

CPM Flue Assemblies and Ancillaries

For use with Models:

CPM58

CPM77

CPM96

CPM116

CPM144

CPM175



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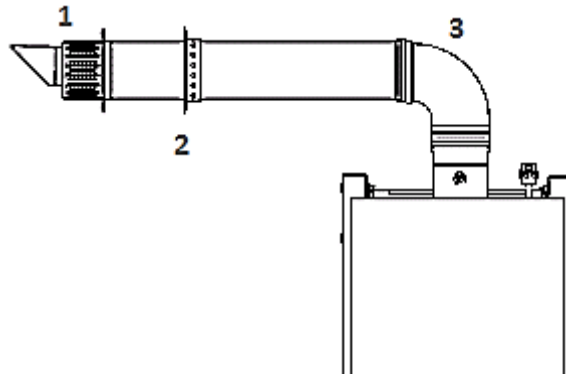
Item No CPMH001

CONCENTRIC HORIZONTAL FLUE ASSEMBLY MODELS CPM58,CPM77

COMPONENTS

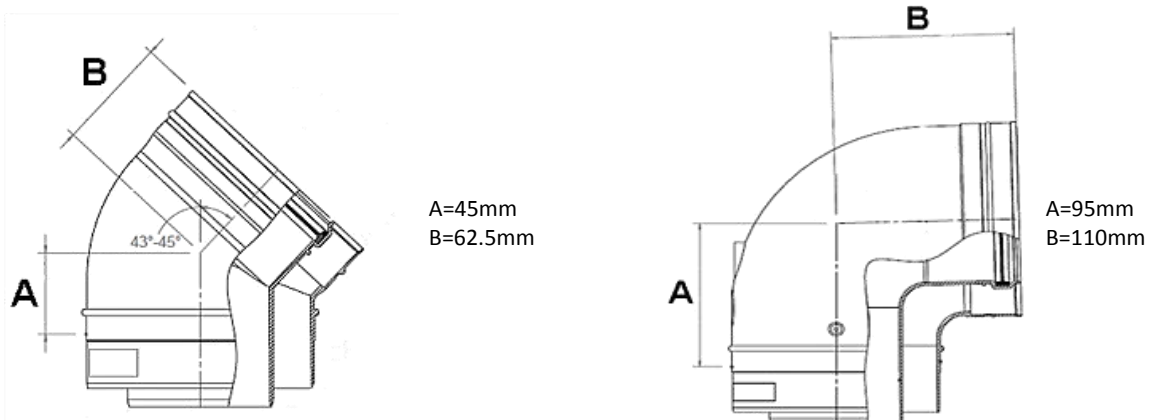
Item No.	Description	Number	Quantity
M86934B	CONCENTRIC HORIZONTAL TERMINAL Ø80/125mm PP (NO WALL PLATES)	1	1
M28925B	TERMINAL WALL PLATES (PAIR)	2	1
M84460B	CONCENTRIC BEND 90° Ø80/125mm PP	3	1

Maximum resistance in the flue system $\leq 200\text{pa}$



Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310740B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	250mm
LV310741B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	500mm
M84452B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	1000mm
LV310743B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	2000mm
LV310744B	CONCENTRIC EXTENSION Ø80/125mm PP TELESCOPIC	280 to 395mm
M84455B	CONCENTRIC EXTENSION Ø80/125mm PP CUT TO LENGTH	100 to 450mm
M84461B	CONCENTRIC BEND 45° Ø80/125mm PP	See drawing below
M84460B	CONCENTRIC BEND 90° Ø80/125mm PP	See drawing below
M87195B	WALL CLAMP Ø130	n/a



For further information, see Installation manual available at www.lochinvar.ltd.uk

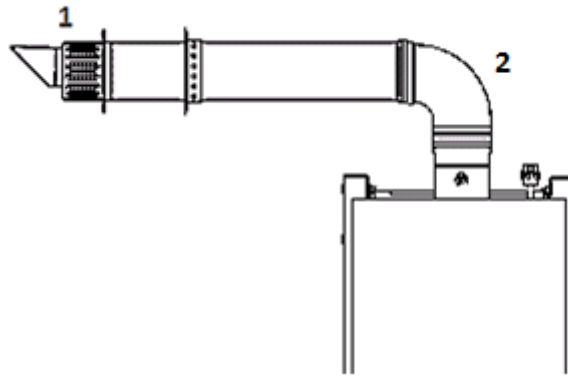
Item No CPMH003

CONCENTRIC HORIZONTAL FLUE ASSEMBLY MODELS CPM96,CPM116

COMPONENTS

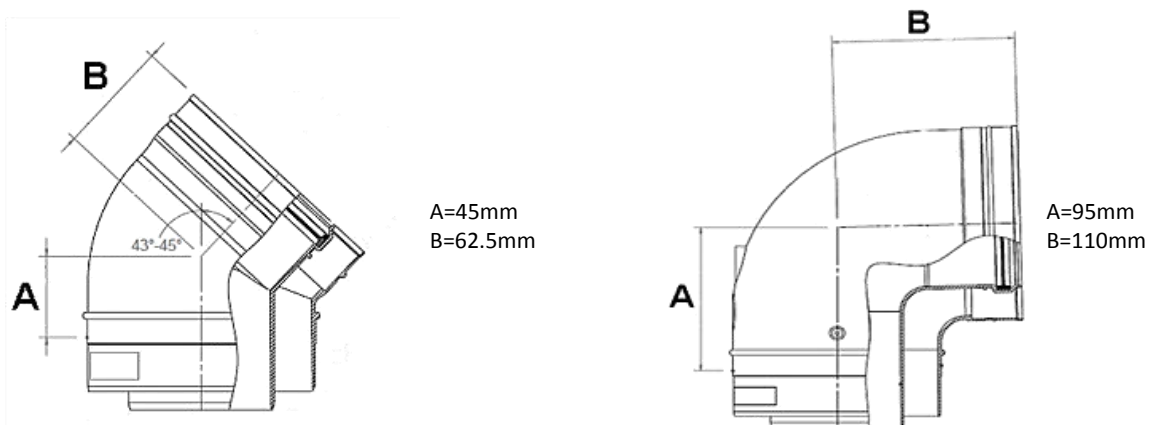
Item No.	Description	Number	Quantity
LV310758	CONCENTRIC HORIZONTAL TERMINAL Ø100/150mm PP	1	1
M84410B	CONCENTRIC BEND 90° Ø100/150mm PP	2	1

