InfraCool®

Rack Airflow Control

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, November 2020

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 dam age 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 dam aged 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 invali date 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 B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential instal-lation.

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

>>> 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

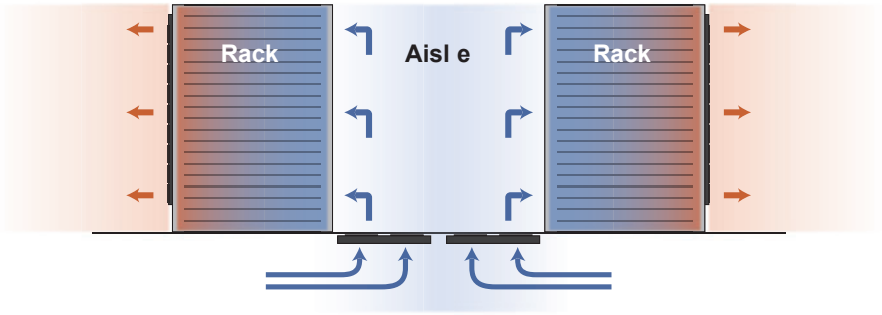
Each EC fan is equipped with an individual on / off switch. It provides flexibility for users while the aisle environment or rack cooling requirement changes.

>>> 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 envioronment.



< 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	Level 1 Level 2 Level 3	1236 1560 2172	1200 1512 2104
Fan CFM	Level 1 Level 2 Level 3	309 390 543	300 378 526

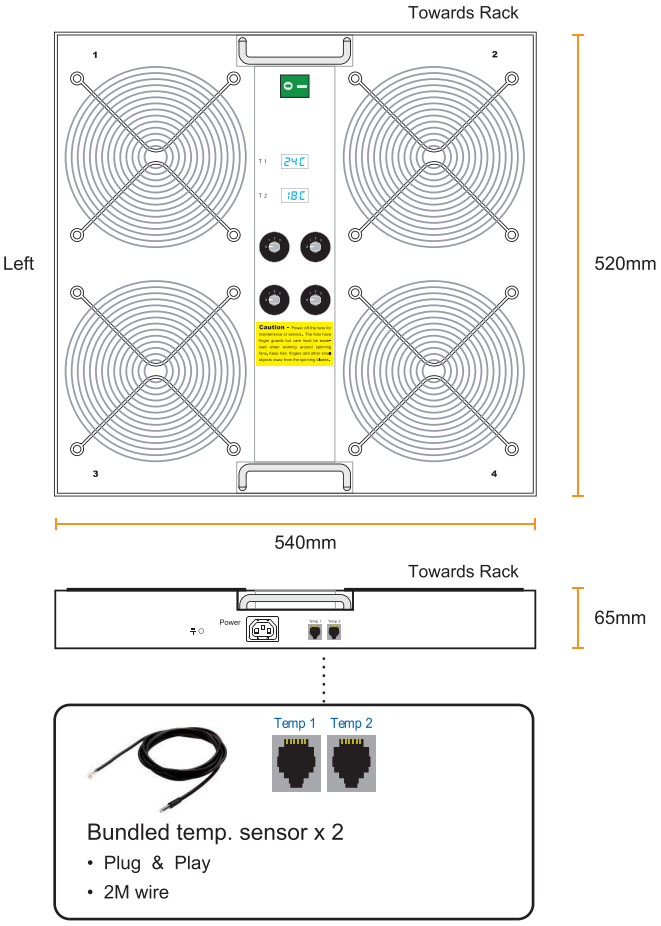
Temperature Monitoring	
Temperature LED	2
Temperature port	2
Temperature sensor	2 (external)
Measurement unit	Celsius (°C) or Fahrenheit (°F)
Measurement range	0 to 99.9°C
Measurement accuracy	± 1.5%

