

Flue Application Guide

This Flue Application Guide provides detailed information on various flueing options available for our range of wall mounted Standard and Combi condensing boilers. Other configurations that are not detailed here should be checked with our Technical Helpdesk.

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M4188a

Flue Options

The following flue system solutions are available for our complete range of Standard and Combi Condensing Boilers. Please note, the 110x55mm Concentric flue system and Twin Pipe system cannot be used on the same appliance.

Concentric

Concentric Flue System (standard low-level flue kit)	page 2
Extended Concentric Flue System	page 2
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Twin Pipe

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Rules

It is essential that you ascertain that you are using the latest edition of this guide before designing and ordering. The Manufacturer has a policy of continuous improvement & reserves the right to change specifications without notice.

Concentric 110 x 55mm

The standard Concentric Flue system and the Extended Flue system must rise from the boiler with a 0 to 3 degree slope. The maximum allowable flue length for the Concentric system is 2 metres. No bends are permitted. It cannot be used with the Twin Pipe system on the same appliance. The Boiler Mounting Box is included.

Twin Pipe

The Twin Pipe system allows longer lengths to be achieved, with bends, and can be used with any of our Condensing Boilers. The maximum permitted equivalent length is 22 metres horizontally and 30m vertically, that is the total equivalent length of both the air and the flue side.

The Boiler Mounting Box is ordered as a separate item for the Twin Pipe system.

If a Twin Pipe system terminates vertically it must use either the Ridge Terminal, a Roof Terminal or a Chimney Terminal. Each fitting, for example a 45° bend, has its own "Straight equivalent length" which is detailed in this guide. This must be used in calculating the overall length. It is preferable to use 2 x 45° (2.6m) instead of 1 x 90° (4.0m).

For mixed system, ie. ones that contain pipes at Horizontal, vertical and/or 45 degrees, the maximum equivalent length has to be calculated as follows.

Add up all the bend equivalent lengths
Add up all the vertical equivalent lengths
Include the terminal equivalent lengths
Add up all the Horizontal equivalent length and multiply by 1.36
Add up all the 45 degree equivalent lengths and multiply by 1.15

Sum all the above and check it is less than 30m.

Straight lengths can be cut square to length.

All Twin Pipe pipework should be clipped every 1000mm and sloped back towards the boiler by at least 3 degrees. Connections must be made with the socket end furthest from the boiler.

The Twin Pipe system allows air to be drawn from a loft space provided it is not used as a living space and the intake is kept free of blockage by the use of the Debris Guard.

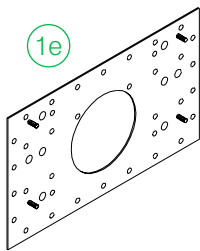
Please refer to the Boiler Installation Instructions and BS 5440 for acceptable positions and spacing of Terminals.

It is permissible to box all Flue pipe work as it is all at low temperature. All the pipes and fittings are polypropylene and can only be painted after using a suitable primer. The Manufacturer recommends the primers used for painting plastic car bumpers.

