

# EcoSable range Flue Guide

Models covered:  
LGSS200-600  
LGSS200-720



## DOCUMENT CONTROL

Article	Language	Version	Modified by
EcoSable flue guide	English	V1.2 January 2023	S Hunt

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Lochinvar Water Heaters are certified for use on the following flue categories:

Installation type	Category	Description
<b>B23</b>	Open flue	An appliance intended to be connected to a flue that evacuates the products of combustion to the outside of the room containing the appliance. The combustion air is drawn directly from the room.
<b>C13</b>	Closed Flue	An appliance connected to either a concentric or twin-pipe flue system with a Horizontal flue terminal. Both the air inlet and flue exhaust must be in the same pressure zone.
<b>C33</b>	Closed Flue	An appliance connected to either a concentric or twin-pipe flue system with a Vertical flue terminal. Both the air inlet and flue exhaust must be in the same pressure zone.
<b>C43</b>	Closed Flue	An appliance connected to a common air inlet and flue exhaust system, which is designed for more than one appliance. This common system has a single air inlet and flue exhaust and is part of the building not the appliance.
<b>C53</b>	Closed Flue	An appliance connected to a twin-pipe flue system with a Horizontal or Vertical flue terminal. Both air inlet and flue exhaust may be in different pressure zones.
<b>C63</b>	Closed Flue	An appliance intended to be connected to a separately approved and marketed system for the supply of combustion air and discharge of combustion products (i.e. other than that supplied by the water heater manufacturer).

All installations should comply with the requirements of:

1. For appliances up to 70kW net input- BS5440-1:2008- Flueing and ventilation for gas appliances of rated input not exceeding 70 kW net (1st, 2nd and 3rd family gases). Specification for installation of gas appliances to chimneys and for maintenance of chimneys.
  - a. Refer to drawing 1 and table 1 for details of terminal locations.
2. For appliances over 70kW net input- IGEM/UP/10 Edition 4 +A: 2016 - Installation of flued gas appliances in industrial and commercial premises, specific attention should be paid to the following sections.
  - a. Refer to drawing 1 and table 1 for details of terminal locations.
  - b. Horizontal terminations shall be located according to the minimum distances given in table 1, and subject to the risk assessment criteria shown in table 2.
  - c. Horizontal flue terminations (other than for fan dilution systems) must not be installed for any single appliance or group of appliances with a total nett input exceeding 333kW net heat input.
  - d. For any single appliance or group of appliances with a total net heat input exceeding 333 kW, the general requirements of IGEM/UP/10 Edition 4 +A: 2016 shall apply and approval must be sought from the Local Authority prior to commencement of the installation.
3. The Clean Air Act for installations exceeding 333kW nett input.

