

## F1 Recessed Kitchen Extract Fan

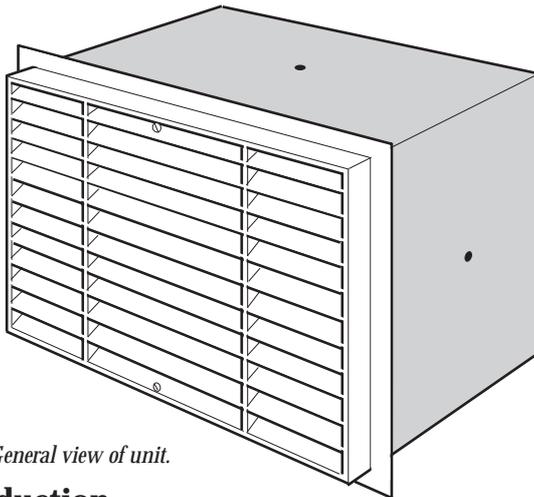


Fig. 1. General view of unit.

### Introduction

NuAire's F1 Kitchen extract fan is designed to be installed in the area to be ventilated. The unit is specifically designed for recessed mounting into an inner wall and cavity space, with only a clearance hole for the 100mm outlet spigot in the outer wall being necessary to simplify installation.

Inlet is through a flame retardant foam grease filter (optional aluminium), located in the front ABS grille cover of the unit, which can be easily removed for cleaning. Air is extracted at a rate of 61 litres/sec (61 or 40) on two speed units. It should be noted that if the unit is connected to ducting which is longer than that required to for a standard wall cavity, the performance will be less than specified. Typical resistances of ducting etc can be found in the NuAire Domestic Products Brochure Leaflet Number 670607.

Exhaust air is discharged through a 100mm dia. spigot on the rear of the unit into a gravity operated outlet shutter (supplied) fixed to the outside wall. If necessary, a short section of 100mm dia. ducting (by others) may be used to sleeve over the unit and shutter spigots.

The motor has sealed for life, self lubricating bearings and 'Heatseeker' thermal overload protection. The blower assembly and all electrical components are mounted on a removable back plate to simplify installation and/or maintenance.

### Control options

Single speed via remote switch. Simple ON/OFF operation. Switch by others. **(Unit coded F1).**

Single speed via integral pullcord and electronic control module. Simple ON/OFF operation. **(Unit coded F1-PC).**

Two speed via remote switch LOW/HIGH/ON/OFF operation. Switch supplied **(Unit coded F1-2S).**

Single speed with integral humidistat and electronic control module with pullcord or remote switch operation. Switch by others. **(Unit coded F1-H).**

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The optional humidity control continuously monitors the relative humidity (RH) within the kitchen.

The point at which the fan operates can be adjusted to suit the individual installation. At any time the unit can be manually over-ridden using the pullcord. When triggered, the RH sensor operates the fan until the RH returns to below its set point.

### Installation

#### NOTE:

*The F1 Kitchen Extract unit is NOT designed for siting immediately above a cooker. Excessive heat may cause distortion of the inlet grille. NuAire Cooker Hoods and KU fans are available for such applications.*

#### BEFORE COMMENCING WORK ISOLATE THE ELECTRICAL SUPPLY.

It is assumed that a solid non-reverberant mounting position has been selected, and provision made for routing the electrical cables. For ease of installation the distance from the surface of the inside wall to the inside surface of the outer cavity wall should be not less than 165mm (see Fig. 2).

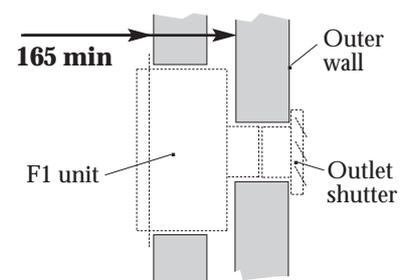


Fig. 2 Typical wall section

# Installation and Maintenance F1 KITCHEN EXTRACT FAN

Prepare an aperture in the inner wall 268mm wide x 229mm care must be taken not to exceed these dimensions by more than 10mm as too large an aperture would not be covered by the grille flange.

