



# Monmouth Scientific

Operating & Maintenance Manual

## Ductaire<sup>®</sup> Ducted Fume Cupboard

DFC700/DFC1000/DFC1200  
DFC1500/DFC2000/DFC3000



**THE MARKET LEADER IN *CLEAN AIR SOLUTIONS***  
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For permission requests, please write to:-  
Monmouth Scientific Limited,  
Units 5 & 5 Kilnside, East Quay, Bridgwater, Somerset, TA6 4DB.  
Email: [info@monmouthscientific.co.uk](mailto:info@monmouthscientific.co.uk)  
Tel: +44(0)1278 458090

## **Warning**

**This cabinet must be used in compliance with these instructions and any repairs or maintenance carried out by qualified personnel.**

**For parts or service information please contact Monmouth Scientific.**

# SECTION 1

## DESCRIPTION OF THE CABINET

The Ductaire fume cabinet working chamber is manufactured from fully welded and structurally tested industrial quality copolymer white polypropylene, complete with an integral spillage containment area and an optional secondary fully tested replaceable spillage tray. The folding acrylic sash allows excellent access to the large work area and fully isolated lighting ensures the area is well lit and easy to work in. The Ductaire range of fume cabinets are supplied with integral side mounted power and plug access ports, facilitating the ease of using electrical apparatus within the working chamber without having to trail cables through the front aperture.

They are available in five different standard sizes and can be supplied on a supply only basis or complete with full installation and/or validation to BS7258 Part 4.

<b>DFC</b>	<b>700</b>	<b>1000</b>	<b>1200</b>	<b>1500</b>	<b>2000</b>	<b>3000</b>
External Dimensions	700mmW 700mm D 1030mm H	1000mmW 700mm D 1030mm H	1200mmW 700mm D 1030mm H	1500mmW 700mm D 1030mm H	2000mmW 700mm D 1030mm H	3000mmW 700mm D 1030mm H
Internal Dimensions	685mmW 620mm D 800mm H	985mmW 620mm D 800mm H	1185mmW 620mm D 800mm H	1485mmW 620mm D 800mm H	1985mmW 620mm D 800mm H	2985mmW 620mm D 800mm H
Duct spigot connection	1 x Ø160	1 x Ø160	1 x Ø200	1 x Ø200	2 x Ø200	3 x Ø200
Airflow	300m <sup>3</sup> /h	400m <sup>3</sup> /h	500m <sup>3</sup> /h	675m <sup>3</sup> /h	850m <sup>3</sup> /h	1400m <sup>3</sup> /h
Pressure drop (cabinet only)	<100 pa					

## **SECTION 2**

### **INSTALLATION**

- The cabinet should be sited in a draught free position.
- The cabinet requires connection to ductwork.
- The airflow monitor / control system / light requires connection to a 230v AC power supply.
- A volt free contact is provided within the control panel to interface with external fan control if required\*.

\*See page 7 for wiring diagram.

### **TESTING / COMMISSIONING**

If Monmouth are installing the cabinet a test certificate will be supplied upon completion of the installation.

**THE CABINET MUST BE TESTED EVERY 14 MONTHS TO COMPLY WITH C.O.S.H.H REGULATIONS.**

## SECTION 3

### OPERATION

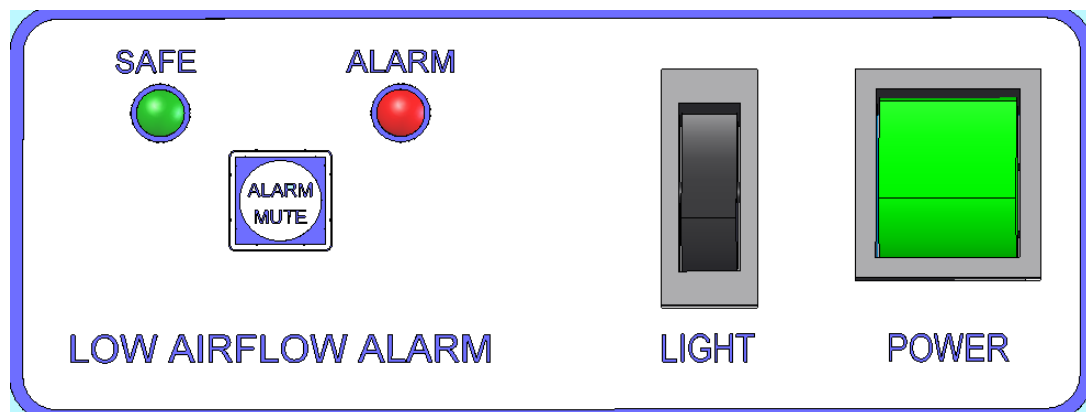
The cabinet is started by the illuminated rocker switch on the control panel. A zero-volt contact is activated at the same time allowing for external control of the extraction system.

