

# NUAIRE XS

## Roof fan kits

### Supply / Extract units

(ducted to ceiling and direct ventilation) for flat or pitched roofs

# Installation and Maintenance

## NUAIRE

NuAire Limited  
 Western Industrial Estate  
 Caerphilly,  
 Mid Glamorgan CF83 1XH  
 Telephone: 029 20 885911  
 Facsimile: 029 20 887033  
 Email: info@nuaire.co.uk

Leaflet 671053

MAY 2009

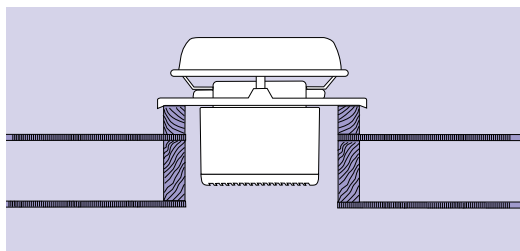


Fig. 1 On flat roof upstand, direct ventilation

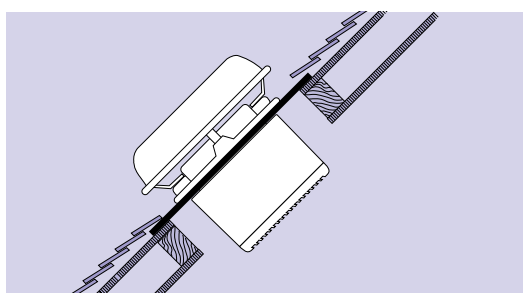


Fig. 1a On pitched roof, direct ventilation

### General Description

The NuAire XS Roof Fan Kits are available in 6", 9" and 12" impeller sizes suitable for supply or extract and can form the heart of an automatic ventilation system. Two types of roof fan kits are available, one for a flat roof and the other to cover a pitched roof installation. The applications are ideally suitable for direct ventilation of a top storey area.

The fan is IP24 splash proof approved with the motor rated at IP44. Roof Terminal components are made in soft grey colours from ultra violet stable Styrosun so they will blend with most decors and will not fade in sunlight.

Roof fans are supplied as a complete kit with all the roof installation parts included.

#### Coding for FLAT Roof Fan Kits

DESCRIPTION	CODE
6" Flat roof fan kit complete.....	XS6FR
9" Flat roof fan kit complete.....	XS9FR
12" Flat roof fan kit complete.....	XS12FR

#### Coding for PITCHED Roof Fan Kits

DESCRIPTION	CODE
6" Pitched roof fan kit complete .....	XS6PR
9" Pitched roof fan kit complete .....	XS9PR
12" Pitched roof fan kit complete .....	XS12PR

### Switching

Operated via a separately wired fused spur (by others) or operated via the optional XS-MFC remote controller allowing supply or extract, variable speed and automatic or manual switching of several fans if desired (see Wiring details section).

### Contents

Contents	Page
General Description .....	1
Flat Roof Fan Kit details & installation .....	3
Pitched Roof Fan Kit details & installation .....	4
Installation Flat Roof Kit .....	3
Integral sensors .....	7
Remote sensors / Remote switch .....	8
Accessories .....	12
Warranty .....	12

### Sensors

Sensors are available as remote units or integral 'plug in' units. They are able to control multiple fans, depending on sensor and fan types. Integral sensors are quick and easy to install and are aesthetically pleasing, whilst remote sensors give the benefit of location close to the pollutant source.

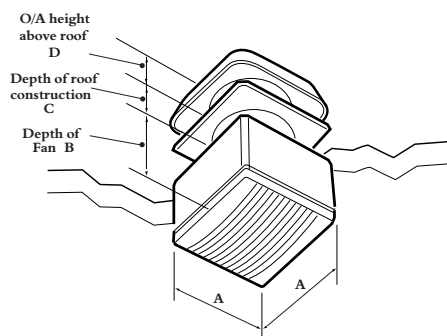
Remote Sensors should be positioned at least 1.5m above the floor and away from direct sources of heat such as radiators etc.

Options include Humidity, Air Quality, Passive Infra Red, Temperature and Timer versions.

Further information in relevant section .

### Roof Installation Accessories

A range of roof installation accessories is available. Further information on page 9.



### General Dimensions

XS	A	B	C*	D
6"	269	161	150	170
9"	337	158	150	180
12"	413	172	150	185

\*minimum height of Flat roof upstand (by others)

# Installation & Maintenance XS ROOF FAN KITS

## Flat Roof Fan Kit Installation

Construct a timber or Builders work curb / upstand to the following dimensions.

Fan code	A	B	C	D
XS6FR	610	610	300	300
XS9FR	610	610	450	450
XS12FR	695	695	450	450

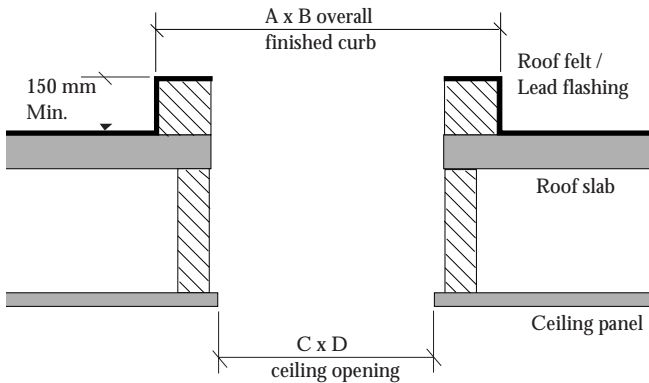


Fig. 2 Flat roof upstand construction details.