Maximum resistance in the flue system $\leq 200\text{pa}$



Additional Flue Ancillary Items

Item No.	Description	Dimensions
M84405B	CONCENTRIC EXTENSION Ø100/150 PP CUT TO LENGTH	100mm to 450mm
M84402B	CONCENTRIC EXTENSION Ø100/150 PP FIXED	1000mm
M84412B	CONCENTRIC BEND 90° Ø100/150mm PP	See drawing below
M84413B	CONCENTRIC BEND 45° Ø100/150mm PP	See drawing below
M84421B	SAMPLING POINT Ø100/150mm PP	115mm
M87196B	WALL CLAMP Ø150mm	n/a



For further information, see Installation manual available at www.lochinvar.ltd.uk

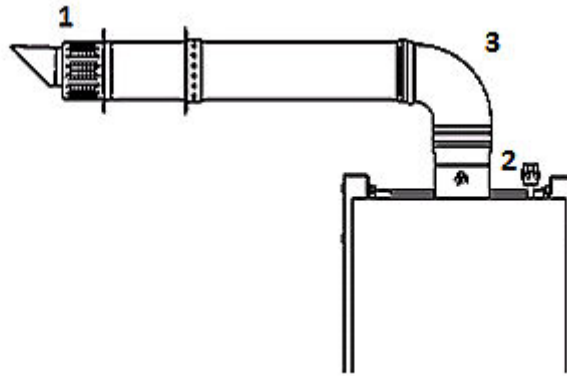
Item No CPMH004

CONCENTRIC HORIZONTAL FLUE ASSEMBLY MODELS CPM144, CPM175

COMPONENTS

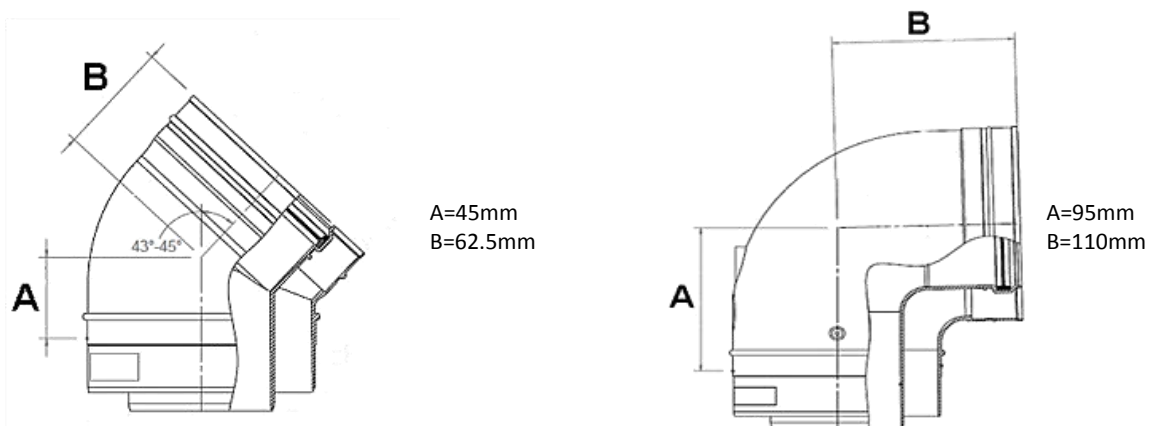
Item No.	Description	Number	Quantity
LV310758B	CONCENTRIC HORIZONTAL TERMINAL Ø100/150mm PP	1	1
E61-001-172	TWIN-PIPE TO CONCENTRIC ADAPTOR Ø130/130 to Ø100/150mm	2	1
M84410B	CONCENTRIC BEND 90° Ø100/150mm PP SHORT RADIUS	3	1

Maximum resistance in the flue system $\leq 200\text{pa}$



Additional Flue Ancillary Items

Item No.	Description	Dimensions
M84405B	CONCENTRIC EXTENSION Ø100/150 PP CUT TO LENGTH	100mm to 450mm
M84402B	CONCENTRIC EXTENSION Ø100/150 PP FIXED	1000mm
M84412B	CONCENTRIC BEND 90° Ø100/150mm PP	See drawing below
M84413B	CONCENTRIC BEND 45° Ø100/150mm PP	See drawing below
M84421B	SAMPLING POINT Ø100/150mm PP	115mm
M87196B	WALL CLAMP Ø150mm	n/a



For further information, see Installation manual available at www.lochinvar.ltd.uk