NOTE: Check the minimum depth dimension (shown in fig. 2). by temporarily removing the units outlet spigot and placing the unit in the aperture. THE REAR OF THE CASE MUST NOT TOUCH THE OUTSIDE CAVITY WALL WHEN INSTALLED. If necessary the inner wall surface must be dressed away to provide clearance. Refit the outlet spigot.

Remove the front grille and filter (retained by two screws). On pullcord models withdraw the pullcord through the hole in the grille bottom. The backplate assembly incorporating the blower and electrical components is located on two lugs and retained by a single rear screw (see fig. 3). Remove the rear screw and retain. Tilt the backplate assembly downward easing it out through the case front. Knock out the relevant cable entry position in the top or bottom of the casing.

Offer the case up to the aperture again and working through the outlet spigot mark the position of the outlet on the inside of the outer cavity wall. Using a suitable tool, drill a clearance hole for the 100 dia. spigot in the position you have marked.

Position the unit case in the aperture. With the case flush with the wall surface (including plaster) secure the casing (fixings to be supplied by others), through the four case holes provided. Drill and plug the mounting surface if necessary. Refit the backplate assembly incorporating the blower and electrical components into the case and secure using the rear screw removed earlier.

Feed the supply cable through the cable entry leaving approximately 150mm of cable projecting into the case. Connect the wiring to the internal terminal block (see wiring diagram in the electrical section). If an electronic control