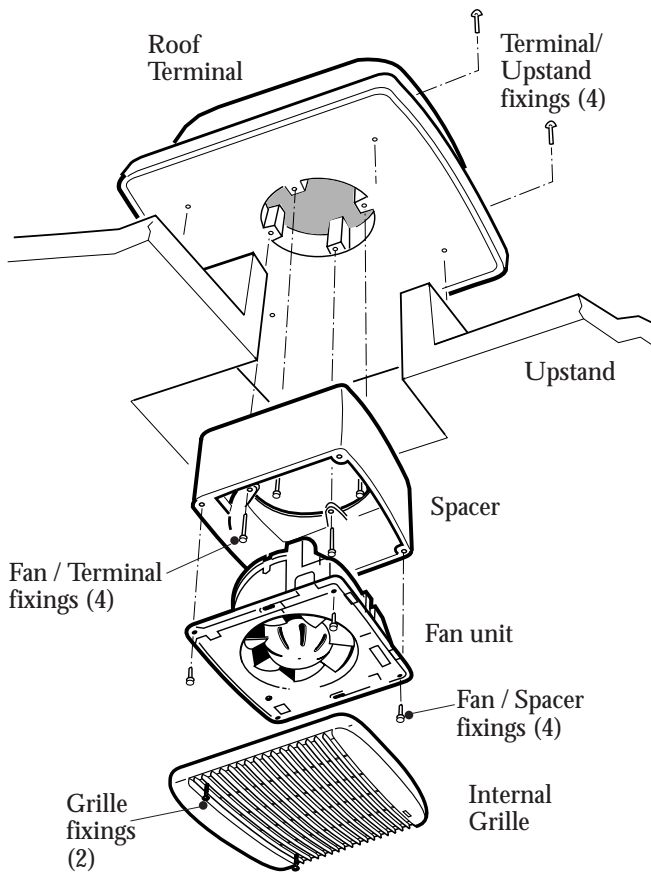


Fig. 4 Exploded assembly Flat Roof Kit

## Pitched Roof Fan Kit Installation

Prepare an aperture in the sloping roof trimmed to the following dimensions.

Fan code	A	B
XS6PR	320	320
XS9PR	385	385
XS12PR	450	450

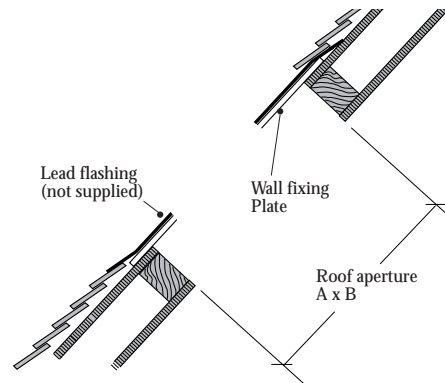


Fig. 3 Pitched roof aperture details.

