

# MAIN SYSTEM 18, 24 & 28 HE



MAIN

For over 75 years, Main has manufactured domestic gas appliances designed to make life more affordable and comfortable for as many people as possible.

Today, Main is part of one of Europe's largest heating appliance manufacturing groups and takes full advantage of the group's huge international resources to uphold its long and proud heritage.

Main appliances have always been designed and built to satisfy the prevailing technical standards governing quality, safety and energy efficiency. The Main System HE Range of gas central heating boilers are no exception and use tried and tested technology, materials and assembly methods to offer outstanding reliability.

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# THE MAIN SYSTEM 18, 24 & 28 HE



**Main System 18 HE**



**Main System 24 HE**



**Main System 28 HE**

- Clean and simple design with engineered reliability
- Designed to meet the central heating needs of a variety of properties
- Quick and easy to install using a simple pre-plumbing jig
- Tried and tested technology
- Modulating outputs to maximise efficiency
- Optional flue accessories for ease of installation.

The Main System 18, 24 and 28 HE are a family of boilers, designed and built to meet your customers' individual preferences.

## Easy to use

You'll find each boiler in our range easy to install and your customers will benefit from their ease of use. Features include rotary controls and LED lights indicating boiler efficiency and automatic adjustment of output to radiators are all easy to explain and understand. So you'll be able to fit, and move on with confidence to your next Main job.

## Meet the very latest regulations

Each boiler in the Main range meets the very latest Building Regulations concerning the efficient conversion and conservation of energy. All the appliances in the Main System HE range include a second heat exchanger that extracts more energy from the same amount of gas. Resulting in up to 20% improved efficiency and lower gas bills for your customers.

## Reassuring back-up

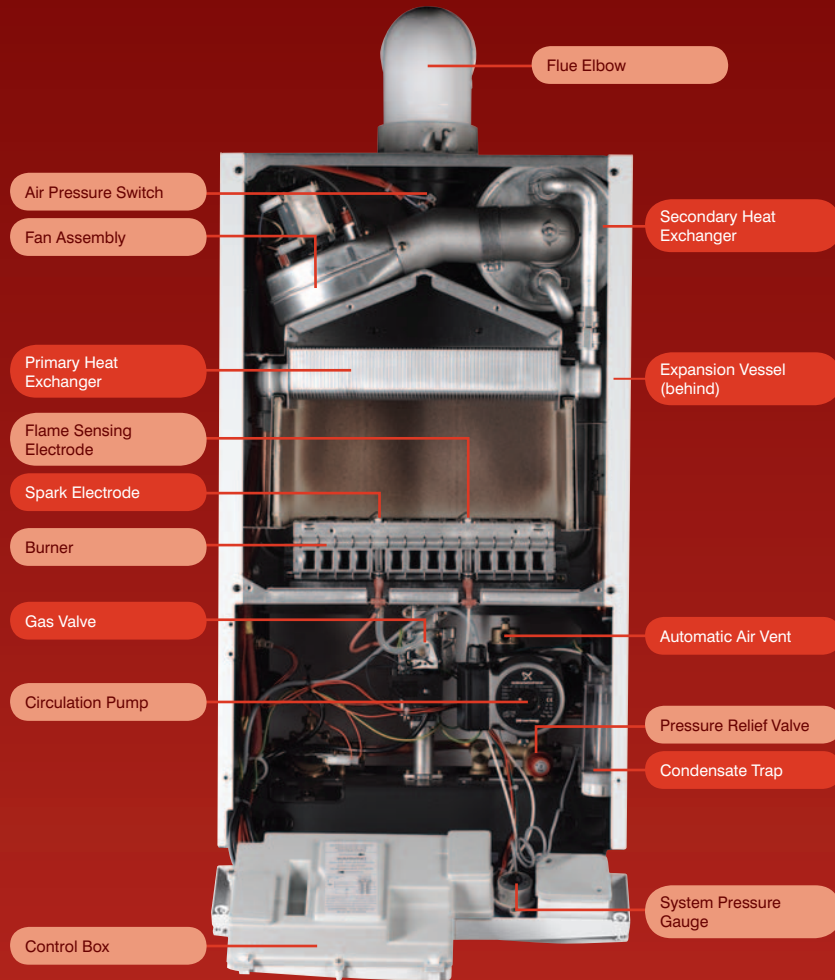
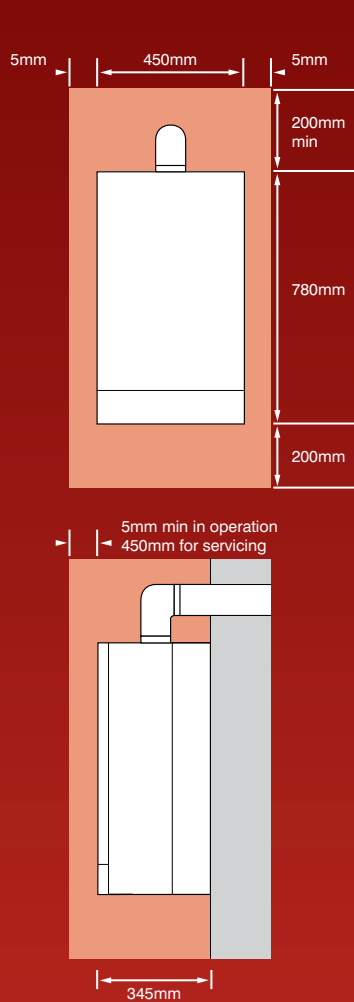
- The most efficient and competent after-sales organisation in the heating industry
- Dedicated call centre staff operate 363 days a year\*
- Over 200 highly trained and fully equipped engineers
- The biggest network of spares outlets in the UK