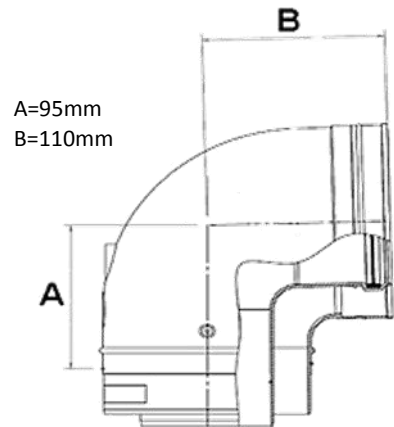
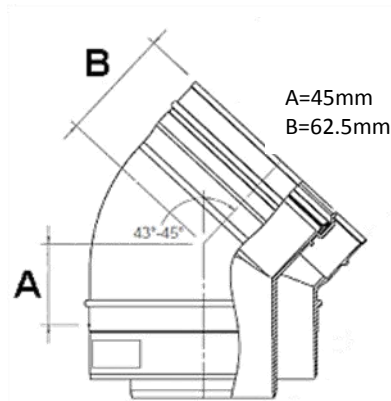
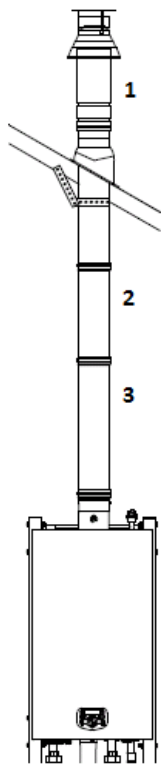
Item No CPMV001

CONCENTRIC VERTICAL FLUE ASSEMBLY MODELS CPM58, CPM77

COMPONENTS

Item No.	Description	Number	Quantity
M86864B	CONCENTRIC VERTICAL TERMINAL Ø80/125mm PP	1	1
M84455B	CONCENTRIC EXTENSION Ø80/125mm (500mm) PP CUT TO LENGTH	2	1
M84452B	CONCENTRIC EXTENSION Ø80/125mm (1000mm) PP FIXED	3	1

Maximum resistance in the flue system $\leq 200\text{pa}$



Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310740B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	250mm
LV310741B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	500mm
M84452B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	1000mm
LV310743B	CONCENTRIC EXTENSION Ø80/125mm PP FIXED	2000mm
LV310744B	CONCENTRIC EXTENSION Ø80/125mm PP TELESCOPIC	280 to 395mm
M84455B	CONCENTRIC EXTENSION Ø80/125mm PP CUT TO LENGTH	100 to 450mm
M84461B	CONCENTRIC BEND 45° Ø80/125mm PP	See drawing above
M84460B	CONCENTRIC BEND 90° Ø80/125mm PP	See drawing above
M87195B	WALL CLAMP Ø130	n/a
M87376B	FLAT ROOF FLASHING Ø80/125mm	n/a

For further information, see Installation manual available at www.lochinvar.ltd.uk

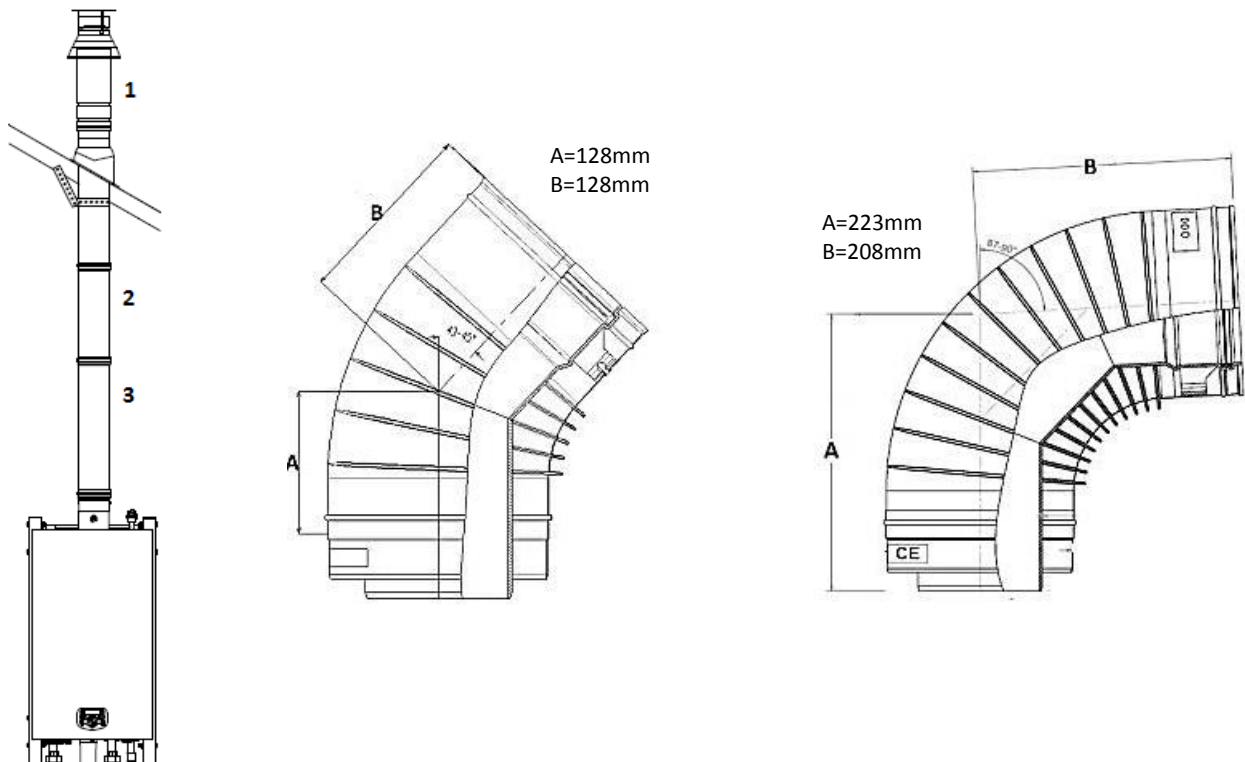
Item No CPMV003

CONCENTRIC VERTICAL FLUE ASSEMBLY MODELS CPM96,CPM116

COMPONENTS

Item No.	Description	Number	Quantity
LV310754B	CONCENTRIC VERTICAL TERMINAL Ø100/150mm PP	1	1
M84405B	CONCENTRIC EXTENSION Ø100/150 (500mm) PP CUT TO LENGTH	2	1
M84402B	CONCENTRIC EXTENSION Ø100/150 (1000mm) PP FIXED	3	1