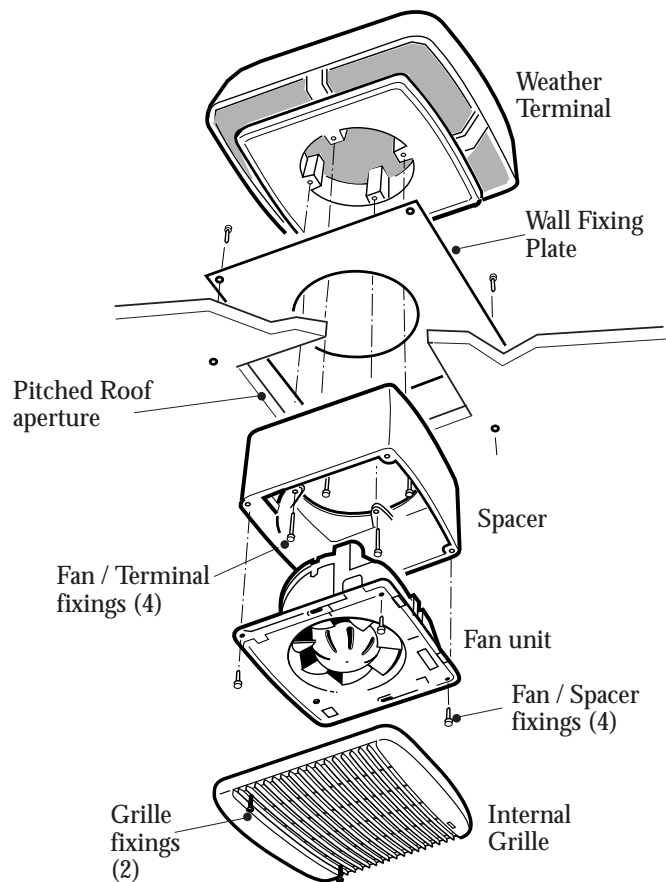
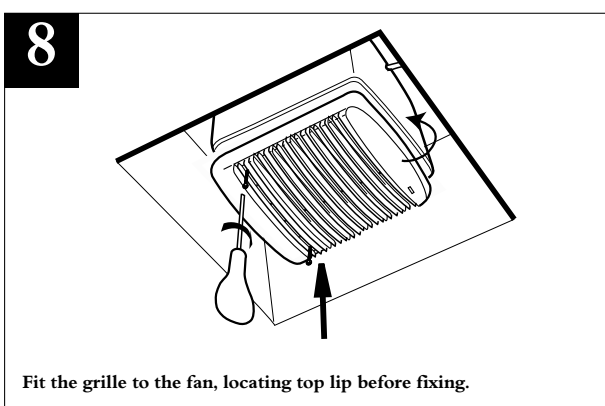
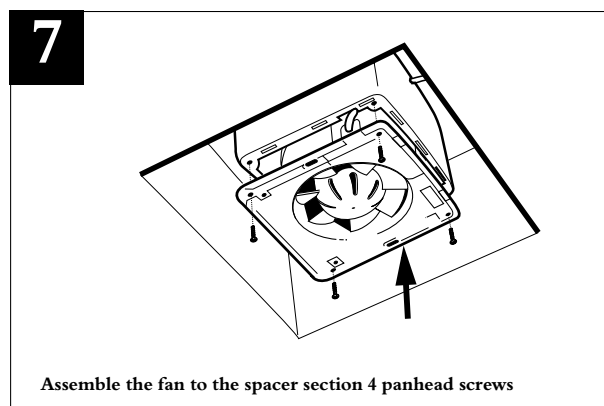
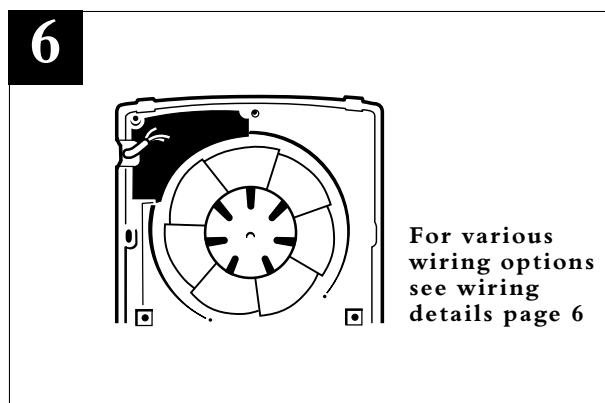
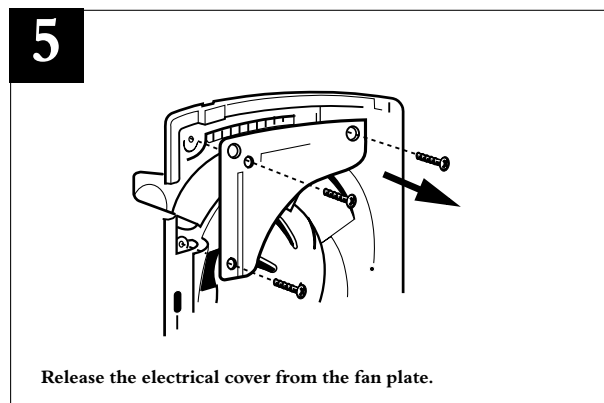
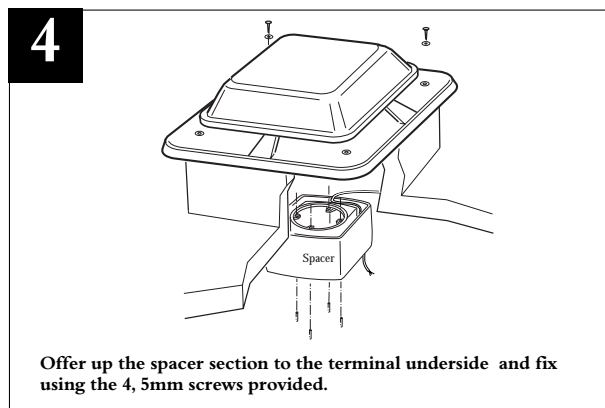
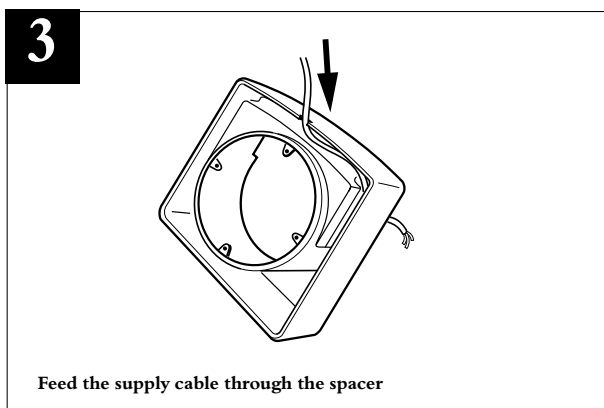
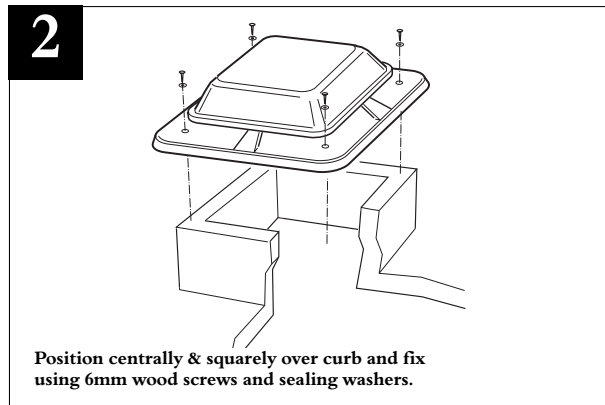
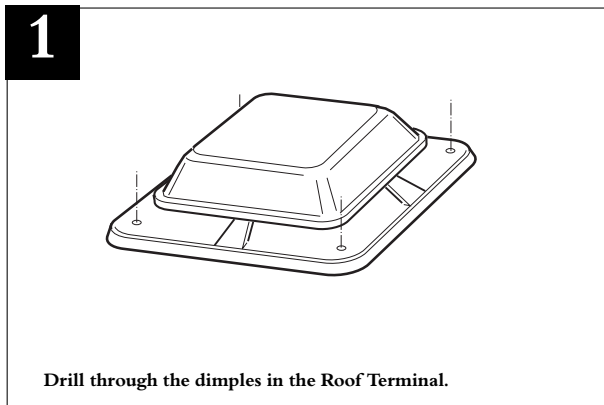