# DRAWING 1 WATER HEATER TERMINAL LOCATIONS

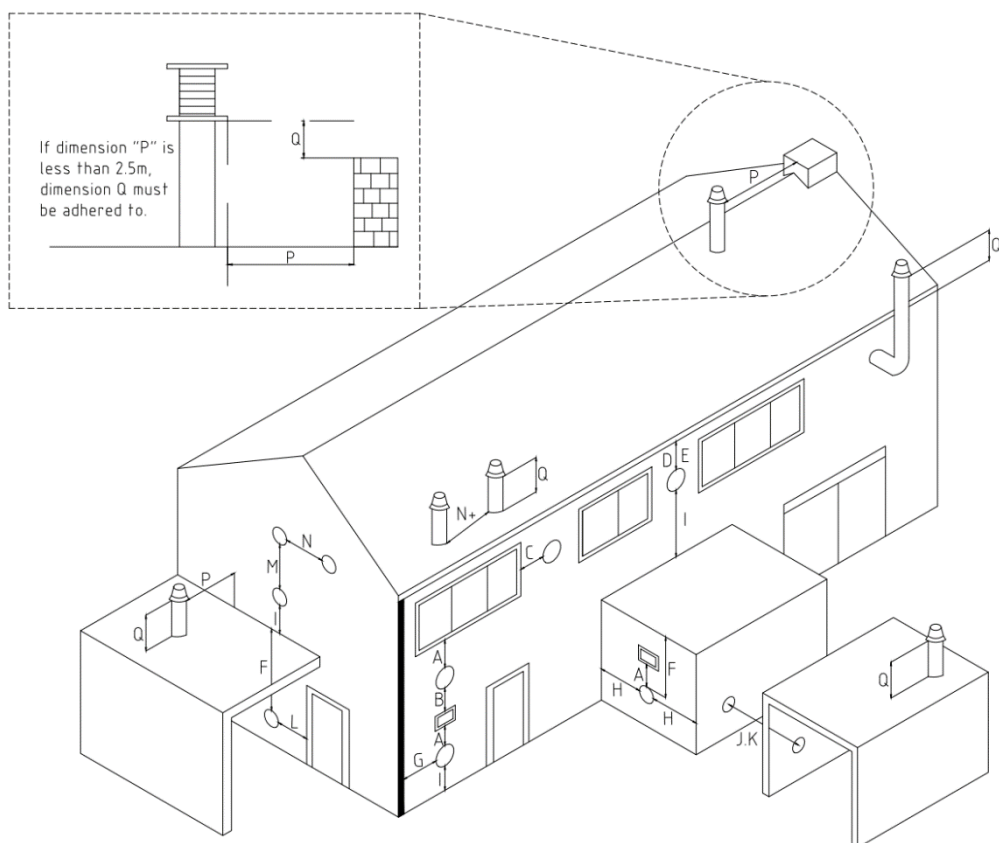


TABLE 1 WATER HEATER TERMINAL LOCATIONS

Location	Description		LGSS200-600	LGSS200-720
	<b>Water heater nett input</b>	<b>kW</b>	<b>35.9</b>	<b>46.2</b>
A	Directly below an opening, air brick, opening windows etc.#	mm	300	300
B	Above an opening, air brick, opening windows etc.	mm	300	300
C	Horizontally to an opening, air brick, opening windows etc.#	mm	300	300
D	Below a gutter or sanitary pipework	mm	75	75
E	Below the eaves	mm	200	200
F	Below a balcony or car port roof	mm	200	200
G	From a vertical drain or soil pipe	mm	150	150
H	From an internal or external corner	mm	300	300
I	Above ground, roof or balcony level	mm	300	300
J	From a surface facing the terminal	mm	600	600
K	From a terminal facing the terminal	mm	1200	1200
L	From an opening in the car port (e.g. door, window) into the dwelling	mm	1200	1200
M	Vertically from a terminal on the same wall	mm	1500	1500
N	Horizontally from a terminal on the same wall	mm	300	300
N+	Vertically from a terminal on the same roof	mm	300	300
P	From a vertical structure on the roof	mm	N/A	
Q	Above intersection with the roof	mm	N/A	

The table above should be used in conjunction with the following notes:

- Distances shown ensure the Water Heaters will operate without problems under most conditions, these distances can be reduced in certain circumstances
- The above should be read in conjunction with the latest edition of BS5440-1 and IGEN UP10
- For Water Heater installation above 333kW nett input the table above should not be used, these installations are covered by the clean air act and must comply with its requirements in full, contact your local environmental health team for further guidance

For further guidance please contact Lochinvar Technical support

**LV310759 CONCENTRIC HORIZONTAL FLUE ASSEMBLY**  
ALL MODELS

**COMPONENTS INCLUDED**

Item No.	Description	Included
LV310759	CONCENTRIC HORIZONTAL FLUE ASSEMBLY 80/125mm PP Includes: Horizontal Concentric terminal, wall plates, 90 bend and 500mm concentric extension	1
Maximum equivalent flue length =20 Metres		
Maximum number of bends allowed =5		