Maximum resistance in the flue system $\leq 200\text{pa}$



Additional Flue Ancillary Items

Item No.	Description	Dimensions
M84405B	CONCENTRIC EXTENSION Ø100/150 PP CUT TO LENGTH	500mm
M84402B	CONCENTRIC EXTENSION Ø100/150 PP FIXED	1000mm
M84412B	CONCENTRIC BEND 90° Ø100/150mm PP	See drawing above
M84413B	CONCENTRIC BEND 45° Ø100/150mm PP	See drawing above
M84421B	SAMPLING POINT Ø100/150mm PP	115mm
M87196B	WALL CLAMP Ø150mm	n/a
LV306017B	SLOPING ROOF FLASHING Ø100/150mm (25°-45°) LEAD	n/a
LV302509B	ROOF FLASHING (170mm) ALU	n/a

For further information, see Installation manual available at www.lochinvar.ltd.uk

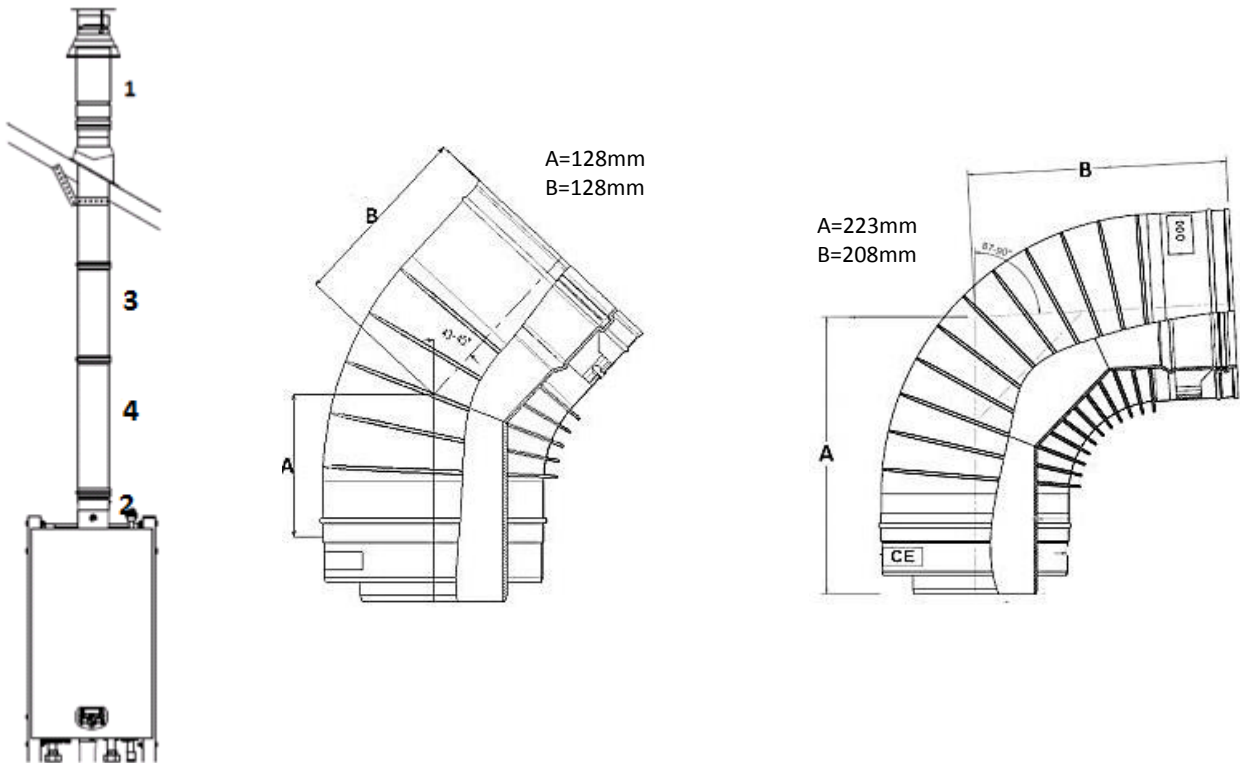
Item No CPMV004

CONCENTRIC VERTICAL FLUE ASSEMBLY MODELS CPM144, CPM175

COMPONENTS

Item No.	Description	Number	Quantity
LV310754B	CONCENTRIC VERTICAL TERMINAL Ø100/150mm PP	1	1
E61-001-172	TWIN-PIPE TO CONCENTRIC ADAPTOR Ø130/130 to Ø100/150mm		
M84405B	CONCENTRIC EXTENSION Ø100/150 (500mm) PP CUT TO LENGTH	2	1
M84402B	CONCENTRIC EXTENSION Ø100/150 (1000mm) PP FIXED	3	1

