

# + PLUME KIT

## EVOMAX

30 - 120

30P - 80P

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](http://www.idealcommercialboilers.com) where you can download the relevant information in PDF format.**

# INTRODUCTION

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## 1 INTRODUCTION

This kit is suitable only for the following boilers;  
 Evomax - 30, 40, 60, 80, 100,120, 30P, 40P, 60P, 80P  
 Destination countries GB & IE

**Note: This plume kit is not suitable for use on the Evomax 150 model variant.**

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.

Evomax Boiler Size	G.C.Number
Evomax 30	41-750-33A
Evomax 40	41-750-34A
Evomax 60	41-750-35A
Evomax 80	41-750-36A
Evomax 100	41-750-37A
Evomax 120	41-750-38A
Evomax 30P	41-750-40
Evomax 40P	41-750-41
Evomax 60P	41-750-42
Evomax 80P	41-750-43

**NOTE: ALWAYS CHECK FLUE INTEGRITY AFTER INSTALLATION**

## 2 FLUING PACKAGED OPTIONS

High Level Flue Kit – Packaged Options		Compatible with Evomax 30, 30P, 40, 40P, 60, 60P, 80, 80P	Compatible with Evomax 100, 120
Ideal Part Code	Description		
210684	Plume Kit 80 /125		
210685	Plume Kit 1m extension 80/125	✓	
210686	Plume kit 90 deg elbow 80/125	✓	
210687	Plume kit 45 deg elbows 80/125	✓	
210688	Plume kit 100/150	*	✓
210689	Plume kit 1m extension 100/150	*	✓
210690	Plume kit 90 deg elbow 100/150	*	✓
210691	Plume kit 45 degree elbows (pair) 100/150	*	✓

**\*Note:** The 100/150mm Plume Kit system can also be used on Evomax 80, 80P, 60 & 60P model variants if internal concentric wall horizontal flue adaptor is used, (Part No. 158660). See main Evomax Installation Literature for details.

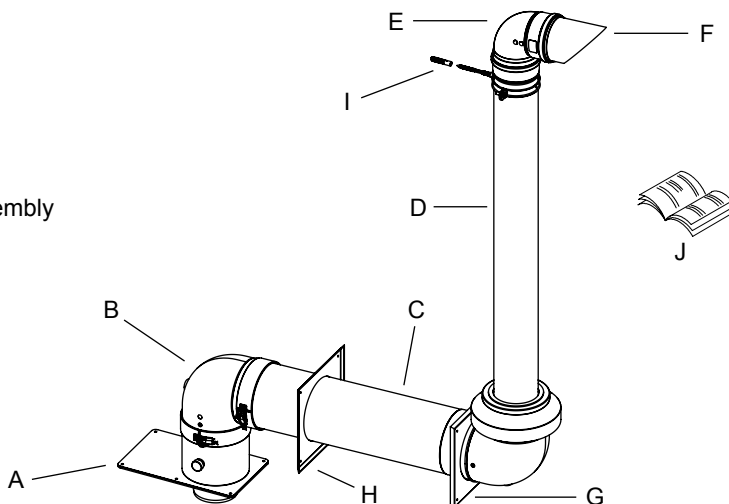
**NOTE TO THE INSTALLER: LEAVE THESE INSTRUCTIONS ADJACENT TO THE GAS METER.**

# GENERAL

## 3 UNPACKING

Unpack the kit and check the contents:

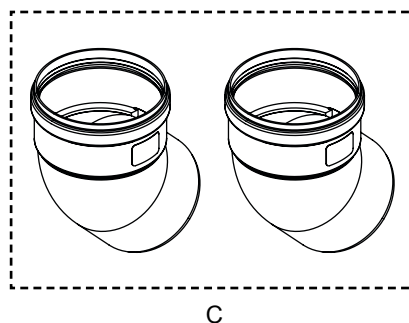
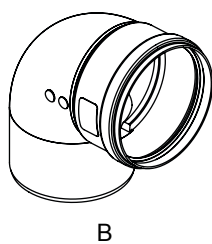
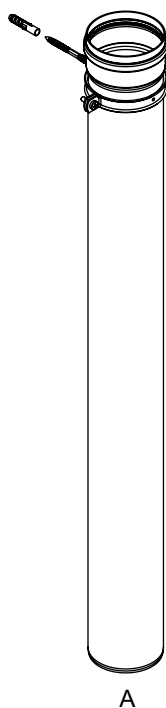
- A Boiler adaptor
- B Turret elbow
- C Flue terminal with rain cowl & air terminal assembly
- D 1 Metre extension tube
- E 90 degree elbow
- F Flue terminal end
- G External wall plate
- H Internal wall plate
- I Wall bracket
- J Product literature



