

# HPKF

## High Performance Kitchen Fan Installation and Maintenance

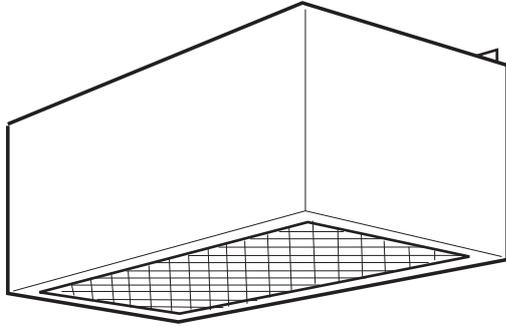


Fig 1. General view of unit.

### I.O Introduction

The Nuairé HPKF Kitchen Extract fan is designed to be mounted on a wall within a kitchen. The unit contains two fans, one of which runs continuously providing 'trickle' ventilation, and a boost speed operation which can be triggered manually or automatically. Fig 1. shows a general view of the unit.

The unit will exhaust through the wall (125mm dia. back outlet) or alternatively through the adjacent ceiling (150mm dia. top outlet).

A suitable spigot is supplied ready to fit in the users chosen position following removal of the top knockout or back aperture cover plate.

A washable metal grease filter is located in a recess on the underside of the case and can easily be withdrawn for cleaning.

LOW or HIGH 'boost' speed can be initiated manually by the remote switch provided or automatically via the integral adjustable thermostat or via an external trigger such as 'Cooker Miser' (details on request).

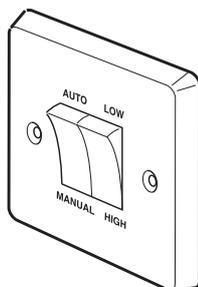


Fig 2. The remote control switch.

### Remote Control Switch

A remote switch is included which allows the user to select auto or manual operation, and a high or low manual 'boost' speed (see fig 2).

NOTE: Caution! The control wiring carries 230V mains voltage.

### Thermostat (integral)

A thermostat control knob is located on the top face of the unit. The range of adjustment is 0-60 °C. The chosen setting will dictate when the unit switches to 'boost' speed. The thermostat only operates in auto mode.

The user can override the thermostat when required by switching to manual, or can permanently disable the thermostat by removing the BROWN link wire on the control wiring panel if desired. (see fig 4).

### Setting the 'boost' speed (auto mode only)

In 'auto' mode, the preferred 'boost' speed can be set for LOW (half) or HIGH (full).

Note: in 'manual' mode the 'boost' speed is fixed HIGH (full)

The wiring connection panel is located under a removable top mounted cover plate.

The RED link wire can be relocated to change the 'auto' mode LOW or HIGH boost setting (see fig 4).

### IMPORTANT

The HPKF should be so positioned to give a minimum distance of 650mm between the supporting surface for the cooking vessel on the hob and the lowest part of the HPKF.

The exhaust air must not be discharged into a flue which is used for exhausting fumes from appliances burning gas or other fuels.

