User Manual - Raised Floor Mount Fan Unit

Model   : F-66.4

**Voltage :
230V / 208V**

Designed and manufactured by Austin Hughes

Legal Information
First English printing, February 2025

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions
Please read all of these instructions carefully before you use the device. Save this manual for future reference.

■ Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
■ Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40º Celsius (104º Fahrenheit).
■ When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
■ When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
■ Arrange the equipment's power cord in such a way that others won't trip or fall over it.
■ If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labelled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
■ Observe all precautions and warnings attached to the equipment.
■ If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
■ Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
■ Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
■ If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

What the warranty does not cover
■ Any product, on which the serial number has been defaced, modified or removed.
■ Damage, deterioration or malfunction resulting from:
  ☐ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  ☐ Repair or attempted repair by anyone not authorized by us.
  ☐ Any damage of the product due to shipment.
  ☐ Removal or installation of the product.
  ☐ Causes external to the product, such as electric power fluctuation or failure.
  ☐ Use of supplies or parts not meeting our specifications.
  ☐ Normal wear and tear.
  ☐ Any other causes which does not relate to a product defect.
■ Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in business, industrial and commercial environments.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

■ Re-position or relocate the receiving antenna.
■ Increase the separation between the equipment and receiver.
■ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Content

Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

< 1.1 >   Key benefits

F-66.4
Raised Floor Mount Fan Unit

• Maximize Aisle Containment Cooling Performance
• Minimize Hot Spots in Server Rack
• Provide Overall Temperature Monitoring
• Adjustable CFM Levels

FC CE RoHS REACH

>>> Quad EC (Electronically Communicated) Fans

InfraCool F-66.4 consists of four high performance and quality EC fans. It provides unit CFM up to 2100 and unit MTBF up to 50,000 hours.

>>> Maximize CRAC Efficiency & Minimize Rack Hot Spots

InfraCool F -66.4 delivers strong cool air from underfloor via the contained aisle to the high density server racks to eliminate inside hot spots. Eventually, F-66.4 not only maximizes CRAC efficiency, but also saves the energy cost.

>>> Retrofits or New Construction Aisle

Well-designed mounting kit offers user a quick and easy installation. It is ideal for new project deployment or retrofit. User can just proceed with the installation on 600 x 600mm raised floor and no rack movement is required.

>>> Individual Fan On / Off

Each EC fan is equipped with an individual on / off switch. It provides flexibility for users while the aisle environment or rack cooling requirement changes.

>>> Unit / Fan Speed Levels

Each EC fan is provided with 3 speed levels. User can adjust the speed level according to aisle environment and requirements. Energy expenses for the cooling become more cost-effective as lower speed level costs much less.

>>> Overall Temperature Monitoring

By two temp. sensors and LED display, it is easy to monitor the temperature status in rack level, aisle level and even air duct underfloor level. Eventually, user can be aware of overall temperature enviornoment.
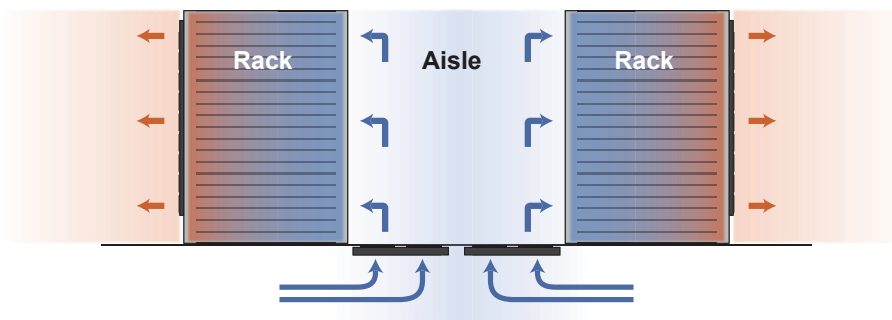
< 1.2 >   Specifications

Intelligent EC Fan	230V	208V
No. of Fan	4	4
Fan dimensions	200 x 200 x 60 mm	200 x 200 x 60 mm
MTBF	50,000 hrs	50,000 hrs
Speed per fan	2950 RPM	2810 RPM
IP Remote Access	Yes	Yes
Noise	77 dBA max.	76 dBA max.
Operating frequency	50 / 60 Hz	50 / 60 Hz

