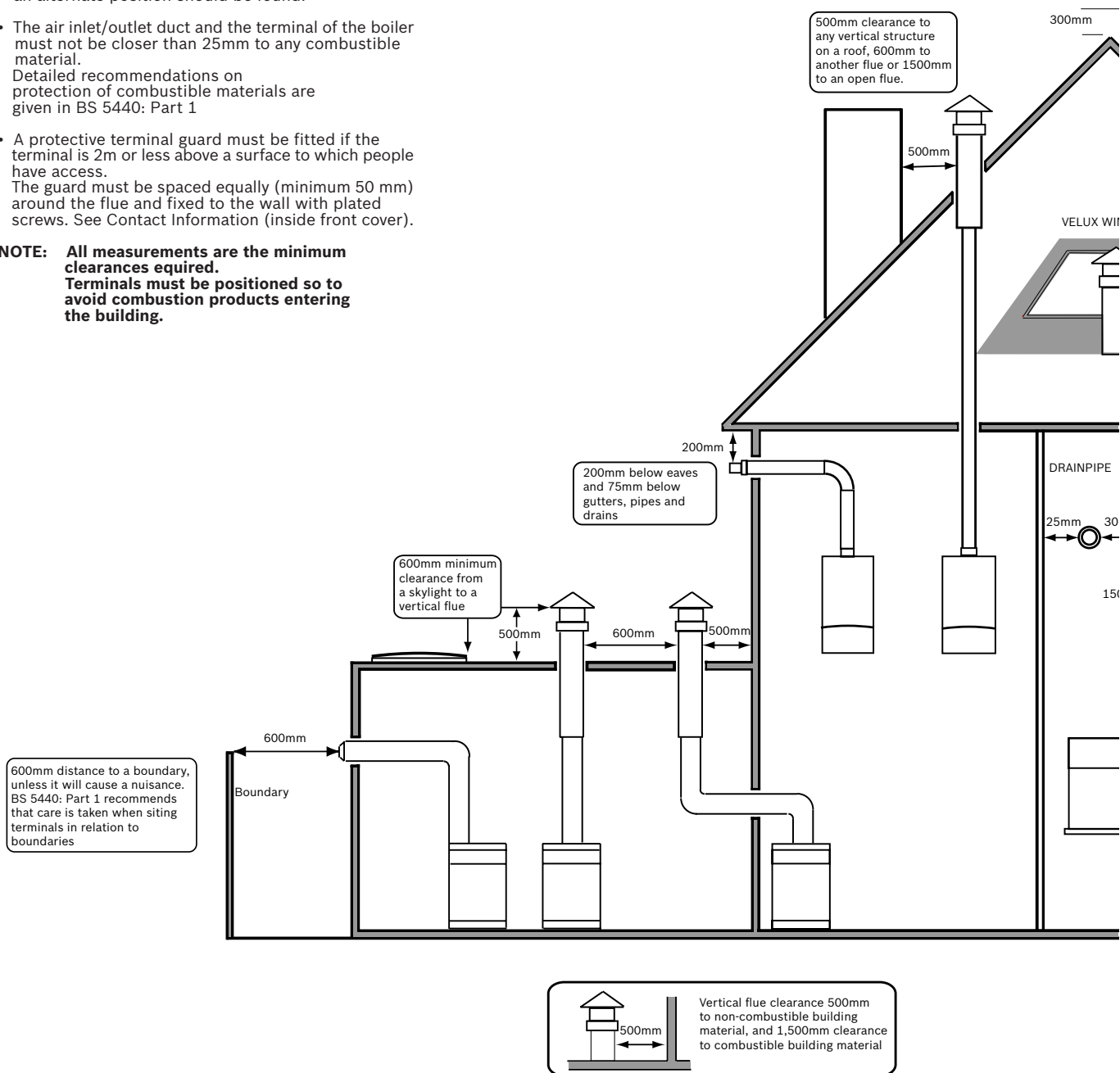
Note, the terminal end projects beyond the outside wall by the distance shown opposite.