## 2.0 Installation

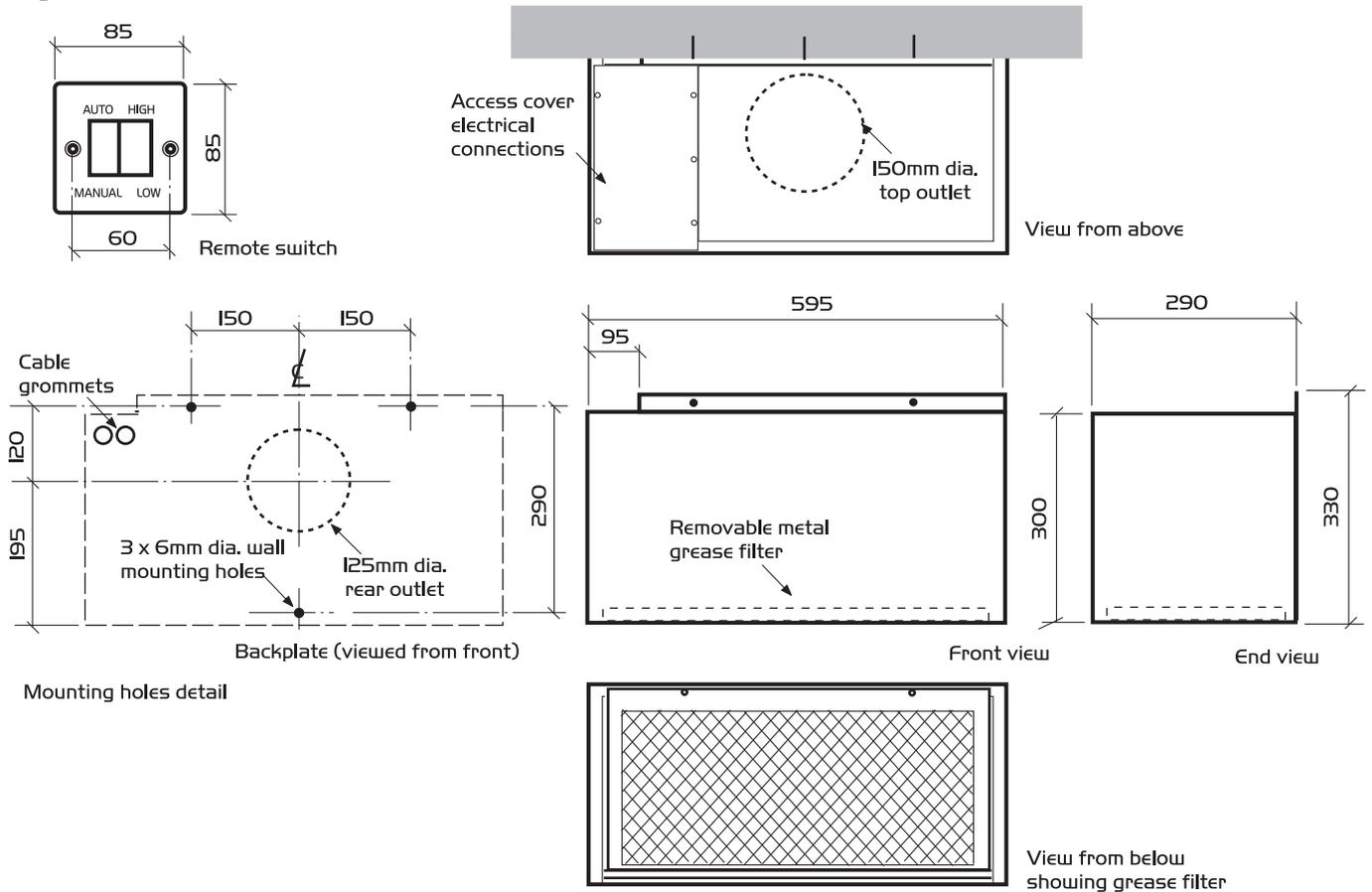
Select and mark out a suitable mounting position. Note the clearance between the top of the unit and the ceiling must not be less than 150mm when fitted to allow manual adjustment of the top mounted thermostat control and sufficient room to allow removal of the electrical access cover.

Select a mounting position for the remote control switch as close to the unit as is practical.

Refer to dimensions drawing and cut a suitably sized hole in the wall (125mm dia outlet) or ceiling (150mm dia. outlet) to allow connection to any associated ductwork (by others).

Drill and plug the three mounting position holes in the wall as per fixing deOffer the unit up and screw into position

Fig 3. Dimensions.



using appropriate fixings. During the operation, connect the outlet spigot to the ductwork, if applicable, and feed the electrical cables through the grommets into the connection recess.

Wire the supply and the remote switch into the unit terminal strips (see wiring diagrams fig 4).

**Setting the thermostat**

The thermostat control knob is located on the top face of the unit. Advance the thermostat control knob through the ambient room temperature position (you can detect this as a gentle click around 20°C position). Set the control in excess of the 'click'. This will trigger the fan to operate on boost when the room temperature increases.