Concentric Flue System & Internal Fit Concentric Flue System

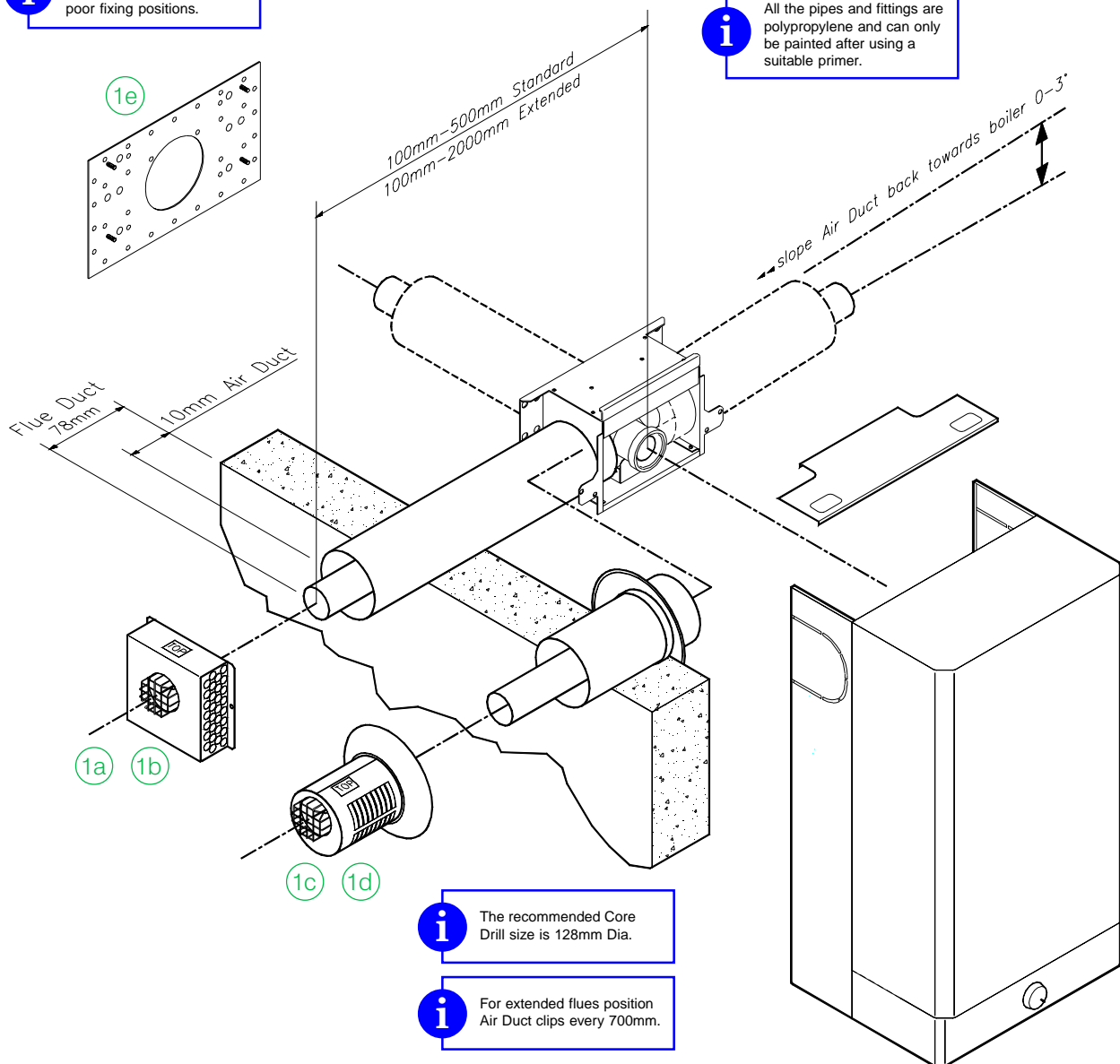
The flue may only be taken horizontally to the left, right or to the rear of the boiler, without bends. The Boiler Mounting Box is included with this system.

i An optional Mounting Plate is available for walls with poor fixing positions.



i It is permissible to box all flue pipework as it is all at low temperature.

i All the pipes and fittings are polypropylene and can only be painted after using a suitable primer.



i The recommended Core Drill size is 128mm Dia.

i For extended flues position Air Duct clips every 700mm.

Item No	To order any of these items see Order Form on page 7
1a	Standard Concentric Flue Kit
1b	Extended Concentric Flue Kit
1c	Standard Concentric, Internal Fit Flue Kit.
1d	Extended Concentric, Internal Fit Flue Kit
1e	Mounting Plate (optional for poor fixing position)

! Observe terminal position distances given in Installation Instructions.

! The Air Duct must slope back to the boiler by 0 to 3 degrees.

Horizontal Twin Pipe Flue System

For Twin Pipe application the Twin Pipe Boiler Mounting Box is purchased separately. (item 2a)

i The Flue pipe must be connected to the extended outlet of the terminal.