Fan Control		230V	208V
Main on / off switch		✓	✓
Individual fan switch	On / Off	✓	✓
	Speed levels	✓	✓
Unit CFM	Normal	1236	1200
	High	1560	1512
	Max	2172	2104
Fan CFM	Normal	309	300
	High	390	378
	Max	543	526

Temperature Monitoring	
Temperature LED	2
Temperature port	2
Temperature sensor	2 (external)
Measurement unit	Celsius (°C) or Fahrenheit (°F)
Measurement range	0 to 99.9°C
Measurement accuracy	± 1.5%
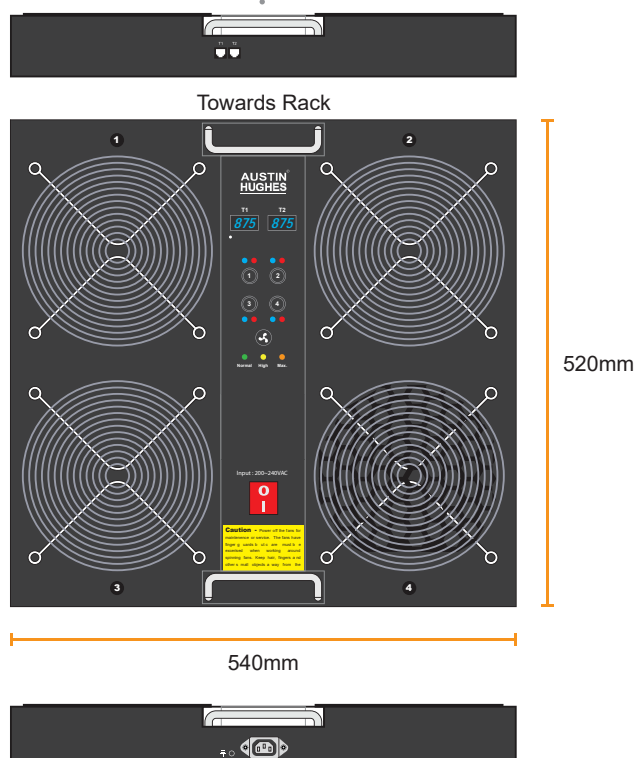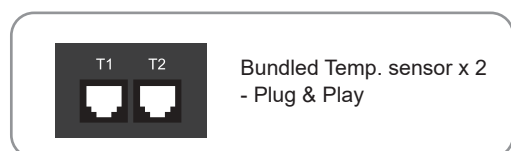
Physical	
Product (W x D x H)	540 x 520 x 65 mm
Packing (W x D x H)	718 x 674 x 133 mm
Net weight	12 kg / 26.4 lb
Gross weight	14 kg / 30.8 lb
Chassis color	Black
Chassis materials	Steel
Support bracket	Left & right side, set of 2

Power			230V	208V
Unit Power Consumption (±5%)		Normal	43W	40W
		High	75W	71W
		Max	170W	155W
Fan Power Consumption (±5%)		Normal	12W	11W
		High	19W	18W
		Max	44W	40W
Input voltage			200 ~ 230V	

Environment	
Operating temperature	0 to 50°C
Storage temperature	-5 to 60°C
Operating humidity	20 ~ 90%, non-conensing
Storage humidity	5 ~ 90%, non-conensing

Compliance	
EMC	FCC & CE
Safety	CE / LVD
Envirnment	RoHS3 & REACH compliant

Bundled Temp. sensor x 2
- Plug & Play

Towards Rack

520mm

540mm

Temperature LEDs
- Temp. detected by T1 & T2 ext. sensors
- °F or °C

Individual fan kit on/ off status LEDs
- ON status : blue LED only
- OFF status : red LED + blue LED

Individual fan kit on / off buttons
- for EC fan kit #1 ~ #4

Fan CFM setup button

Fan CFM status LEDs
- Normal : green LED
- High : Yellow LED
- Max : Orange LED

Power On/Off switch

Input : 200~240VAC

< 1.3 >   Safty & Usage Warnings

Before Installation ⚠️

- Make sure the fan unit is installed under the 600 x 600mm raised floor & located in front of the server rack.
- The fan unit contains moving parts which may cause serious injury. Don't apply power until the installation is complete.
- The fan unit must be installed by a qualified electrician and comply with local and national regulations.
- Use the provided input power cord to connect the unit. The power voltage must be rated 208V or 230V.
- Never disassemble the unit. It contains potentially hazardous voltages.

