

Also available:-

**Ductable 3 Phase Fan Heaters:-**

FF13 415v - 16A 415v 3PH + Earth Supply (No Neutral required.)

FF29 415v - 32A 415v 3PH + Earth Supply (No Neutral required.)

FF42 415v - 63A 415v 3PH + Earth Supply (No Neutral required.)

**Industrial, high capacity air movers (Fans):-**

MB30 110v & 230v/240v

MB50 110v & 230v/240v

MB2000 110v & 230v/240v

**Industrial Portable Air Conditioning Units:-**

MCM230 230v – 23,000 BTU Mono Bloc

MCM280 230v – 28,000 BTU Mono Bloc

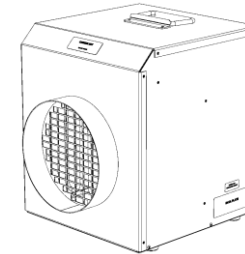
MCM350 230v – 35,000 BTU Mono Bloc

MCWCS 250 230v – 25,000 BTU Water Cooled Split – can be piped 30 metres.

\*Also VF250, VF300 and VF600 Portable Industrial Fume Extractors.

# FF3

## INDUSTRIAL ELECTRIC FAN HEATER



### PRODUCT MANUAL

#### Models Covered:

**FF3 ~ FF3T ~ FF3R**

**230v 13A Plug ~ 110v 16A / 32A Plug**

#### GENERAL SAFETY



- This equipment should only be used by a competent person who has read and fully understood these instructions.
- Never operate this equipment if you are ill, feeling tired or are under the influence of alcohol or drugs.
- Always switch OFF and unplug the equipment when not in use.
- Check condition of the equipment before use. If unit is showing signs of damage contact your supplier immediately.

## **WARNINGS**

### **These instructions should be read by:**

- The specifying engineer.
- The installation engineer.
- The user.
- The service engineer.

- Failure to follow these instructions may result in risk of personal injury or damage to the equipment.
- Damage due to a failure to follow these instructions will invalidate the warranty.
- The appliance must be commissioned & serviced by qualified engineers in compliance with local regulations.
- The appliance must be switched off and disconnected from the power supply before any work is carried out.
- There are no user controls inside the appliance casing.
- Do not place anything on top of the appliance.
- Do not use in the vicinity of a pool, bath or shower.
- An air gap of at least 300mm should be allowed at the rear of the unit to ensure a clear airflow. Do not site the unit close to soft fabrics or combustible materials.
- Allow the unit to cool by running fan only for a minimum of 5 minutes before switching off.
- Do not disconnect the appliance from the supply under load.
- For internal use only. Do not use out of doors.
- Extension cables should be correctly rated for the load, fully unwound and never run through water or over sharp edges.

 **NEVER** cover the air inlet or outlet! 

Notes.

## MACHINE SPECIFICATIONS

MODEL	FF3
WEIGHT	11 kg
IP RATING	IP20
MAXIMUM CURRENT	230v – 12A   110v – 25A
POWER SUPPLY	FF3 230V – 230V 1 PHASE 50Hz FF3 110V – 110V 1 PHASE 50 Hz

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Standards Applied:-

EN 55014-1: 2017

EN 55014-2: 2015

EN 61000-3: 2014

EN 12100-1: 2010

EN 12100-2: 2010

EN 60335-1: 2012

EN 60335-2: 2012

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Notes.

## Specifications:

The FF3 is a single phase industrial electric fan heater. It is supplied as a 230v machine or a 110v machine.

The 230v appliance is connected to a 13Amp 50Hz power supply and comes fitted with the appropriate UK mains plug.

The 110v 3kW appliance is connected to a 32Amp 110v 50Hz supply and comes fitted with the appropriate plug.

The 110v 1.5kW appliance is connected to a 16Amp 110v 50Hz supply and comes fitted with the appropriate plug.

The FF3 is fitted with a high quality axial fan motor.

The FF3 is fitted with an internal thermostat as standard.

\*If connecting a 110v machine to a transformer, please ensure it is CONTINUOUSLY RATED.

## Setup and operation:

### *To start:*

- Please note! The control panel is at the rear of the appliance.
- Site the appliance on a firm level surface.
- Connect to the appropriate power supply.
- Switch the rocker switch to I.
- Set the thermostat to the desired temperature.

