



PLUME KIT

EVOMAX 2

30 40 60 80 100 120 150

30P 40P 60P 80P 100P 120P

When replacing any part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Ideal.

For the very latest copy of literature for specification and maintenance practices visit our website www.idealcommercialboilers.com where you can download the relevant information in PDF format.



INTRODUCTION

CONTENTS

Introduction	2
Unpacking	3
Plume Kit Flue Outlet Terminal Positioning	4
Fluing Options	5-6
Kit Fitting	7

1 INTRODUCTION

This kit is suitable only for the following boilers;

Evomax 2 Range of boilers

Destination countries GB & IE

Evomax 2 Boiler Size	G.C.Number
Evomax 2 30	41-796-26
Evomax 2 40	41-796-27
Evomax 2 60	41-796-28
Evomax 2 80	41-796-29
Evomax 2 100	41-796-30
Evomax 2 120	41-796-31
Evomax 2 150	41-796-32
Evomax 2 30P	41-796-33
Evomax 2 40P	41-796-34
Evomax 2 60P	41-796-35
Evomax 2 80P	41-796-36
Evomax 2 100P	41-796-37
Evomax 2 120P	41-796-38

These instructions must be read in conjunction with the installation and servicing instructions supplied with the boiler.

This kit allows the boilers wall mounted horizontal flue to be extended vertically on the outside wall, this enables the flue products to be emitted at a higher level where plumbing is not detrimental.

NOTE:

ALWAYS CHECK FLUE INTEGRITY AFTER INSTALLATION

2 FLUING PACKAGED OPTIONS

High Level Flue Kit – Packaged Options		Compatible with Evomax 2 30, 30P, 40, 40P, 60, 60P, 80, 80P	Compatible with Evomax 2 100, 100P, 120, 120P, 150
Ideal Part Code	Description		
220922	Plume Kit 80 /125	✓	
213274	Plume Kit 1m extension 80/125	✓	
213272	Plume kit 90 deg elbow 80/125	✓	
213273	Plume kit 45 deg elbows 80/125	✓	
220923	Plume kit 100/150	*	✓
213277	Plume kit 1m extension 100/150	*	✓
213275	Plume kit 90 deg elbow 100/150	*	✓
213276	Plume kit 45 degree elbows (pair) 100/150	*	✓
220924	Plume kit 100/150 with 80/125 adapter	✓	

*Note: PLUME TERMINAL KIT 80/125 with 80/125 adapter (Part No.222133) can be used.

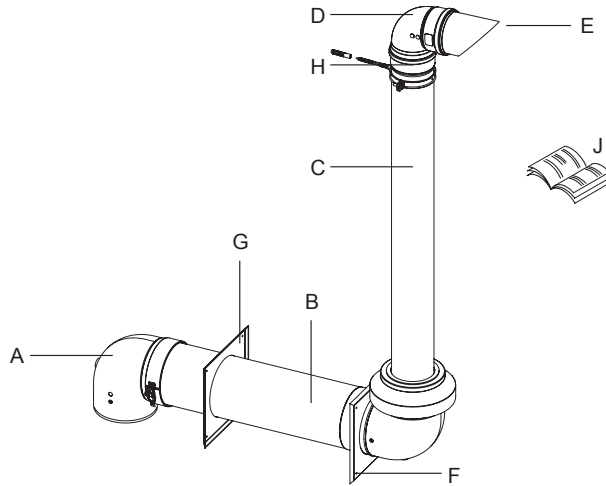
NOTE TO THE INSTALLER: LEAVE THESE INSTRUCTIONS ADJACENT TO THE GAS METER.

GENERAL

3 UNPACKING

Unpack the kit and check the contents:

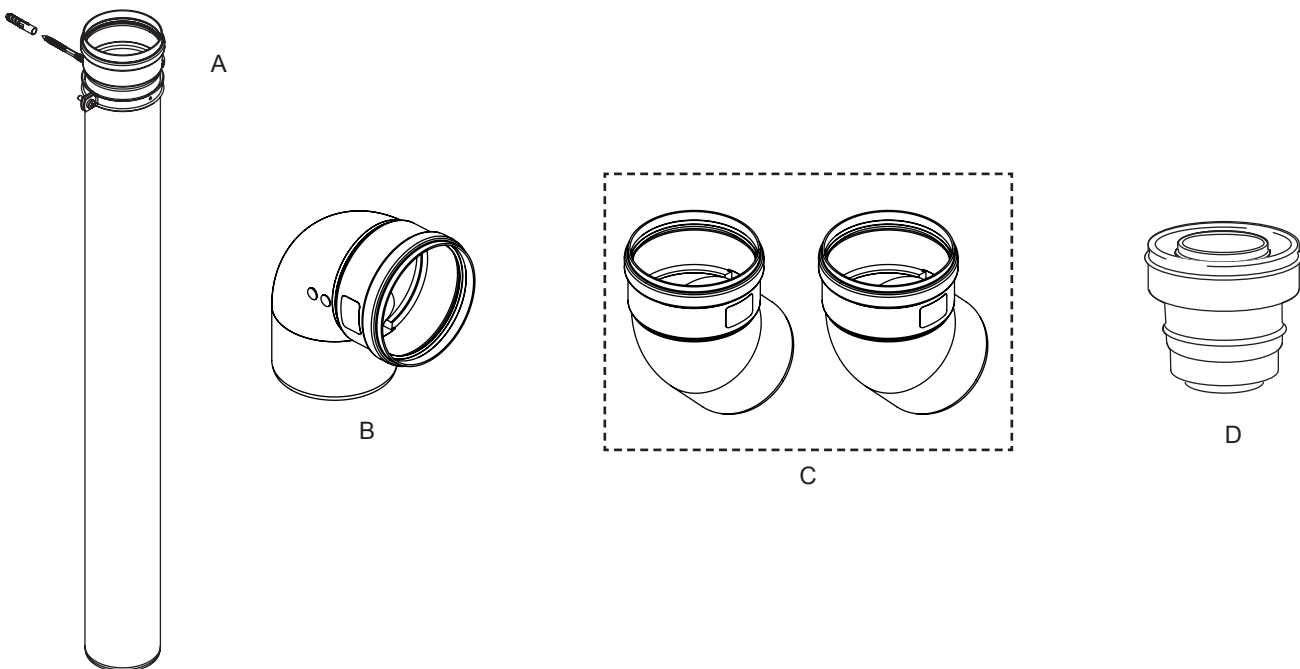
- A Turret elbow
- B Flue terminal with rain cowl & air terminal assembly
- C 1 Metre extension tube
- D 90 degree elbow
- E Flue terminal end
- F External wall plate
- G Internal wall plate
- H Wall bracket
- J Product literature



4 OPTIONAL EXTRAS

High Level Flue Kit – Packaged Options			Compatible with Evomax 2 30, 30P, 40, 40P, 60, 60P, 80, 80P	Compatible with Evomax 2 100, 100P, 120, 120P, 150
UIN	Description	Drawing Identifier		
213274	Plume Kit 1m extension 80/125	A	✓	
213272	Plume kit 90 deg elbow 80/125	B	✓	
213273	Plume kit 45 deg elbows (pair) 80/125	C	✓	
213277	Plume kit 1m extension 100/150	A	*	✓
213275	Plume kit 90 deg elbow 100/150	B	*	✓
213276	Plume kit 45 degree elbows (pair) 100/150	C	*	✓
222133	Plume kit 100/150 with 80/125 adapter	D	✓	

* **Note:** PLUME KIT 100/150 including adapter to fit 80/125 (Part No.220924) can be used.



GENERAL

5 PLUME KIT FLUE OUTLET TERMINAL POSITIONING

IMPORTANT: For stated clearances for the flue outlet terminal in relation to openings, air inlet etc., refer to the Flue Installation section of the boiler Installation Instructions.

Due to the high efficiency of these boilers pluming will occur. For this reason terminal positions which could cause problems should where possible be avoided.

Particular care should be taken in the case of large multiple boiler installations and complying with the requirements of the clean air act.

The minimum siting dimensions for the terminal positions, A, B, C stated can be applied when a high level flue outlet kit is fitted. The information below is extracted from BS. 5440 Pt. 1 and is for boilers with heat inputs not exceeding 70 kW nett, and the latest Building Regulations Part J. Detailed reference should still be made to these standards. In IE refer to I.S. 813:2002.