\*Please note - calls to the contact centre may be recorded or monitored

# MAIN SYSTEM HE RANGE

Dimensions and minimum clearances mm



## Features:

The Main System HE range has a second heat exchanger neatly tucked into the same size case for the added benefit of higher efficiency and lower running costs. Put simply, it extracts more heat from any given amount of gas. The Main System HE range is rated SEDBUK Band B on the Government's energy efficiency rating scheme.

- 3 outputs available: 18kW, 24kW and 28kW.
- Compact dimensions for easier siting.
- Modulating outputs to maximise economy.
- Multifunction LED indication of operation and fault modes.
- Pre-plumbing wall plate with integral isolating valves.
- Low lift weights for easier and safer installation.
- 100mm diameter concentric flue system.
- 80mm diameter twin pipe flue system.
- Horizontal or vertical flue terminals.
- Comprehensive range of flue bends and extensions.
- Optional LPG conversion kits.
- SEDBUK Band B.

# MAIN SYSTEM HE RANGE SPECIFICATIONS

Model	Units	Main System 18 HE	Main System 24 HE	Main System 28 HE
Boiler only code		5120040	5120988	5119353
<b>Controls</b>				
Adjustable CH temperature		Yes	Yes	Yes
Operating mode selector switch		Yes	Yes	Yes
LED operating / fault status display		Yes	Yes	Yes
<b>Gas</b>				
Natural Gas		Yes	Yes	Yes
Optional LPG conversion kit		Yes	Yes	Yes
Inlet supply pressure (Natural Gas)	mbar	20	20	20
Inlet supply pressure (Propane)	mbar	37	37	37
Gas rate	m <sup>3</sup> /hr	1.98	2.62	3.06
Heat input (maximum)	kW	18.7	24.8	28.9
Heat input (minimum)	kW	10.6	10.6	11.9
Heat output (maximum) non-condensing	kW	18	24	28
Heat output (minimum) non-condensing	kW	9.9	9.8	11
Heat output (maximum) condensing	kW	18.9	25.2	29.3
Heat output (minimum) condensing	kW	10.2	10.1	11.3
Seasonal efficiency band	SEDBUK	B	B	B
NO <sub>x</sub>	Class	3	3	3
<b>Electrical</b>				
Electrical supply	Volts/Hz	230 / 50	230 / 50	230 / 50
Power consumption	Watts	140	170	180
External fuse rating	Amps	3	3	3
Ingress protection rating		IPX5D	IPX5D	IPX5D
Pump overrun		Yes	Yes	Yes
24hr pump exercise		Yes	Yes	Yes
Integral frost thermostat (boiler protection only)		Yes	Yes	Yes
<b>Weight</b>				
Maximum installation lift weight	kg	38.5	40.5	40.5
<b>Mechanical &amp; Hydraulic</b>				
Safety pressure discharge bar		3	3	3
Integral automatic bypass		Yes	Yes	Yes
CH system capacity (maximum)	litres	125	125	125
Gas supply pipe size	mm	22	22	22
Flow & return pipe size	mm	22	22	22
Condensate drain connection	mm	21.5	21.5	21.5
Temporary filling loop		Optional	Optional	Optional
Compartment ventilation required		No	No	No
Pre-plumbing jig		Standard	Standard	Standard
<b>Flue systems</b>				
Standard concentric flue diameter	mm	100	100	100
Standard flue installed length	mm	685	685	685
Maximum equivalent length horizontal	m	5	4	3
Maximum equivalent length vertical	m	5	4	3
Optional twin pipe vertical flue diameter	mm	80 / 80	80 / 80	80 / 80
Maximum equivalent length vertical terminal	m	10	12	12
<b>Plume displacement kit</b>				
PDK Maximum equivalent length vertical	m	3.5	2.5	2.5

