

Ecovector® LL



Installation, commissioning
and user manual



LL1200 | LL2000 | LL2800

Low Level Fan Convector

Contents

Introduction	2
Declaration of conformity	3
Symbols used in this guide	3
Important safety and installation instructions	4
Product dimensions	6
Product performance	6
Mounting the unit	8
Pipe work	8
Electrical connection	8
Commissioning	9
Fault finding	10
User Manual	10
Heating	10
Registering your product	11
Disposal	11
After sales	11

Introduction

In the event of items missing or visible damage please contact us on 01245 324560.

This heating appliance is intended for mounting on a wall at low level. The minimum recommended installation height is 150cm (6 inches) from the floor. There is no clearance required on either side of the heater.

This heater must not be used in bathrooms or other high humidity areas.

Ecovector is designed for use on standard two-pipe pumped central heating systems where the system hot water is generated from either a boiler or renewable sources. This product is not suitable for one-pipe heating systems. Pipe connections are 15mm.

We recommend the use of full flow isolating valves. These valves should be accessible after completion of the installation.

Ecovector is classified as a fixed appliance and electrical connection should be via a double pole 3A fused spur. The fused spur must not be directly above the heater but should be accessible after completion of the installation. If the pre-wired mains cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons. The appliance must be earthed.

To avoid possibility of vibration, this product must be installed on a flat, even surface.

To comply with Building Regulations Part L (Part J in Scotland) this heater is fitted and controlled by an integral room thermostat

Please note the guarantee may be invalidated if this product is not installed and used in accordance with this guide.

Declaration of conformity

EC Declaration of conformity

We, Smith's Environmental Products Limited
1-2 Blackall Industrial Estate
South Woodham Ferrers
Chelmsford
Essex CM3 5UW
Tel: 01245 324900 Fax: 01245 324422

Declare under sole responsibility that the products:

Product name:
Ecovector Low Level (LL)

Product range:
LL1200, LL2000, LL2800

Listed above conforms with the following directives:

Low Voltage Directive 2006/95/EC / Electrical Equipment (Safety) Regulations 2016
EMC Directive 2004/108/EC / Electromagnetic Compatibility Regulations 2016
Pressure Equipment directive 97/23/EC / Pressure Equipment (Safety) Regulations 2016
Machinery (98/37/EC) / Supply of Machinery (Safety) Regulations 2008

Standards Comply with the Above Directives

Safety Directive Standards:
EN 60335-2-80:2003 + A1:04 in conjunction with EN 60335-1:2002 + A11:04 + A1:04 + A12:06 + A2:06
With U.K deviations.

EMC Directive Standards:
EN 55014-1:2000+A1:01+A2:02
EN 61000-3-2:2000
EN 61000-3-3:1995+A1:01+A2:05

EMF Standards:
EN 50366:2003+A1:06

This Declaration is made on behalf of Smith's Environmental Products Limited.

Symbols

This manual contains information and prescriptions marked by the following symbols.



Ignoring these safety provisions marked by the symbol "caution: hazard" may endanger the safety of people.



Ignoring these safety provisions marked by the symbol "caution: electricity" may endanger the safety of people, as well as the integrity of things.



The removal of the screws can cause the output of hot fluids under high pressure from heating system. Drain the system or close the isolating valves.



High temperature surface. Take utmost care to prevent people from getting in contact with the hot surfaces of the appliance.

Important safety and installation instructions

Prior to installation, read these installation and operating instructions. The installation and operation should also be in accordance with national regulations and accepted codes of good practice.



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

To guard against injury, basic safety precautions should be observed, including the following:



1. Read and follow all safety instructions and all the important notices on the appliance before installing, using and maintaining the appliance. Failure to do so may cause personal injury or damage to the appliance or installation.
2. Always disconnect electrical supply before putting on or taking off parts and whilst the equipment is being installed, maintained or handled. Never work with bare feet and/or with wet hands.
3. To avoid possible electric shock, special care should be taken since water is used with electrical equipment. Carefully examine the appliance before and after installation. Do not operate the appliance if it has a damaged supply cord or enclosure, or if it is malfunctioning or it is dropped or damaged in any manner. Inspect the appliance periodically.

The appliance should not be electrically supplied if there is water on parts not intended to be wet.



4. Risk of scalding. To avoid injury before any servicing operation wait until the water has cooled inside the appliance. Do not touch the fluid or the appliance when temperature is higher than 60°C.



