

SQFA-AE-WP

SQUIF with Weatherproof Acoustic Enclosure

Installation and Maintenance Manual

(Addendum to I&M 671175)



1.0 IMPORTANT SAFETY INFORMATION

- The provision of the electrical supply and the connection of the unit to the electrical supply must be carried out by a qualified electrician in accordance with latest edition of the wiring regulations.
- Isolate from power supply before removing any covers. During installation or maintenance ensure all covers are fitted before switching on the mains supply.
- All-pole disconnection from the mains as shown in the wiring diagram must be incorporated within the fixed wiring and shall have a minimum contact separation of 3mm in accordance with latest edition of the wiring regulations.
- This unit must be earthed.
- Ducting must be securely fixed with screws to the spigot to prevent access to live parts. Duct runs terminating close to the fan must be adequately protected by suitable guards.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. The replacement cord must be of the same technical specification as the original cord or greater.
- Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.
- This appliance should not be used by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning the safe use of the appliance by a person responsible for their safety. Children shall not play with the appliance. Cleaning and user maintenance shall not be carried out by children.

1.1 HAZARD SYMBOLS



GENERAL WARNING

Signifies a general warning regarding hazard specified by supplementary information.



ELECTRIC SHOCK

This unit must be completely electrically isolated before any panels are removed. Check mains supply and control connections.



ROTATING PARTS

This unit contains fast moving rotational parts which may start automatically. It is the sole responsibility of the installer to adequately guard these components.



REFER TO INSTRUCTION MANUAL

Read and understand the installation and maintenance manual before installing, operating or maintaining this product.

1.2 IMPORTANT INFORMATION

This manual contains important information on the safe and appropriate assembly, transport, commissioning, operation, maintenance, disassembly and simple troubleshooting of the product.

While the product has been manufactured according to the accepted rules of current technology, there is still a danger of personal injury or damage to equipment if the following general safety instructions and the warnings contained in these instructions are not complied with.

- **Read these instructions completely and thoroughly before working with the product.**
- **Keep these instructions in a location where they are accessible to all users at all times.**
- **Always include the operating instructions when you pass the product on to third parties.**

1.3 PERSONAL PROTECTIVE EQUIPMENT

The following minimum Personal Protective Equipment (PPE) is recommended when interacting with Nuair product:

- **Protective Steel Toed Shoes:** When handling heavy objects.
- **Full Finger Gloves (Marigold PU800 or equivalent):** When handling sheet metal components.
- **Semi Fingerless Gloves (Marigold PU3000 3DO or equivalent):** When conducting light work on the unit requiring tactile dexterity.
- **Safety Glasses:** When conducting any cleaning/cutting operation or exchanging filters.
- **Reusable Half Mask Respirators:** When replacing filters which have been in contact with normal room or environmental air.

Nuair would always recommend a site specific risk assessment by a competent person to determine if any additional PPE is required.

2.0 INTRODUCTION

The enclosure is designed to further attenuate Squif single in-line fans. It is manufactured using pentapost framework, with double skinned panels and high density mineral wool insulation.

2.1 CODE DESCRIPTION

1	2	3	4	-	5	-	6	-	7
SQF	A	4	3	-	3	-	AE	-	WP

- 1. Fan Range: **SQF** = Square single inline fan
- 2. Variant: **A** = Suitable for ambient running temperatures only
- 3. Motor Poles: **4** = 4-pole motor
6 = 6-pole motor
- 4. Unit Size: **1-6** (4-pole variants)
1-4 (6-pole variants)
- 5. Phase: **1** = Single phase
3 = Three phase
- 6. Enclosure: **AE** = Acoustic enclosure
- 7. Weatherproofing: **WP** = Weatherproof Unit

3.0 DELIVERY & HANDLING

All equipment is inspected prior to despatch and leaves the factory in good condition. Upon receipt of the equipment an inspection should be made and any damage indicated on the delivery note.

Particulars of damage and/or incomplete delivery should be endorsed by the driver delivering the goods before offloading by the purchaser. No responsibility will be accepted for damage sustained during the offloading from the vehicle or on the site thereafter. All claims for damage and/or incomplete delivery must be reported to Nuair within two days of receipt of the equipment.

The weight of the unit modules and palletised items are displayed on the packaging.

Offloading and positioning of the equipment is the responsibility of the purchaser. Items should only be lifted by competent personnel following appropriate risk assessment.

Always handle with care to avoid damage and distortion, and where lifting slings are employed use spreaders to ensure slings do not come into contact with the unit case, or control pack.