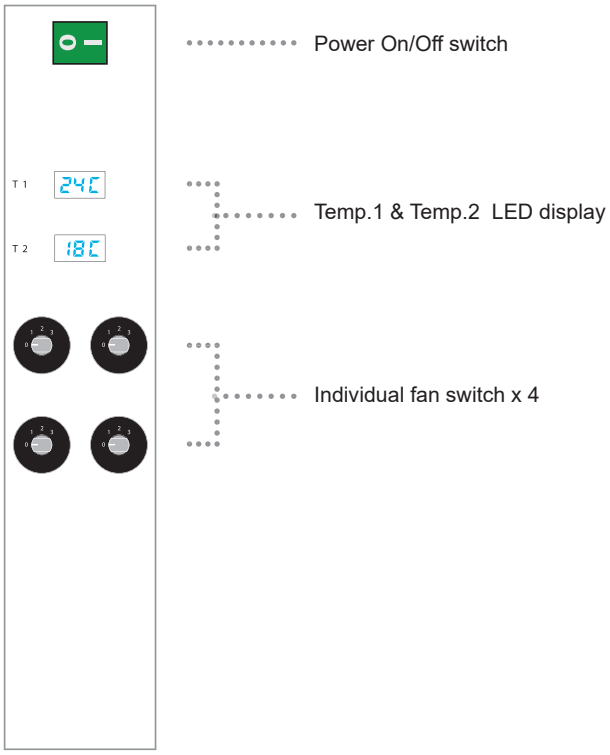
Physical	
Product (W x D x H)	540 x 520 x 65 mm
Packing (W x D x H)	718 x 674 x 133 mm
Net weight	12 kg / 26.4 lb
Gross weight	14 kg / 30.8 lb
Chassis color	Black
Chassis materials	Steel
Support bracket	Left & right side, set of 2

Power		230V	208V
Unit Power Consumption (±5%)	Level 1 Level 2 Level 3	43W 75W 170W	40W 71W 155W
Fan Power Consumption (±5%)	Level 1 Level 2 Level 3	12W 19W 44W	11W 18W 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

Environment	
EMC	FCC & CE certified
Safety	CE / LVD certifies
Envirnment	RoHS3 & REACH compliant





< 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

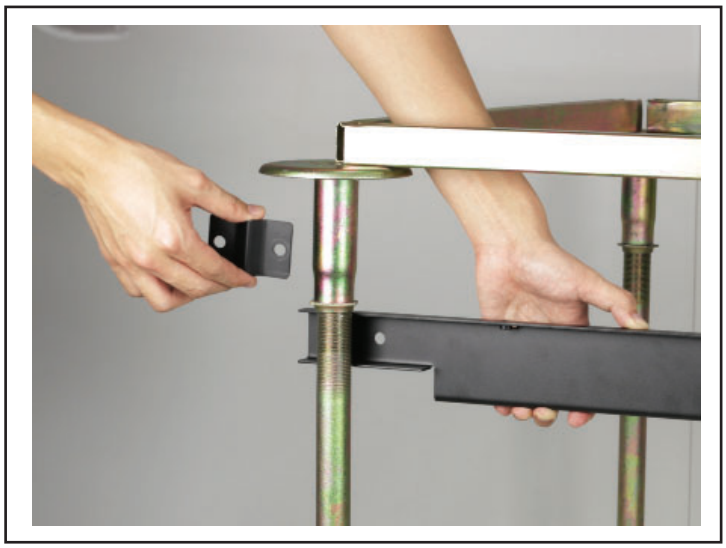
- Power off the fan unit before maintenence or service.
- The fan unit have finger guards but care must be excerised when working around spinning fans.
- During maintenence or service, keep hair, fingers and other small objects away from the spinning blades.
- Do not put any object on the raised floor 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

1. Fan unit x 1
2. Temp. sensor w/ cable x 2
3. Support bracket, left & right side
4. Bracket fixing plate x 4
5. M8 screw & nut x 8 (for fixing plate)
6. M5 screw x 4

