



LIMPET Ceiling Extract Fans

Installation, Operation and Maintenance Manual

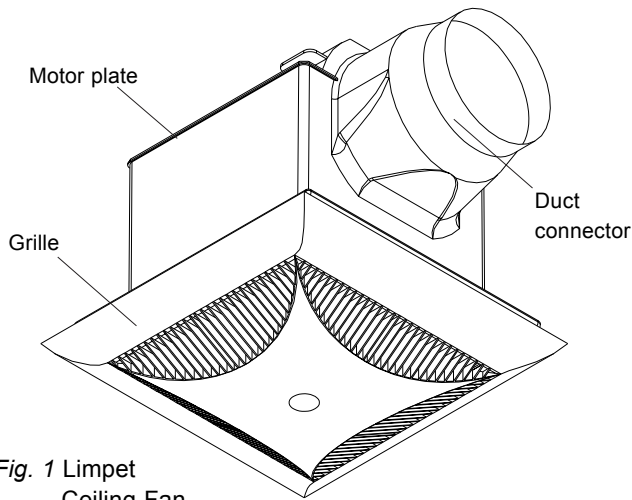


Fig. 1 LIMPET Ceiling Fan

IMPORTANT !

Only experienced fitters should undertake this work. Take necessary safety precautions when working in elevated positions.

For optimum unit performance, careful consideration must be given to the location of the unit in relation to the ductwork and associated items; placing the unit directly adjacent to a bend in ductwork may impede airflow and reduce performance see *fig. 7*. Consideration must be given by the installer to the positioning of the unit to ensure that access for maintenance can be provided in line with the Health and Safety and Building Regulations. Adequate illumination of the units location must also be considered in order to carry out maintenance safely.

We recommend installing the LIMPET at a minimum height of 2.4m, when installing the extract fan always ensure access is allowed for fan maintenance.

For fixing the unit to the ceiling follow the installation options below. Note: this unit is not suitable for wall mounting.

IMPORTANT !

This manual must be read in full before Installation, Operation and Maintenance of the unit/s supplied

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1 Introduction

The LIMPET series is a range of ceiling mounted extract fans available in three sizes from 170mm to 300mm diameter, with a duty range of between 0.025m³/s and 0.08m³/s. Standard operating temperature of the unit is 0 to +40°C

For further technical details contact VES on **08702 404340** quoting the sales order number and the unit type as found on the unit nameplate.

2 Receipt of Goods

Immediately upon receipt of goods, check for possible damage in transit, paying particular attention to fan impellers and casework. Prior to installation please check to ensure smooth rotation of the impeller. Also check to ensure that any ancillary items are included. These will normally be supplied fitted or in the case of small items taped to the unit. In the event of any damage having occurred or if any item is found missing, it is essential to inform VES Andover Ltd. within **7 working days** of delivery quoting sales order (SO) number and the unit type as found on the unit nameplate. After this period we will be unable to accept any claim for damaged or missing goods.

3 Installation

The entire system must be considered for safety purposes and it is the responsibility of the installer to ensure that all of the equipment is installed in compliance with the manufacturer's recommendations, with due regard to the current HEALTH AND SAFETY AT WORK ACT and conforms to all relevant statutory regulations. Where a unit is installed so that a failure of components could result in injury to personnel, precautions should be taken to prevent such an injury.

A: Using the steel angles provided see *fig. 2*:

In order to facilitate installation we have provided two pre-punched steel angles for fixing to a ceiling grid (max. size 600x600mm).

- Cut hole in ceiling tile (centered) to suit opening of unit see *fig.6*.
- Remove round plastic spigot and place unit on top of ceiling tile and match drill holes.
- Attach tile between unit ceiling flange and support angle using 6mm bolts provided.
- Drop fan & tile assembly into ceiling tile grid.
- Replace round spigot.
- Screw on plastic grille (use clips supplied on the 170 size unit see *fig. 9*).

B: Using a fabricated pattress see *fig. 3*:

The unit can be installed using a pattress (not supplied). This is recommended in instances where a larger unit is used or if the unit is installed in a larger or non-standard ceiling grid or ceiling.