**LV310755 CONCENTRIC HORIZONTAL FLUE ASSEMBLY**  
ALL MODELS

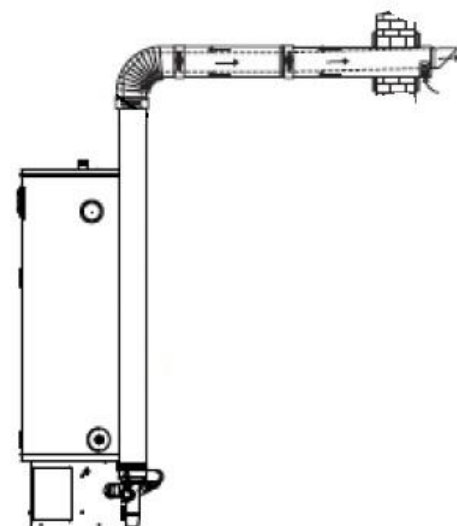
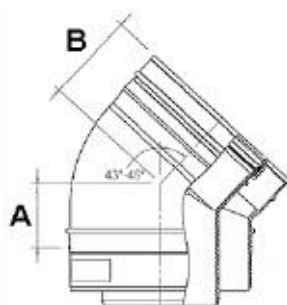
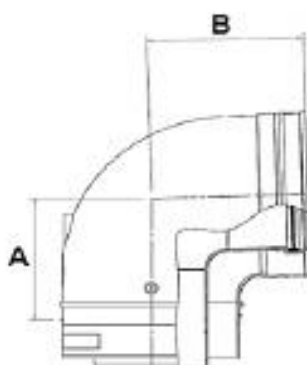
**COMPONENTS INCLUDED**

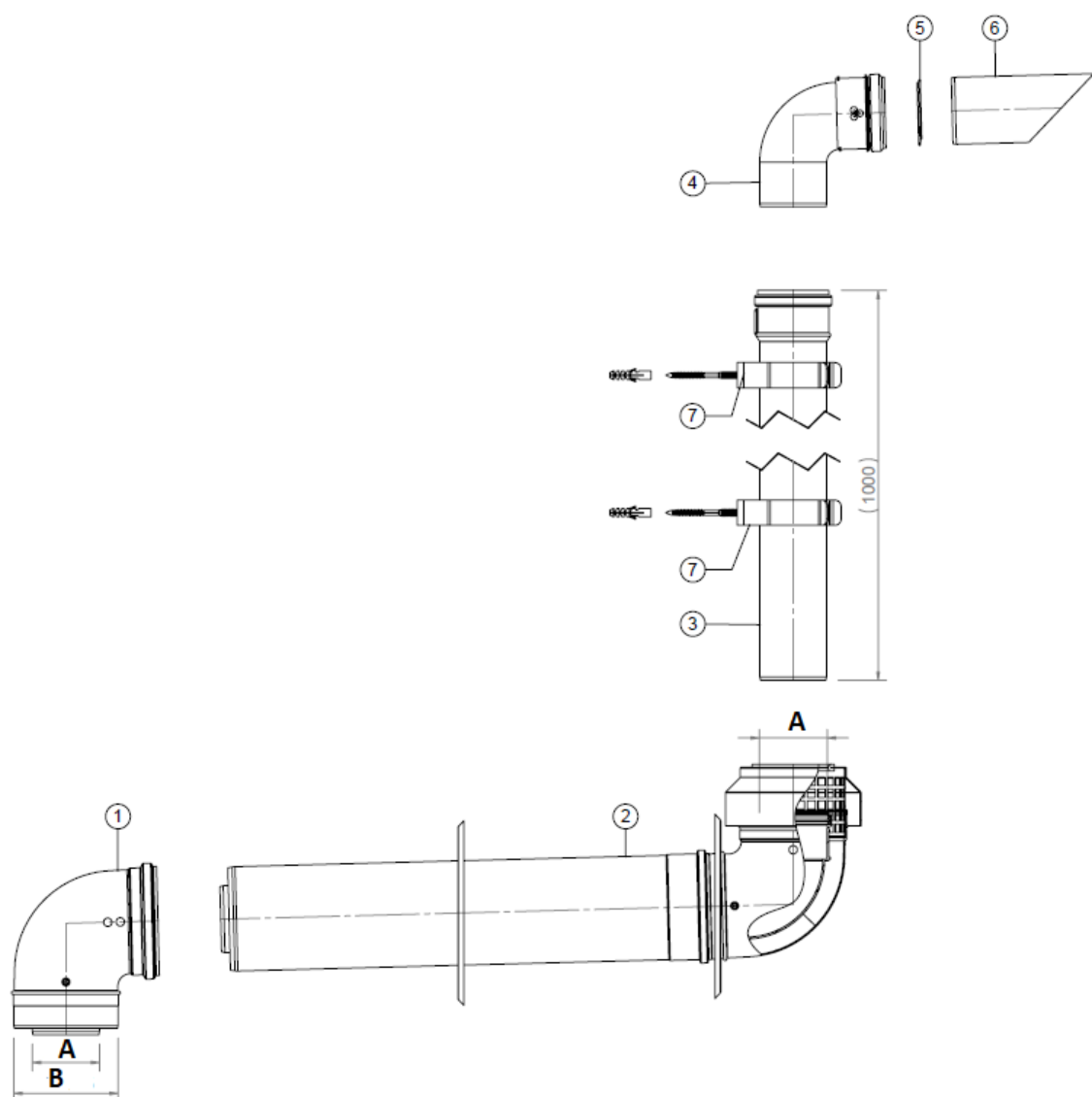
Item No.	Description	Included
LV310755	CONCENTRIC VERTICAL FLUE ASSEMBLY 80/125mm PP Includes: Vertical Concentric terminal, flat roof flashing and 1000mm concentric extension	1
Maximum equivalent flue length =20 Metres		
Maximum number of bends allowed =5		