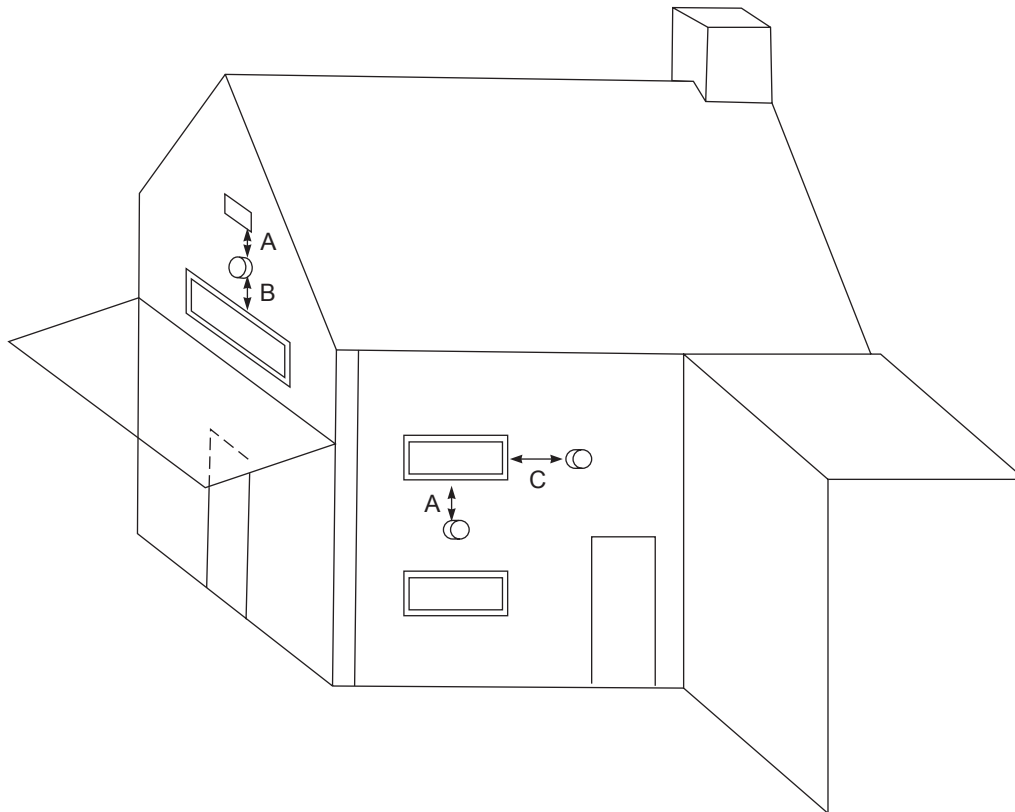
MINIMUM SITING DIMENSIONS FOR FANNED FLUE TERMINALS

Minimum Siting For Air Inlet

A.	Directly below an opening, air brick, opening windows etc.	150mm
B.	Directly above an opening, air brick, opening windows etc.	300mm
C.	Horizontally to an opening air brick, opening windows etc.	150mm

Minimum Siting For Flue Outlet

A.	Directly below an opening, air brick, opening windows (Horizontal Discharge).	300 mm
B.	Directly above an opening, air brick, opening windows (Horizontal Discharge).	300 mm
C.	Horizontally to an opening air brick, opening windows etc.	300 mm



Note: The flue outlet termination should not be installed less than two metres above ground level.

HEAT INPUTS IN EXCESS OF 70KW NETT

For boiler installations with total heat inputs in excess of 70kW nett, reference should be made to BS6644 and IGEM/UP/10. IN IE refer to I.S.820.2000

6 FLUING OPTIONS

The maximum permissible length of the external flue tube is ten metres. (See dimension Y below). This will reduce in proportion to the internal flue duct length (dimension X) and internal and external elbows fitted.

Size the internal and external ductwork lengths in accordance Table One and Table Two for 80/125mm and 100/150mm systems respectively. If using optional 45 and 90 degree elbows the maximum permissible flue length 'X' must be reduced by the equivalent values depicted in Table 3.

