

The CFH & CFS Fan Heaters

(CFS60, CFH60, CFH90, CFH120, CFCH)

Frequently Asked Questions

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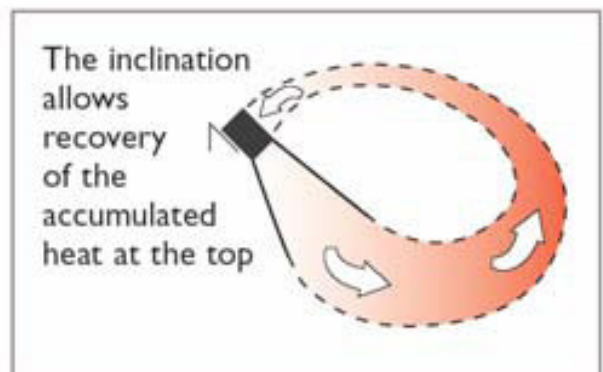
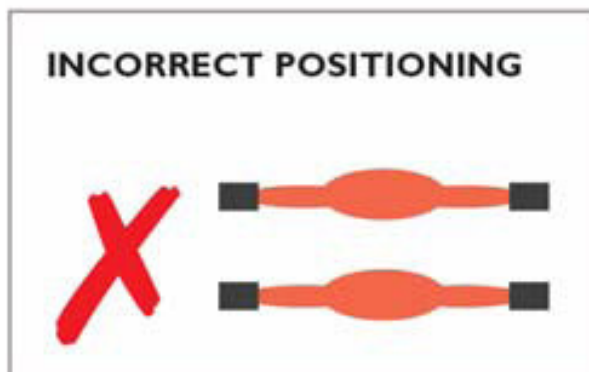
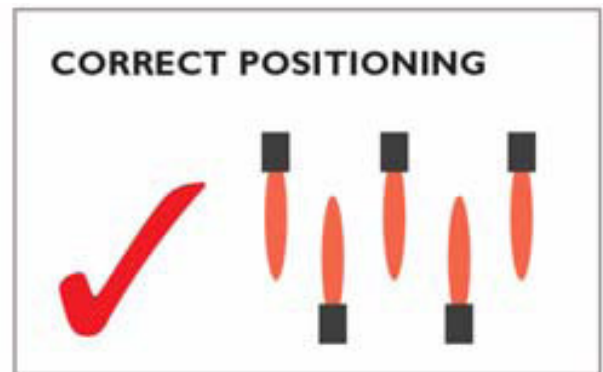
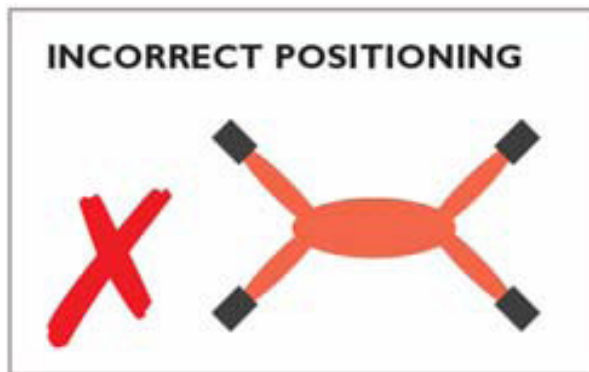
General Positioning & Control

I would like to install the heater at 4m above the floor, will this affect the performance of the product?

The CFH and CFS (>6kW) have been designed for installation between 2m and 3.5m from floor level. Installation above 3.5m will reduce the heaters ability to effectively heat to ground level.

How close together should I mount the heaters for even heat distribution?

*The heaters should be spaced to give the best distribution of heat within the area to be heated following a calculation of the heat load requirement.
(See below diagrams for suggested arrangement)*



Can the heaters be ceiling mounted?

No, the heaters are designed for installation onto a secure wall with a minimum downward angle of 45° as constrained by the wall bracket.

Can I position the heaters together for a greater level of heat?

Yes, the CFH range heaters can be positioned side by side where up to 120kW of heat is needed and controlled from a single CFCH controller.

How far from the heater can I position the wall mounted controller?

CFS = Any length.

CFH = The total CAT-5 cable length including modular links should not exceed 90m.

What is the advantage of using the CFCH electronic control with the CFH heater?

Multiple heaters can be linked together as a system with operation from a single central control point.

The electronic control system enables quick and easy connection via the use of CAT-5 cable terminated with RJ45 plugs.

The control gives the possibility to program temperatures and ON/OFF times over 7 days.

The control has an inbuilt electronic thermostat.

Can I control the temperature local to the heater rather than where the CFCH is located?

Yes, on the CFH heaters the electronic thermostat in the CFCH may be overridden by connecting a local thermostat to the PCB within the chosen heater.

For CFS heaters, locate the switchbox close to the heater and operate as per instructions.

Further information is contained in the Electrical & Connection section.

Can I set different temperatures or On/Off times for heaters operating on the same system?

No, all connected heaters will operate from a single control point and setting.

This is only possible by selecting a second CFCH control and running two separate systems.

CFS range, not applicable.

Electrical & Connection

What electrical supply do I need to power the heaters?

Refer to the specification table.

Can I link the electrical supply of more than one heater together?

Supply should be such that wire size and circuit breakers are adequate for the load.

Separate circuits may be required.

How do I connect the wall mount controller to more than one heater as a system?