4.0 ACCESS TO THE UNIT

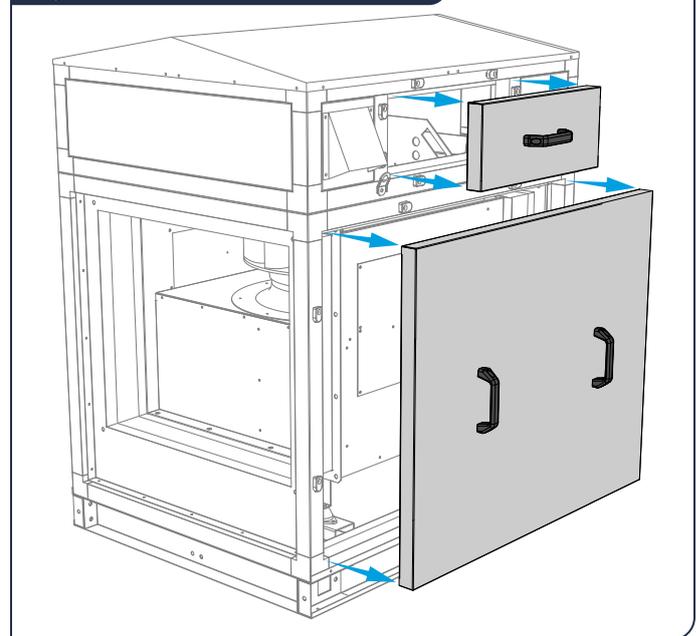
4.1 ACCESS FOR MAINTENANCE

Access for regular maintenance can be achieved by removing the access panels provided (Fig 1).

To access the Squif impeller chamber, remove the centre panel on either side of the lower unit.

To inspect the motor, remove the centre panel on the top unit.

Fig 1: Maintenance Access Panels



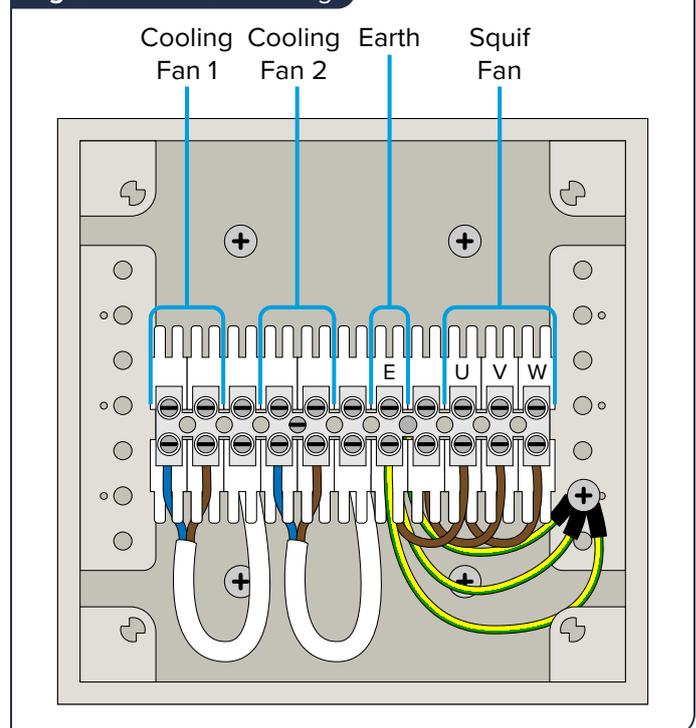
4.2 FULL ACCESS

The top section can be removed to give full access to the motor and impeller assembly.

To remove the top section:

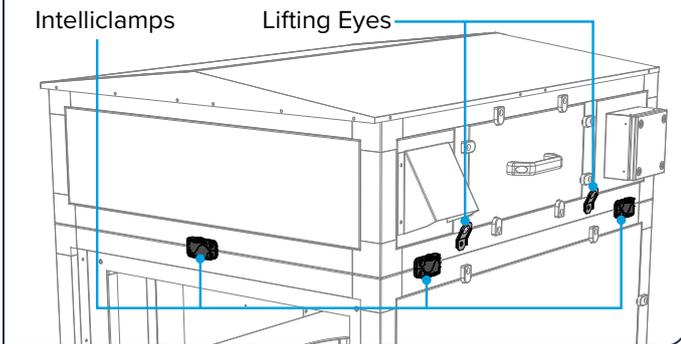
1. Open the terminal box, mark the location of each wire and disconnect the Squif. The remaining wires are for the cooling fan (See Fig 2)