## 4 OPTIONAL EXTRAS

High Level Flue Kit – Packaged Options			Compatible with Evomax 30, 30P, 40, 40P, 60, 60P, 80, 80P	Compatible with Evomax 100, 120
UIN	Description	Drawing Identifier		
210685	Plume Kit 1m extension 80/125	A	✓	
210686	Plume kit 90 deg elbow 80/125	B	✓	
210687	Plume kit 45 deg elbows (pair) 80/125	C	✓	
210689	Plume kit 1m extension 100/150	A	*	✓
210690	Plume kit 90 deg elbow 100/150	B	*	✓
210691	Plume kit 45 degree elbows (pair) 100/150	C	*	✓

\* **Note:** The 100/150mm Plume Kit system can also be used on Evomax 80, 80P, 60 & 60P model variants if internal concentric wall horizontal flue adaptor is used, (Part No. 158660). See main Evomax Installation Literature for details.



# 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.

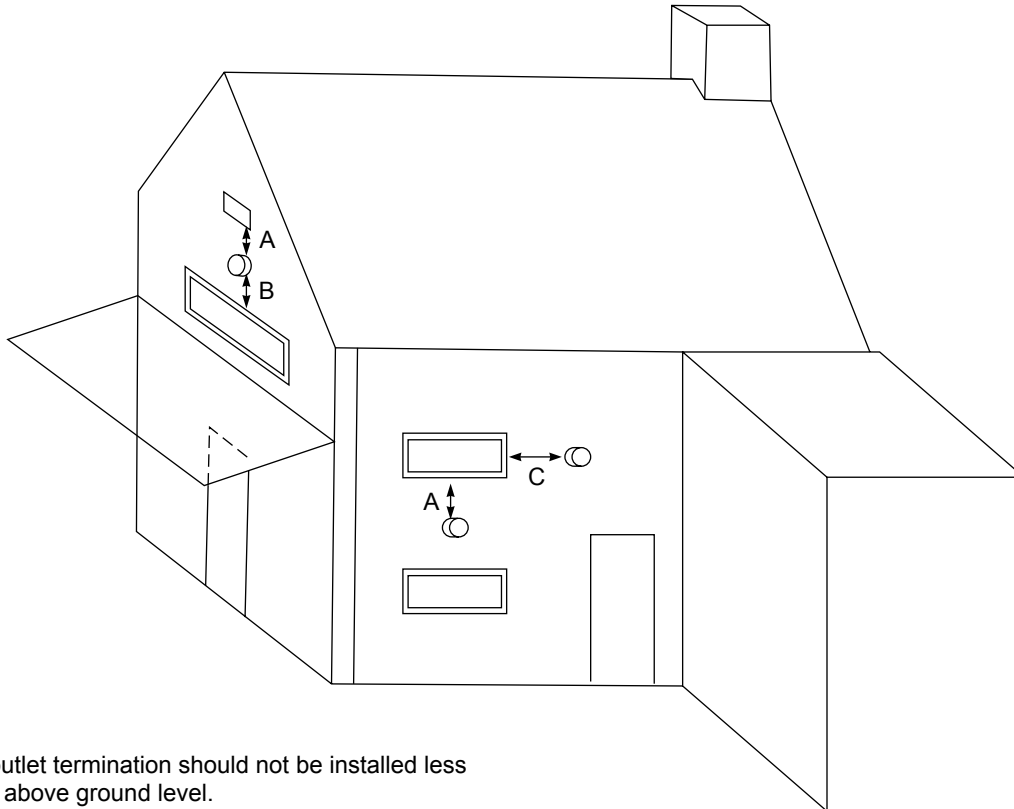
### MINIMUM SITING DIMENSIONS FOR FANNED FLUE TERMINALS

#### 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

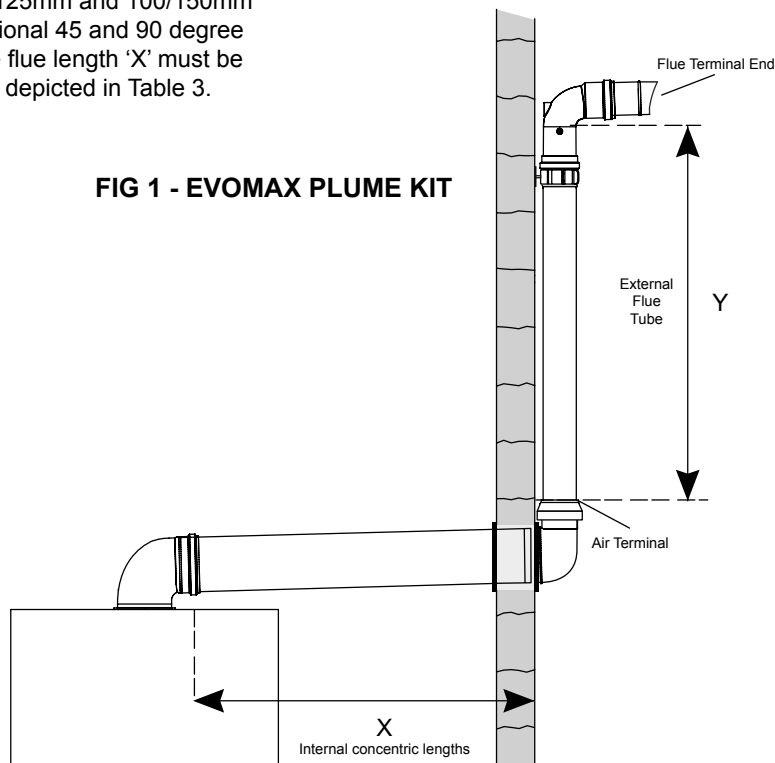
For boiler installations with total heat inputs in excess of 70kW nett, reference should be made to BS6644. IN IE refer to I.S.820.2000