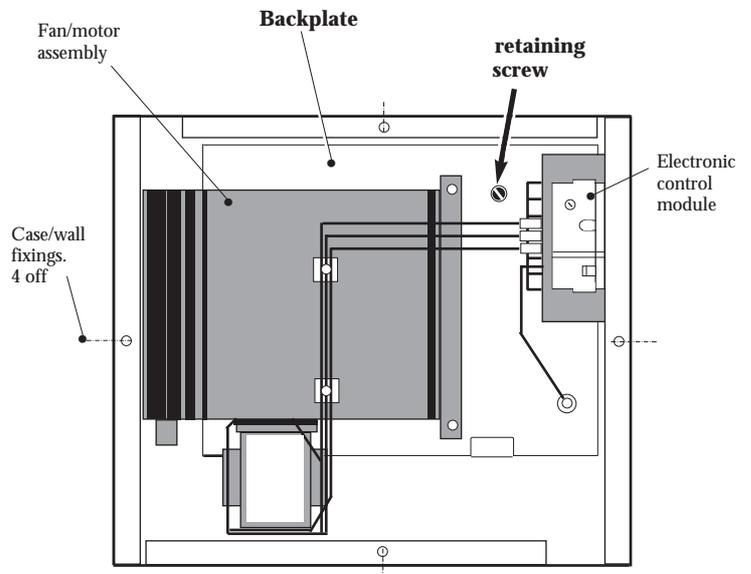


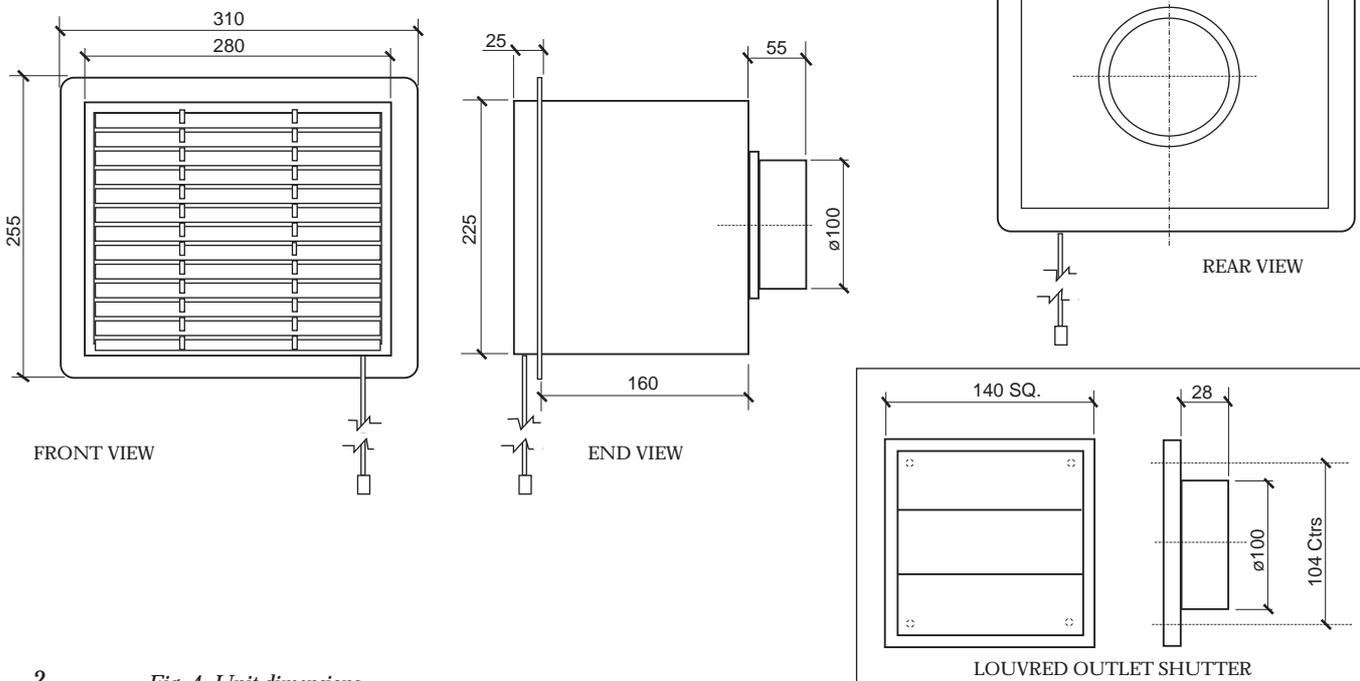
Fig. 3. View of unit with grille/filter removed showing backplate retaining screw.

module is fitted this must be temporarily removed (pull-out) to gain access to the terminal block. Note: Ensure pullcord is not trapped when replacing the electronic control module. On pullcord models feed the pullcord through the hole in the grille bottom and refit the grille / filter (two screws). Working from outside the dwelling, offer up the shutter spigot to the hole. A short section of 100mm dia ducting (by others) may be used to bridge the two spigots if required. Fix the shutter assembly to the outside wall (suitable fixings by others).

Test run the unit.

Note that on models fitted with humidistat the unit may run on for the duration of the timer control sequence following initial start up.

## Dimensions



### Adjusting the Humidistat

**(For units supplied with integral Humidistat option).**  
ISOLATE THE UNIT BEFORE CARRYING OUT ADJUSTMENTS.

By adjusting the humidity set point it is possible to adjust the humidity level at which the fan operates (see fig. 5).

Remove the front grille/filter, locate the electronic control module situated to the right of the fan/ motor assembly

Use a small screwdriver to turn the adjuster, clockwise to sense a higher humidity level or anti-clockwise for a lower level.

When initially running an F1 unit with the humidistat option the humidity adjustment control should be set to maximum (fully clockwise). Start the fan and after approximately 30 minutes the fan will switch off. Adjust the set point downwards (by turning the control anti-clockwise until the desired level is achieved. The fan will cut in when the selected humidity level is reached.

NOTE: The unit may be manually over-riden at any time by use of the pull cord.

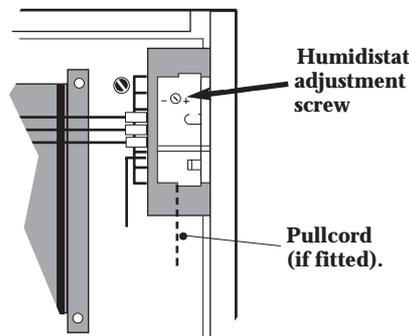


Fig. 5. Humidistat adjusting screw.