Additional Concentric flue items available to complete the installation

**Additional Flue Ancillary Items**

Item No.	Description
LV310740	CONCENTRIC EXTENSION - Ø80/125mm PP FIXED (250mm)
LV310745	CONCENTRIC EXTENSION - Ø80/125mm PP (500mm)
LV310742	CONCENTRIC EXTENSION - Ø80/125mm PP FIXED (1000mm)
LV310743	CONCENTRIC EXTENSION - Ø80/125mm PP FIXED (2000mm)
LV310744	CONCENTRIC EXTENSION - Ø80/125mm PP TELESCOPIC
LV310734	CONCENTRIC BEND 45° Ø80/125mm PP (A=45mm B=62.5mm)
LV310735	CONCENTRIC BEND 90° Ø80/125mm PP (A=95mm B=110mm)
M87195	WALL CLAMP Ø130mm





LG800008B PLUME MANAGEMENT KIT Ø80/125mm

No	Description	All models
1	CONCENTRIC BEND 90°-PP	Ø80/125mm
2	CONCENTRIC HORIZONTAL PLUME KIT TERMINAL -PP	Ø80/125mm
3	EXTENSION -PP CUTABLE (1000mm)	Ø80mm
4	BEND 90°-PP	Ø80mm
5	PLUME KIT BIRD GUARD	Ø80mm
6	PLUME KIT FLUE EXIT-PP	Ø80mm
7	WALL CLAMP	Ø80mm
A	INTERNAL DIAMETER	Ø80mm
B	EXTERNAL DIAMETER	Ø125mm



The plume kit **must not be used** to correct an illegal terminal location



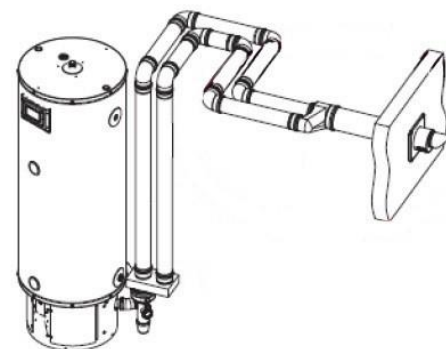
The plume kit can only be used as supplied, further extensions are not permitted

## TWIN PIPE FLUE SYSTEMS

### ELGPH001 TWIN PIPE HORIZONTAL FLUE ASSEMBLY USING A CONCENTRIC TERMINAL ALL MODELS

#### COMPONENTS INCLUDED

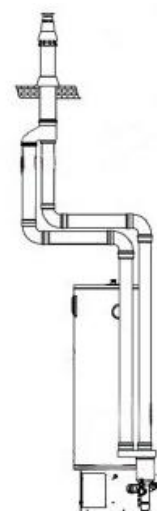
Item No.	Description	Included
LV310728	CONC HORZ TERMINAL - Ø80/80mm TO Ø80/125mm PP	1
M85291	BEND 90° Ø80mm PP	2
LV310718	EXTENSION - Ø80mm (250mm) PP	2
LV310722	EXTENSION - Ø80mm PP TELESCOPIC	2
LV312209	CONC TO TWIN PIPE ADAPTOR - Ø80/125 - 80/80 PP/ALU	1
Maximum equivalent flue length =50 Metres		
Reduction for each 90 bend=3.9metre		
Reduction for each 45 bend=1.1metre		