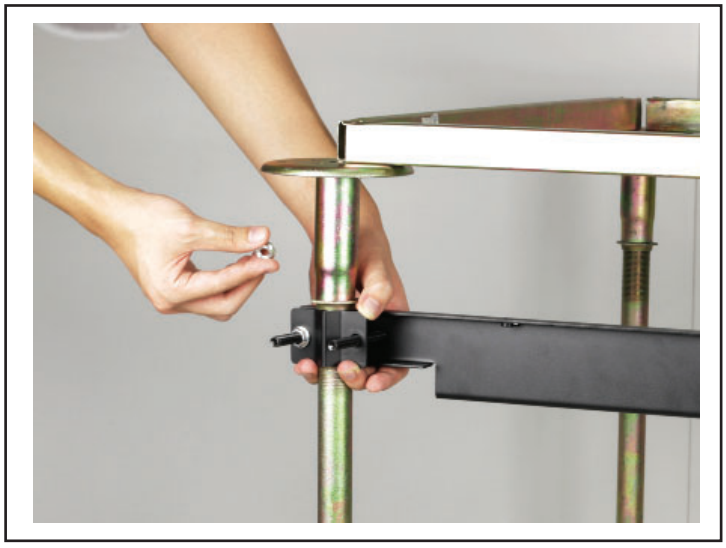
Bundled power cord x 1

< 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

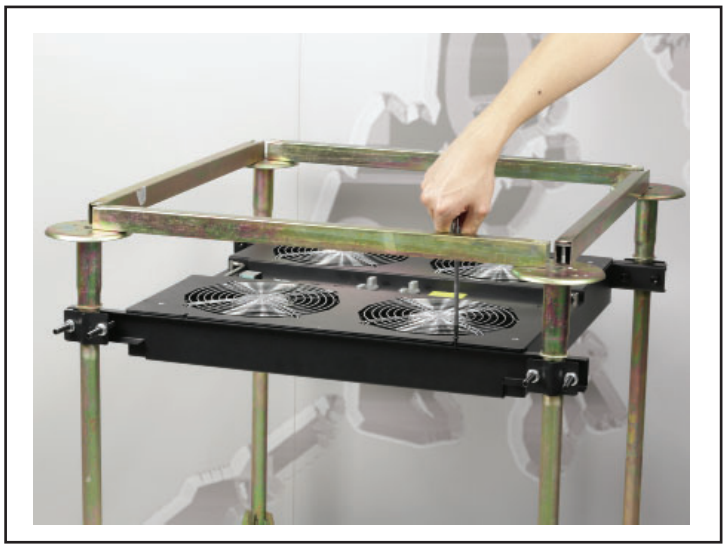


Step 2

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

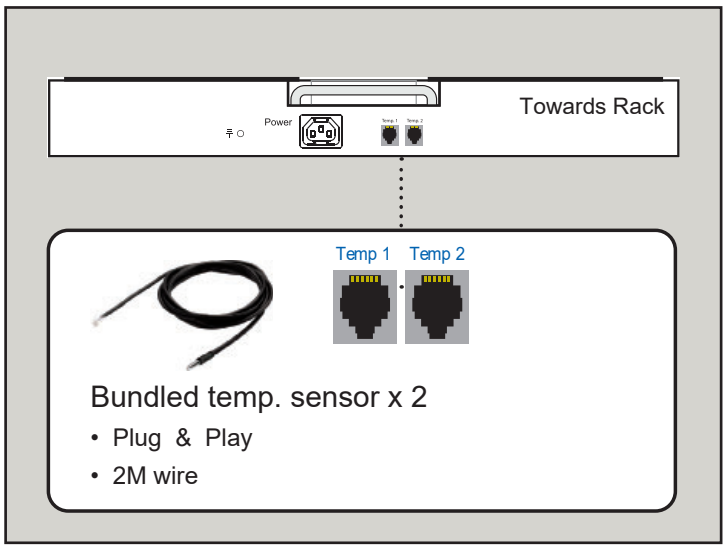
Step 3

- 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



Step 5

- Connect power & temperature sensors