- ▶ Add the following to length (L) to check the maximum flue length is not exceeded:

- ▶ 2000mm for each extra 90° bend.
- ▶ 1000mm for each extra 45° bend.

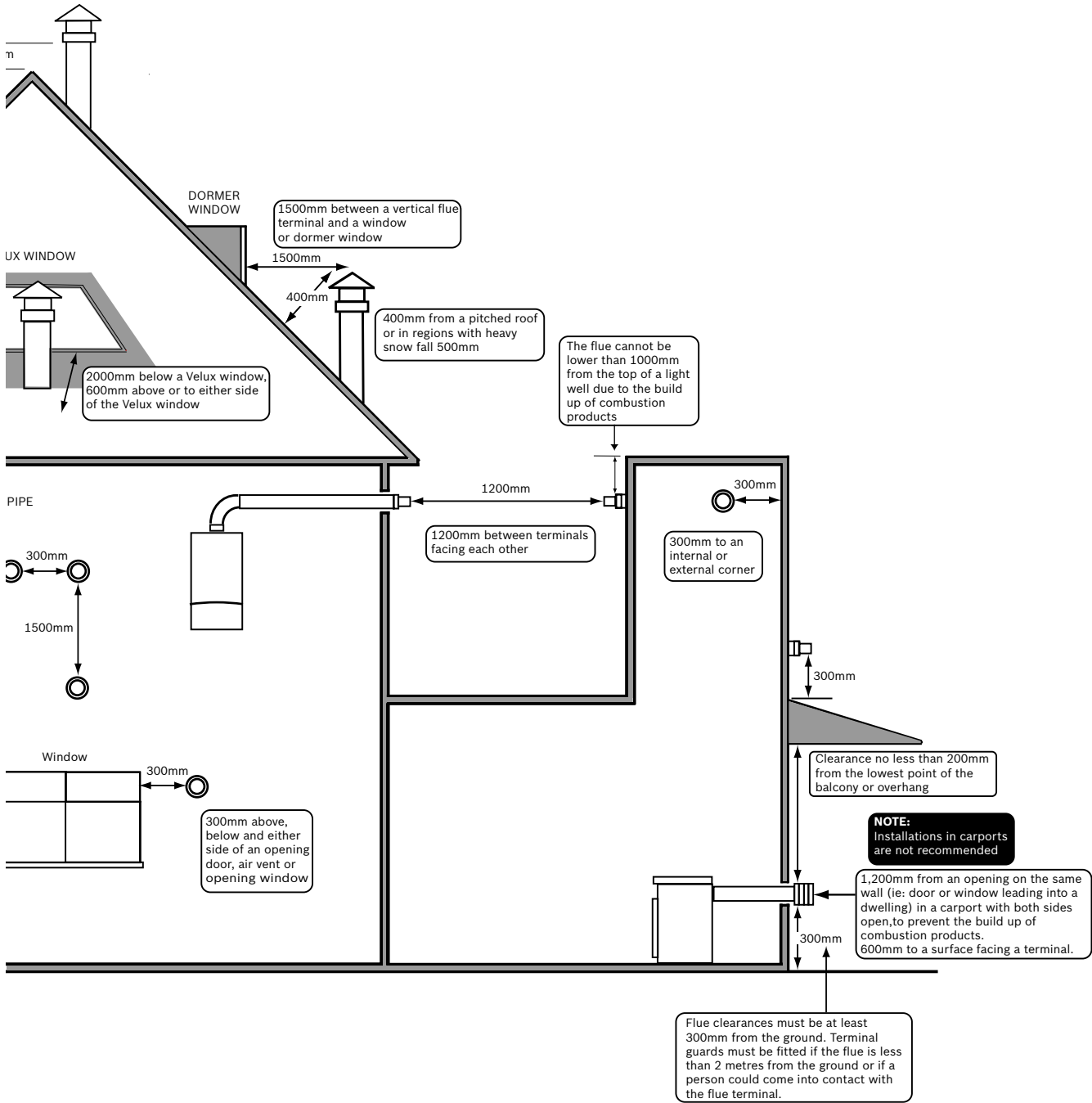
- The flue must be fitted and terminated in accordance with the recommendations of BS5440 : Part 1.
- The flue must not cause an obstruction.
- Discharge and any noise from the flue outlet must not cause a nuisance.
- Flue gases have a tendency to plume and in certain weather conditions a white plume of condensation will be discharged from the flue outlet. Where this could be a nuisance, for example, near security lighting, an alternate position should be found.
- The air inlet/outlet duct and the terminal of the boiler must not be closer than 25mm to any combustible material.
Detailed recommendations on protection of combustible materials are given in BS 5440: Part 1
- A protective terminal guard must be fitted if the terminal is 2m or less above a surface to which people have access.
The guard must be spaced equally (minimum 50 mm) around the flue and fixed to the wall with plated screws. See Contact Information (inside front cover).