### ELGPV001 TWIN PIPE VERTICAL FLUE ASSEMBLY- USING A CONCENTRIC TERMINAL ALL MODELS

#### COMPONENTS INCLUDED

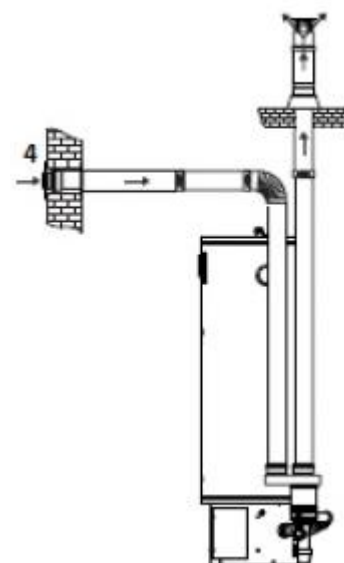
Item No.	Description	Included
LV310708	VERTICAL CONC TERMINAL - Ø80/80mm TO Ø80/125mm PP	1
M85272	EXTENSION Ø80mm (1000mm) PP	2
LV310722	EXTENSION - Ø80mm PP TELESCOPIC	2
LV312209	CONC TO TWIN PIPE ADAPTOR - Ø80/125 - 80/80 PP/ALU	1
Maximum equivalent flue length =50 Metres		
Reduction for each 90 bend=3.9metre		
Reduction for each 45 bend=1.1metre		



### TWIN PIPE HORIZONTAL FLUE UTILISING SEPARATE AIR INLET AND FLUE OUTLET ALL MODELS

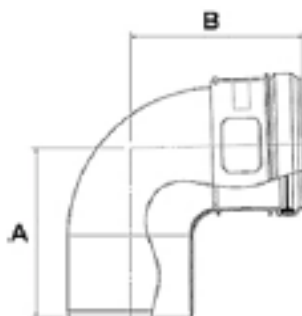
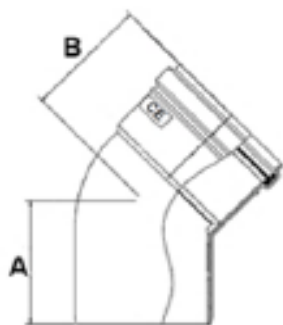
#### COMPONENTS REQUIRED TO START INSTALLATION

Item No.	Description
LV312209	CONCENTRIC TO TWIN PIPE ADAPTOR Ø80/125mm - 2X80mm
LV310753	CONCENTRIC VERTICAL TERMINAL - Ø80/125mm PP
LV302520	FLAT ROOF FLASHING Ø140mm ALU
LV305016	HORIZONTAL AIR INLET Ø80mm
Maximum equivalent flue length =50 Metres	
Reduction for each 90 bend=3.9metre	
Reduction for each 45 bend=1.1metre	



Additional Twin-pipe flue items available to complete the installation

Additional Flue Ancillary Items	
Item No.	Description
LV310718	EXTENSION - Ø80mm PP 250mm
M85271	EXTENSION Ø80mm PP 500mm
M85272	EXTENSION Ø80mm PP 1000mm
LV310721	EXTENSION - Ø80mm PP 2000mm
LV310722	EXTENSION - Ø80mm PP TELESCOPIC
M85292	BEND 45° Ø80mm PP (A=72.5mm B=72.5mm)
M85291	BEND 90° Ø80mm PP (A=110mm B=110mm)
LV310703	BEND WITH SUPPORT 90° Ø80mm PP
LV310690	SUPPORT BRACKET
M87191	WALL CLAMP Ø80mm