Fig. 5 Exploded assembly Pitched Roof Kit

## Flat Roof Kit Installation

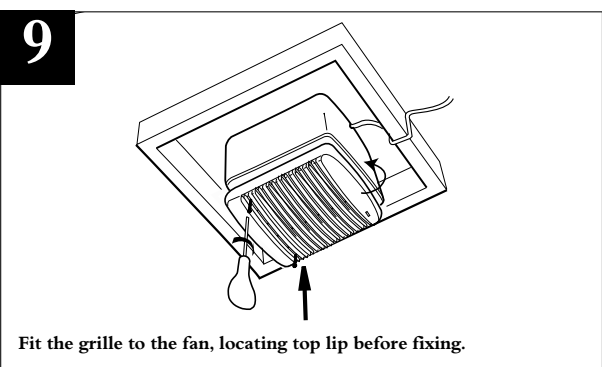
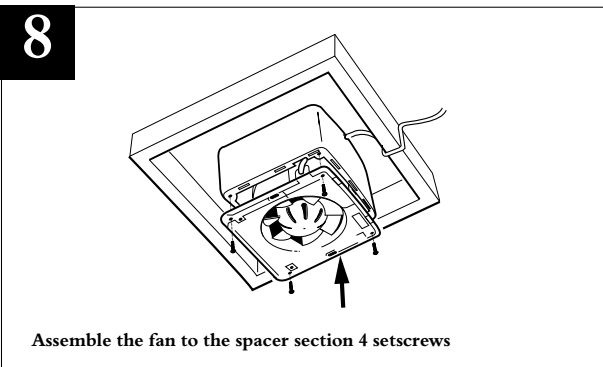
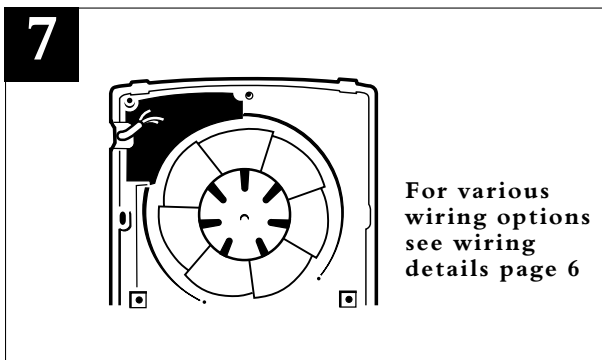
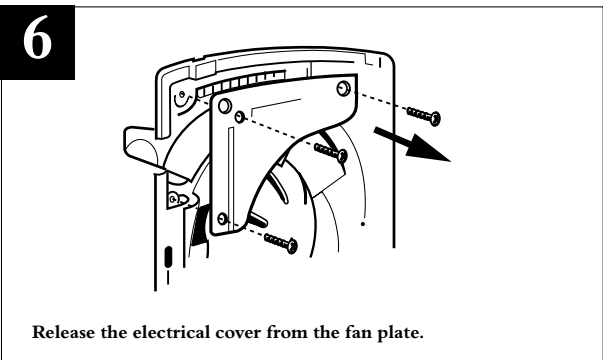
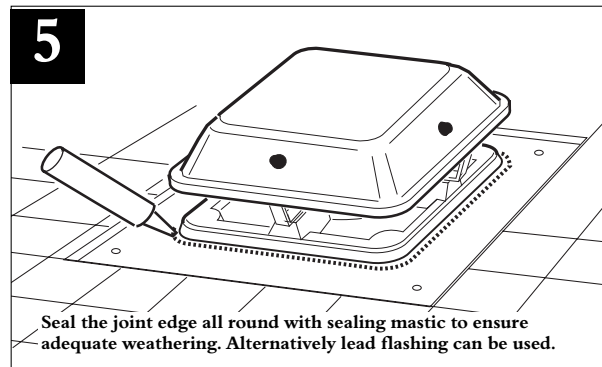
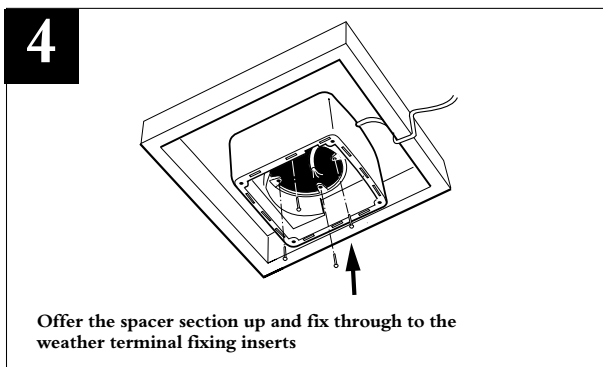
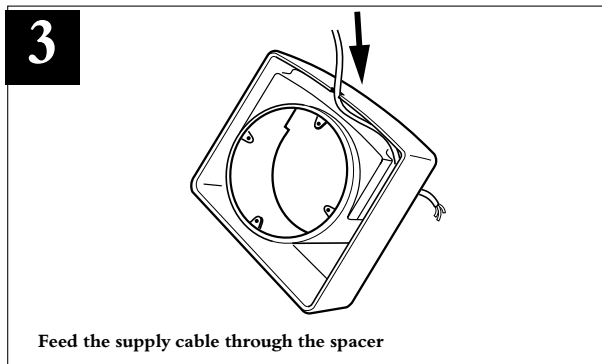
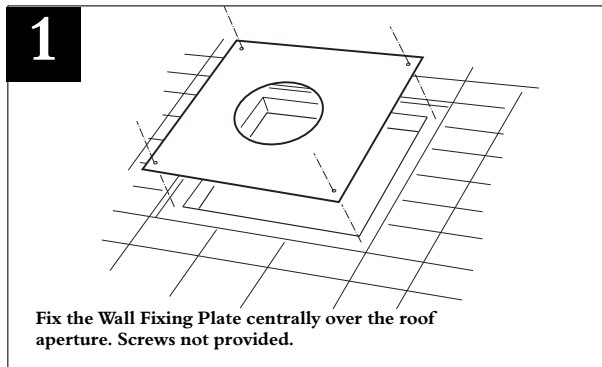
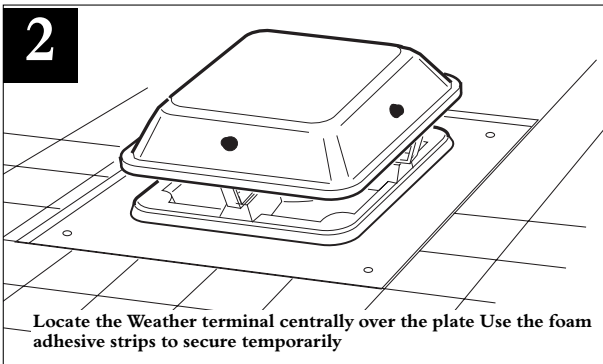
Prepare a timber or builders work upstand on the roof to the dimensions indicated on page 2. Carry roof felt or weathering material over the curb to ensure a good seal. The kit is supplied with the fan, spacer and grille assembled for transit purposes. The following instructions assume the fan assembly has been separated to begin the installation.



# Installation & Maintenance XS ROOF FAN KITS

## Pitched Roof Kit Installation

Prepare a suitably sized aperture in the roof to the dimensions indicated on page 2. Arrange purlins / trimmers to frame the aperture. The kit is supplied with the fan, spacer and grille assembled for transit purposes. The following instructions assume the fan assembly has been separated to begin the installation.

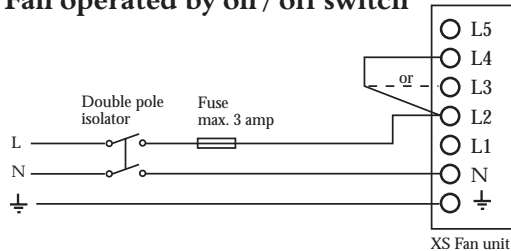


# Installation & Maintenance *XS* ROOF FAN KITS

## NOTES:

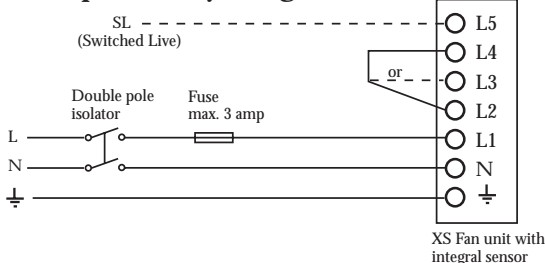
- 1) Ensure adequate air replacement for the fan and any fuel burning appliance in the room.
- 2) All electrical products should be wired and installed by a qualified electrician in accordance with the wiring regulations.
- 3) Always isolate the unit from the mains supply before carrying out any cleaning of the unit.
- 4) Do not use any solvents to clean this product.