5. Improper use.

This is an appliance to be used in heating systems with clean water without abrasive particles.

Do not use this appliance:

- With liquids other than water (e.g. flammable liquids, etc.) (EN60335-2-51);
- In locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas) (EN60335-2-51);
- For other than intended use.

6. Installation.

The appliance must be mounted in a stable/fixed position in a dry, well ventilated, frost-free, waterproof and protected place, with sufficient ventilation around it. Make sure that the appliance is securely and correctly installed before operating it and that there is enough room around it for maintenance operations, dismantling, checking for free inspection.

The maximum ambient temperature at which the appliance is to be used is 40°C (EN60335-2-51).



7. Electric connection

IMPORTANT: Connection to the power supply must be effected by means of a fixed power cable which is fitted with a plug-type connection or a two pole isolating switch with a minimum contact opening of 3 mm.

Electrical connection must be carried out by a qualified electrician and in accordance with local regulations and both data on the name-plate and the appropriate diagram inside the terminal box cover.

Follow all safety standards.

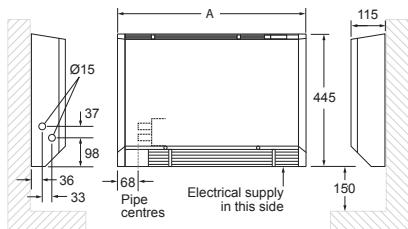
8. All electrical work should be carried out in accordance with current IEEE regulations; we recommend the appliance is protected by a Residual Current Device (RCD or Ground-Fault Circuit-Interrupter) with a rated residual operating current not exceeding 30mA.
9. Prior to any modification being made to the equipment, it must be agreed with and authorised by the manufacturer. Original spare parts and accessories authorised by the manufacturer are integral part contributing to the safety of the equipment and of the machines. The use of non original components or accessories may endanger the safety and causes the termination of the warranty. Safe operation is only assured for the applications and conditions described in Application of this manual.

Non-observance of the safety instructions results in the loss of any claims to damages.

The indicated limit values are binding and cannot be exceeded for any reason whatsoever.

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Product dimensions



Model	A
LL 1200	635
LL 2000	1025
LL 2800	1385

Product performance

Heat output

Model	Heat Output at 80°		Heat Output at 75°		Heat Output at 70°	
	Low (kW)	High (kW)	Low (kW)	High (kW)	Low (kW)	High (kW)
ECOVECTOR LL 1200	1.2	1.6	1.1	1.4	1.0	1.3
ECOVECTOR LL 2000	2.0	2.6	1.9	2.4	1.6	2.2
ECOVECTOR LL 2800	2.8	3.5	2.6	3.2	2.3	2.9

Model	Heat Output at 65°		Heat Output at 60°		Heat Output at 55°	
	Low (kW)	High (kW)	Low (kW)	High (kW)	Low (kW)	High (kW)
ECOVECTOR LL 1200	0.9	1.1	0.8	1.0	0.7	0.8
ECOVECTOR LL 2000	1.5	1.9	1.3	1.7	1.2	1.6
ECOVECTOR LL 2800	2.0	2.6	1.9	2.4	1.9	2.1

Model	Heat Output at 50°		Heat Output at 45°		Heat Output at 40°	
	Low (kW)	High (kW)	Low (kW)	High (kW)	Low (kW)	High (kW)
ECOVECTOR LL 1200	0.6	0.7	0.5	0.6	0.4	0.5
ECOVECTOR LL 2000	1.0	1.3	0.9	1.1	0.7	0.8
ECOVECTOR LL 2800	1.3	1.8	1.2	1.5	1.0	1.2

Product performance

Model	Water Capacity (Litres)	Sound Levels		Casting colour	Fan-only
		Low (dBA)	High (dBA)		
ECOVECTOR LL 1200	0.29	32	38	white	n/a
ECOVECTOR LL 2000	0.58	35	40	white	n/a
ECOVECTOR LL 2800	0.83	37	42	white	n/a