## CONVENTIONAL FLUE SYSTEMS

### FAN ASSISTED CONVENTIONAL FLUE TRANSITION-ALL MODELS

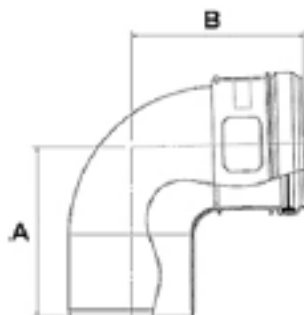
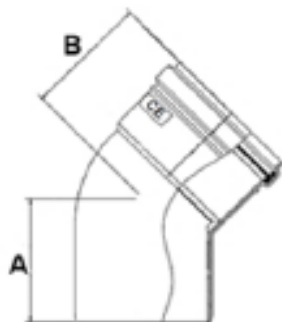
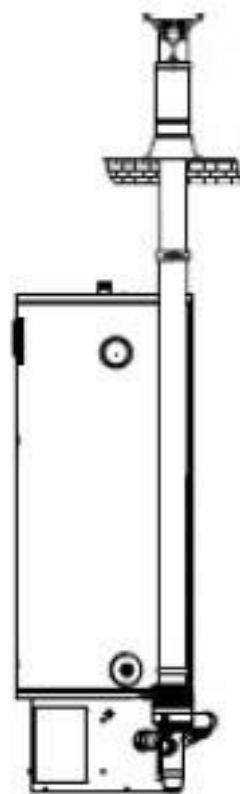
#### COMPONENTS INCLUDED

Item No.	Description
LV305030	APPLIANCE AIR INTAKE GUARD Ø80/125mm
LV310753	CONCENTRIC VERTICAL TERMINAL - Ø80/125mm PP
LV302520	FLAT ROOF FLASHING Ø140mm ALU
Maximum equivalent flue length =50 Metres	
Reduction for each 90 bend=3.9metre	

#### ADDITIONAL CONVENTIONAL FLUE ITEMS AVAILABLE TO COMPLETE THE INSTALLATION

#### Additional Flue Ancillary Items

Item No.	Description
LV310718	EXTENSION - Ø80mm PP
M85271	EXTENSION Ø80mm PP
M85272	EXTENSION Ø80mm PP
LV310721	EXTENSION - Ø80mm PP
LV310722	EXTENSION - Ø80mm PP TELESCOPIC
M85292	BEND 45° Ø80mm PP (A=72.5mm B=72.5mm)
M85291	BEND 90° Ø80mm PP (A=110mm B=110mm)
LV310703	BEND WITH SUPPORT 90° Ø80mm PP
LV310690	SUPPORT BRACKET
M87191	WALL CLAMP Ø80mm



## COMMON FLUE SYSTEMS

Any installations using flue type c63 must be designed and installed in compliance with any local building or planning regulations, but as these systems use a flue system not supplied by Lochinvar, Lochinvar cannot comment / advise or provide support on the design of this type of flue system. To design such a flue system, the installer/contractor must consult a specialist flue supplier who will be responsible for the design and installation of the separate flue system. When designing the type c63 flue system, the instructions in the installation manual, provided with the water heater, must be considered. Lochinvar will provide pressure loss figures for the specific units, but other than that, Lochinvar cannot provide support on common flue requests because flue certification is limited to the certified categories in the table on page 2. Lochinvar cannot accept any responsibility for flue system design.

	Maximum Pressure					
	Inlet Only		Outlet Only		Inlet + Outlet	
	P <sub>inlet</sub>	P <sub>outlet</sub>	P <sub>inlet</sub>	P <sub>outlet</sub>	P <sub>inlet</sub>	P <sub>outlet</sub>
	Pa	Pa	Pa	Pa	Pa	Pa
LGSS200-600	-176	0	0	176	-85	92
LGSS200-780	-291	0	0	291	-140	151

ORDER FORM AND NOTES

Notes-Items to Order		
Item No	No Required	Notes

Contact Lochinvar customer service to order additional flue items on 01295 269981

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8 Lombard Way, The MXL Centre, Banbury, Oxon, OX16 4TJ

Tel: +44(0) 1295 269 981, Fax: +44(0) 1295 271 640, Email: [info@lochinvar.ltd.uk](mailto:info@lochinvar.ltd.uk)

[www.lochinvar.ltd.uk](http://www.lochinvar.ltd.uk)