NOTE: All measurements are the minimum clearances required. Terminals must be positioned so to avoid combustion products entering the building.

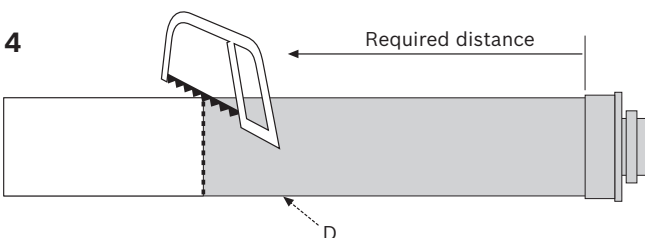
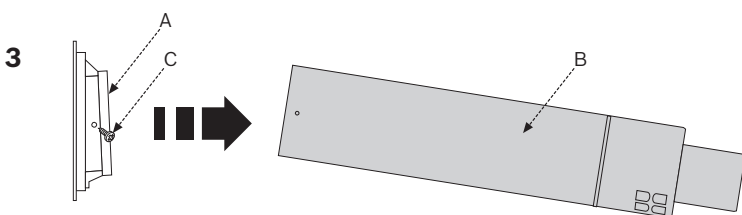
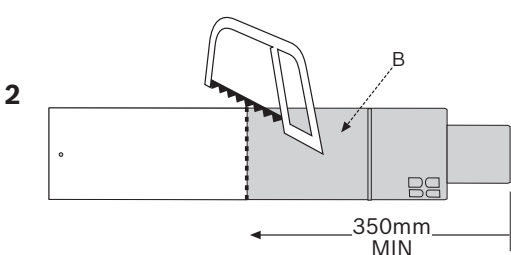
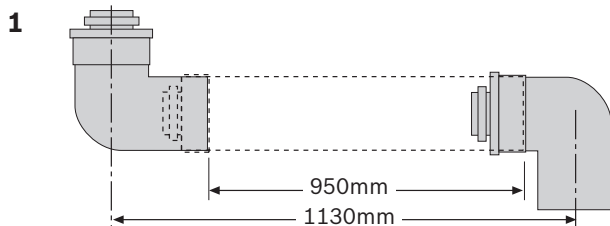


TERMINAL OUTLET POSITIONS

The flue terminal outlet position must follow those stated in the relevant appliance Instruction Manual.



PRE-
INSTALLATION



FLUE MEASURING & CUTTING

Flue bends:

- 1 ▶ Connecting flue bends increases the effective pipe length and an allowance must be made for the different connectors. The example opposite shows dimensions for two 90° bends connected to a standard flue extension.