- Cut hole in ceiling tile to suit opening of unit see *fig.6*.
- Fabricate a pattress (plywood, MDF etc) with a cutout to suit the unit size and outside dimensions to suit the application i.e. ceiling grid.
- Remove round plastic spigot and place fan unit to top of ceiling tile and pattress and match drill holes.
- Attach tile to unit and pattress using 6mm bolts provided.
- Drop fan and tile assembly into ceiling tile grid.
- Replace round spigot.
- Screw on the plastic grille (use clips on the 170 size unit see *fig. 9*).

C: Using steel angles and optional vandal proof grille see *fig. 4*:

Follow the steps as described in section A, instead of screwing the grille into place, push the grille up to the ceiling ensuring the welded studs pass through the holes in the flange of the unit. Secure the grille/fan case together (with the ceiling sandwiched between them) with the wing nuts supplied.

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3 Installation continued

Fig. 2 A: Standard installation on ceiling tiles

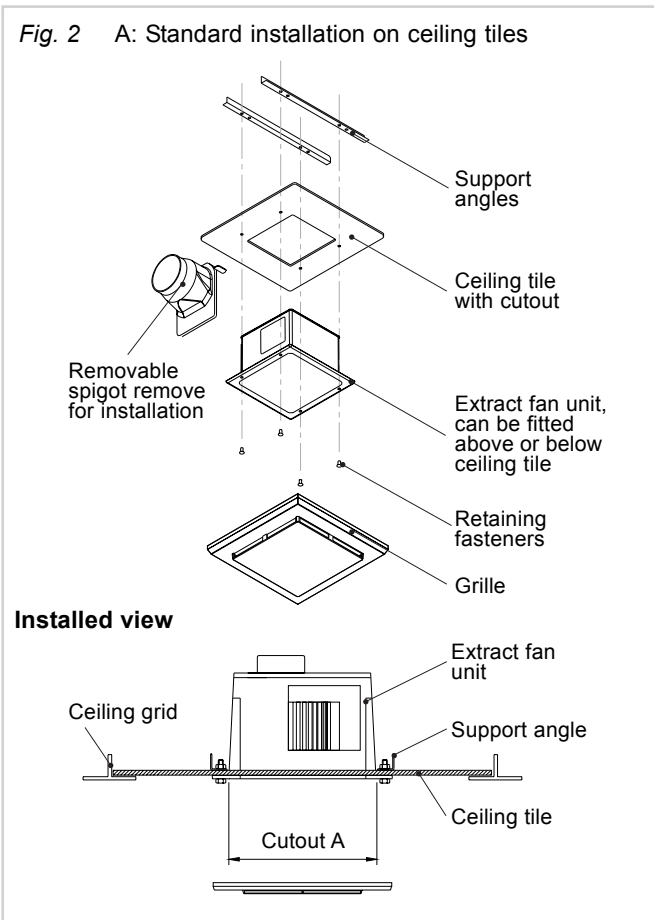


Fig. 3 B: Installing unit with supporting pattress

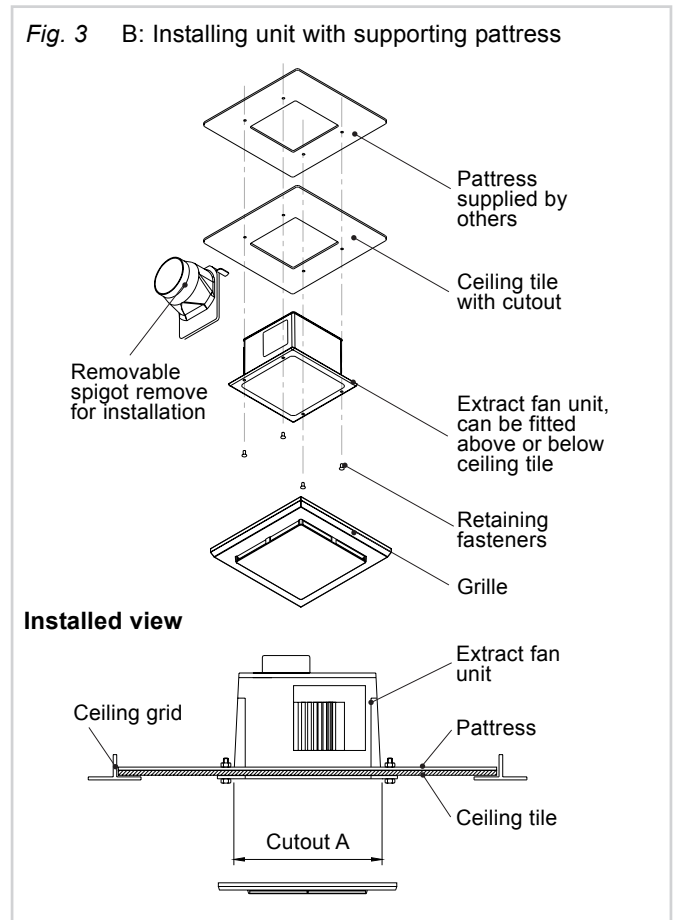


Fig. 4 C: Unit with vandal proof grille

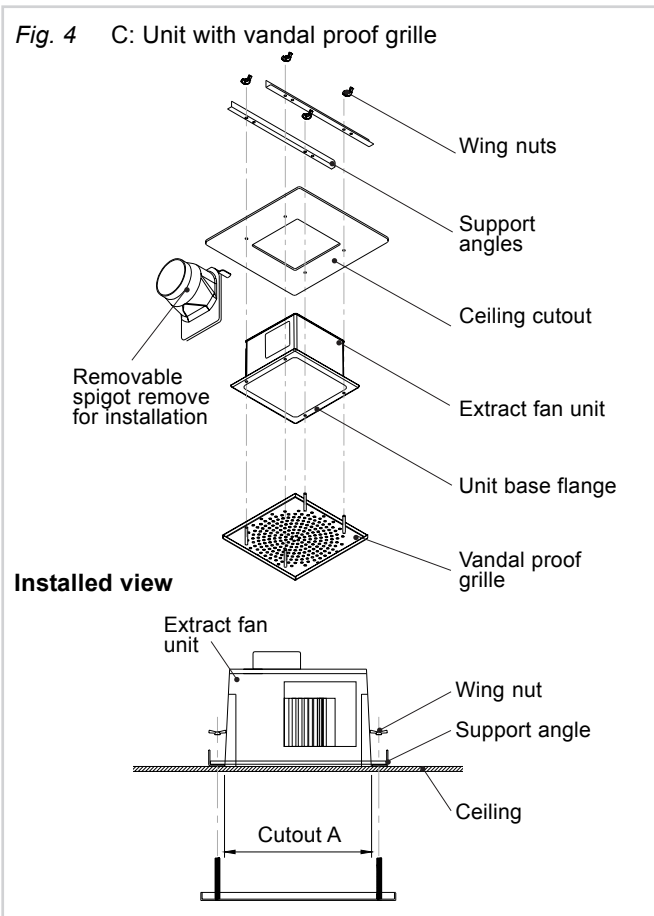
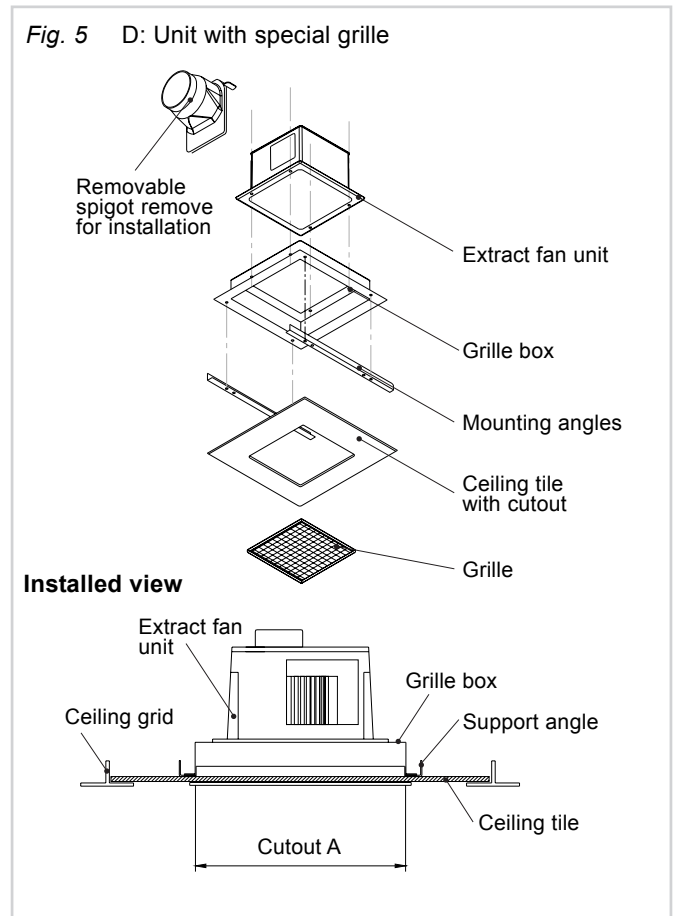


Fig. 5 D: Unit with special grille





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3 Installation continued

D: Using Optional grille and grille box see *fig. 5*:

The grille box will be supplied to suit the dimensions of the grille (cutout 'B') and the inlet size of the extract unit.