Maximum resistance in the flue system $\leq 200\text{pa}$



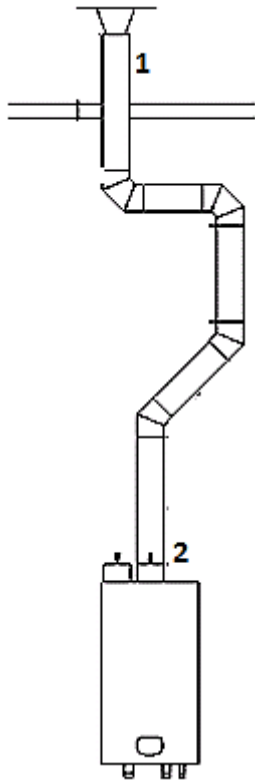
Additional Flue Ancillary Items

Item No.	Description	Dimensions
M84405B	CONCENTRIC EXTENSION Ø100/150 PP CUT TO LENGTH	500mm
M84402B	CONCENTRIC EXTENSION Ø100/150 PP FIXED	1000mm
M84412B	CONCENTRIC BEND 90° Ø100/150mm PP	See drawing above
M84413B	CONCENTRIC BEND 45° Ø100/150mm PP	See drawing above
M84421B	SAMPLING POINT Ø100/150mm PP	115mm
M87196B	WALL CLAMP Ø150mm	n/a
LV306017B	SLOPING ROOF FLASHING Ø100/150mm (25°-45°) LEAD	n/a
LV302509B	ROOF FLASHING (170mm) ALU	n/a

For further information, see Installation manual available at www.lochinvar.ltd.uk

Introduction Twin-Pipe and Conventional Flue Systems

Due to the varying and sometimes complex nature of twin-pipe and conventional flue systems Lochinvar do not offer a standard flue kit for these flue types. The following pages show the flue components available including the items that must be ordered in order to start and terminate the system. The example below shows a typical conventional flue system.



Items 1 and 2 must be ordered to start the installation, assuming this is a CPM77 this will be:

Item 1-

M86864B	CONCENTRIC VERTICAL TERMINAL Ø80/125mm PP
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Item 2-

E61-001-163B	CONCENTRIC TO TWIN-PIPE ADAPTER Ø80/125mm to 80/80mm
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Additional components can be selected as required shown in the tables on page 14.

TWIN-PIPE FLUE SYSTEMS MODEL CPM58

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-162B	CONCENTRIC TO TWIN-PIPE ADAPTER \varnothing 80/125mm to 80/80mm	1
M86864B	CONCENTRIC VERTICAL TERMINAL \varnothing 80/125mm PP	1
LV305016	HORIZONTAL AIR INLET \varnothing 80mm	1

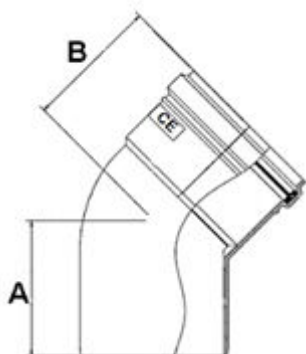
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-162B	CONCENTRIC TO TWIN-PIPE ADAPTER \varnothing 80/125mm to 80/80mm	1
M86934B	CONCENTRIC HORIZONTAL TERMINAL \varnothing 80/125mm PP (NO WALL PLATES)	1
LV305016	HORIZONTAL AIR INLET \varnothing 80mm	1
M28925B	TERMINAL WALL PLATES (PAIR)	1

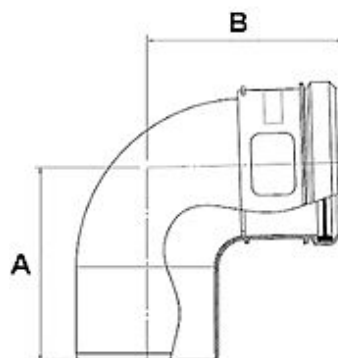
Maximum resistance in the flue system \leq 200pa

Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310718B	EXTENSION - \varnothing 80mm PP CUT TO LENGTH	250mm
M85271B	EXTENSION \varnothing 80mm PP CUT TO LENGTH	500mm
M85272B	EXTENSION \varnothing 80mm PP CUT TO LENGTH	1000mm
LV310721B	EXTENSION - \varnothing 80mm PP CUT TO LENGTH	2000mm
LV310722B	EXTENSION - \varnothing 80mm PP TELESCOPIC	240-360mm
M85292B	BEND 45° 80mm PP	See drawing below
M85291B	BEND 90° 80mm PP	See drawing below
M87191B	WALL CLAMP \varnothing 80mm	n/a



A=72.5mm, B=72.5mm



A=80mm, B=100mm

For further information, see Installation manual available at www.lochinvar.ltd.uk

TWIN-PIPE FLUE SYSTEMS MODEL CPM77

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-163B	CONCENTRIC TO TWIN-PIPE ADAPTER $\varnothing 80/125\text{mm}$ to $80/80\text{mm}$	1
M86864B	CONCENTRIC VERTICAL TERMINAL $\varnothing 80/125\text{mm}$ PP	1
LV305016B	HORIZONTAL AIR INLET $\varnothing 80\text{mm}$	1

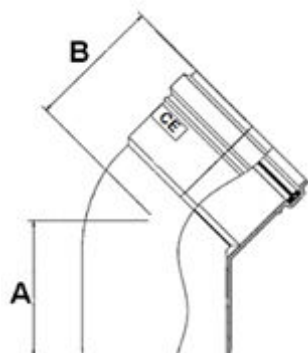
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-163B	CONCENTRIC TO TWIN-PIPE ADAPTER $\varnothing 80/125\text{mm}$ to $80/80\text{mm}$	1
M86934B	CONCENTRIC HORIZONTAL TERMINAL $\varnothing 80/125\text{mm}$ PP (NO WALL PLATES)	1
LV305016B	HORIZONTAL AIR INLET $\varnothing 80\text{mm}$	1
M28925B	TERMINAL WALL PLATES (PAIR)	1