### Fan operated by on / off switch



Connect link wire between L2 & L4 for extract  
or  
Connect link wire between L2 & L3 for supply

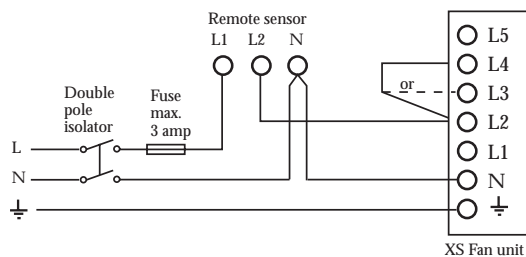
### Fan operated by integral sensor



Connect link wire between L2 & L4 for extract  
or  
Connect link wire between L2 & L3 for supply

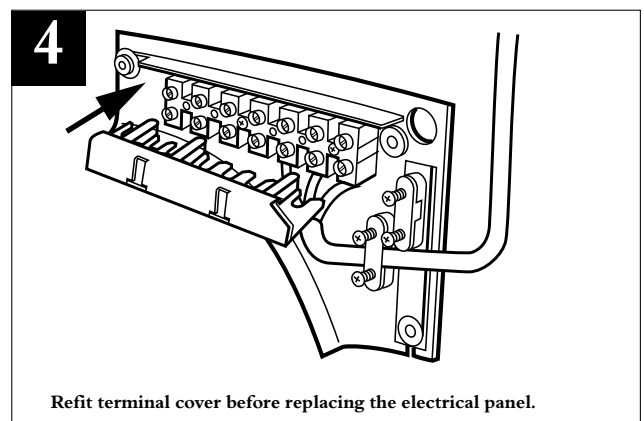
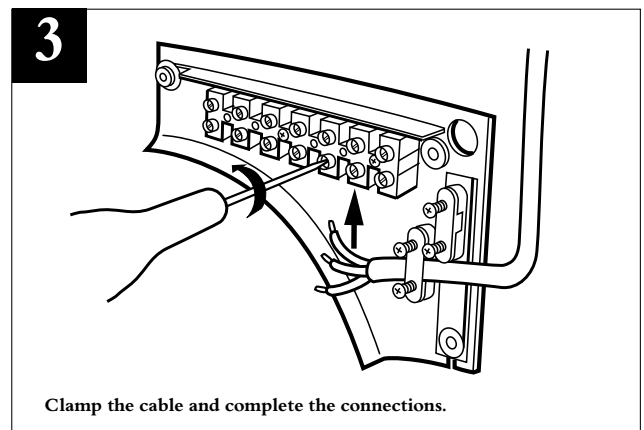
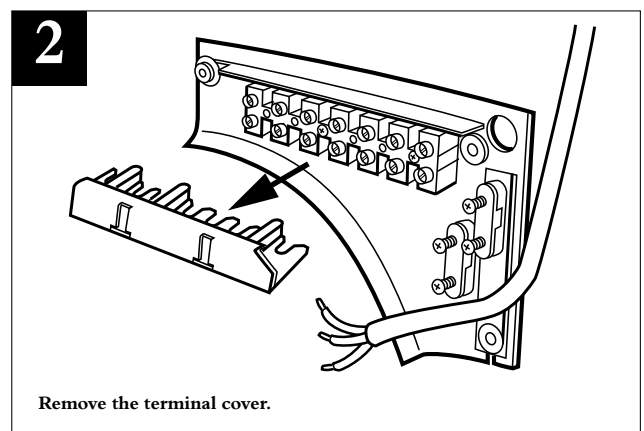
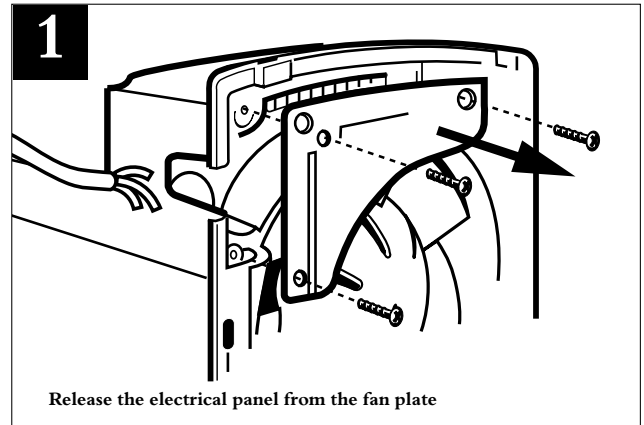
Connect switched live signal to L5 for integral timer module "TA"

### Basic fan operated by remote sensor



Connect link wire between L2 & L4 for extract  
or  
Connect link wire between L2 & L3 for supply

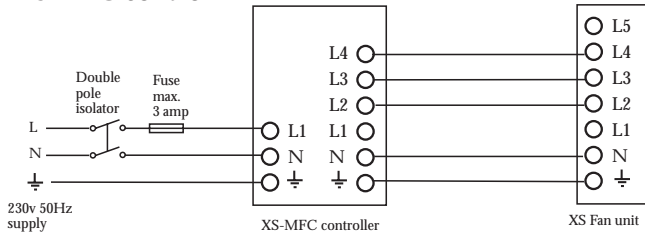
## Electrical Wiring Instructions



# Installation & Maintenance **XS** ROOF FAN KITS

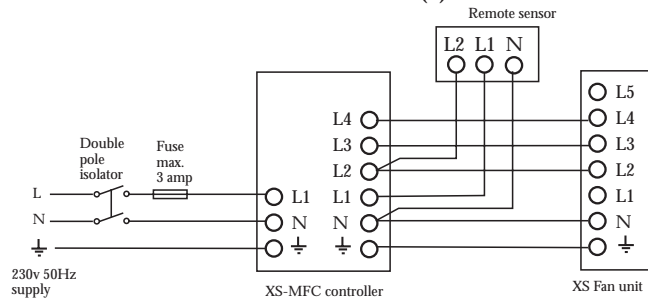
## Electrical Wiring Instructions .. continued

### Supply / Extract fan operated via remote XS-MFC control



Remote switch may be set: On / Off, Forward / Reverse, Economy / Std. (variable speed), Auto / Manual.

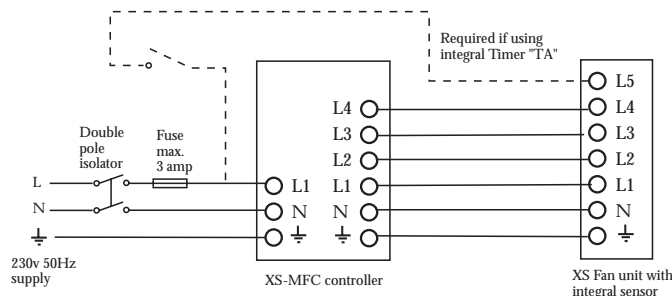
### Supply / Extract fan operated via remote XS-MFC control & Remote Sensor(s)



Remote switch may be set: On / Off, Forward / Reverse, Economy / Std.(variable speed), Auto / Manual.