- Cut hole in ceiling tile (centered) to suit the size of the inside flange of the grille. For sizes see *fig. 6*.
- Remove round plastic spigot and secure extract unit to grille box using bolts provided.
- Secure both angles to underside of grille box flange.
- Drop fan and grille box assembly into ceiling tile grid on top of ceiling tile
- Screw on the grille (use clips on the 170 size unit see *fig. 9*).

Model	Cutout size	Clearance req. in ceiling void *	Duct mm
LCE170	180 x 180	250	100
LCE240	246 x 246	300	100
LCE300	315 x 315	375	150

Fig. 6 Cutout sizes for ceiling tiles and ductwork.

*Allow an additional 50mm for grille box where used.

Spigots should not be used to support the ductwork they should be used solely as a means of ductwork connection.

IMPORTANT !

Before duct work is connected to the unit ensure the back draught flaps are in the down position.

Installing the extract duct.

Duct must be selected to suit the spigot diameter of the unit, indicated in *fig. 6*. Follow the steps below to install ductwork see *fig 7 & 8*:

- Clip removable round spigot back into position.
- Push duct over spigot and secure with duct tape or band (Do not over tighten).
- Follow the wiring guidelines on the following page.
- If supplied, fit the optional wall shutters as indicated.

Fig. 7 For optimum performances **AVOID** the following scenarios:

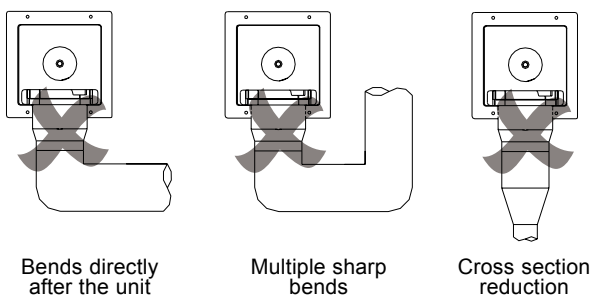


Fig. 8 Typical installation with optional with optional wall shutters shown

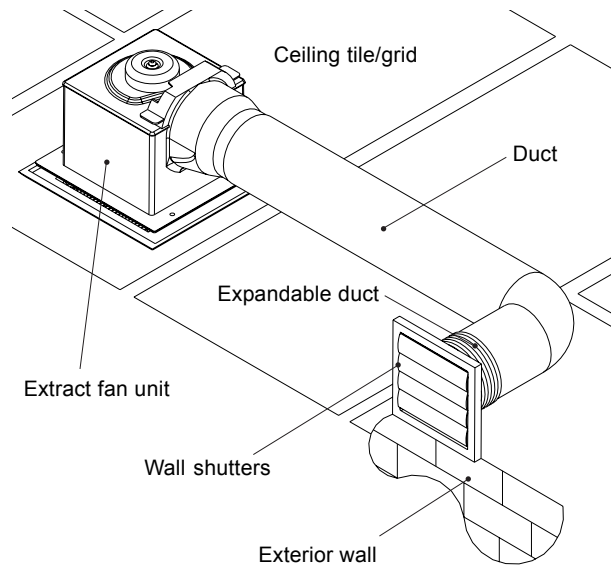
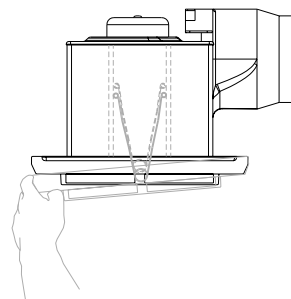
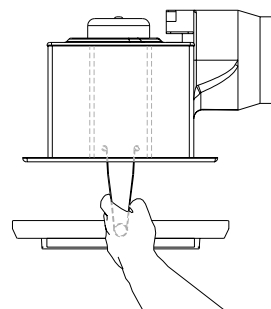