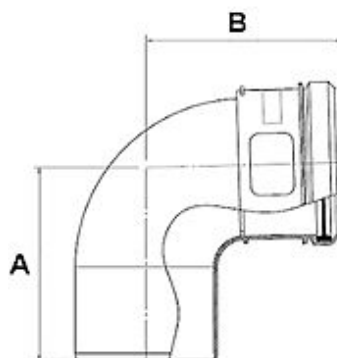
Maximum resistance in the flue system $\leq 200\text{pa}$

Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310718B	EXTENSION - $\varnothing 80\text{mm}$ PP CUT TO LENGTH	250mm
M85271B	EXTENSION $\varnothing 80\text{mm}$ PP CUT TO LENGTH	500mm
M85272B	EXTENSION $\varnothing 80\text{mm}$ PP CUT TO LENGTH	1000mm
LV310721B	EXTENSION - $\varnothing 80\text{mm}$ PP CUT TO LENGTH	2000mm
LV310722B	EXTENSION - $\varnothing 80\text{mm}$ PP TELESCOPIC	240-360mm
M85292B	BEND 45° 80mm PP	See drawing below
M85291B	BEND 90° 80mm PP	See drawing below
M87191B	WALL CLAMP $\varnothing 80\text{mm}$	n/a



A=72.5mm, B=72.5mm



A=80mm, B=100mm

TWIN-PIPE FLUE SYSTEMS MODEL CPM96,CPM116

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-164B	CONCENTRIC TO TWIN-PIPE ADAPTER Ø100/150mm to 100/100mm	1
LV310754B	CONCENTRIC VERTICAL TERMINAL Ø100/150mm PP	1
LV305039B	HORIZONTAL AIR INLET Ø100mm ALU	1

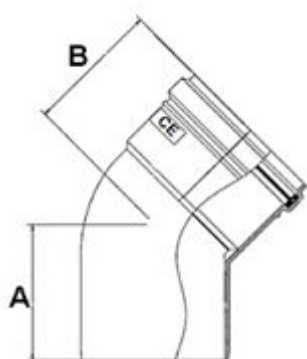
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-164B	CONCENTRIC TO TWIN-PIPE ADAPTER Ø100/150mm to 100/100mm	1
LV310758B	CONCENTRIC HORIZONTAL TERMINAL Ø100/150mm PP	1
LV305039B	HORIZONTAL AIR INLET Ø100mm ALU	1

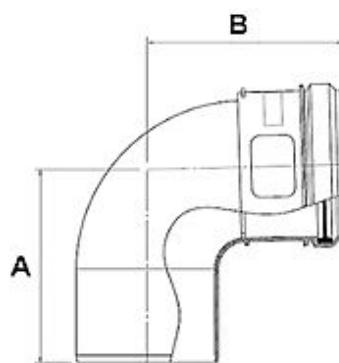
Maximum resistance in the flue system $\leq 200\text{pa}$

Additional Flue Ancillary Items

Item No.	Description	Dimensions
M85176B	EXTENSION Ø100mm PP CUT TO LENGTH	500mm
M85177B	EXTENSION Ø100mm PP CUT TO LENGTH	1000mm
M85181B	BEND 90° 100mm PP	See drawing below
M85182B	BEND 45° 100mm PP	See drawing below
M87193B	WALL BAND (100mm)	n/a



A=78mm, B=65mm



A=115mm,
B=115mm

For further information, see Installation manual available at www.lochinvar.ltd.uk

CONVENTIONAL FLUE SYSTEMS MODEL CPM58

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-162B	CONCENTRIC TO TWIN-PIPE ADAPTER $\varnothing 80/125\text{mm}$ to $80/80\text{mm}$	1
M86864B	CONCENTRIC VERTICAL TERMINAL $\varnothing 80/125\text{mm}$ PP	1

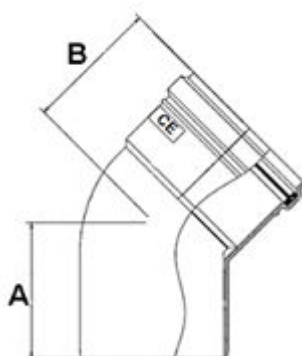
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-162B	CONCENTRIC TO TWIN-PIPE ADAPTER $\varnothing 80/125\text{mm}$ to $80/80\text{mm}$	1
M86934B	CONCENTRIC HORIZONTAL TERMINAL $\varnothing 80/125\text{mm}$ PP (NO WALL PLATES)	1
M28925B	TERMINAL WALL PLATES (PAIR)	1

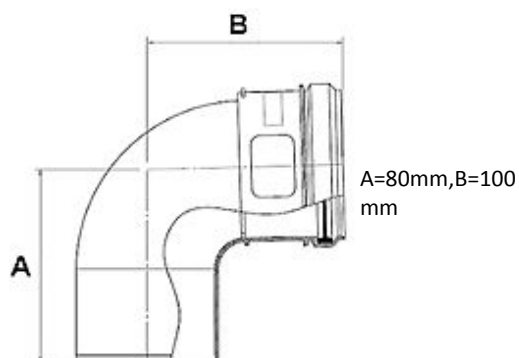
Maximum resistance in the flue system $\leq 200\text{pa}$

Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310718B	EXTENSION - $\varnothing 80\text{mm}$ PP CUT TO LENGTH	250mm
M85271B	EXTENSION $\varnothing 80\text{mm}$ PP CUT TO LENGTH	500mm
M85272B	EXTENSION $\varnothing 80\text{mm}$ PP CUT TO LENGTH	1000mm
LV310721B	EXTENSION - $\varnothing 80\text{mm}$ PP CUT TO LENGTH	2000mm
LV310722B	EXTENSION - $\varnothing 80\text{mm}$ PP TELESCOPIC	240-360mm
M85292B	BEND 45° 80mm PP	See drawing below
M85291B	BEND 90° 80mm PP	See drawing below
M87191B	WALL CLAMP $\varnothing 80\text{mm}$	n/a