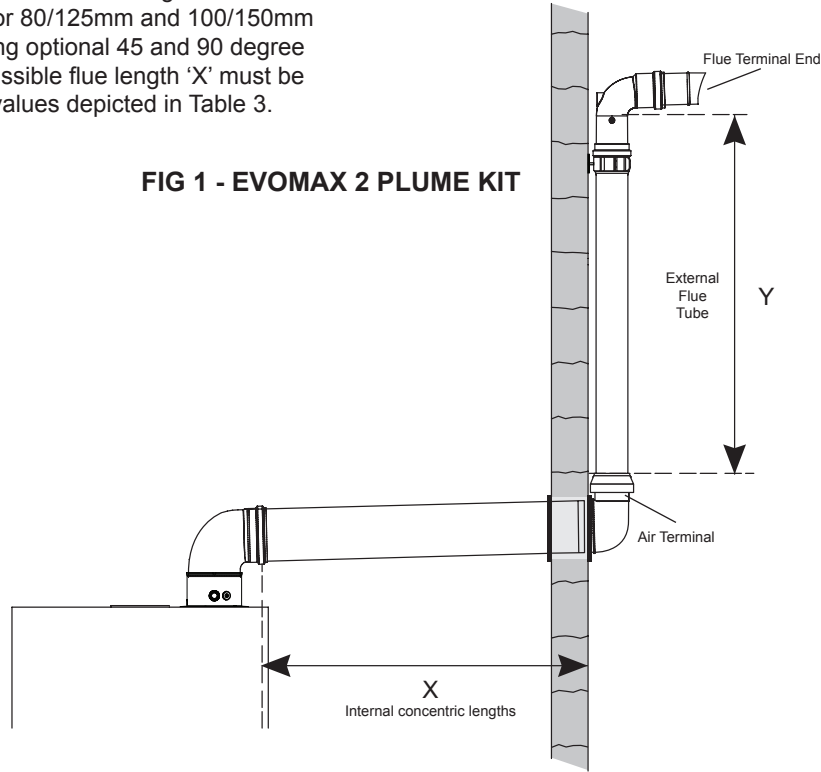


FIG 1 - EVOMAX 2 PLUME KIT

Table One 80 / 125 dia flue ~ Maximum permissible flue lengths (m)				
Evomax 2 Model	30/30P	40/40P	60/60P	80/80P
Y	X			
0.5	30.2	27.2	14.7	7.2
2.0	29.5	26.5	14.0	6.5
4.0	28.6	25.6	13.1	5.6
6.0	27.7	24.7	12.2	4.7
8.0	26.8	23.8	11.3	3.8
10.0	25.9	22.9	10.4	2.9

Table Two 100 / 150 dia flue ~ Maximum permissible flue lengths (m)					
Evomax 2 Model	60/60P	80/80P	100/100P	120/120P	150
Y	X				
0.5	25.0	15.0	7.0	6.0	3.0
2.0	24.6	14.6	6.6	5.6	2.6
4.0	24.0	14.0	6.0	5.0	2.0
6.0	23.5	13.5	5.5	4.5	1.5
8.0	22.9	12.9	4.9	3.9	0.9
10.0	22.4	12.4	4.4	3.4	0.4

ADDITIONAL PLUME KIT EXTENSION ELBOWS

For each additional elbow used the length 'X' must be reduced by the following values.

Table Three Equivalent resistance of elbows		
	45°	90°
80 dia flue	0.45m	1m
100 dia flue	0.6m	1m

Note: The flue terminal end elbow is exempt from the above need to account for elbow resistance.