## 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 PLUME KIT



Evomax Model	30/30P	40/40P	60/60P	80/80P
Y	X			
0.5	39.2	39.2	4.7	9.2
2.0	38.5	38.5	4.0	8.5
4.0	37.6	37.6	3.1	7.6
6.0	36.7	36.7	2.2	6.7
8.0	35.8	35.8	1.3	5.8
10.0	34.9	34.9	0.4	4.9

Evomax Model	60/60P	80/80P	100	120
Y	X			
0.5	27.0	32.0	8.0	14.6
2.0	26.6	31.6	7.6	14.2
4.0	26.0	31.0	7.0	13.6
6.0	25.5	30.5	6.5	13.1
8.0	24.9	29.9	5.9	12.5
10.0	24.4	29.4	5.4	12.0

### ADDITIONAL PLUME KIT EXTENSION ELBOWS

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

	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.

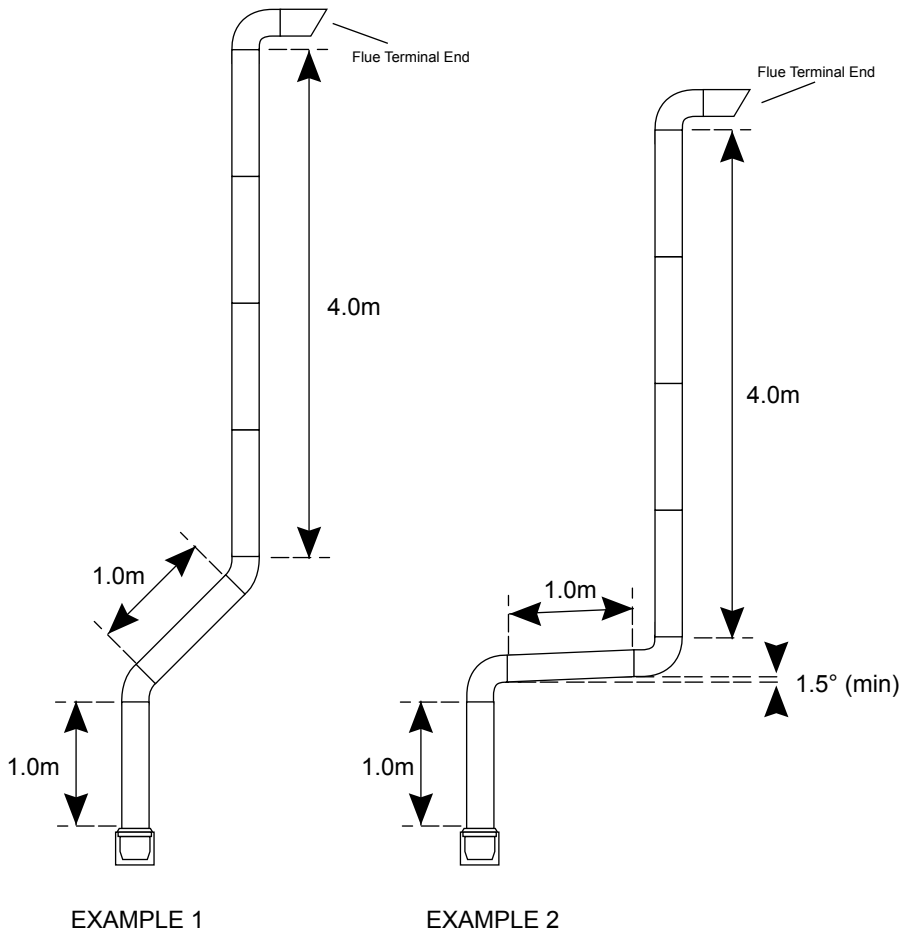
### EXTENSION OF INTERNAL CONCENTRIC SECTION – FITMENT OF ADDITIONAL CONCENTRIC ELBOWS

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 Installation & Servicing booklet.