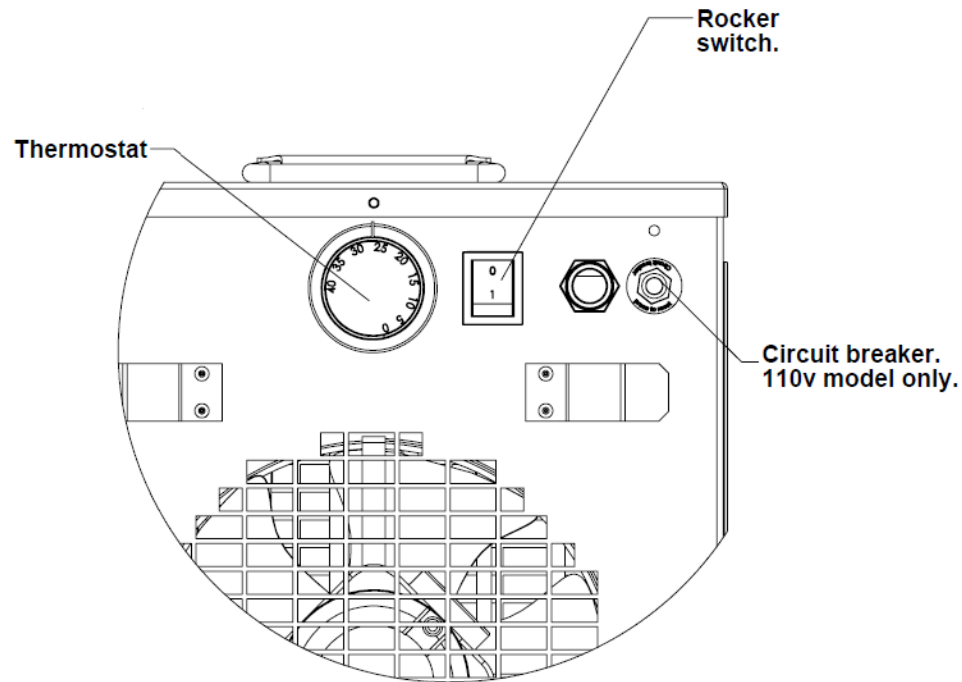
### *To stop:*

- Turn the thermostat fully anti-clockwise and allow the fans to run for a minimum of five minutes to cool the machine. Failure to follow this procedure will damage sensitive components and invalidate the warranty.
- Switch the rocker switch to 0 when the heat has dissipated.
- If the heater is not in regular daily use disconnect from the power supply.

## Protective /safety devices:

- The FF3 is fitted with a safety limit thermostat. Should the maximum design operating temperature be exceeded it will shut down the heating element and leave the fan running. This device will automatically reset as the temperature reduces.

## Rear view. Control Panel



## Spare parts:

FF3 Parts List		Part Number	
Drawing No	Description	110v	240v
1	FF3 Case	BW0201155	BW0201155
2	FF3 Chassis	BW0201156	BW0201156
3	Heating Element	HE010115	HE010114
4	FF3 Rubber Foot	ME040315	ME040315
5	FF3 Fan Motor Assembly	FA040106	FA040215
6	Over Temperature Thermostat	EL010310	EL010301
7	Mains Cable c/w Plug	EL020125	EL020124
8	Trunk Handle	ME040305	ME040305
9	Cable Gland c/w Lock Nut	ME040201	ME040201
10	I/O Rocker switch	EL030140	EL030135
11	Thermostat c/w Knob & Bezel	EL030411	EL030409
12	25A Circuit Breaker	EL010229	NA