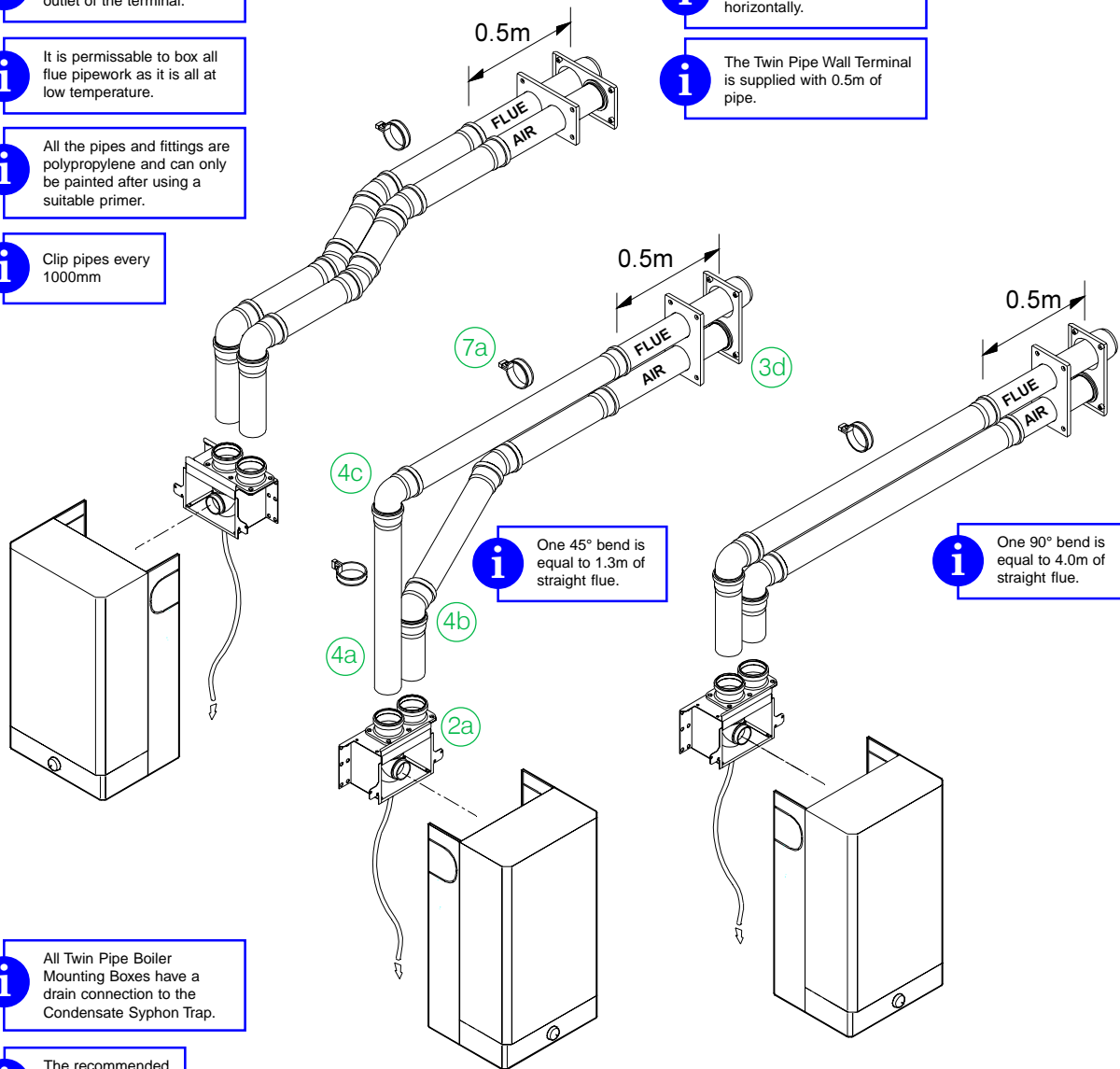
i It is permissible to box all flue pipework as it is all at low temperature.

i All the pipes and fittings are polypropylene and can only be painted after using a suitable primer.

i Clip pipes every 1000mm

i The Twin Pipe Wall Terminal can be fixed vertically or horizontally.

i The Twin Pipe Wall Terminal is supplied with 0.5m of pipe.



i One 45° bend is equal to 1.3m of straight flue.

i One 90° bend is equal to 4.0m of straight flue.

i All Twin Pipe Boiler Mounting Boxes have a drain connection to the Condensate Syphon Trap.

i The recommended Core Drill size is 90mm Diameter.

! The Flue must slope back to the boiler by at least 3 degrees.