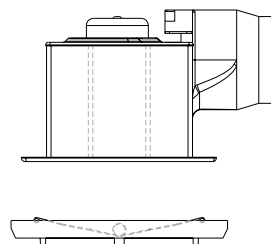
Fig. 9 Removing LCE170 grille



Step 1
Gently lower the grille (use the edge of the grille)



Step 2
Squeeze the retaining clips and remove the grille



Right: grille fully removed, retaining clips fully extended. When reinstalling the grille, return retaining clips to guides in casework. This is easiest one clip at a time (separately).



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4 Wiring

All electrical connections to any unit must be carried out in accordance with the current edition of the I.E.E REGULATIONS and only competent electricians should be allowed to affect any electrical work to our units.

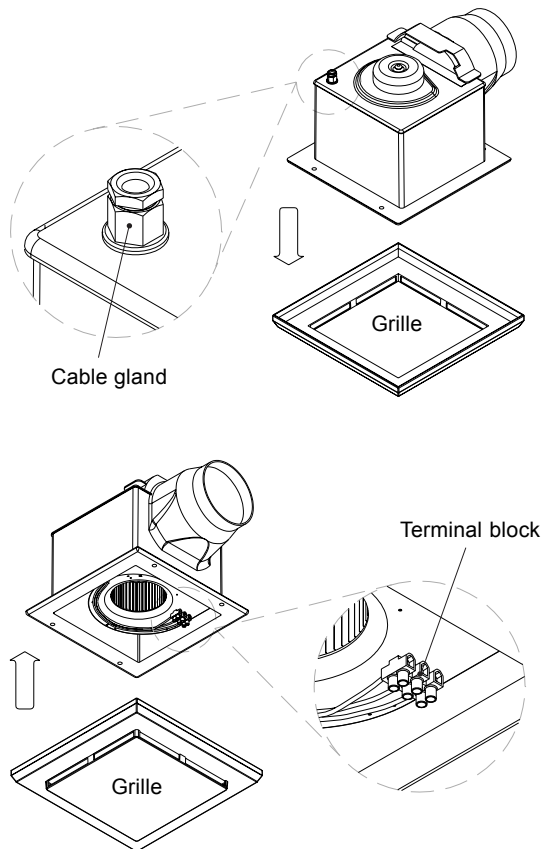
IMPORTANT !

Do not connect any unit to an electrical supply voltage outside of that indicated on the motor nameplate.

A local isolator must be fitted and mains cables should be suitably sized and terminated as shown in *fig 12 & 13*. Electrical details are shown in *fig 11*.

To connect the unit to a mains supply; remove the grille from the front of the unit, a terminal block mounted on the fan scroll see *fig. 10* will be clearly visible for connecting to the supply. Feed the cable through the cable gland on the back of the unit see *fig. 10*, into the fan section. Connect the supply to the terminal block ensuring the wire is secured to avoid being drawn into the impeller.

Fig. 10 Cable entry & Terminal block location

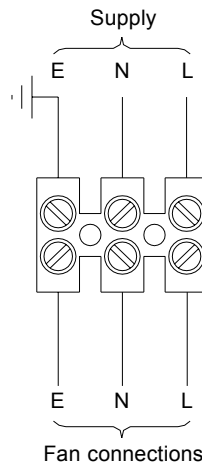


Electrical Details				
Model	Motor Input (W)	FLC* (A)	Fan Speed (RPM)	Supply Voltage
LCE170	13	0.11	1261	240V 1Ph 50Hz
LCE240	30	0.14	1050	240V 1Ph 50Hz
LCE300	36	0.17	711	240V 1Ph 50Hz

Fig. 11 Electrical details

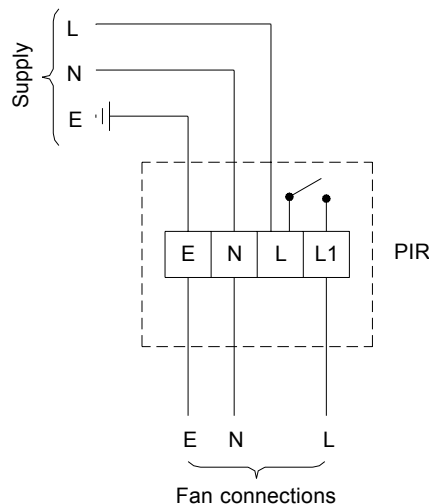
Standard fan wiring arrangement

Fig.12 240v 1Ph 50Hz supply



PIR/fan wiring arrangement

Fig.13 240v 1Ph 50Hz supply, wiring diagram to suit VES PIRs ESPIR/W1 & ESPIR/C1 ONLY



Note: If alternative PIR is to be used, manufacturers wiring diagram and installation instructions must be consulted.