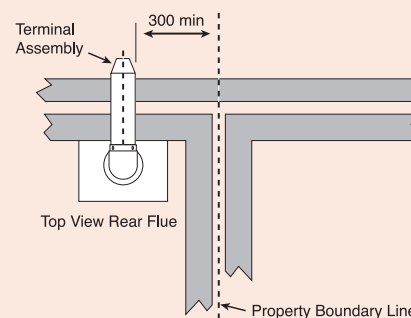
### Terminal Position with Minimum Distance

(mm)

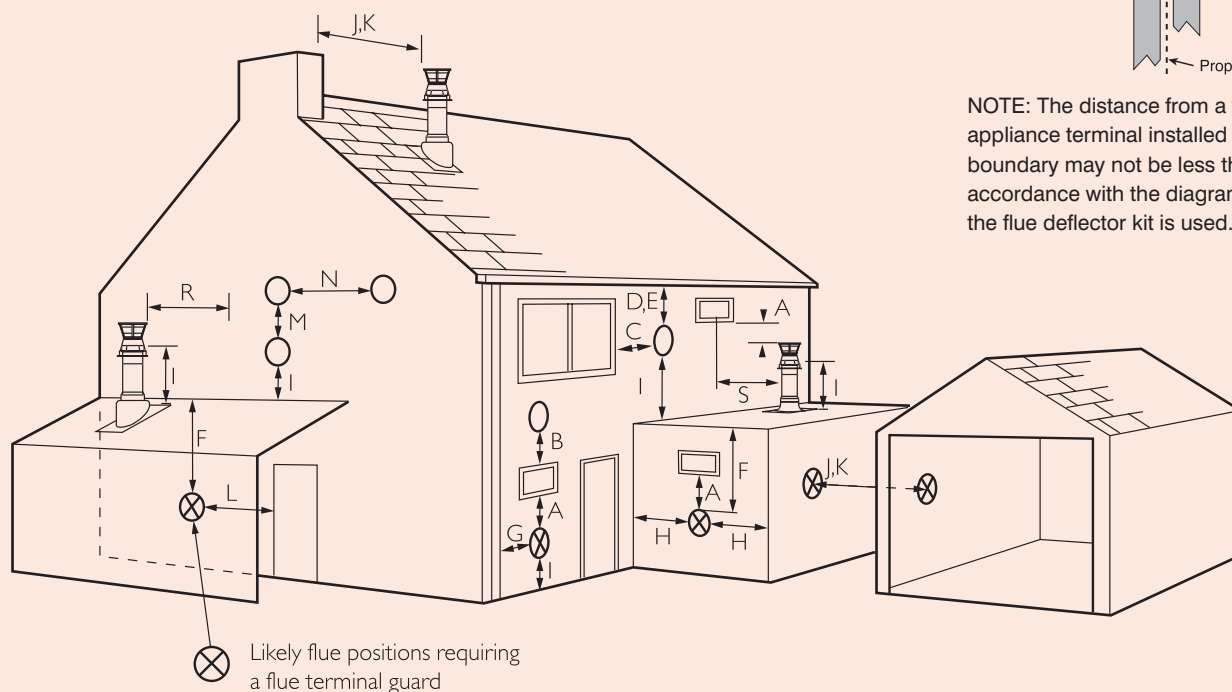
A*	Directly below an opening, air brick, opening windows etc.	300
B*	Above an opening, air brick, opening window etc.	300
C*	Horizontally to an opening, air brick, opening window etc.	300
D	Below gutters, soil pipes or drain pipes.	150
E	Below eaves.	200
F	Below balconies or carport roof.	200
G	From a vertical drain pipe or soil pipe.	150
H	From an internal (i) or external (ii) corner.	300
I	Above ground, roof or balcony level.	300
J	From a surface or boundary line facing a terminal.	600
K	From a terminal facing a terminal (horizontal flue).	1200
	From a terminal facing a terminal (vertical flue).	600
L	From an opening in carport (e.g. door, window) into the dwelling.	1200
M	Vertically from a terminal on the same wall.	1500
N	Horizontally from a terminal on the same wall.	300
R	From adjacent wall to flue (vertical only).	300
S	From an adjacent opening window (vertical only).	1000