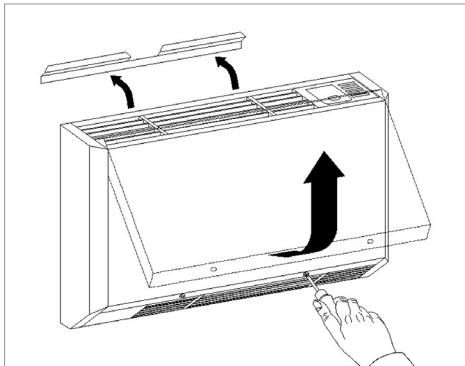
Model	Flow & return connections	Mains cable	Transformer	Fused spur	Total Power Consumption	
					Low (Watts)	High (Watts)
ECOVECTOR LL 1200	15mm	1.5m	n/a	3A	17	21
ECOVECTOR LL 2000	15mm	1.5m	n/a	3A	26	55
ECOVECTOR LL 2800	15mm	1.5m	n/a	3A	43	76

Heat outputs tested in accordance with BS4856 using entering water temperature and 340 l/h (75gph) flow rate.

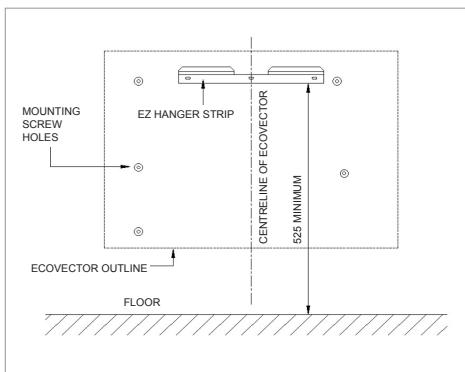
Sound levels measured at 1.5m.

Mounting the Unit

Remove the EZ hanger from the back of the heater. Remove screws from the underside of the front panel, carefully lift up and remove.



Fix the EZ hanger to the wall, position the heater on the EZ hanger and secure to the wall at the five fixing points.

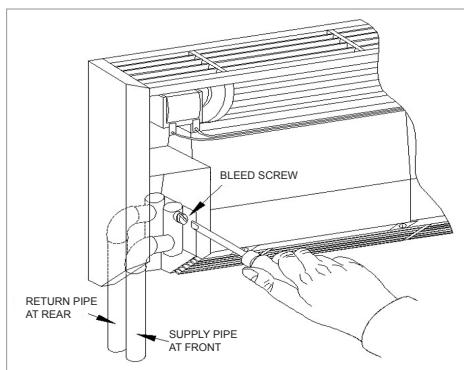


Pipe Work

We recommend the use of full flow isolating valves. These valves should be accessible after completion of the installation. Pipe work can be brought out from the heater directly or through the rear chassis. A lower panel blanking plate is packed and supplied with the heater if the latter option is used (to fit this remove the 3 screws from the fitted slotted pipe access panel and replace with the blanking plate).

Connect the heating system flow and return pipes to the heater pipe work. Do not use soldered fittings to the heater pipe work as heat generated could damage internal wiring and components. The pipe nearest the front of the heater is the supply flow and the pipe nearest the chassis is the return.

Check for water leaks. Remove any trapped air from the system via the vent valve on the top left hand side of the heat exchanger. Do not over tighten the air vent.



Electrical Connection

ALL ELECTRICAL INSTALLATIONS CONNECTIONS MUST COMPLY WITH BS7671, 1992 AND THE IEE REGULATIONS. CHECK THE VOLTAGE ON THE HEATER IS CORRECT FOR YOUR SUPPLY. IF IN DOUBT, CONSULT A QUALIFIED ELECTRICIAN.

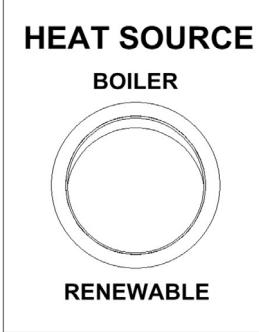
If the pre-wired mains cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons.

Isolate the supply and connect the heater three core mains lead to the fused spur (3A) in accordance with the instructions provided on the mains lead label. (The supply wire which is coloured green or green and yellow must be connected to the terminal marked E on the appliance, the supply wire which is coloured black or blue must be connected to the terminal marked N on the appliance and the supply wire which is coloured red or brown must be connected to the terminal marked L on the appliance).

The fused spur must not be directly above the heater but should be accessible after completion of the installation.

Commissioning

This heater is equipped with a selectable low temperature cut out thermostat which requires the correct system hot water to be sensed before the fan(s) will run. The heat source switch can be set to run on either renewable (+38°C) or boiler mode (+52°C).