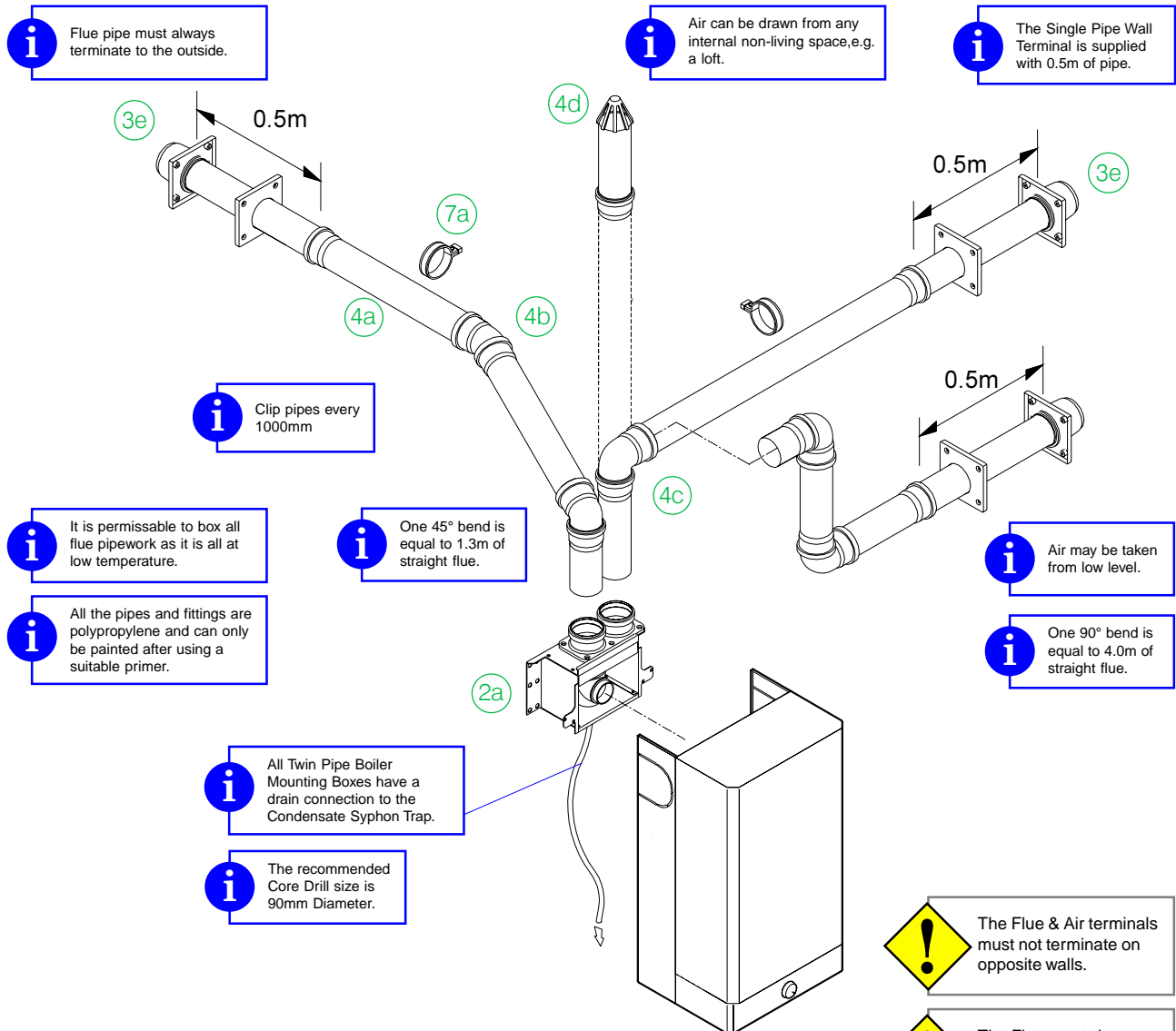
! The maximum Twin Pipe Equivalent Length is 22 metres horizontal, 30 metres vertical, there and back

! For mixed systems, (horizontal & vertical) refer to rules on page 1 for instruction

Item No	To order any of these items see Order Form on page 7
2a	Twin Pipe Boiler Mounting Box.
3d	Wall Terminal Twin Pipe
4a	1 metre pipe x 80mm Dia.
4b	45° Bend x 80mm Dia.
4c	90° Bend x 80mm Dia.
7a	Pipe clip 80mm Dia.