When the ambient room temperature increases beyond the chosen thermostat set point, the unit will automatically switch to the boost speed -the auto boost speed factory set at HIGH (full) but can be changed to LOW (half) by relocating a link on the circuit board. (See wiring in Fig. 4).

**IMPORTANT**

Isolation - Before commencing work make sure that the unit and Nuaire control are electrically isolated from the mains supply.

**Electrical connection**

The installation must be carried out by a suitably qualified and competent person and conform to all relevant regulations.

The electrical supply to the unit must be isolated by a suitable local double-pole isolating switch (by others) for maintenance purposes.

**Note that the mains wiring for the unit MUST be from a fixed wiring installation.**

The unit MUST be earthed.

Connect the incoming supply to the mains terminals.

Connect the remote control switch (six wires 0.5mm<sup>2</sup> 500V ac rated) ensuring connections match at the switch.

Replace cover plate.

**Testing after installation**

**Manual operation**

Set the remote switch to MANUAL and HIGH.

Check the unit is functioning satisfactorily by switching on the mains supply.

The unit should start and run on the HIGH (full speed)

Select LOW speed and check for LOW (half speed) operation.

Switch off the mains supply.

**Automatic operation**

Select AUTO on the remote switch. In this mode the unit is controlled by the integral thermostat. See 'Setting the thermostat'

The fan will run continuously providing a 'trickle ventilation'.

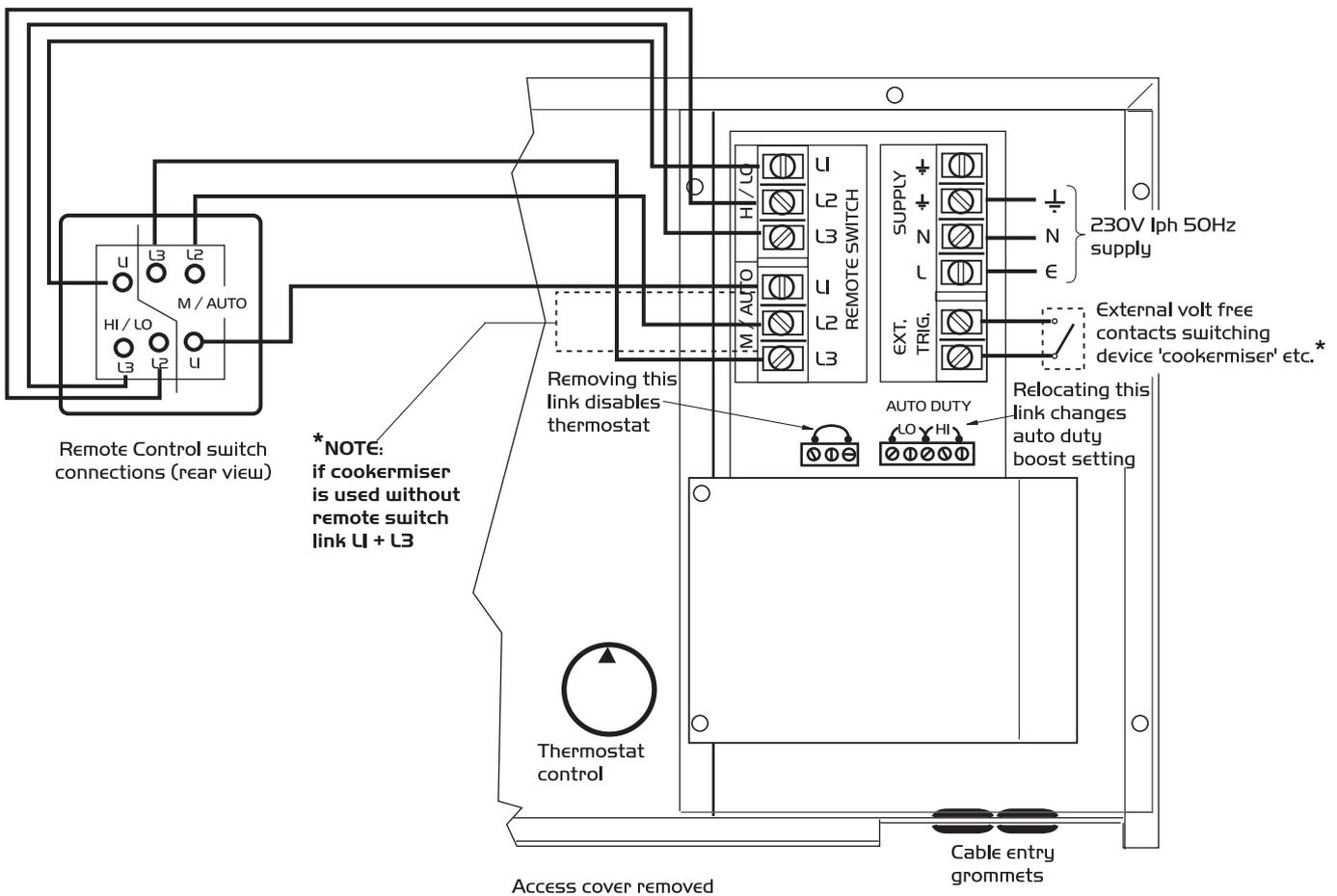
Reducing the thermostat control setting temporarily will trigger the fan for test purposes.