### Coding

#### Equipment Product Codes

Note unit is supplied with a white outlet shutter as standard. If a brown shutter is required please specify when ordering.

F1	Single Speed unit operated by remote switch* ON / OFF.
F1-PC	Single Speed unit operated by pullcord ON / OFF.
F1-2S	Two Speed unit operated by remote switch (supplied). LOW / HIGH / ON / OFF
F1-H	Single speed Integral Humidistat. Unit operated by pullcord or remote switch* *remote switch by others (also see note below)

#### NOTE:

**When installing the F1-H unit for remote switching it is important that the pullcord is removed. Switch off the unit. Remove the grille / filter and cut the pullcord approx 30mm below the electronic module. Replace the grille / filter.**

### Maintenance

#### Isolation

ENSURE THAT THE UNIT IS TOTALLY ISOLATED FROM THE ELECTRICAL SUPPLY. SWITCH OFF AT THE MAIN JUNCTION BOX AND ALSO REMOVE THE RELEVANT FUSE.

#### Every 3 months\*

It is inevitable that some dust, fluff etc. will pass through the filter which, if ignored, will build up internally on the motor and impeller, shortening the life of the unit, and in severe cases leading to overheating of the motor. Consequently, it is strongly recommended that all units are inspected and cleaned at least every three months. To clean the filter, remove them from the unit by removing the grille front. Wash the filters in tepid water adding a little mild detergent. Shake out excess water and allow to dry naturally. Replace when dry.

#### Every 6 months\*

At all times take care not to damage, distort or disturb the balance of the impeller. Remove the cover grille/filter as detailed earlier. If fitted, withdraw the electronic control module. Disconnect the electrical wires from the terminal block. Remove the brass screw retaining the backplate and withdraw the fan / backplate assembly. Inspect all parts.

Using a brush or dry cloth clean the assembly. Lightly brush away dust and dirt from the fan motor and impeller. If stubborn, carefully remove with a suitable blade or scraper. Refit the fan / backplate assembly, reconnect the wiring and refit the filter / grille. Switch on supply and test run unit.

#### Warranty

The F1 Kitchen Extract unit is guaranteed for 24 months from purchase on parts and labour. If fitted the plastic electronic control module is a sealed component. Breaking the seal will invalidate the guarantee.

#### \*Note

In dust free conditions and with light useage the unit maintenance times may be extended.

# Installation and Maintenance F1 KITCHEN EXTRACT FAN

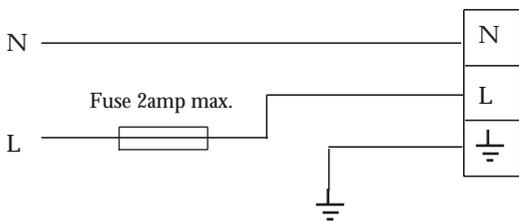
## Electrical

	Low Speed	High Speed
Input Power	58 Watts	86 Watts
Full Load Running Current	.5 Amps	.7 Amps
Starting Current	.71 Amps	.71 Amps

## Wiring diagrams

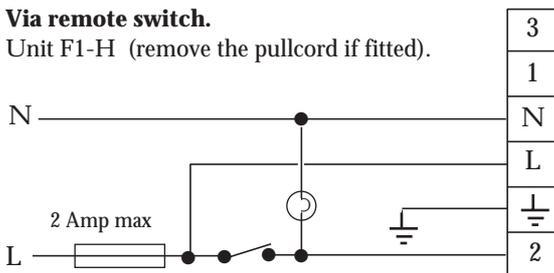
### Via pullcord (if fitted).