EXTENSION OF INTERNAL CONCENTRIC SECTION – FITMENT OF ADDITIONAL CONCENTRIC ELBOWS

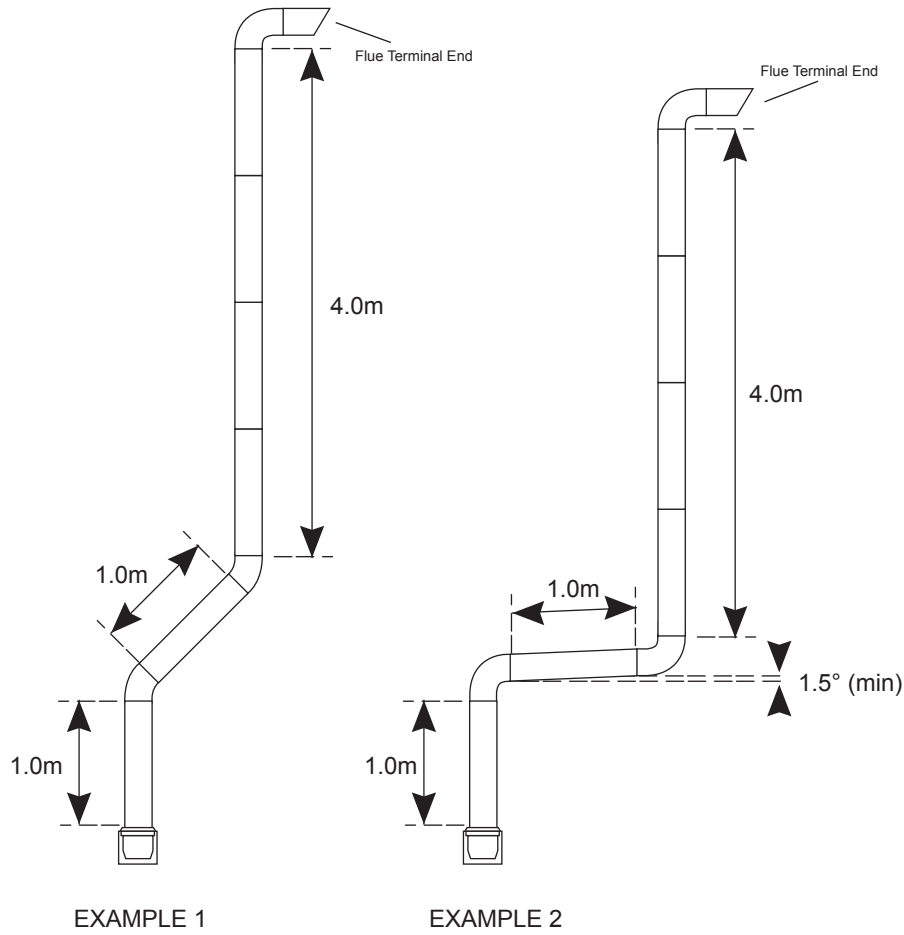
The internal concentric flue section can be extended within the constraints of parameter 'X' shown in Table One & Two for 80/125 & 100/150mm systems respectively.

When doing this, if internal concentric elbows are fitted, the equivalent resistance must be subtracted from the permissible length 'X' depicted in Figure One. The equivalent resistance for internal concentric elbows is provided in the main Evomax 2 Installation & Servicing booklet.

GENERAL

FLUING OPTIONS CONTINUED

**FIG 2 - FLUE SIZE CALCULATION EXAMPLES
(ASSUMES NO INTERNAL CONCENTRIC FLUE ELBOWS ARE USED)**



Flue calculation examples		
	Example 1	Example 2
Boiler	Evomax 2 100	Evomax 2 80
Flue Size	100/150	80/125
Y	6.0m	6.0m
X	$5.5\text{m} - (2 \times 0.6\text{m}) = 4.3\text{m}$	$4.7\text{m} - (2 \times 1.0\text{m}) = 2.7\text{m}$

Note: No allowance for the flue terminal end elbow is required.

7 KIT FITTING

Figure three depicts a typical installation schematic.