Usage Warnings ⚠️

- Power off the fan unit before maintenence or service.
- The fan unit have finger guards but care must be excerised when working around spinning fans.
- During maintenence or service, keep hair, fingers and other small objects away from the spinning blades.
- Do not put any object on the raised floor which covers the raised floor mount fan unit. It will affect the cooling performance. If small objects drop into the fan unit, it will cause unit failure and even damage.
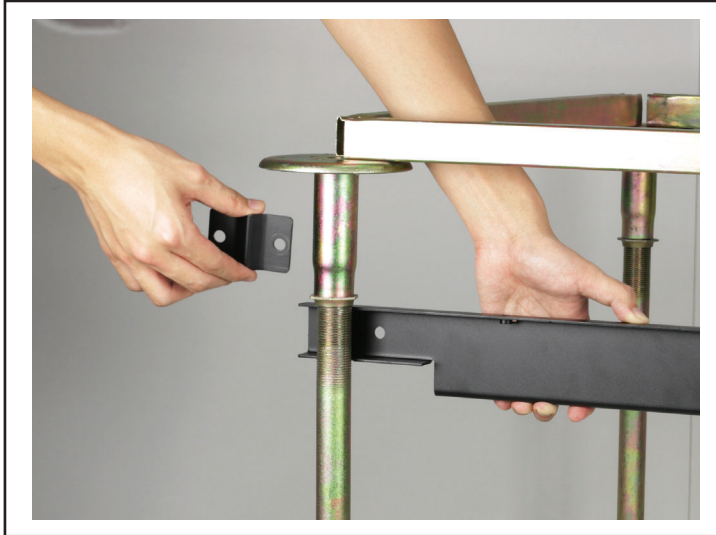
< 1.4 >   Package Content

|			
❶	Fan unit x 1	❹	Bracket fixing plate x 4
❷	Temp. sensor w/ cable x 2	❺	M8 screw & nut x 8 (for fixing plate)
❸	Support bracket, left & right side	❻	M5 screw x 4

Bundled power cord x 1

< 1.5 > Installation

Step ①

- Move the 600 x 600mm raised floor
- Refer to the package content, install the left & right side
  support bracket to the pedestals
- Fix the support bracket with 4 corner's fixing plate provided
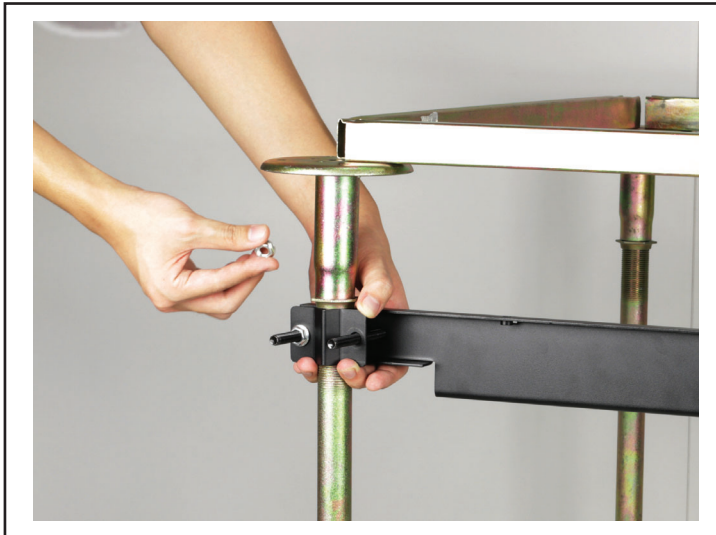
Step ②

- Tighten four fixing plates with provided M8 screw & nut
- Keep the left & right side bracket in the same horizontal
  level

Step ③

- Put the fan unit on the left & right bracket

Step ④

- Fix the fan unit position on the support bracket with four

  provided M5 screws to against virbation & movement

T1	T2

Bundled Temp. sensor x 2
- Plug & Play

Step ⑤

- Connect power & temperature sensors

Towards Rack

Bundled power cord x 1