A=72.5mm, B=72.5 mm



A=80mm, B=100 mm

For further information, see Installation manual available at www.lochinvar.ltd.uk

CONVENTIONAL FLUE SYSTEMS MODEL CPM77

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-163B	CONCENTRIC TO TWIN-PIPE ADAPTER \varnothing 80/125mm to 80/80mm	1
M86864B	CONCENTRIC VERTICAL TERMINAL \varnothing 80/125mm PP	1

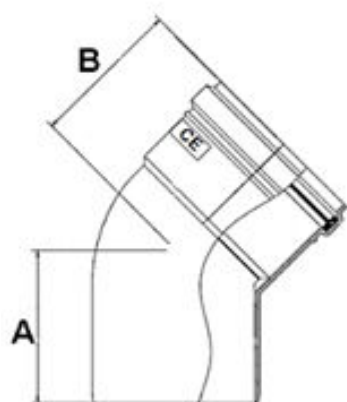
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-163B	CONCENTRIC TO TWIN-PIPE ADAPTER \varnothing 80/125mm to 80/80mm	1
M86934B	CONCENTRIC HORIZONTAL TERMINAL \varnothing 80/125mm PP (NO WALL PLATES)	1
M28925B	TERMINAL WALL PLATES (PAIR)	1

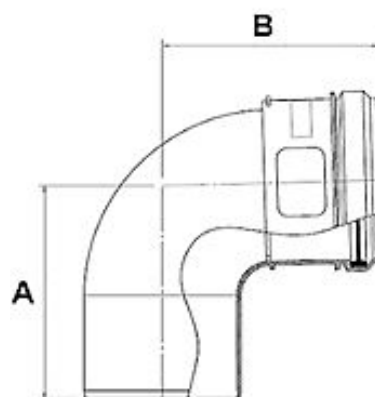
Maximum resistance in the flue system \leq 200pa

Additional Flue Ancillary Items

Item No.	Description	Dimensions
LV310718B	EXTENSION - \varnothing 80mm PP CUT TO LENGTH	250mm
M85271B	EXTENSION \varnothing 80mm PP CUT TO LENGTH	500mm
M85272B	EXTENSION \varnothing 80mm PP CUT TO LENGTH	1000mm
LV310721B	EXTENSION - \varnothing 80mm PP CUT TO LENGTH	2000mm
LV310722B	EXTENSION - \varnothing 80mm PP TELESCOPIC	240-360mm
M85292B	BEND 45° 80mm PP	See drawing below
M85291B	BEND 90° 80mm PP	See drawing below
M87191B	WALL CLAMP \varnothing 80mm	n/a



A=72.5mm, B=72.5 mm



A=80mm, B=100 mm

CONVENTIONAL FLUE SYSTEMS MODEL CPM96,CPM116

COMPONENTS REQUIRED TO START INSTALLATION

VERTICAL FLUE

Item No.	Description	Number required
E61-001-164B	CONCENTRIC TO TWIN-PIPE ADAPTER Ø100/150mm to 100/100mm	1
LV310754B	CONCENTRIC VERTICAL TERMINAL Ø100/150mm PP	1

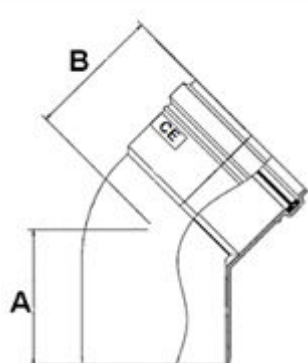
HORIZONTAL FLUE

Item No.	Description	Number required
E61-001-164B	CONCENTRIC TO TWIN-PIPE ADAPTER Ø100/150mm to 100/100mm	1
LV310758B	CONCENTRIC HORIZONTAL TERMINAL Ø100/150mm PP	1

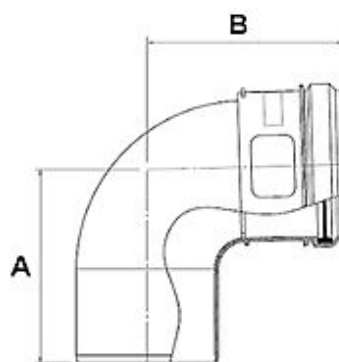
Maximum resistance in the flue system $\leq 200\text{pa}$

Additional Flue Ancillary Items

Item No.	Description	Dimensions
M85176B	EXTENSION Ø100mm PP CUT TO LENGTH	500mm
M85177B	EXTENSION Ø100mm PP CUT TO LENGTH	1000mm
M85181B	BEND 90° 100mm PP	See drawing below
M85182B	BEND 45° 100mm PP	See drawing below
M87193B	WALL BAND (100mm)	n/a



A=78mm, B=65mm



A=115mm,
B=115mm

For further information, see Installation manual available at www.lochinvar.ltd.uk

Sizing Guide

Maximum Length – Concentric Flue

The maximum length of the flue system is determined by the resistance of the components within the flue.



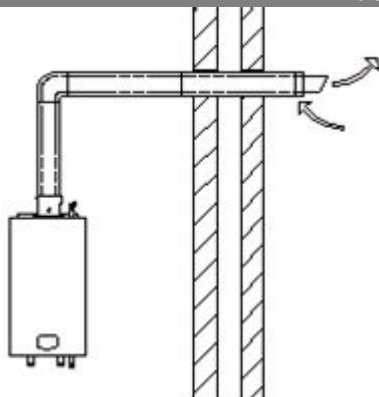
The resistance must not exceed 200 Pa.