A separate switch is provided to control the lighting.

The airflow is continuously monitored by an airflow detection system and will provide a visual and audible alarm if the airflow drops below the set level.

The sounder can be temporarily silenced by pressing the "Mute" button. It automatically resets after 2 minutes or when the airflow returns to normal level.

#### Control Panel



## SECTION 4

### MAINTENANCE

**The cabinet should be isolated from the electricity supply before carrying out any maintenance procedures.**

### FUSES

The airflow monitor is protected by a 3A 20mm fuse located inside the front cover. To gain access, remove 2 securing screws inside the enclosure. The front panel can now be hinged up. The fuse holder is mounted on the DIN rail.



**Always replace fuses with the correct type and rating.**

### LIGHTING

The light fitted is a long-life LED type and should require no maintenance or replacement. If it is required to remove the tube, remove the securing screws and open the front panel to gain access. Removal is the same as a standard tube (rotate 90° and withdraw).

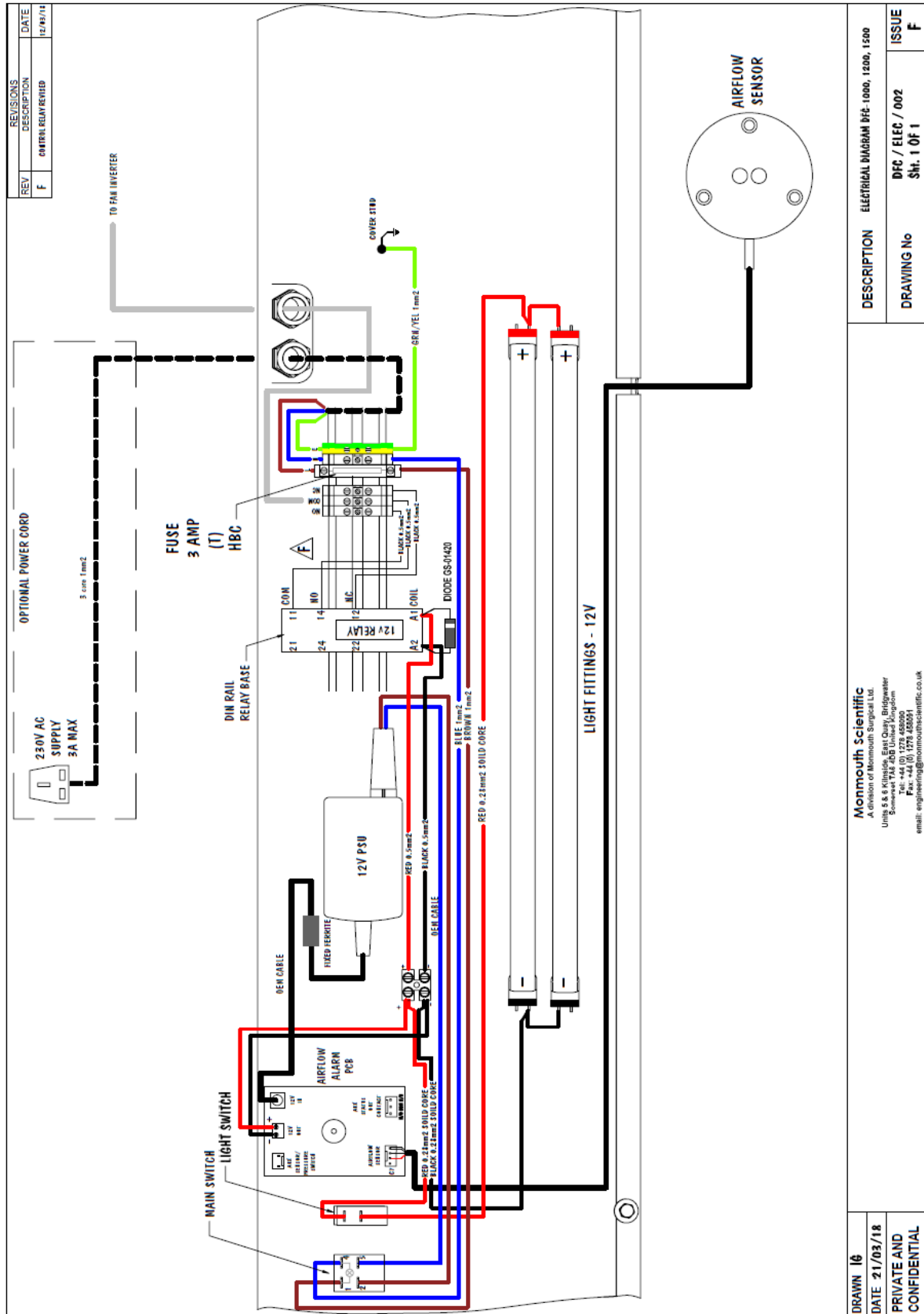
### CALIBRATION OF THE LOW AIRFLOW ALARM