The fan should switch to the boost speed.

Reset the thermostat as detailed in previous paragraphs.

### Electrical wiring connections

Fig 4. Unit connection panel and remote control switch connections.



### 3.0 Maintenance

The unit is sealed and has no user serviceable parts inside. No lubrication is required as the unit motors have sealed for life bearings. Occasionally wipe the unit over with a damp cloth.

### 4.0 Filter Cleaning

The metal grease filter must be kept clean as otherwise the unit performance will be greatly reduced. Cleaning should be carried out approximately every 6 weeks but this may be varied depending on the frequency of use.

To clean the filter, first switch off the fan. Remove the two screws under the front lip, drop the filter down from the back slot, shake out any loose dust then immerse the filter in hot water containing ordinary household detergent (do not add soda to the water under any circumstances). Agitate occasionally to help free the grease. Wipe clean, remove from the water and allow to drip dry. Return the filter to the unit.

### 5.0 Replacement of Parts

Should any component need replacing Nuair keep extensive stocks for quick delivery. Ensure that the unit is electrically

isolated, before carrying out any work.

When ordering spare parts, please quote the serial number of the unit and the ARC number of the purchase if possible. **(This information will be available on the fan label).**

### 6.0 Warranty

The 3 year warranty starts from the day of delivery and includes parts and labour for the first year. The remaining 2 years covers replacement parts only. This warranty is conditional on planned maintenance being undertaken.

### 7.0 Service Enquiries

Nuair can assist you in all aspects of service. Our Technical Support department will be happy to provide any assistance required.

**Technical Support**  
**029 2085 8400**

## DECLARATION OF INCORPORATION AND INFORMATION FOR SAFE INSTALLATION, OPERATION AND MAINTENANCE

We declare that the machinery named below is intended to be assembled with other components to constitute a system of machinery. The machinery shall not be put into service until the system has been declared to be in conformity with the provisions of the EC Machinery Directive.

Designation of machinery: KITCHEN EXTRACT FAN  
 Machinery Types: HPKF  
 Relevant EC Council Directives: 2006/42/EC (Machinery Directive)  
 Applied Harmonised Standards: BS EN ISO 12100-1, BS EN ISO 12100-2, EN294, EN60204-1, BS EN ISO 9001  
 Applied National Standards: BS848 Parts One, Two and Five  
 Note: All standards used were current and valid at the date of signature.

### Signature of manufacture representatives:

Name:	Position:	Date:
1) C. Biggs	 Technical Director	20. 07. 07
2) A. Jones	 Manufacturing Director	20. 07. 07

## INFORMATION FOR SAFE INSTALLATION, OPERATION AND MAINTENANCE OF NUAIRE VENTILATION EQUIPMENT

To comply with EC Council Directives 2006/42/EC Machinery Directive and 2004/108/EC (EMC).