Reduced clearances This range of boilers has been tested and approved for use with certain clearances less than those shown. Horizontal flues in positions D, E, F, G & H(i) may be reduced to 25mm. H(ii) may only be reduced to 115mm. Only one of these reductions may be used on a single installation.

\*In addition, the terminal should be no nearer than 150mm to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame. See BS 5440 Pt1.



NOTE: The distance from a fanned draught appliance terminal installed parallel to a boundary may not be less than 300mm in accordance with the diagram below, unless the flue deflector kit is used.





## Flue options

Maximum permissible equivalent flue lengths are:

	18HE	24HE	28HE
Concentric Horizontal	5m	4m	3m
Concentric Vertical	5m	4m	3m
Twin Pipe Vertical	10m	12m	12m

Any additional "in line" bends in the flue system must be taken into consideration.

Their equivalent lengths are:

Concentric Pipes	45°	0.5m
	93°	1.0m
Twin Flue Pipe	45°	0.25m
	90°	0.5m

The elbow supplied with the standard horizontal flue is not included in any equivalent length calculations.

## General principles

Flue systems must be constructed using the Main accessories approved for the particular product and installed in accordance with BS5440 part 1 - flues.

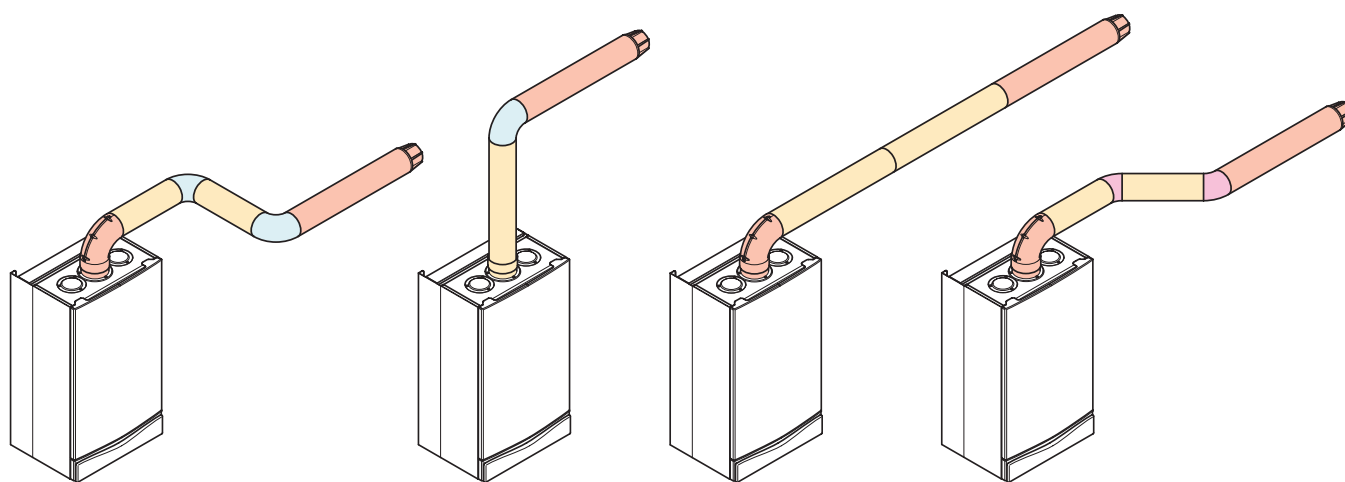
This information is provided for guidance only and is not an intended substitute for Installation Instructions, copies of which are included with the product and are also available on request.