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5 Maintenance

IMPORTANT !

Before attempting to carry out any work on our units, the unit **MUST BE COMPLETELY ISOLATED** from its electrical supply. Ensure a minimum of two minutes after electrical disconnection before commencing work. This will allow any moving part to come to a rest

In general, this series of units require very little maintenance. All fan and motor bearings are supplied fully lubricated and sealed for life. In the unlikely event of component failure, spares are available from stock at VES Andover Ltd.

IMPORTANT !

Before attempting to carry out maintenance work or repair work on our units, all accompanying documentation including warning labels on the unit must be referenced

Recommended checks

Ensuring the unit is isolated:

- Remove the grille; LCE170 see *fig. 9*, LCE240 & 300 remove screw caps and screws (screw covers used on LCE240 only). Do not lose screws or screw covers (LCE240 & LCE300 only).
- Clean the grille using luke warm water and light detergent (soap & water), rinse clean and dry thoroughly.
- Ensure there is no build up of dust in the fan, vacuum clean or wipe with duster if necessary.
- Refit the grille (again see *fig. 9* for LCE170).

Failure to do this periodically could lead to a loss of performance or the fan to become out of balance, leading ultimately to bearing failure.

IMPORTANT !

Do not clean the casework or grille with alkali solution or powerful detergent as this will damage the finish. Do not spray water near the extract fan.

WEEE Directive



At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with normal household waste. Do not burn

When enquiring after or ordering spares contact VES Spares Department, quoting the sales order (SO) number and unit type as found on the unit nameplate.

Telephone	08702 40 43 40
Fax	08702 40 45 50



PLEASE ENSURE THAT THIS DOCUMENT IS PASSED ON TO THE END USER.

We reserve the right to alter the specification without notice

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6 Warranty

Extended Warranties

All VES Andover Products come with a one year guarantee from date of dispatch, which covers parts and labour. You can now extend this with the following options:

Option 1. **FREE extended Warranty**

We can offer you a maintenance agreement that keeps this equipment in tip-top condition.

If you take out this agreement, we will extend the warranty **free of charge for up to 5 years**, providing the regular maintenance agreement remains in place.

Option 2. **12-24 Month Extended Warranty**

12-24 months from the date of dispatch. This can be covered at a cost of just 3% of order value. (minimum charge £50.00).

Option 3. **12-36 Month Extended Warranty**

12-36 months from date of dispatch. For this cover, the charge is 6% of order value (Minimum charge £80)

Please State which option you require when you place your order. A transferable certificate will then be issued to you. *Please note, this offer excludes condensing units. We would be happy to quote you for these separately.*

Register for separate spares reminders and get a 10% discount

Register for this free service and we will automatically send you a regular reminder detailing the consumable spares for this unit, together with their current list prices.

You will then be entitled to a 10% discount off any spares.

To arrange any of these options.

or **Phone: 023 8046 1150**
Email: spares@ves.co.uk

Stating the sales order and reference number from the unit.



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Declaration of Conformity

Date: 30th November 2005

Product: Limpet Centrifugal Ceiling Fans

Type: LCE

Manufacturer: VES Andover Limited

The product above is produced in accordance with EC Council Directives:

98/37/EC (Machinery Directive)

89/336/EEC and amendment 92/31/EEC (Electromagnetic Compatibility Directive)

73/223/EEC and amendment 93/68/EEC (Low Voltage Directive)

The European Harmonised Standards applied are:

BS EN ISO 12100, EN 294, EN61000, EN 60204-1

The National Standards applied in particular are :

BS 848 Part 1

Basis of Self attestation:

Quality Assurance to ISO 9001-2000, BSI Reg. Firm Cert. No. Q5375

Signature of Manufacturer:

Position of Signatory:

Technical Director