Units F1, F1-PC, F1-H



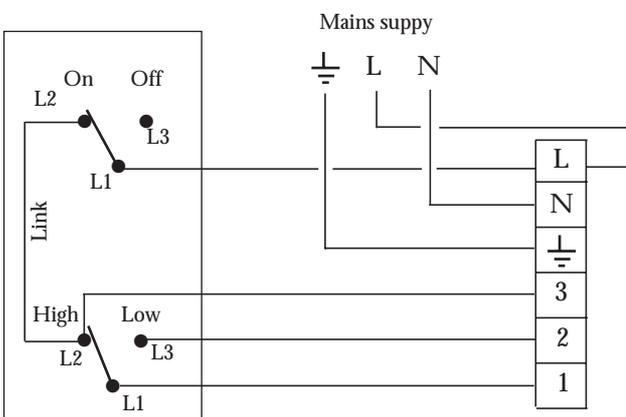
### Via remote switch.

Unit F1-H (remove the pullcord if fitted).



### Two speed via remote switch.

Unit F1-2S



Two gang, two way switch (supplied).

## Spares

ITEM	PART No.
Foam Filter (all units).	040536
Aluminium Filter (optional).	040539
Grille (all units).	040537
Blower (all units).	771249
Resistor (F1-2S only).	160355
Capacitor (F1-2S only).	660379
Humidity Module (F1-H only).	770980
Single Speed Module (F1-PC only).	770978
Outlet Shutter, white (all units).	PVC100 -100 dia
Outlet Shutter, brown (optional).	NKF1 SHUT

## Service

As a manufacturer NuAire provides you with factory trained Service Engineers.

Our Engineers are supported by a comprehensive range of spare parts 'off the shelf'.

If you are an industrial or commercial user, you may be interested in details of NuAire's regular maintenance Service Contracts. This is a worthwhile service that helps you get the most from our products.

Our Service Department will be happy to give you further information.

Please telephone: **01222 858254**

*We declare that the machine named below  
conforms to the requirements of EC Council Directives  
relating to Electromagnetic Compatibility and  
Safety of Electrical Equipment.*

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<b>Designation of machinery :-</b>	KITCHEN EXTRACT FAN
<b>Machinery Types :-</b>	F1
<b>Relevant EC Council Directives :-</b>	89/336/EEC, 92/31/EEC (EMC) 73/23/EEC, 93/68/EEC (Low Voltage Directive)
<b>Applied Harmonised Standards :-</b>	E50081-1, EN50082-1, EN60204-1 EN60335-2-80
<b>Basis of Self Attestation :-</b>	Quality Assurance to BS EN ISO 9001 BSI Registered Firm Certificate No. FM 149

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**Signature of manufacture representatives :-**

	<b>Name:</b>	<b>Position:</b>	<b>Date:</b>
1)	 C. Biggs	Technical Director	2. 10. 98
2)	 Michael J. Fussell	Manufacturing Director	2. 10. 98

## **DECLARATION OF INCORPORATION & INFORMATION FOR SAFE INSTALLATION, OPERATION & MAINTENANCE**

OCTOBER 1998

*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 Council Machinery Directive.*

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<b>Designation of machinery :-</b>	KITCHEN EXTRACT FAN
<b>Machinery Types :-</b>	F1
<b>Relevant EC Council Directives :-</b>	89/392/EEC (Machinery Directive) 93/44/EEC (Amendment to the Machinery Directive)
<b>Applied Harmonised Standards :-</b>	EN292-1, EN292-2, EN294, EN29001
<b>Applied National Standards :-</b>	BS848 Parts One, Two and Five

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### **Signature of manufacture representatives :-**

	<b>Name:</b>	<b>Position:</b>	<b>Date:</b>
1)	 C. Biggs	Technical Director	3.10.98
2)	 Michael J. Fussell	Manufacturing Director	3.10.98

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

To comply with EC Council Directives 89/392/EEC Machinery Directive & 93/44/EEC Amendment to the Machinery Directive.

*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, please 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 in particular 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 eg. 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 ductwork systems. They must not be used to support the ductwork.

## 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.

## 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.*

## **NUAIRE**

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