One or more Remote Sensors may be wired in parallel to one XS-MFC Control.  
Humidity Sensor: XS-HR, Air Quality Sensor: X S-AQR  
Passive Infra Red Sensor: XS-PIRR,

### Supply / Extract fan operated via remote XS-MFC control and Integral Sensor



Remote switch may be set: On / Off, Forward / Reverse, Economy / Std. (variable speed), Auto / Manual.

Maximum one Integral Sensor per fan 6/9/12 denotes unit size identity  
Humidity Sensor: XS-H6/9/12, Air Quality Sensor: XS-AQ6/9/12  
Passive Infra Red Sensor: XS-PIR6/9/12, Temperature Sensor: XS-TH6/9/12  
Run on Timer: XS-TA6/9/12

A single sensor will switch all fans if more than one fan is being operated by a single XS-MFC controller.

#### NOTE:

Multi-fan options:  
Up to 5 fans (size 6" / 9") can be controlled by one XS-MFC.  
Up to 3 fans (size 12") can be controlled by one XS-MFC.  
Do not mix different fan sizes on the same controller.

## 6" Fan XS6FR & XS6PR Consumption and weight

Model	Input Power Watts		Weight kg
	Max.	Economy	
XS6FR supply + extract	38	20	6.3
XS6PR supply + extract	38	20	6.3

Note figures are for extract only

## Electrical Specification

230V ~ 50Hz Class I. Motor thermally protected by overload device. Cable: 1mm max. or min. Fuse: 3 amp (if fan is supplied from a 5A lighting circuit, no local fuse is required).

## 9" Fan XS9FR & XS9PR Consumption and weight

Model	Input Power Watts		Weight kg
	Max.	Economy	
XS9FR supply + extract	50	37	8.7
XS9PR supply + extract	50	37	9.1

Note figures are for extract only

## Electrical Specification

230V ~ 50Hz Class I. Motor thermally protected by overload device. Cable: 1mm max. or min. Fuse: 3 amp (if fan is supplied from a 5A lighting circuit, no local fuse is required).

## 12" Fan XS12FR & XS12PR Consumption and weight

Model	Input Power Watts		Weight kg
	Max.	Economy	
XS12FR supply + extract	100	70	11.0
XS12PR supply + extract	100	70	11.8

Note figures are for extract only

## Electrical Specification

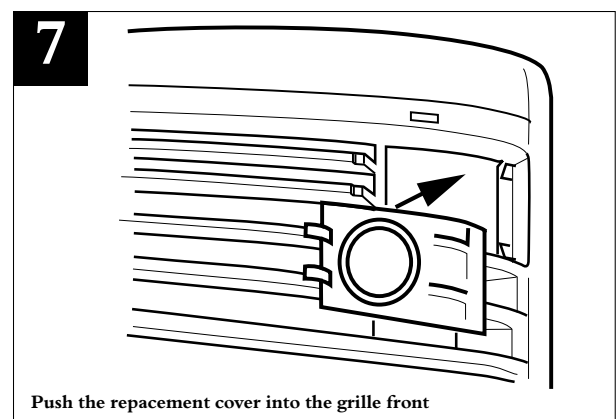
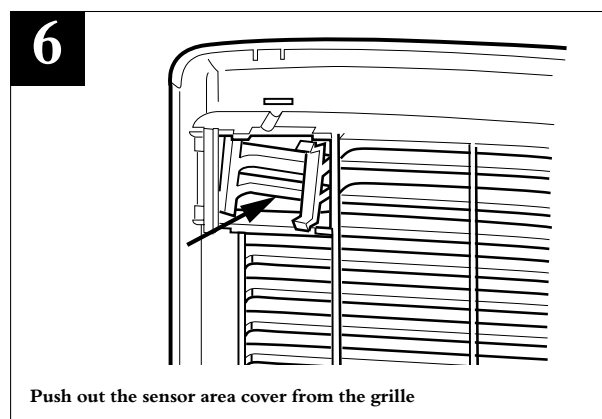
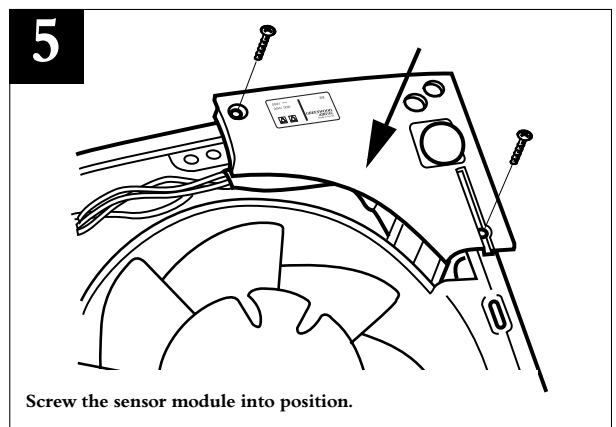
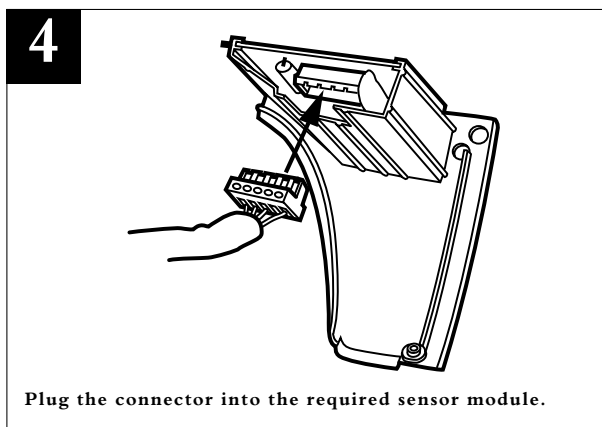
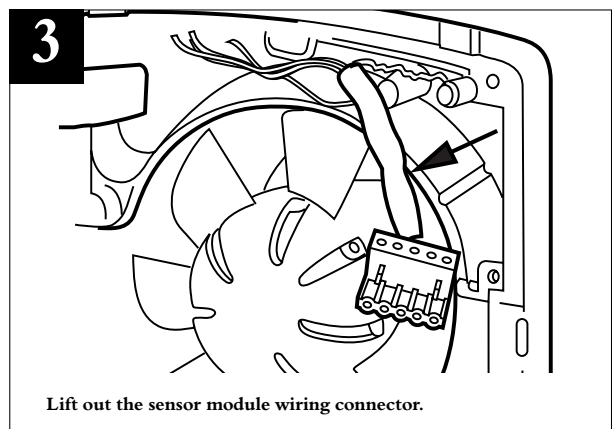
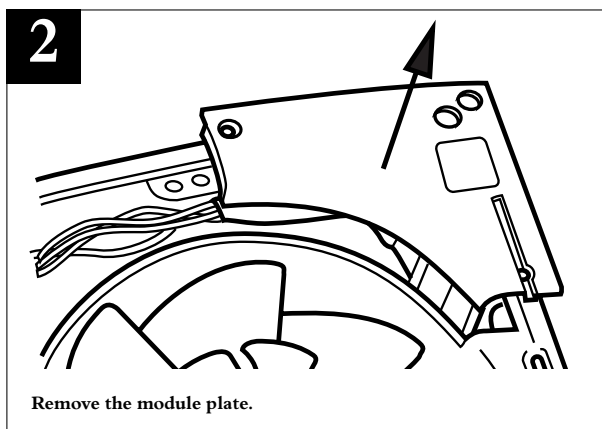
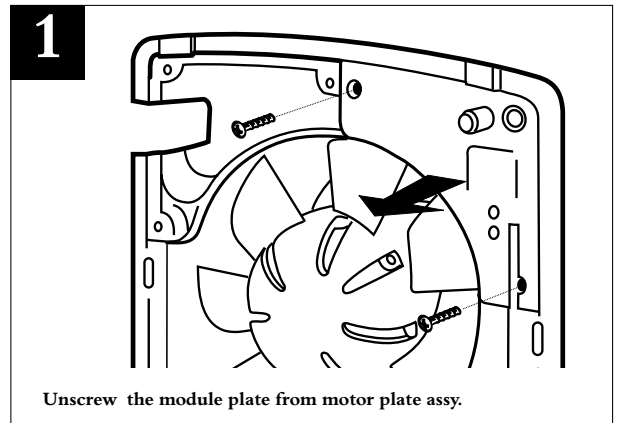
230V ~ 50Hz Class I. Motor thermally protected by overload device. Cable: 1mm max. or min. Fuse: 3 amp (if fan is supplied from a 5A lighting circuit, no local fuse is required).