To be read in conjunction with the relevant Product Documentation (see 2.1)

### 1.0 GENERAL

1.1 The equipment referred to in this Declaration of Incorporation is supplied by Nuaire to be assembled into a ventilation system which may or may not include additional components.

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 manufacturers recommendations and with due regard to current legislation and codes of practice.

### 2.0 INFORMATION SUPPLIED WITH THE EQUIPMENT

2.1 Each item of equipment is supplied with a set of documentation which provides the information required for the safe installation and maintenance of the equipment. This may be in the form of a Data sheet and/or Installation and Maintenance instruction.

2.2 Each unit has a rating plate attached to its outer casing. The rating plate provides essential data relating to the equipment such as serial number, unit code and electrical data. Any further data that may be required will be found in the documentation. If any item is unclear or more information is required, contact Nuaire.

2.3 Where warning labels or notices are attached to the unit the instructions given must be adhered to.

### 3.0 TRANSPORTATION, HANDLING AND STORAGE

3.1 Care must be taken at all times to prevent damage to the equipment. Note that shock to the unit may result in the balance of the impeller being affected.

3.2 When handling the equipment, care should be taken with corners and edges and that the weight distribution within the unit is considered. Lifting gear such as slings or ropes must be arranged so as not to bear on the casing.

3.3 Equipment stored on site prior to installation should be protected from the weather and steps taken to prevent ingress of contaminants.

### 4.0 OPERATIONAL LIMITS

4.1 It is important that the specified operational limits for the equipment are adhered to e.g. operational air temperature, air borne contaminants and unit orientation.

4.2 Where installation accessories are supplied with the specified equipment e.g. wall mounting brackets. They are to be used to support the equipment only. Other system components must have separate provision for support.

4.3 Flanges and connection spigots are provided for the purpose of joining to duct work systems. They must not be used to support the ductwork.

4.4 In the event of RF interference the fan may change speed. This is normal and will have no adverse effect on the fan. The speed will return to normal once the interference has subsided.

### 5.0 INSTALLATION REQUIREMENTS

In addition to the particular requirements given for the individual product, the following general requirements should be noted.

5.1 Where access to any part of equipment which moves, or can become electrically live are not prevented by the equipment panels or by fixed installation detail (eg ducting), then guarding to the appropriate standard must be fitted.

5.2 The electrical installation of the equipment must comply with the requirements of the relevant local electrical safety regulations.

5.3 For EMC all control and sensor cables should not be placed within 50mm or on the same metal cable tray as 230V switched live, lighting or power cables and any cables not intended for use with this product.

### 6.0 COMMISSIONING REQUIREMENTS

6.1 General pre-commissioning checks relevant to safe operation consist of the following:

Ensure that no foreign bodies are present within the fan or casing.  
 Check electrical safety. e.g. Insulation and earthing.

Check guarding of system.

Check operation of Isolators/Controls.

Check fastenings for security.

6.2 Other commissioning requirements are given in the relevant product documentation.

### 7.0 OPERATIONAL REQUIREMENTS

7.1 Equipment access panels must be in place at all times during operation of the unit, and must be secured with the original fastenings.

7.2 If failure of the equipment occurs or is suspected then it should be taken out of service until a competent person can effect repair or examination. (Note that certain ranges of equipment are designed to detect and compensate for fan failure).

### 8.0 MAINTENANCE REQUIREMENTS

8.1 Specific maintenance requirements are given in the relevant product documentation.

8.2 It is important that the correct tools are used for the various tasks required.

8.3 If the access panels are to be removed for any reason the electrical supply to the unit must be isolated.

8.4 A minimum period of two minutes should be allowed after electrical disconnection before access panels are removed. This will allow the impeller to come to rest.

**NB: Care should still be taken however since airflow generated at some other point in the system can cause the impeller to "windmill" even when power is not present.**

8.5 Care should be taken when removing and storing access panels in windy conditions.

Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.