Note: These are general illustrations only - detailing of actual components will vary from model to model. For clarity, on occasions items have been labelled once only.

## Accessories

Item Description (MULTIFIT)	Multifit Sales Code
Stand Off Kit	5117035
LPG Conversion Kit (18kW only)	5113143
LPG Conversion Kit (24 & 28kW only)	5113144
Filling Loop Kit	248221

## Horizontal Concentric Flues 60/100mm

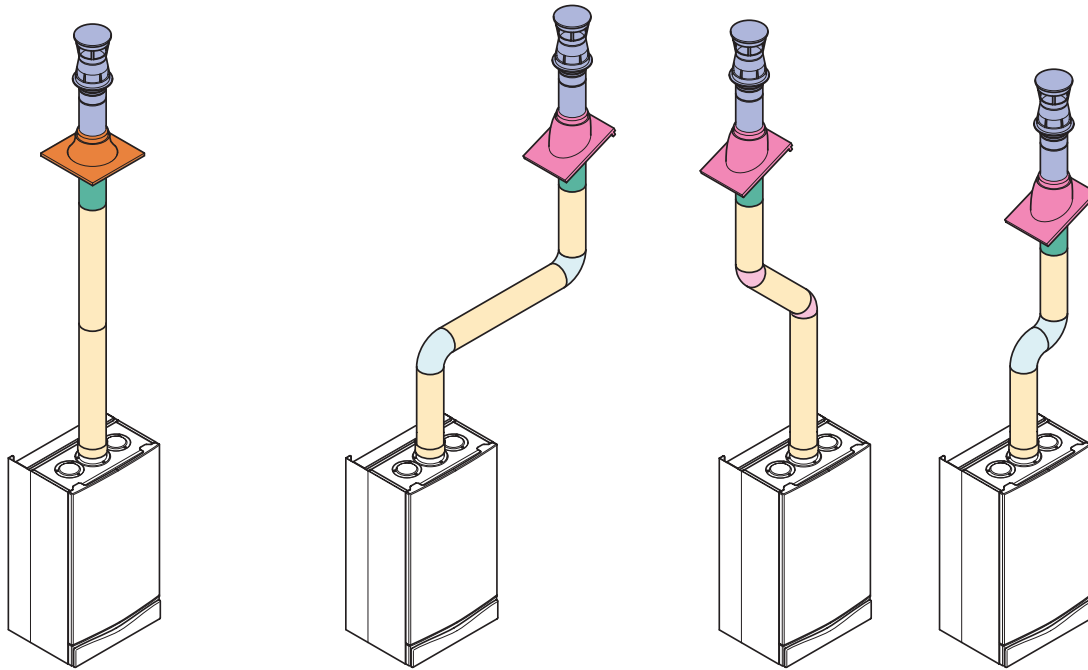


Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	60/100mm	5118489
Standard Horizontal Telescopic Flue inc Elbow	315mm - 500mm	60/100mm	5118069
Telescopic Internal Flue Kit		100mm	5119654
Flue Extension	1000mm	100mm	5111074
Flue Bend	93 degree	100mm	5111075
Flue Bend (Pair)	135 degree	100mm	5111085
Flue Bend	135 degree	100mm	5111076
Pipe Support	Unpainted	100mm	241105
Pipe Support	Painted White	100mm	5111080
Flue Internal Fixing Kit / Wall Liner		100mm	5111067
Flue Terminal Deflector		60mm	5111068

The 3' fall back on concentric flues can be reduced to 1.5' providing the flue system is adequately clamped in accordance with the installation instructions.