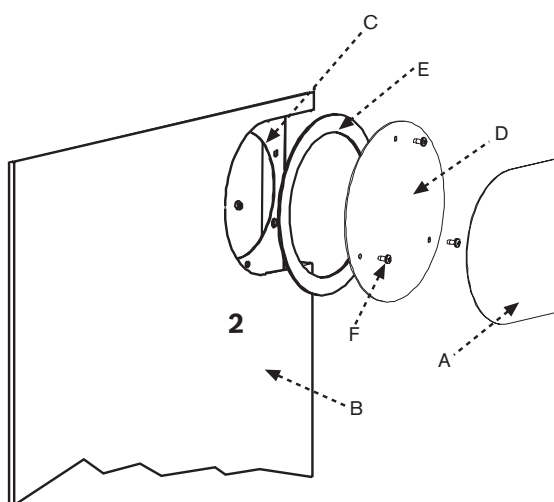
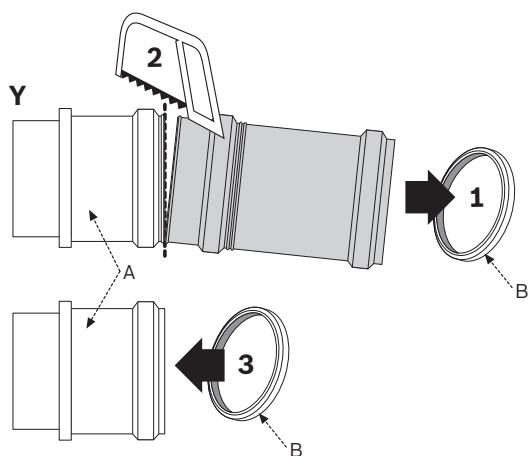
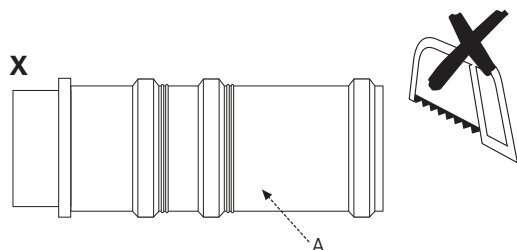
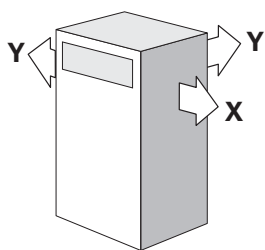
Reducing the terminal length:

- 2 ▶ Mark the length required for the terminal (B) as shown (min. 350mm) and cut square, taking care not to damage the tubes.
 - ▶ Remove any burrs and chamfer the outer edge of the pipe to assist ease of connection and prevent seal damage.
- 3 ▶ Secure the connector (A) to the outer flue tube (B) using two screws (C).

Reducing extended flue tube length:

Only cut straight extension tubes:

- 4 ▶ Mark flue extension (D) to the required distance measuring from the socket end and cut square taking care not to damage the tubes.
 - ▶ Remove any burrs and chamfer the outer edge of the tubes to assist ease of connection and prevent seal damage.



FLUE MEASURING & CUTTING

FLUE OUTLET X:

- 1 ▶ Do not reduce the length of adaptor (A) when using for a right-hand flue outlet, shown as 'X' opposite.