CFH Range

Connect CFCH controller to chosen heater (this will act as the 'master module') Daisy chain remaining heaters (max 10 heaters in total) using CAT5 cable terminated with RJ45 plugs with Straight thro' wiring (no cross-overs).

CFS Range

See instruction for details on how to connect the included switchbox. The CFCH electronic controller is incompatible with this heater range.

Can the CFS models be linked into a series?

Yes, although if a large (more than 3 heaters) system is being installed it is recommended that the CFH models are used as the connection is a simpler process.

I have a BMS system and need to control the heater from it, what control will be offered through the BMS link?

Only the CFH models are suitable: Off, Fan only, Fan with Low Heat, Fan with High Heat.

How do I connect the fan heater to the BMS system?

Direct connections to the CFH model's PCB (refer to wiring diagram)

Do the CFH fan heaters offer any fault reporting through the BMS system?

No

Can I connect the heaters to a single phase 230/240V 1PN supply?

Yes, models can be adapted – See instruction leaflet.

Can I connect the heaters to a three phase 230/240V 3P supply?

Yes, it is possible where the power system is suited to this. Note: this is unlikely to be relevant for the UK market. (See instructions)

Which type of MCB is suitable for use with the heaters?

Type B at the appropriate rating for the product rating.

How do I re-set the thermal cut-outs?

A thermal cut-out is accessible at the top of each heater.

If the trip has activated, the reset button will stand proud of the upper surface.

When the appliance is cool, depress to reset.

What electrical isolation should be provided?

Suitably rated local isolation and fusing of supply circuit.

How do I connect a room thermostat to the heaters system?

CFH – A standard bimetallic room thermostat can be connected direct to the appliance PCB TSTAT connection (refer to the wiring diagram) which will bypass the CFCH control if local temperature control is required and the CFCH is sited elsewhere. Ensure maximum temperature is selected on the CFCH and control temperature via the local thermostat.

This will control all heaters in the system.

*** Note This is only possible with the second generation PCB (Rev 3.1)**

If 2 or more independent heating zones are needed, each must be set up as a separate system.

CFS – A thermostat can be linked to the terminal of the contactors.

Either to give thermostatic control of ½ of the heat output with a base load, or to give full ON/OFF thermostatic control.

A diagram is available for this connection.

Why does the heater continue to run for a period when turned off at the control?

The fans are designed to run on for a period to ensure the heating elements have cooled before shut-down.

The CFH has a set over-run period of 1 minute.

Special Applications

Can I install the product into a dusty environment?

Within reason, dust with a metallic component should be avoided.

Can the heaters be used for drying purposes?

*Not suitable for use in wet areas such as car wash applications, otherwise –
Yes*

Miscellaneous

Are new & old heater control boards compatible within the same system?

Where heaters with different control boards must be used together in the same system, the newer control board (Rev 3.1) takes precedence.

How do I know if I have a new PCB fitted to my heater?

The first generation control PCB (Rev 3.0) has RJ45 control cable sockets mounted horizontally to the board meaning the plug comes in from the side of the board when connecting.

The second generation control PCB (Rev 3.1) has RJ45 control cable sockets mounted vertically with the plug coming in from above the board when connecting.

Should the PCB have link wires in any of the terminals for standard operation?

No links are supplied on the first generation control PCB (Rev 3.0).

The second generation PCB should have links in BUS 12V, BUSGND, TSTAT switch.

What are the start-up currents and are the motors inductive or resistive?

Elements are resistive, motors are inductive but start-up currents are negligible.

Where can I get a suitable CAT5 cable to connect units together?

Most electrical outlets can supply Ethernet cable & RJ45 plugs.

Alternatively you can obtain pre-terminated cables ready to go. Suppliers include RS Components who supply 5m (405-4764) & 10m (405-4786) versions.

Trouble Shoot Guide

	Symptoms		Fault	Notes
1.	Unit(s) dead at switch-on No relay click at power-on Fan doesn't come on	a.	Three phase supply not wired correctly Incorrect phase to neutral wiring will cause control board fuse to blow.	220 – 240v 3P connection not suited to UK power system Rectify & replace fuse
		b.	Internal control circuit fuse (F2 fuse, printed circuit mounted, 5AT 20mm x 5mm) may be blown	(CFH models only)
		c.	Cut-out has triggered – Manual reset required	Establish cause
2.	Unit blows air but with no heat output	a.	Check heat selected at the control	If separate thermostat installed it disables low heat, if high heat selected unit will operate at low heat setting when thermostat open. Check relays click in heater when heat selected
		b.	If fitted - Thermostat is not requesting heat – try high heat and full fan on the switchbox to ensure heat is present	
3.	Heat switches on without fan – unit cuts out after a period of time	a.	Fan motor may be faulty (open circuit) causing too much heat build up inside the unit tripping the thermal cut-outs – manual reset required	If switching from off to fan only produces a “click” fan relay is ok.
4.	Unit will not work in fan only mode but relays heard “clicking” when fan setting changed at switch box.	a.	Motor fault	
5.	Unit does not respond to control box or displays unusual operation	a.	Check green LED on PCB in heater LED on constant – PCB ok LED flashes briefly when setting changed – PCB ok LED flashes constantly – connection error	Check CAT5 cable Must be “straight through” without cross-overs in plug.

Trouble Shoot Guide – (Cont'd)

	Symptoms		Fault	Notes
1.	Unit runs for a few minutes then stops on power up	a.	Check and remove link wire in door switch terminals on heater PCB	If switch on control box is in 'Auto' control will begin runback timer