Fig 2: Terminal Box Wiring



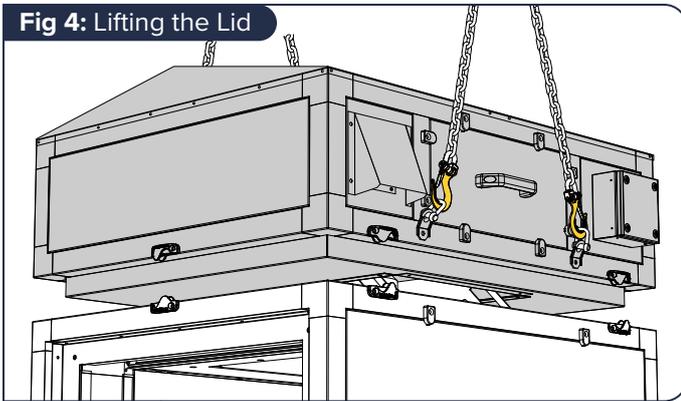
2. Remove the top section access panels and pull the motor wiring through from the terminal box.
3. Separate all the Intelliclamps around the unit. (Fig 3).

Fig 3: Lifting Eyes and Intelliclamps



4. Remove the 4 bolts on the side of the top section and then fasten the lifting eyes provided (Fig 3).
5. The top section may then be lifted vertically and removed. All four lifting points must be utilised. Please use appropriate lifting equipment and adhere to all relevant health and safety practice/guidelines (Fig 4).

Fig 4: Lifting the Lid



IMPORTANT

Lifting eyes and flxings are designed to bear only vertical forces at each point.

Force applied in any other direction (for example while using a lifting bar and excessively splayed chains) may result in damage to the unit.

WARNING

The lifting eyes for the top section must **NOT** be used to lift the entire unit.

5.0 ELECTRICAL INSTALLATION

5.1 WIRING

Please refer to the unit I&M **671175** for the main wiring requirements for the fan uit.

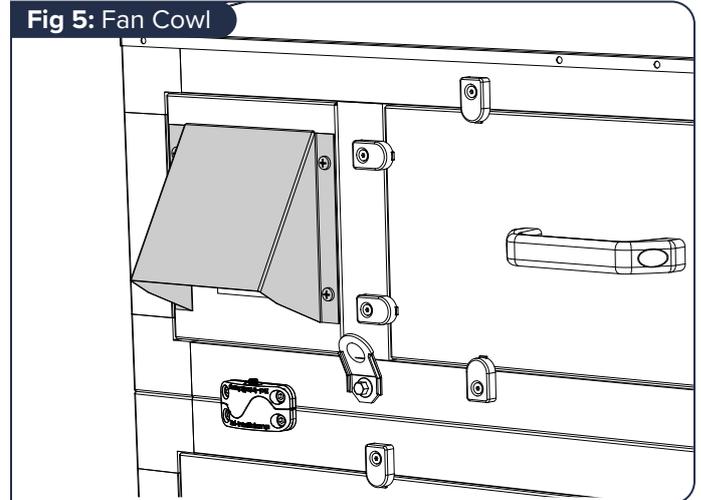
In addition to these, 2 single-phase power supplies are required for the motor cooling fans.

5.2 COOLING FAN REMOVAL

The acoustic enclosure houses 2 cooling fans within the top section to ensure adequate air flow is provided for the motor. To access these:

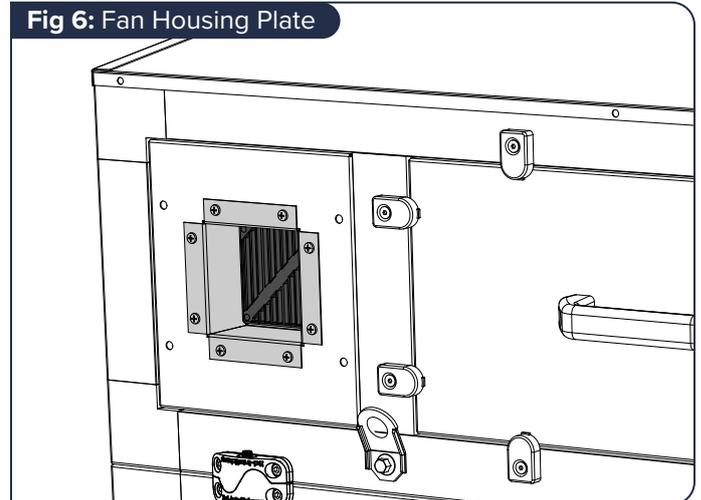
1. Remove screws securing fan cowl and remove cowl (Fig 5).

Fig 5: Fan Cowl



2. Remove screws securing fan housing plate (Fig 6).

Fig 6: Fan Housing Plate



3. Remove fan and housing plate together (Fig 7).

Fig 7: Removing the Fan Housing Plate