**IMPORTANT NOTE**  
**(Shutter Operation XS fans)**  
There will be a short delay on startup and shutdown of approximately 40 seconds.  
This is normal.

## Installation of Roof Fans Fitting Integral Sensors (optional)

Note:  
Before following the pictorial sequence shown- first remove the fans front cover grille (2 screws). Release the four main corner screws and lift out the motor/fan plate assembly. Remove the electrical coverplate opposite the sensor plate refer to page 5 if needed.

Follow the pictorial sequence on this page.



# Installation & Maintenance **XS** ROOF FAN KITS

## Fitting Remote Controller XS-MFC or Remote Sensors (optional)

The XS-MFC Multi Fan Control provides supply or extract, variable speed and automatic or manual switching of several fans if desired, (see note below).

The control is best mounted approx 1.5m above the floor.

Remote Sensors are available for Humidity, Air Quality and Passive Infra Red control.

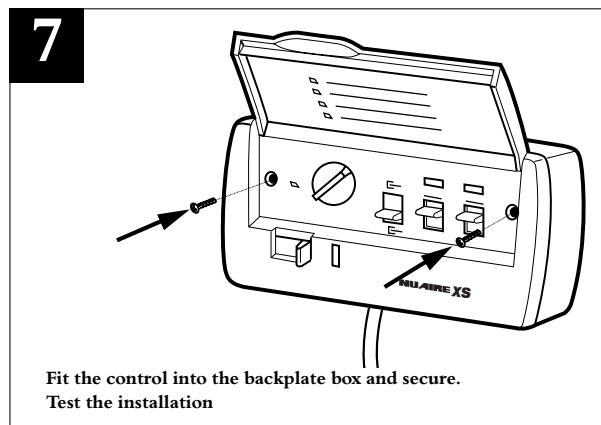
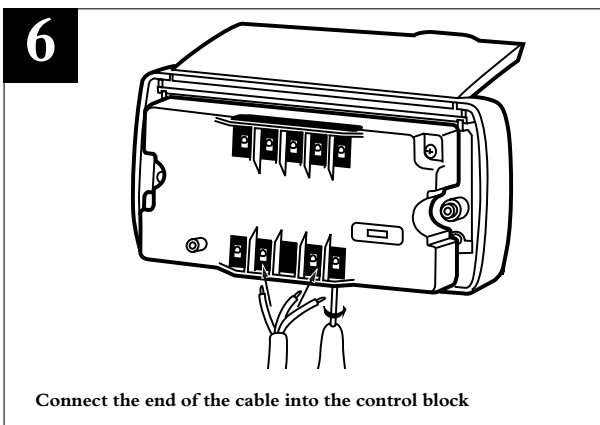
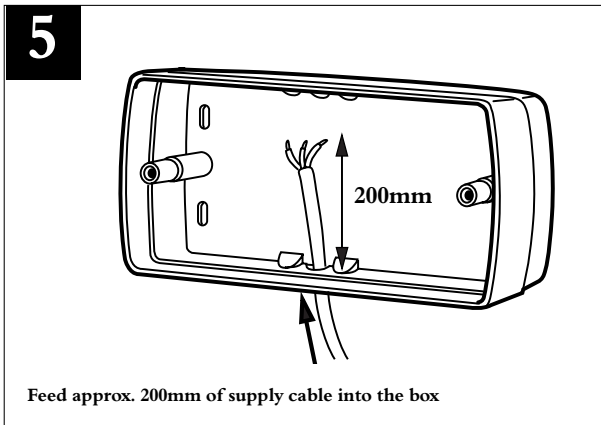
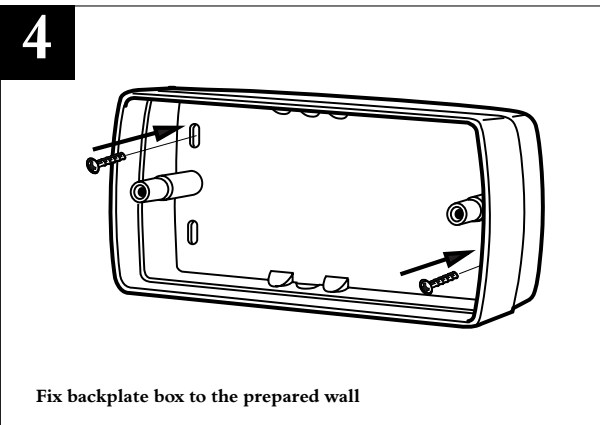
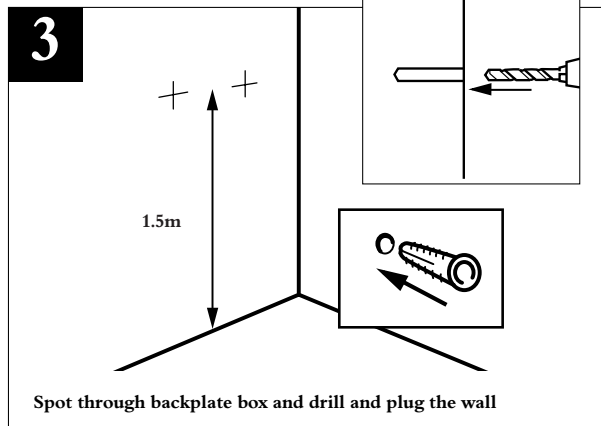
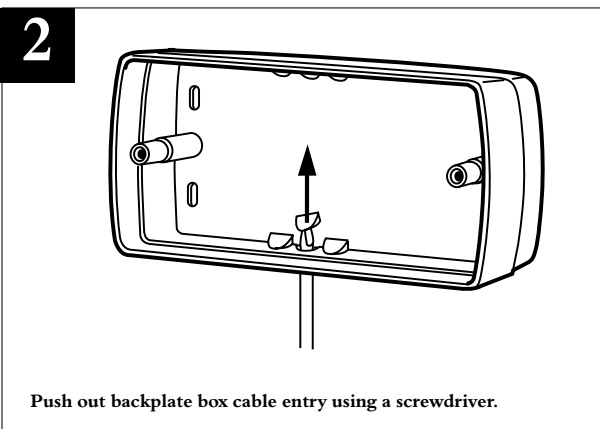
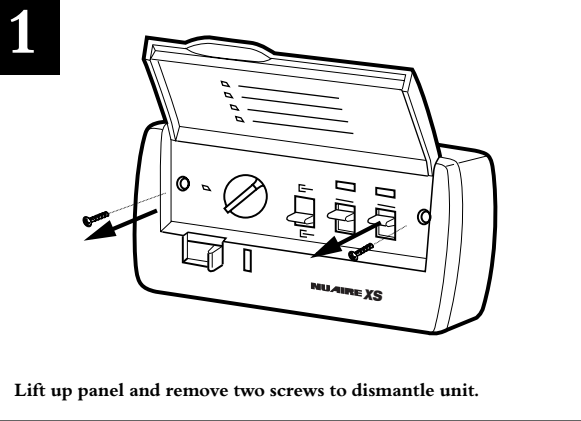
Remote Sensors should be positioned at least 1.5m above the floor and away from direct heat sources e.g. radiators.