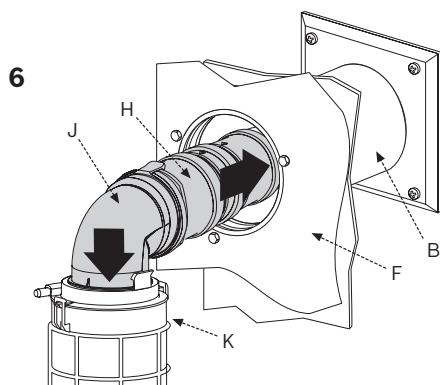
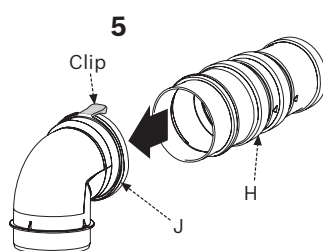
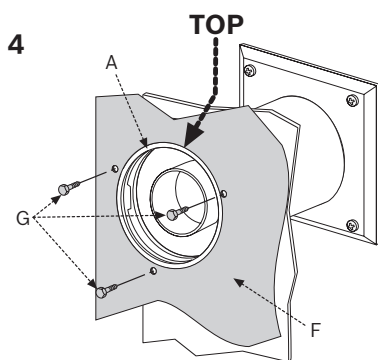
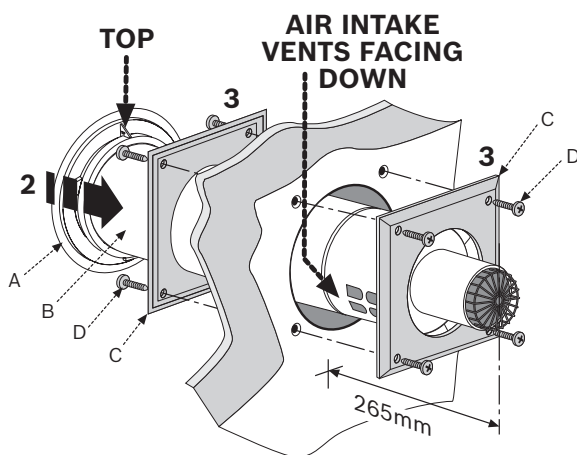
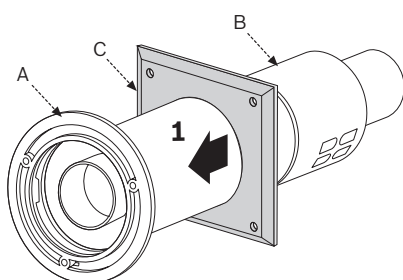
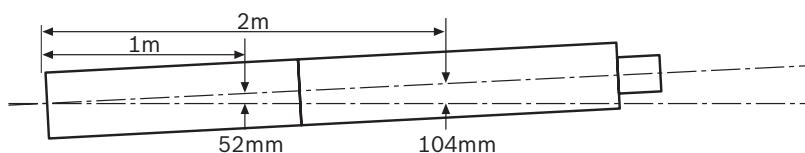
FLUE OUTLET Y:

- 1 ▶ Remove seal (B) from flue adaptor (A).
- 2 ▶ Cut square to mark, as shown, deburr and clean.
- 3 ▶ Replace seal (B).

CONVERT FROM REAR FLUE OUTLET:

The boiler is supplied ready to fit a rear flue outlet. To flue from the sides or top of the boiler, follow the procedure below:

- 1 ▶ Remove the required side or top 'knock-out' panel (A) from the outer casing (B).
- 2 ▶ Remove the flue outlet blanking plate comprising: cover (D) and gasket (E) from the inner casing (C) by removing the three screws (F).
- 3 ▶ Refit the outlet blanking plate over the rear flue outlet.



STANDARD FLUE INSTALLATION

NOTE: to ease assembly of the flue components, grease seals lightly with the solvent-free grease supplied.

Check all the seals are seated properly in the grooves provided and are in good condition.