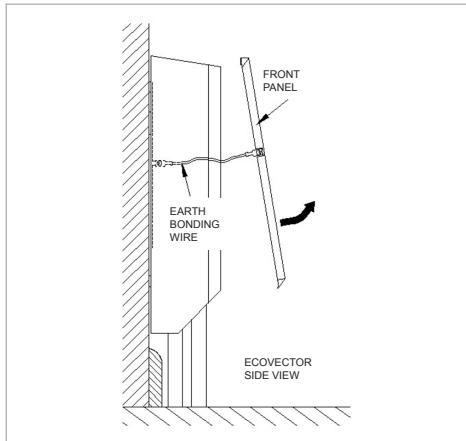
Set the heat source switch to the correct mode, turn on the electrical supply at the fused spur, switch on the central heating system, set the thermostat and the heat output switch to Low (I) or High (II). The fan(s) should run and heat will flow within a few minutes.

If this heater is installed on the same circuit as panel radiators balance the central heating system.

When the installation is working correctly, remember to reset the room thermostat to its normal setting.

Installation Completion

Attach the earth bonding connector to the outer casing and refit the outer casing to the chassis.



Fault finding

In the event of any difficulty, please contact us on +44 (0) 1245 324560.

It will be helpful if you do not disconnect the heater from the central heating system.

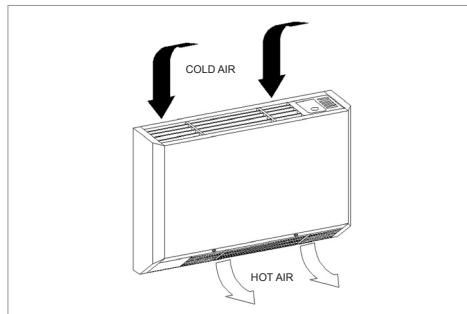
Fault	Checking/Solution
Fan does not run on any switch setting	<p>Check the power supply is switched ON</p> <p>Check the fuse in the fused spur</p> <p>Check the wiring connections at the fused spur</p>
No heat output on settings I or II	<p>Check the power supply is switched ON</p> <p>Ensure the room thermostat is calling for heat</p> <p>Check the heat source switch is in the correct mode</p> <p>Balance the central heating system if installed on the same circuit as panel radiators and increase the circulating pump speed if required</p> <p>Increase the heat source water temperature</p>

User Manual

How an Ecovector fan convector works

Your Ecovector is designed to operate as part of your central heating system in the same way as a panel radiator. Providing you leave the heater switches in their normal operating positions it will switch on and off automatically with your central heating system.

Heat from your central heating system passes through a heat exchanger transferring its heat to the aluminium fins, room air is drawn in the top grille and heated as it passes through the heat exchanger before being gently expelled back into the room at floor level.

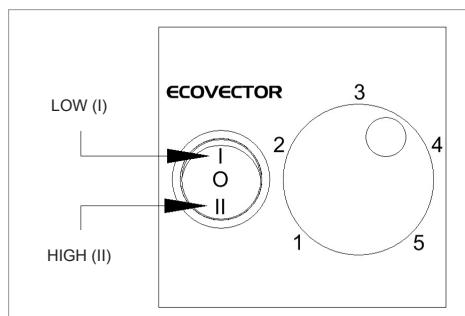


Ecovector includes a selectable low temperature thermostat that prevents the fan(s) operating until the central heating system water passing through the heat exchanger reaches a set temperature.

Heating

Ensure your central heating is ON, the heat output switch set to Low (I) and the thermostat set to the required position (position 3 is approximately 20°C).

If you require a faster warm up set the heat output switch to High (II)





Happy to help

Smith's Environmental Products Ltd is one of the leading manufacturers of heating and cooling products in the UK. We are committed to achieving the highest standards and our faith is supported by a free parts and labour guarantee with every product (see our website for more information). Our customer service is second to none and we are happy to offer any help and guidance that you might need.

Stockists

All products are available nationally from Builders' Merchants, Plumbers' Merchants, Heating Equipment Distributors and Kitchen Equipment Distributors. In the event of difficulty, please contact us or visit our website SmithsEP.co.uk for details of your nearest stockist.

Information and advice

Full technical specifications and list prices are available to download from our website or in hard copy from our office. Also available on our website are price lists, individual product data sheets, installation & user guides, where to buy, who to contact and a media centre.

Alternatively contact our office 9.00am to 5.00pm Monday to Friday.

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**To view the full product information download the datasheet at:
www.SmithsEP.co.uk**

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