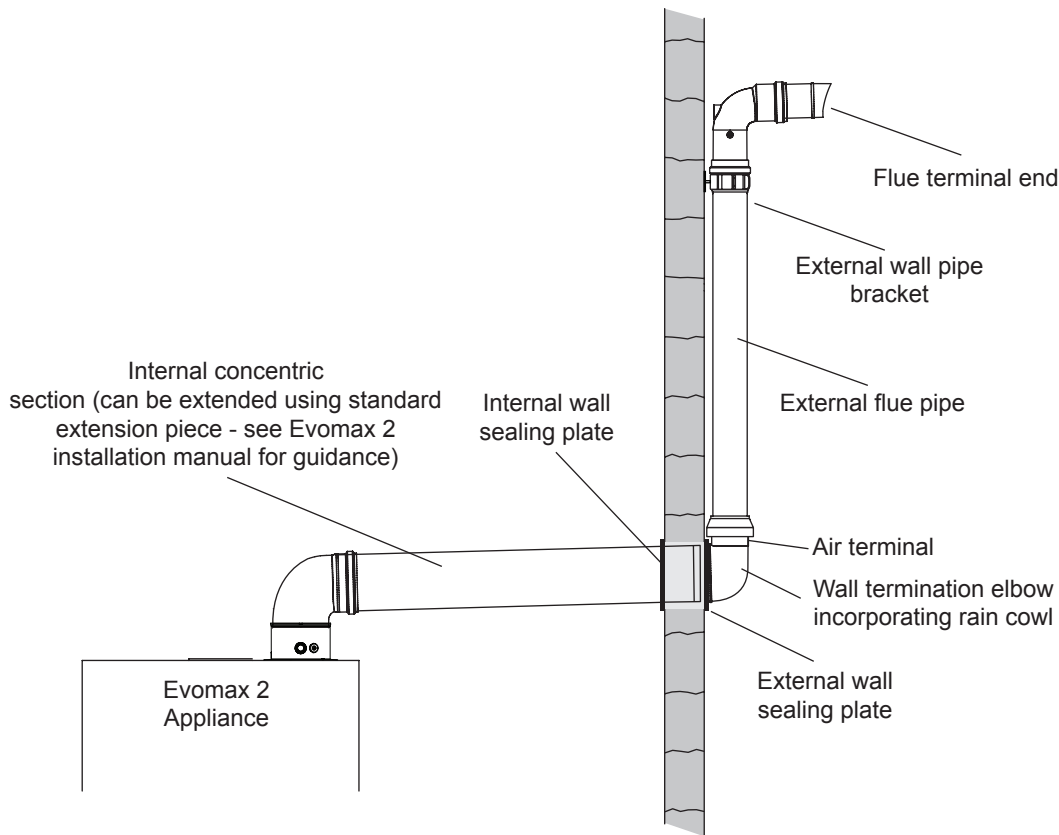
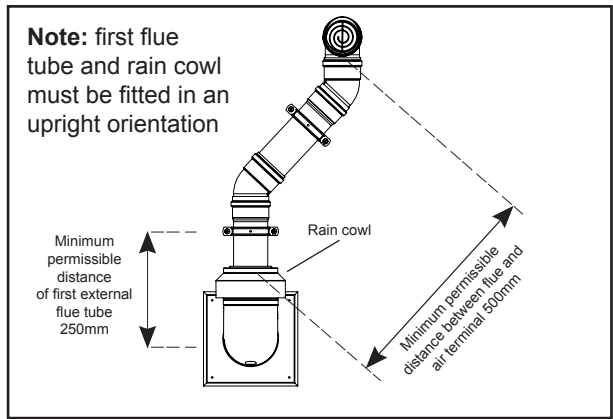
FIG 3 - SYSTEM INSTALLATION

Important Notes

(1.0) Ensure all horizontal flue runs incorporate a fall of no less than 1.5° back to the boiler to ensure flue condensate drains back through the boiler appliance.

(2.0) The flue and air terminals must be separated by a distance of at least 500mm.

(3.0) When assembling the flue components the seals should be lubricated with water. **Do not use other lubricants.**



Fitting Procedure

- Refer to the boiler installation manual to fit the horizontal concentric flue section. Take care to ensure a minimum fall back to the appliance of 1.5° to ensure flue condensate drains back through the boiler appliance. Use only water to lubricate flue pipe seals to aid assembly.
- Fit the wall termination elbow / internal and external wall sealing plates and rain cowl (UIN 220922 or 220923). When fitting the rain cowl assembly ensure all of the components, including the air grill, is pushed fully home into their mating parts.
- Fit the required extension pipes

90° elbows	UIN 213274 or 213277
45° elbows	UIN 213272 or 213275
	UIN 213273 or 213276
- Secure the external flue pipe to the wall using the brackets provided. For horizontal elements ensure a minimum fall back to the appliance of 1.5° to ensure flue condensate drains back through the boiler appliance.
- Fit the 90° flue exit elbow and the horizontal flue exit pipe (UIN 220922 or 220923).
- When installing the system, ensure the distance between the air inlet terminal (rain cowl air inlet) and flue exit pipe is a minimum of 500mm. This requirement must be complied with.
- Ensure all flue components are fully pushed home and are adequately supported.

Technical Training

The Ideal Technical Training Centre offers a series of first class training courses for domestic, commercial and industrial heating installers, engineers and system specifiers.

For details of courses please ring:..... 01482 498432



Ideal Boilers Ltd. pursues a policy of continuing improvement in the design and performance of its products.

The right is therefore reserved to vary specification without notice.

Ideal is a trademark of Ideal Boilers.

Registered Office

Ideal Boilers Ltd., PO Box 103, National Avenue, Kingston Upon Hull, HU5 4JN

Tel 01482 492251 Fax 01482 448858

Registration No. London 322 137

Ideal Technical Helpline: 01482 498376

www.idealcommercialboilers.com