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

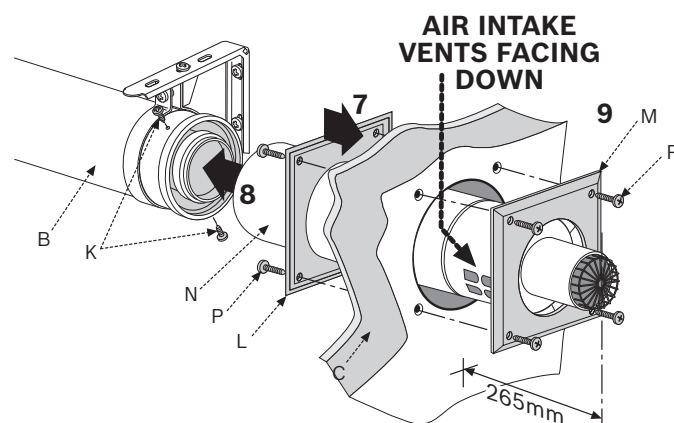
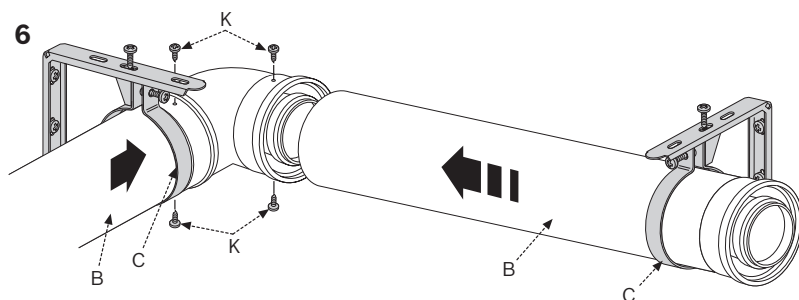
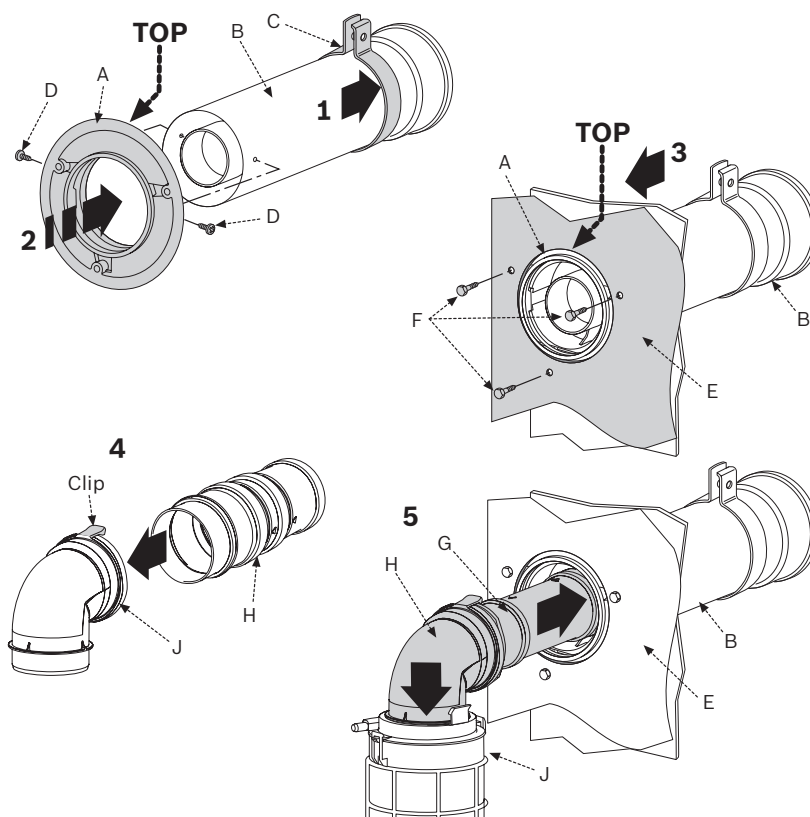
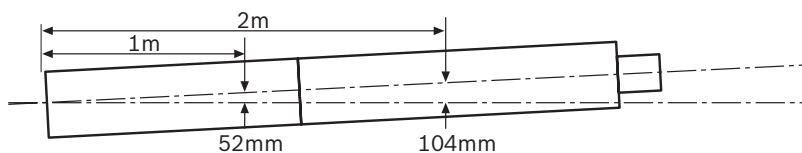
All horizontal flue sections must rise by at least 52mm for each metre away from the boiler to ensure that condensate flows back into the boiler for safe discharge via the condensate waste pipe.

