



# Installation, operation and Maintenance Manual

Unit: CTW & CTE

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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.

The upper part of the unit can become hot; therefore keep 20mm from the mounting surface.

The unit must be positioned within the ceiling grid away from lights and other obstructions.

### 2.2 Hanging the unit

Unit is to be suspended/mounted and levelled using four 6mm drop rods. Two integral brackets are located on two sides of the unit for this purpose.

### 2.3 Pipe connections

Pipe connections are made through the side of the unit. Pipe sizes and inlet/exit points are detailed on G/A drawings/sales literature.

### 2.4 Electrical connections

The unit requires a 230v/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.

The unit has an integral controlbox that houses the speed transformer, controller and electrical consumables. This can be accessed by removing the grille.

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

### 2.5 Dampered fresh air inlet

When supplied, this is a 100mm diameter spigot complete with a manual locking quadrant damper and can be connected using flexible ductwork.

### 3 Operation

#### 3.1 Unit operation

LPHW Version: The unit shall be supplied with an on/off and 3-speed switches that will be mounted within the unit.

Electric Version: The 1.5kw unit shall be supplied with an on/off and 3-speed switches and the 3kw unit shall be supplied with an on/off and 2-speed switches that will be mounted within the unit. The unit can be used in ambient mode, by using the fans only setting. Should the airflow fail, or reduce to dangerously low levels due to obstruction or fan failure, the manual over heat safety cut out will operate. This cuts the electrical power to the heating elements and shuts them down, which prevents the unit from seriously over heating and becoming a safety hazard.

Note: Access to controls is via the removable core (grille).

#### 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.**

**When the unit is switched off, residual heat will be present for a period of time, DO NOT remove the access panel or carry out any maintenance until the heat has dissipated sufficiently to a level where it is safe to do so.**

#### 3.3 Operation of options

Remote or return air Thermostats: To control electric heating on/off on electric version and fan on/off on LPHW version (Standard or Energy saving controls).

Summer/Winter Switch (manual): Can be used in conjunction with the room thermostat (LPHW version) and/or low water temperature cut out. This will allow the fan only to run.

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

Valve & actuator (LPHW version): 2-Port valve with on/off control, 230vac supply. The valve & actuator will be supplied complete with a remote thermostat that disables the heating and allows the fans to run (vent only).

### 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 elements fins can be sharp.**

**Use all necessary safety equipment required by current HSE legislation.**

## 4.2 General maintenance

Access to all the components can be made via the removable core/grille (push release).

Filter: 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.

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

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

## 5 Spares Parts

### 5.1 Contact spares department for full details.

As attached list

## 6 Drawings

### 6.1 G/A Drawings

As attached drawings

### 6.2 Wiring Diagrams

As attached drawings

## 7 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.