NOTE:

Up to 5 fans (size 6" / 9") can be controlled by one XS-MFC

Up to 3 fans (size 12") can be controlled by one XS-MFC

Do not mix different fan sizes on the same controller.



## Accessories

### Roof Installation Accessories



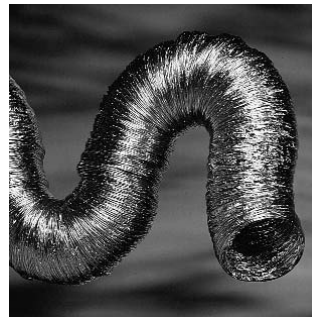
#### Single Spigot Adaptor

Ref.	Code
6" Fans .....	XS-SA6
9" Fans .....	XS-SA9
12" Fans .....	XS-SA12

#### Single Spigot Adaptor

Used in conjunction with flexible ducting systems. Mounted onto the front of the Spacer section using the 4 off 5mm x 40mm brass screws supplied with the Single Spigot Adaptor. Replaces the internal grille.

Can also be used connected directly to a Roof Terminal using the 4 off 5mm x 40mm brass screws supplied with the Single Spigot Adaptor. Manufactured from HIPS material.



#### Flexible Ducting and Installation Accessories

A full range of ducting and installation accessories is available from NuAire. Call NuAire on 02920 885231 to request literature.

"Installation Ancillaries" NuAire catalogue No.670812

## 3 Year Warranty

The three year warranty starts from the date of delivery covering faulty materials or workmanship and includes parts and labour for the first year.

The labour element is subject to full, free and safe access to the equipment as recommended by the CDM regulations. The remaining two years covers replacement parts only.

#### TERMS

*This warranty applies to units installed and used in the United Kingdom. The equipment will be repaired or replaced at NuAire's cost provided that the appliance:*

- 1. Has been installed and used in accordance with the fitting and wiring instructions supplied with each unit.*
- 2. Has not been connected to an unsuitable electrical supply. (The correct supply voltage is shown on the appliance rating label attached to the unit).*
- 3. Has not been modified or repaired by persons not authorised by NuAire.*
- 4. A unit returned to NuAire should be suitably protectively packaged and clearly marked with the 'returns number' obtained from NuAire prior to posting.*

#### NB

If you have any comments or queries on any of our products or services please write to the Marketing Services Manager at the main address opposite

*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.*

## Maintenance

Periodically, at least once a year, or more frequently in case of heavy use, remove the dirt and encrustation from the grille(s) fan impeller and motor casing.

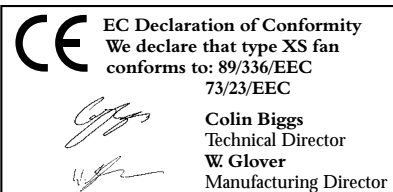
Ensure the impeller is not cracked or deformed and is able to rotate freely and without oscillation.

## After Sales Support

As a manufacturer NuAire is aware that time is important. In the event of a breakdown of this equipment, it should be adequately packaged and returned to NuAire. **IMPORTANT!** Please telephone NuAire before posting your unit. We will give you a returns number to identify your package. We will endeavour to repair or replace it within five working days of receipt. See our warranty terms.

# NUAIRE

Western Industrial Estate, Caerphilly,  
Mid Glam CF83 1XH United Kingdom.  
Telephone: 02920 885911 Facsimile: 02920 887033,  
Email@nuaire.co.uk



Leaflet No. 671053

GP 218