Installing the standard flue:

- 1 ▶ Slide the inner wall cover plate (C) onto the terminal (B) as shown.
- 2 ▶ Position terminal (B) through the flue opening in the wall to the outside of the building by the distance shown.

▶ The flue terminal (B) MUST be fitted with 'TOP' label on connector (A) uppermost and with the air intake vents of terminal (B) facing downwards.

- 3 ▶ Mark and drill fixing holes for the two cover plates (C).
▶ Fix cover plates (C) using wall plugs and screws (D).
- 4 ▶ Roll the boiler into position on the floor mounting frame.
▶ Position connector (A) with 'TOP' uppermost to align with the three holes in the boiler inner casing (F).
▶ Secure using three hexagonal bolts (G).
- 5 ▶ Push-fit adaptor (H) into elbow (J) until secured by the clip.
- 6 ▶ Slide adaptor (H) into the inner flue tube of terminal (B) and push elbow (J) into flue outlet (K) until secured by the retaining clips ensuring a good seal is made.



EXTENDED FLUE INSTALLATION

NOTE: to ease assembly of the flue components, grease seals lightly with the solvent-free grease supplied.

Check all the seals are seated properly in the grooves provided and are in good condition.

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

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

Installing an extended flue:

- 1 ▶ Slide a support clamp (C) onto a flue extension (B) as shown.
- 2 ▶ Secure connector (A) to flue extension (B) using two screws (D).
- 3 ▶ Support the weight of flue extension (B) and position connector (A) with 'TOP' uppermost to align with the three holes in the boiler inner casing (E).
 - ▶ Secure using three hexagonal bolts (F).
- 4 ▶ Push-fit adaptor (H) into elbow (J) until secured by the clip.
- 5 ▶ Push-fit the adaptor (G) into the inner flue tube of flue extension (B) and push elbow (H) into flue outlet (J) until secured by the retaining clips.
- 6 ▶ Slide a support clamp (C) onto additional flue extensions (B).
 - ▶ Working from the boiler, fit the extension/s with support clamp/s as required, to take the weight of the flue.
 - ▶ Drill two holes (180° apart if possible) through the outer flue tube of each extension taking care NOT to drill the inner flue tube and secure with screws (K) as shown.
- 7 ▶ Slide cover plate (L) onto terminal (N).
 - ▶ Position terminal assembly (N) through the flue opening in the wall to the outside of the building by the distance shown.
- 8 ▶ Fit terminal assembly (N) into the last extension (B).

▶ The flue terminal (N) MUST be fitted with the air intake vents facing downwards.

- ▶ Drill the outer flue tubes and fix with screws (K).
- 9 ▶ Mark and drill fixing holes for the two cover plates (L, M).
 - ▶ Fix cover plates (L, M) using wall plugs and screws (P).

SERVICING & SPARE PARTS

SERVICING & MAINTENANCE:

An annual visual check of the flue system must be observed.

SPARE PARTS:

Ø80/125 horizontal flue:

1 Flue Connector:

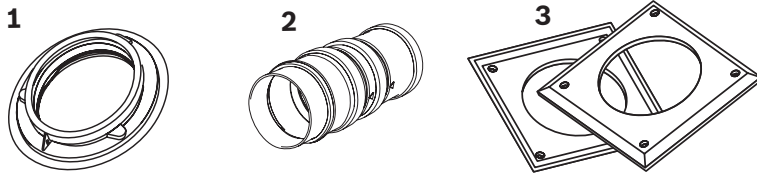
Part No. ~~8-718-680-948-0~~ 8 718 682 378 0

2 Flue adaptor:

Part No. ~~8-718-680-963-0~~ 8 718 682 380 0

3 Wall cover plates:

Part No. ~~8-718-006-600-0~~ 8 718 682 370 0



Dedicated to heating comfort

Worcester, Bosch Group

Cotswold Way, Warndon, Worcester WR4 9SW

Tel. 01905 754624 Fax. 01905 754619

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worcester-bosch.co.uk

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