Split Twin Pipe Flue System

For Twin Pipe application the Twin Pipe Boiler Mounting Box is purchased separately. (item 2a)

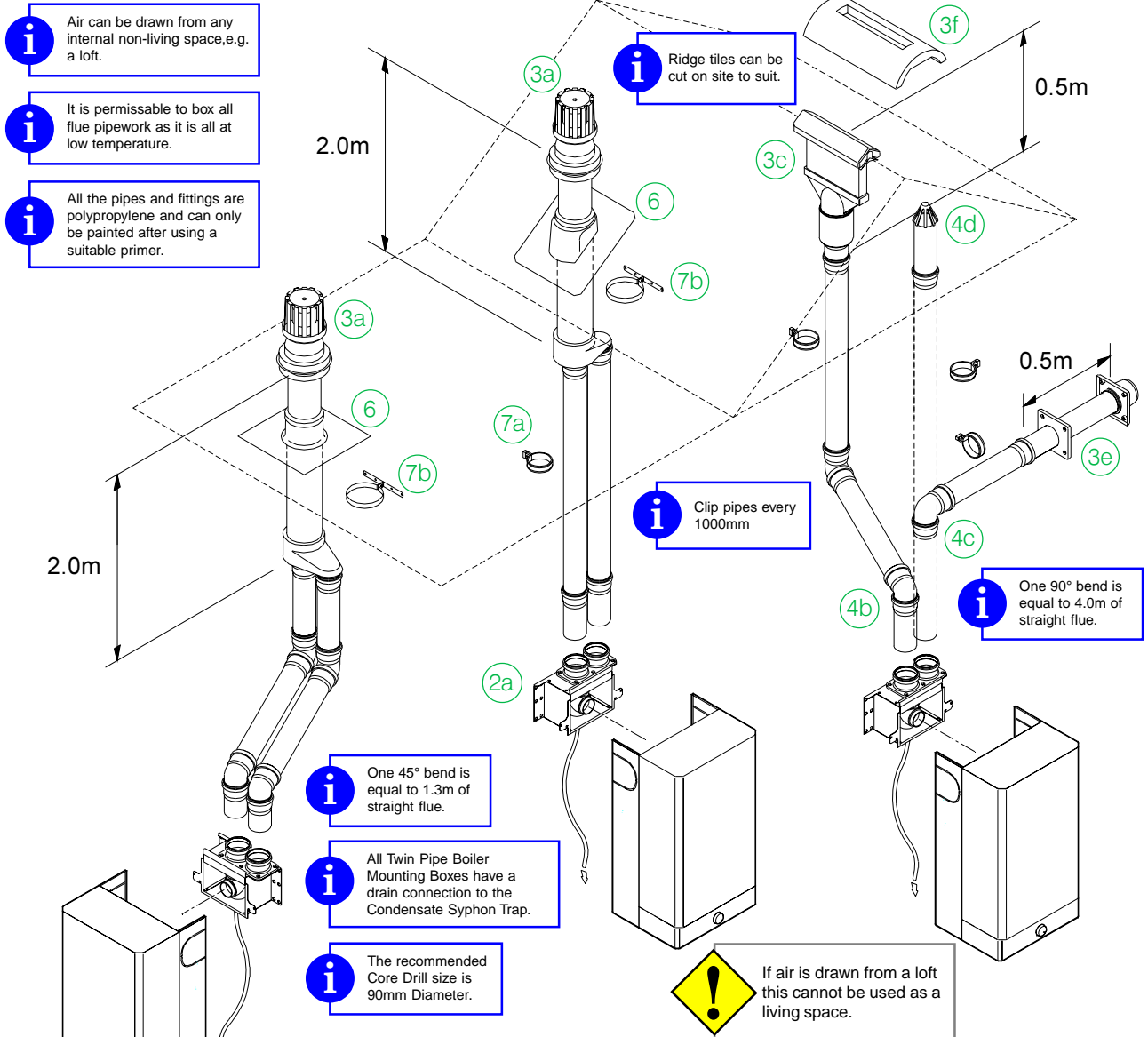


Item No	To order any of these items see Order Form on page 7
2a	Twin Pipe Boiler Mounting Box.
3e	Wall Terminal Single Pipe
4a	1 metre pipe x 80mm Dia.
4b	45° Bend x 80mm Dia.
4c	90° Bend x 80mm Dia.
4d	Debris Guard
7a	Pipe clip 80mm Dia.

- The Flue & Air terminals must not terminate on opposite walls.
- The Flue must slope back to the boiler by at least 3 degrees.
- The maximum Twin Pipe Equivalent Length is 22 metres horizontal, 30 metres vertical, there and back
- For mixed systems, (horizontal & vertical) refer to rules on page 1 for instruction
- If air is drawn from a loft this cannot be used as a living space.