## Maintenance:

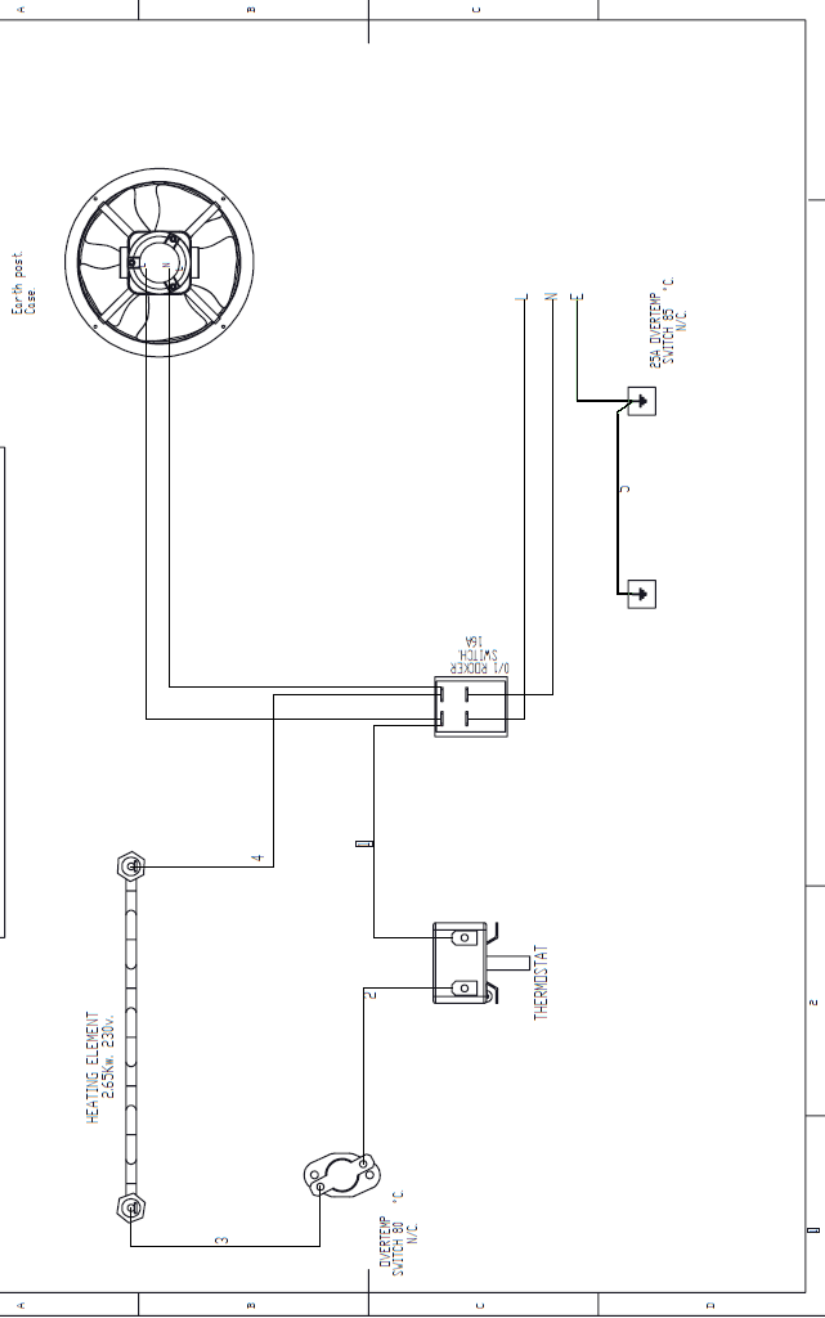
Fan motors, elements and switch gear are not customer serviceable components.

General maintenance should include regular inspection of:

1. Mains cable. Check for signs of damage to the insulation. replace if necessary.
2. Air intake & outlet grills: ensure grills are free from accumulated debris. Blow out with compressed air if required.
3. Fixings: Check all fixings are present and secure.