This requires the use of a calibrated Ø100mm rotating vane anemometer and should be carried out by a trained service engineer.

- 1) Place the head of the anemometer in the centre of the aperture supported by a laboratory stand.
- 2) Reduce the airflow by adjusting an inline damper (if fitted) or by reducing the fan speed to achieve a face velocity of 0.45m/s.
- 3) Turn off the cabinet and restart whilst pressing the  key.
- 4) The alarm warning lights will flash alternately while in calibration mode. When the airflow has stabilised to around 0.45m/sec. Press the  key to store the set point.
- 5) Reset the fan speed to achieve 0.55m/s.
- 6) Check operation of the low airflow alarm by reducing the airflow. The alarm should sound when the panel is raised and stop when the panel is lowered.

# ELECTRICAL DIAGRAMS

## DFC – all standard models



REV	DESCRIPTION	DATE
F	CONTROL RELAY REVISED	12/03/18

DRAWN 16 DATE 21/03/18 PRIVATE AND CONFIDENTIAL	DESCRIPTION	ELECTRICAL DIAGRAM DFC-1000, 1200, 1500
	DRAWING No	DFC / ELEC / 002
	ISSUE	F
	Sh. 1 OF 1	

**Monmouth Scientific**  
 A division of Monmouth Surgical Ltd.  
 Units 5 & 6 Millers Cross, Quarry, Bridgewater  
 Somerset, BA29 7JG, England  
 Tel: +44 (0) 1273 455000  
 Fax: +44 (0) 1273 455051  
 email: engineering@monmouthscientific.co.uk



## **SECTION 5**

### **SERVICING**

An annual service is recommended, and testing is mandatory under C.O.S.H.H regulations and will include the following points:

- Check and record face velocity readings
- Check airflow monitor and re-calibrate if necessary
- Check condition of glazing, hinges etc.
- Inspect electrical components, lighting, cables etc.
- Issue test report and airflow certificate.

**For parts or service information please contact Monmouth Scientific.**

# Monmouth+ Scientific

## Monmouth Scientific Limited

### UK Headquarters

Units 5 & 6 Kilnside,  
East Quay,  
Bridgwater,  
Somerset,  
TA6 4DB.

**+44(0)1278 458090**

[www.monmouthscientific.co.uk](http://www.monmouthscientific.co.uk)

[info@monmouthscientific.co.uk](mailto:info@monmouthscientific.co.uk)