Vertical Twin Pipe Flue System

For Twin Pipe application the Twin Pipe Boiler Mounting Box is purchased separately. (item 2a)

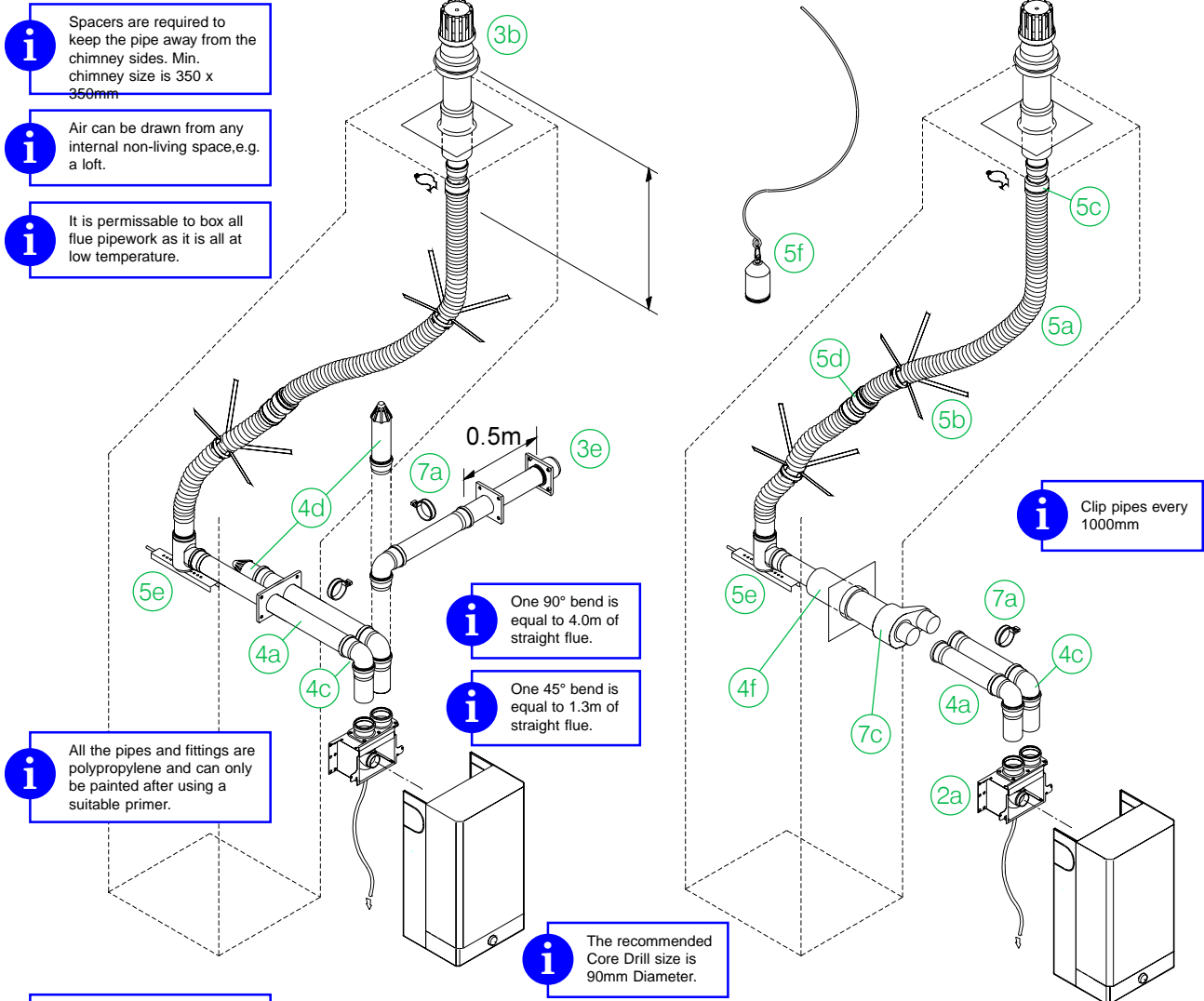


- !** The Flue must slope back to the boiler by at least 3 degrees.
- !** The maximum Twin Pipe Equivalent Length is 22 metres horizontal, 30 metres vertical, there and back
- !** For mixed systems, (horizontal & vertical) refer to rules on page 1 for instruction

Item No	To order any of these items see Order Form on page 7
2a	Twin Pipe Boiler Mounting Box
3a	Roof Terminal with adapter
3c	Ridge Tile Terminal with adapter
3e	Wall Terminal Single Pipe
3f	Ridge Tile (specify Make, Type, & Colour, see page 7)
4a	1 metre pipe x 80mm Dia.
4b	45° Bend x 80mm Dia.
4c	90° Bend x 80mm Dia.
4d	Debris Guard
6	Flashings for Roof Terminal (4 versions available, see page 7)
7a	Pipe clip 80mm Dia.
7b	Pipe clamp 125mm Dia.