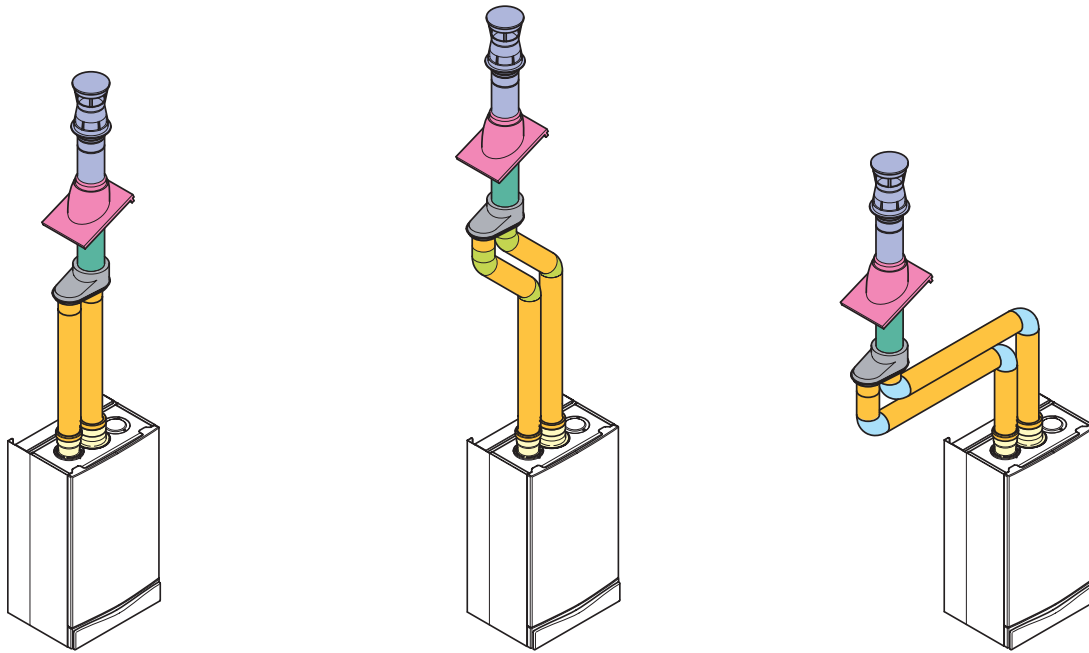


## Vertical Concentric Flues 60/100mm



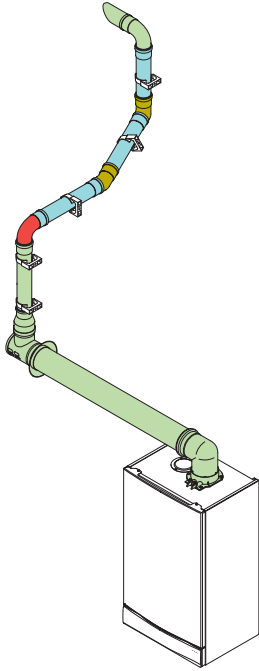
Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		100mm	5118576
Roof Cover Plate		100mm	246143
Flue Bend	93 degree	100mm	5111075
Flue Bend	135 degree	100mm	5111076
Flue Bend Pair	135 degree	100mm	5111085
Flue Extension	1000mm	100mm	5111074
Pipe Support	Unpainted	100mm	241105
Pipe Support	Painted White	100mm	5111080
Flue Vertical Adaptor (Terminal)		100/125mm	5111070
Pitched Roof Flashing	25 / 45 degree	125mm	246141
Flat Roof Flashing		125mm	246144

## Twin Pipe Flues 80/80mm



Item Description (MULTIFIT) Flue System N	Specification	Key & OD Dimensions	Multifit Sales Code
Twin Pipe Flue Adaptor (Boiler)		80/80mm	5111079
Twin to Concentric Adaptor 80/80 - 80/125		80/125mm	5111084
Twin Pipe Flue Bend (Pair)	90 degree	80mm	5111072
Twin Pipe Flue Bend (2 Pair)	135 degree	80mm	5111086
Twin Pipe Extension (Pair inc Brackets)	1000mm	80mm	5111087
Twin Pipe Support (Pair)		80mm	5111081
Vertical Flue Terminal		125mm	5111078
Roof Cover Plate		100mm	246143
Pitched Roof Flashing	25 / 50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144
Flue Vertical Adaptor (Terminal)		100/125mm	5111070

## Plume Displacement Kits 60/100mm



Item Description (MULTIFIT) Flue System K	Specification	Key & OD Dimensions	Multifit Sales Code
Plume Displacement Kit inc Elbow + clips*		100mm	5118638
Plume Displacement Kit Extension + clip	1000mm	60mm	5121368
Plume Displacement Kit Bend	93 degree	60mm	5121369

\*Please note the elbow included with the flue kit does not fit to the appliance. The elbow supplied within the boiler carton must be used. The additional elbow can be used as a 93 degree flue bend (5111075).



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## Contacts

All Enquiries

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The code of practice for the installation, commissioning & servicing of central heating systems.



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