



# Installation, Operation and Maintenance Manual

## Unit: FCH ELECTRIC AND LPHW

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## 1 Pre Installation

### 1.1 Delivery Check

On receipt of delivery check the unit and packaging for any damage. Report any transport damage to Diffusion immediately, or within three working days.

Make sure that all ordered parts have been delivered. Any shortfall should be reported to Diffusion immediately.

### 1.2 Handling

The unit must be handled with care, to avoid damage to the grille and painted surfaces. Distortion of the chassis and damage to the internal components may occur as a result from impact.

### 1.3 Storage

Units should not be stacked. The units should be carefully stored under dry and dust free conditions in their packaging until required.

## 2 Installation

### 2.1 General

Make sure that the structure on which the unit will be suspended/mounted is capable of supporting the weight of the unit. The weight is shown on the G/A drawings.

Do not obstruct inlet grille or inlet area (recessed model) as unit failure will result.

### 2.2 Hanging the units

The unit is to be mounted and levelled using the four fixing holes which are located on the back of the unit and on the rear panel.

### 2.3 Pipe connections (LPHW)

Pipe connections are made through the rear/bottom of the unit. Pipe sizes are detailed on G/A drawings/sales literature.

### 2.4 Electrical connections

The unit requires a 230/1ph/50Hz electrical supply that is terminated within the control box and should be connected in accordance with the wiring diagram and current IEE regulations. Cable entry points are detailed on the G/A drawings/sales literature.

**Warning: The unit must be earthed. Make sure that the mains supply you are working on is switched off.**

## 3 Operation

### 3.1 Unit operation

LPHW version:

Units may be controlled individually or in parallel by one of the following methods:-  
(Optional)

- a) Remote/integral or case mounted 3 speed control with 'OFF' position.

- b) Low water temperature cut out, factory pre-set to 35°C.
- c) Remote room thermostat for wall mounting, adjust dial to required setting.
- d) Manual Summer/Winter switch. This overrides the low water temperature cut out and thermostat, allowing the fan to run in summer to provide ventilation only. It is not required if a low water temperature cut out/or thermostat is not installed.
- e) Built in return air thermostat (optional on low level units only), adjust dial to required setting.

Electric version:

The unit is provided with a bank of three switches integrally mounted within the unit casing. Operation of the green fan switch will start the fan circulating and operation of the orange heat switches will provide 1.5kW + 1.5kW. There is a built-in protection to prevent the heating elements from being operated, when the fan is switched off.

Remote room thermostat for wall mounting, adjust dial to required setting alternatively a built in return air thermostat (optional on low level units only), adjust dial to required setting.

### 3.2 Safety Instructions

#### **Warning:**

**Do not insert any objects into the inlet or discharge openings.**

**Never block the inlet or discharge openings.**

**During operation the surface of the unit can become hot.**

**Make sure mains power supply is switched off, whilst working on the unit.**

### 3.3 Operation of options

Low water temperature cut out: Provides automatic shutdown of the fan/motor when boilers have been switched off.

Thermostat – for remote mounting and can be supplied adjustable or tamperproof.

Summer/Winter switch (manual): Used in conjunction with the room thermostat and/or low water temperature cut out, this will allow the fan only to run for air movement. This can be incorporated within the LPHW version control plate if requested.

## 4 Maintenance and Servicing

### 4.1 Safety Instructions

**Warning: Before maintaining/servicing the unit:**

**Make sure mains power is switched off, (i.e. fused spur or main circuit breaker).**

**Wait until fans/motors have stopped rotation.**

**Allow the unit to cool down after operation.**

**Coil fins and element fins can be sharp.**

## 4.2 General maintenance

Access to all the components can be made by removing the front panels of the unit, which are secured with screws.

Filter (if applicable): Must be maintained at regular intervals. Exact intervals will be determined by environmental/building conditions.

Fans: Impeller blades should lightly brushed/cleaned at regular intervals, this is to remove any dust that has gathered. The fans have sealed for life bearings and therefore require no lubrication. Fan deck can be removed and fans are fixed to the motor with allen keys fixings.

Electric Elements: Fins should be lightly brushed/cleaned at regular intervals; this is to remove any dust that has gathered.

LPHW Coils: Fins should be lightly brushed/cleaned at regular intervals; this is to remove any dust that has gathered.

### Spares Parts

#### 5.1 Spares lists

Contact spares department

### Drawings

#### 5.1.1 G/A Drawings

As attached drawings

#### 5.2 Wiring Diagrams

As attached drawings

## 6 General information

The goods supplied are subject to et Environmental standard terms and conditions of sale, a copy of which is available on request. If anything in these installation operation and maintenance instructions conflicts with the terms and conditions, then the terms and conditions will apply.

Each unit is individually tested both mechanically and electrically. A test label is attached to each unit signed by the tester for each test completed.

Liability for the contents of this guide:

However much care might have been taken in ensuring the correctness and, where necessary, completeness of the description of the relevant parts, et Environmental disclaims all liability for damage resulting from any inaccuracies and/or deficiencies in this guide.

Should you detect any errors or ambiguities in this guide then we would be pleased to hear from you: it helps us to improve our documentation even further.

et Environmental has a policy of continuous development and therefore reserves the right to alter information contained in this literature without prior notice.

If you require any further information please contact the following:

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# **Declaration of Conformity**

This certificate declares that the following et Environmental plc products:

**Over door heaters, space heating units, fan convectors and vent units.**

Have been designed and manufactured in accordance with the requirements of the council directive 89/336/EEC relating to Electromagnetic Compatibility by the application of the following EMC generic standards.

EN50 081.1 1992

EN50 082.1 1992

Providing installation is carried out in compliance with BS 5345 & BS 6959 and that correct EMC practices are applied, and that any cable glands and connections to the units are approved for use in the relevant environment.