Chimney Twin Pipe Flue System

For Twin Pipe application the Twin Pipe Boiler Mounting Box is purchased separately. (item 2a)



Item No	To order any of these items see Order Form on page 7
2a	Twin Pipe Boiler Mounting Box
3b	Chimney Terminal inc. flashing
3e	Wall Terminal Single Pipe
4a	1 metre pipe x 80mm Dia.
4b	45° Bend x 80mm Dia..
4c	90° Bend x 80mm Dia.
4d	Debris Guard
4f	0.5 metre pipe, Concentric 125 x 80 mm
5a	Flexible pipe
5b	Spacers, flexible, blue
5c	Socket connector, rigid to flexible
5d	Coupling, flexible to flexible
5e	Chimney Bottom Support
5f	Rope & towing cone.
7a	Pipe Clip 80mm
7c	Adapter Concentric to Twin

Enter quantity against the items you require & check against the total length.

Flue Components Requirements Form

Malvern Boilers Spring Lane North Malvern Worcestershire WR14 1BW Tel. 01684 893777 Fax. 01684 893776

1. Concentric Flue Systems

Item	Description	Part No.	Qty.
1a	Concentric Flue Kit, Standard 0.5m.	M3837	
1b	Concentric Flue Kit, Extended 2m.	M3838	
1c	Concentric Flue Internal Fit Kit, Standard 0.5m	M1106	
1d	Concentric Flue Internal Fit Kit, Extended 2m	M1107	
1e	Mounting Plate (optional for poor fixing position)	M3946	

2. Twin Pipe Flue Systems

			Equivalent length	Qty	Total Length
2a	Twin Pipe Boiler Mounting Box	M1103	Nil		Nil

3. Terminals

3a	Roof Terminal with adapter, BLACK	M4264	2.0m	x		=
3a	Roof Terminal with adapter, TERRACOTTA	M4265	2.0m	x		=
3b	Chimney Terminal inc. flashing	M4266	Flue 1.2m Air 0.6m	X		=
3c	Ridge Terminal, inc. 80mm adapter (without tile)	M4268	0.5m	x		=
3d	Wall, Twin Pipe BLACK	M4269	1.2m	x		=
3e	Wall, Single Pipe, BLACK	M4270	0.5m	x		=
3f	Ridge Tile, specify Make, Type, Colour & Qty.					

4. Pipe & bends

4a	1 metre pipe, GREY x 80mm Dia.	M4260	*1.0m	x		=
4b	45° Bend, GREY x 80mm Dia.	M4262	1.3m	x		=
4c	90° Bend, GREY x 80mm Dia.	M4263	4.0m	x		=
4d	Debris Guard	M4284	0.5m	x		=
4e	Spacers, rigid, brown, set.	M4288	Nil			Nil
4f	0.5 metre Concentric pipe, 125 x 80 mm	M4295	1.5 m	x		=

5. Flexible pipe system

5a	Flexible pipe, 25m coil	M4275	3 x Actual			=
5b	Spacers, flexible, blue, set.	M4278	Nil			Nil
5c	Socket Connector, Rigid to Flexible	M4276	Nil			Nil
5d	Coupling, Flexible to Flexible	M4277	Nil			Nil
5e	Chimney Bottom Support	M4280	4.0m			=
5f	Rope & Towing cone	M4286				=

Check Calculation: Max. permitted length is 22m Horizontal 30m Vertical.

6. Flashings

6a	Lead Tile, BLACK, with collar 15/25°	M4272	
6b	Lead Tile, BLACK, with collar 25/45°	M4273	
6c	Lead Tile, BLACK, with collar 35/55°	M4274	
6d	Aluminium with collar, Flat roof	M4271	

7. Fittings

7a	Pipe Clip, plastic 80mm Dia.	M4282	
7b	Pipe Clamp, 125mm Dia.	M4283	
7c	Adapter, Concentric to Twin	M4287	

* For mixed system only: straight pipe lengths at 45° multiply by 1.15, horizontal straight pipe lengths multiply by 1.36

From

Tel No:
Fax No:

Date