6 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 100	Evomax 80
Flue Size	100/150	80/125
Y	6.0m	6.0m
X	$6.5\text{m} - (2 \times 0.6\text{m}) = 5.3\text{m}$	$6.7\text{m} - (2 \times 1.0\text{m}) = 4.7\text{m}$

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

## 7 KIT FITTING

Figure three depicts a typical installation schematic.

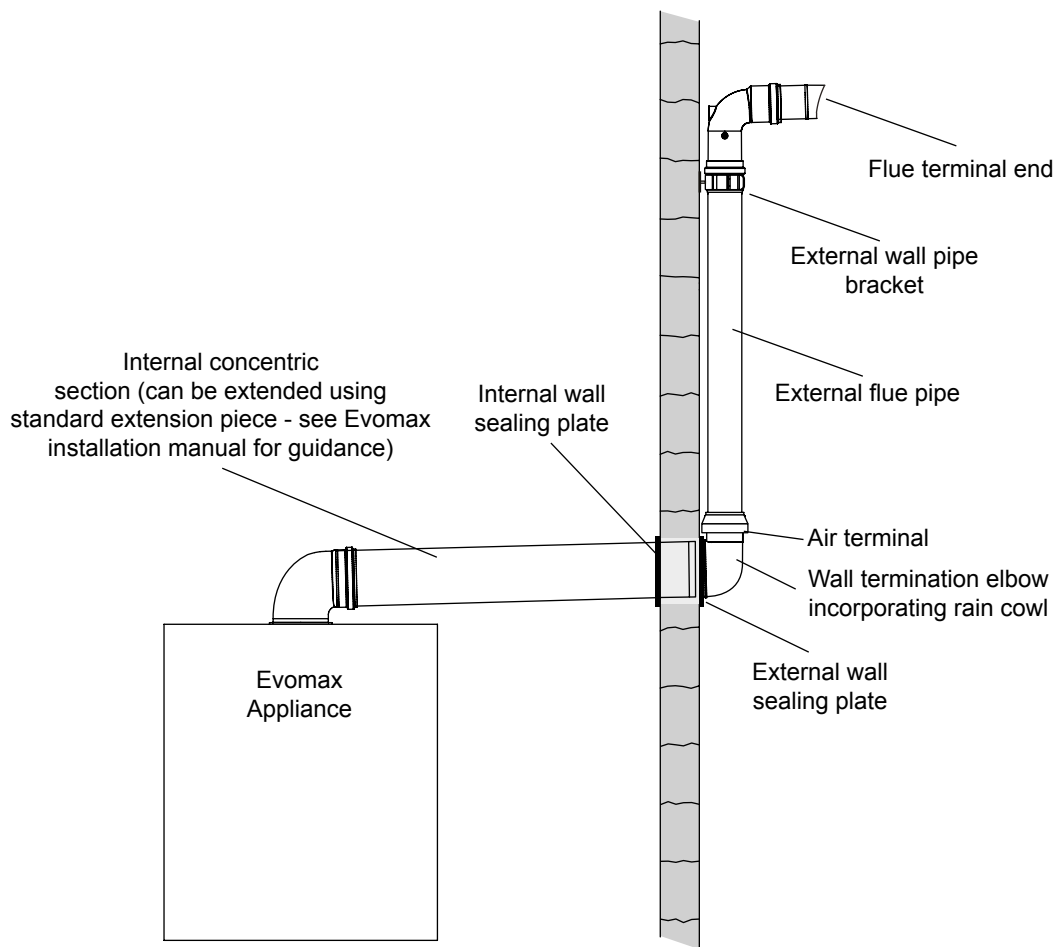
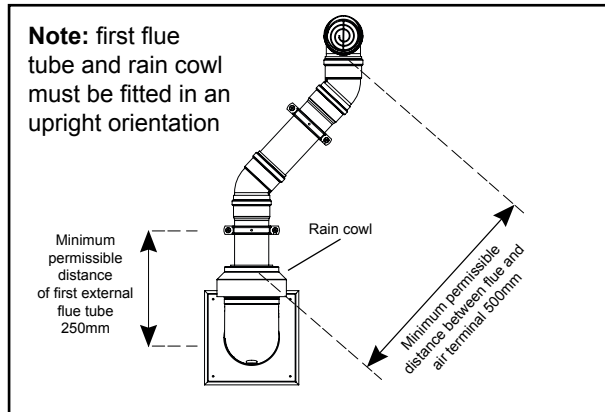
### FIG 3 - SYSTEM INSTALLATION

#### 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 210684 or 210688). 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 210685 or 210689
45° elbows	UIN 210686 or 210690
	UIN 210687 or 210691
- 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 210684 or 210688).
- 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 Boilers 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 498 432

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