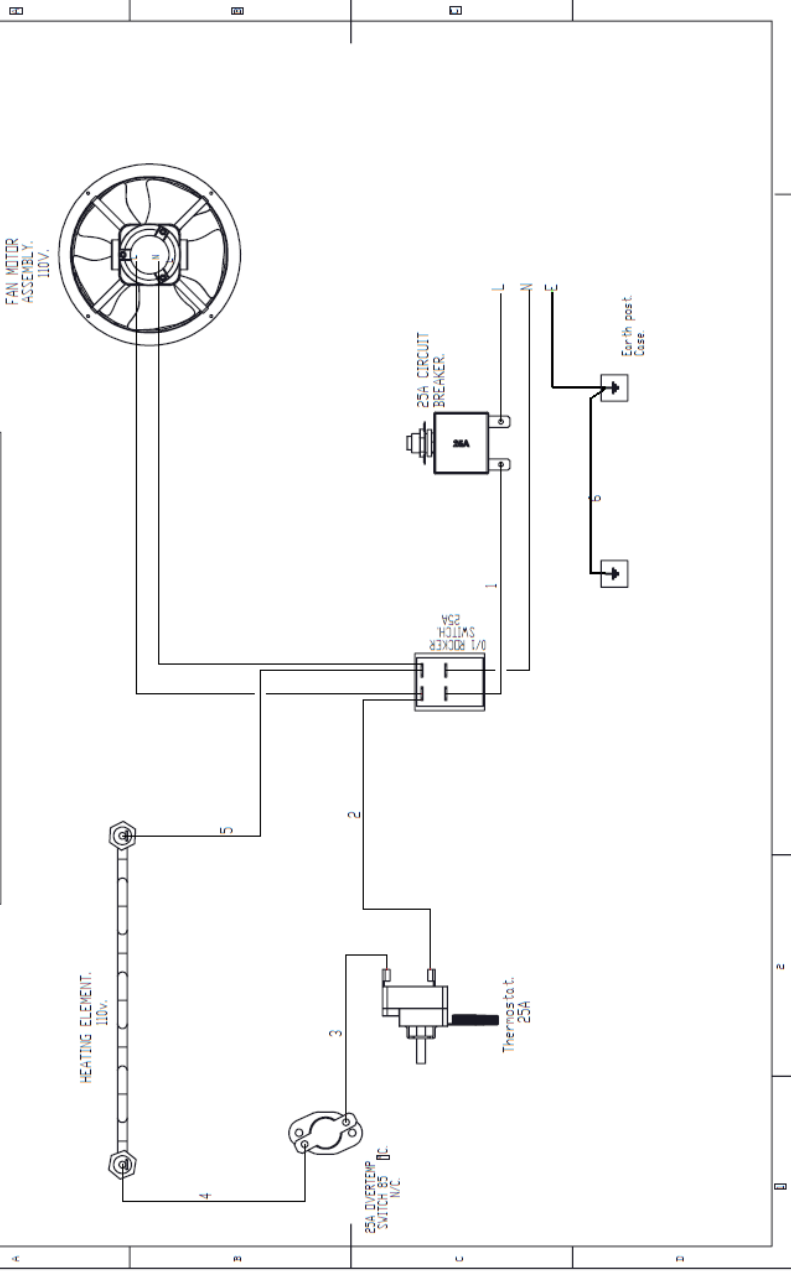
FF3T-13. 230V WIRING DIAGRAM

30-04-2013

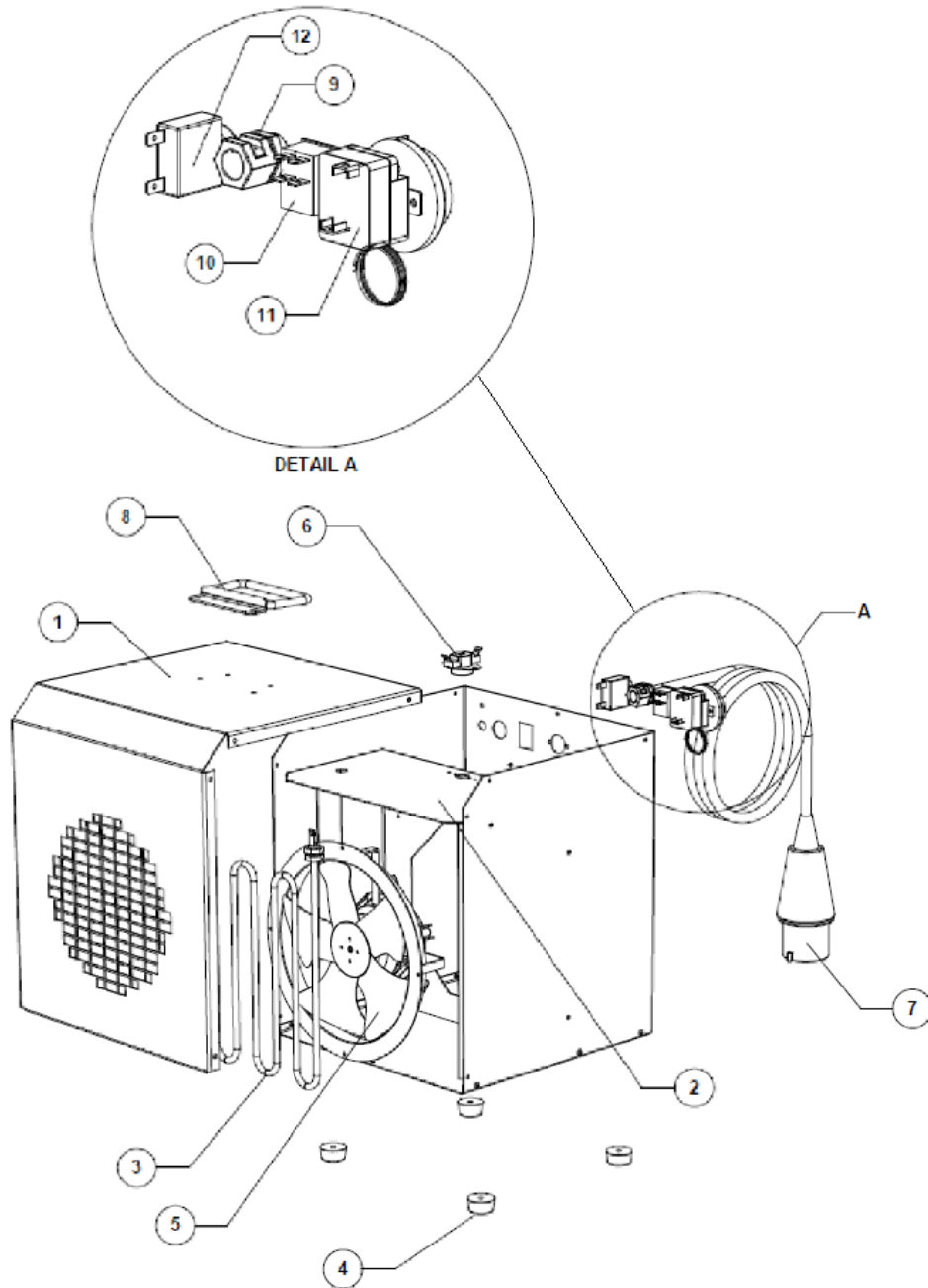


FF3T-15. 110V WIRING DIAGRAM

04-06-2015



## Exploded view:



## Fault finding:

FAULT	POSSIBLE CAUSE	SOLUTION
NO HEAT OUTPUT.	FANS AND OR HEATING NOT SWITCHED ON.	CHECK ALL SWITCHES ARE ON.
	THERMOSTAT INCORRECTLY SET.	TURN THERMOSTAT KNOB FULLY CLOCKWISE.
	POWER SUPPLY INTERRUPTED.	CHECK POWER SUPPLY.
	FAULTY ROCKER SWITCH.	CHECK SWITCH AND REPLACE IF NECESSARY.
	FAULTY THERMOSTAT.	CHECK THERMOSTAT AND REPLACE IF NECESSARY.
FAN MOTOR NOT RUNNING.	POWER SUPPLY INTERRUPTED.	CHECK POWER SUPPLY.
	FAULTY ROCKER SWITCH.	CHECK SWITCH AND REPLACE IF NECESSARY.
TEMPERATURE RISE INSUFFICIENT.	THE MACHINE SHOULD DELIVER A TEMPERATURE RISE OF APPROXIMATELY 40°C ABOVE THE AMBIENT TEMPERATURE. SHOULD THE MACHINE FAIL TO DO THIS CHECK THE POWER SUPPLY AND THAT THE THERMOSTAT IS TURNED FULLY CLOCKWISE. IT SHOULD BE NOTED THAT THE MAXIMUM AMBIENT TEMPERATURE THE MACHINE WILL RUN AT IS 40°C +/- 3°C.	

## Ducting

A 2 metre length of ducting is available for use with the FF3 spigot models – ask your supplier for details.

When using ducting with an FF3, for safety reasons please observe the following:-

- Never extend the ducting beyond 2 metres. 2 metres is the maximum safe duct length.
- Always stretch the ducting to its full length to ensure good air flow.
- Keep the ducting as straight as possible. Never use the ducting with bends in it.