The information shown in table below is for the Lochinvar supplied flue system only; other flue system suppliers may have different values.

	CPM 58 (80/125)	CPM 77 (80/125)	CPM 96 (100/150)	CPM 116 (100/150)	CPM 144 (100/150)	CPM 175 (100/150)
Wall terminal	13	22	19	24	40	48
Roof terminal	34	61	39	45	69	86
Straight tube (m)	9	12	8	10	14	16
45° Elbow	5	7	8	9	14	16
90° Elbow	8	13	11	13	22	28

Flue Resistance Calculation Example



EXAMPLE A
 CPM96 BOILER WITH HORIZONTAL CONCENTRIC TERMINAL (100/150mm)
 3000mm VERTICAL FLUE LENGTH
 6000mm HORIZONTAL FLUE LENGTH
 90° BEND

Example A			
Item	Quantity	Resistance	Total
Wall terminal	1	19	19
Roof terminal	0	39	0
Straight tube (m)	9	8	72
45° Elbow	0	8	0
90° Elbow	1	11	11
Total Resistance (Pa)			141
141 < 200 FLUE SYSTEM DESIGN HAS PASSED			

Maximum Length – Conventional/Twin-Pipe Flue

The maximum length of the flue system is determined by the resistance of the components within the flue. When a conventional or twin-pipe flue is to be used, the maximum length of the flue system is limited by the combined resistance of the inlet (if used) and outlet flue components as detailed in the following tables.



The resistance must not exceed 200 Pa.



The information shown in table below is for the Lochinvar supplied flue system only; other flue system suppliers may have different values.



Due to the large Flue pipe size required Lochinvar does not supply conventional flue or Twin-Pipe components for models CPM144, CPM175 except the air inlet guard. For this installation type a flue system designer/installer should be consulted.

Air Inlet Component Resistances (Pa)

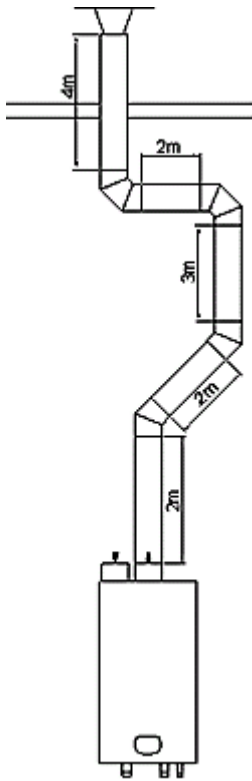
Item	Size (mm)	Resistance (Pa)					
		CPM 58	CPM 77	CPM 96	CPM 116	CPM 144	CPM 175
Straight tube (per metre)	80	4.0	7.5	X	X	n/a	n/a
Straight tube (per metre)	100	1.2	3.0	3.5	4.0	n/a	n/a
Straight tube (per metre)	130	0.4	0.7	0.8	1.1	n/a	n/a
45° Elbow	80	2.0	3.5	X	X	n/a	n/a
45° Elbow	100	0.6	1.5	1.7	2.0	n/a	n/a
45° Elbow	130	0.2	0.4	0.4	0.5	n/a	n/a
90° Elbow	80	4.0	7.0	X	X	n/a	n/a
90° Elbow	100	1.2	3.0	3.5	4.0	n/a	n/a
90° Elbow	130	0.3	0.7	0.8	1.1	n/a	n/a
Vertical inlet cap	80	10.4	18.1	X	X	n/a	n/a
Vertical inlet cap	100	4.2	7.4	11.4	16.7	n/a	n/a
Vertical inlet cap	130	1.5	2.6	4.0	5.8	n/a	n/a

Exhaust Component Resistances (Pa)

Item	Size (mm)	Resistance (Pa)					
		CPM 58	CPM 77	CPM 96	CPM 116	CPM 144	CPM 175
Straight tube (per metre)	80	5.0	8.0	X	X	n/a	n/a
Straight tube (per metre)	100	2.0	3.5	4.0	6.5	n/a	n/a
Straight tube (per metre)	130	0.5	0.8	1.2	1.8	n/a	n/a
45° Elbow	80	2.5	4	X	X	n/a	n/a
45° Elbow	100	1.0	1.7	2	3.2	n/a	n/a
45° Elbow	130	0.2	0.4	1.6	0.8	n/a	n/a
90° Elbow	80	5.0	8.0	X	X	n/a	n/a
90° Elbow	100	2.0	3.5	4.0	6.5	n/a	n/a
90° Elbow	130	0.4	0.8	1.2	1.8	n/a	n/a
Vertical exhaust cap	80	13.8	24.0	X	X	n/a	n/a
Vertical exhaust cap	100	5.6	9.8	15.2	22.1	n/a	n/a
Vertical exhaust cap	130	2.0	3.5	5.3	7.8	n/a	n/a

Worked Example – Conventional Flue

Flue Resistance Calculation Example



EXAMPLE CPM96 BOILER WITH VERTICAL CONCENTRIC TERMINAL(100mm)
 11000mm VERTICAL FLUE LENGTH
 2000mm HORIZONTAL FLUE LENGTH
 2X 90° BEND
 2X 45° BEND
 AIR SUPPLY FROM PLANT ROOM

Item	Quantity	Resistance	Total
Straight tube (m)	13	4.0	52.0
45° Elbow	2	2.0	4.0
90° Elbow	1	4.0	4.0
Concentric Vertical terminal	1	86.0	86.0
Total Resistance (Pa)			146
Total Resistance 146<200 FLUE SYSTEM DESIGN HAS PASSED			



IMPORTANT INFORMATION

These instructions must be read and understood before installing, commissioning, operating or maintaining the equipment.

