

# Monmouth<sup>+</sup> Scientific

**OPERATING AND MAINTENANCE MANUAL**

**Duclair Titan 1000 Fume Cabinet**

# **CONTENTS**

<b>SECTION 1: OPERATION OF THE CABINET .....</b>	<b>3</b>
<b>SECTION 2: TESTING/MAINTENANCE.....</b>	<b>5</b>
<b>SECTION 3: SPECIFICATION OF THE CABINET .....</b>	<b>9</b>
<b>SECTION 4: FACE VELOCITY PROFILE RESULTS .....</b>	<b>10</b>

This manual is intended to provide information about the product.  
Monmouth Scientific Limited assumes no liability whatsoever for the accuracy of any information contained herein, as products can be subject to improvement changes at any time.

The contents may not be distributed, shared or commercially exploited in any form or by any means, redistributed or reproduced in entirety or in part in any form, for individual or third party use, photocopied or stored on any form of electronic retrieval system or linked to any other website, without the prior express written permission of Monmouth Scientific Limited.

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: OPERATION OF THE CABINET

### Starting the extract fan

The method of starting the extract system may differ depending on the installation and specification.

1. *The extract system may have a starter / on/off buttons near the fume cupboard*
2. *The extract system may be linked to the fume cupboard alarm panel*
3. *The extract system may be controlled by a remote system or BMS*

Before operating the fume, cupboard ensure that the airflow alarm has been properly calibrated (see separate calibration booklet)

On successful starting of the extract fan, the airflow alarm panel should display a green light. If a red flashing light and audible beeping is encountered, please close the sash and report to laboratory supervisor.

(Check to see if alarm panel has been calibrated)

### Sash Stop (High)

The glass sash can be raised to its maximum safe height of 500mm for access to the fume cupboard chamber.

The sash will automatically stop at this height.



At all times make sure to close the sash fully, thus providing maximum protection to the user. If large equipment is to be loaded into the fume cupboard chamber, the sash can be raised further by pushing the sash restrictor knob upwards, once the sash is lowered the sash stop will automatically reset.

Note: when raising the sash above 500mm an audible alarm will be heard and a red flashing light will appear on the sash high button of the control panel. Once the sash is lowered below 500mm the sash high button light will return to green.

### Sash Stop (Low)

When the glass sash is fully closed, there will be a 50mm gap at the bottom, this is intentional.

### Stopping the extract fan

To switch the extract fan off press the fan OFF button on the control panel / or local stop start.

We recommend running the fan several minutes after an experiment has been completed to ensure removal of all fumes.

As a matter of safety please ensure that the sash is always closed unless loading or unloading equipment.

### **Muting the alarm panel**

Depending on how your alarm panel is configured, when the extract fan is switched off you may encounter an audible beep and a flashing red light.

Press the ENTER button on the alarm panel to mute the alarm, the red light will still flash.

Consult the alarm panel user manual for further details

### **Light**

The light switch is located on the left-hand service panel at the top, press to turn light on and off

### **Double Sockets**

A switched double electrical socket is usually located on each service panel

### **Services**

Depending on the fume cupboard configuration, various service valves and taps may be fitted which may include cold water and gas etc.

Turn the valves anti-clock wise to open the valve

Turn the valve clock-wise to close the valve



## **SECTION 2: TESTING/MAINTENANCE**

**Testing and maintenance schedules should be carried out every 12 – 14 months as a minimum.**

**A risk assessment by the laboratory manager on the type and frequency of work in the fume cupboard may indicate that more periodic testing and maintenance is required.**

### **Routine testing**

- ✓ Face velocity tests
- ✓ Sash suspension and sash stop
- ✓ Protection against splashes
- ✓ Cleanliness of the fume cupboard and cleaning of baffles
- ✓ Integrity of mechanical assembly, corrosion;
- ✓ Alarm panel function /airflow and sash high
- ✓ Leakages
- ✓ Internal seals around panels and sinks etc.
- ✓ Check glass sash for cracks, chemical attack or any other damage
- ✓ Hygiene
- ✓ Services
- ✓ Illumination
- ✓ Noise
- ✓ Electrical isolation

### **Routine maintenance**

- ✓ Lubricate sash cables and pulleys (Rocol 34235 Dry PTFE Spray)
- ✓ Remove rear baffle and clean inner chamber with mild disinfectant
- ✓ Clean glass sash with standard glass cleaner

### **Fan and Extract System**

- ✓ Examine ductwork for seals and physical condition
- ✓ Check volume control damper
- ✓ Examine Fire dampers (where fitted)
- ✓ Inlet and outlet connections to fan
- ✓ Anti-vibration mounts for wear
- ✓ Examination of electrical supply and isolators for physical damage
- ✓ Rigidity of discharge stack
- ✓ Check fan belts for wear and tensioning (if fitted)

## Access to fume cupboard services

### **WARNING Danger of electrical shock**

Isolate electrical supply before carry out any maintenance.

Only qualified personnel may carry out work on these fume cupboards

#### Removal of Access Grille



To remove the front access grille, remove the M6 socket head bolts and lift out the access panel

This will give you access to the light fitting, electrical junction box and the exhaust take off section.

#### Removal of Front Service Panel



To remove the front service panels, remove socket head bolts and carefully pull service panel forward, this will give you access to the service valves / plumbing, electrical sockets, light switch and the alarm panel.

Please note: Even if the fume cupboard junction box has been isolated the alarm panel can still be electrically connected via another source, if the relay is being used as a fan stop / start for example.

**If in doubt do not attempt to carry out any modifications or maintenance without making sure the whole system is isolated.**

**Warranty**

12 months warranty on parts and labour from date of delivery or installation with an extension of up to 5 years Subject to T&C's

**Spare Parts**

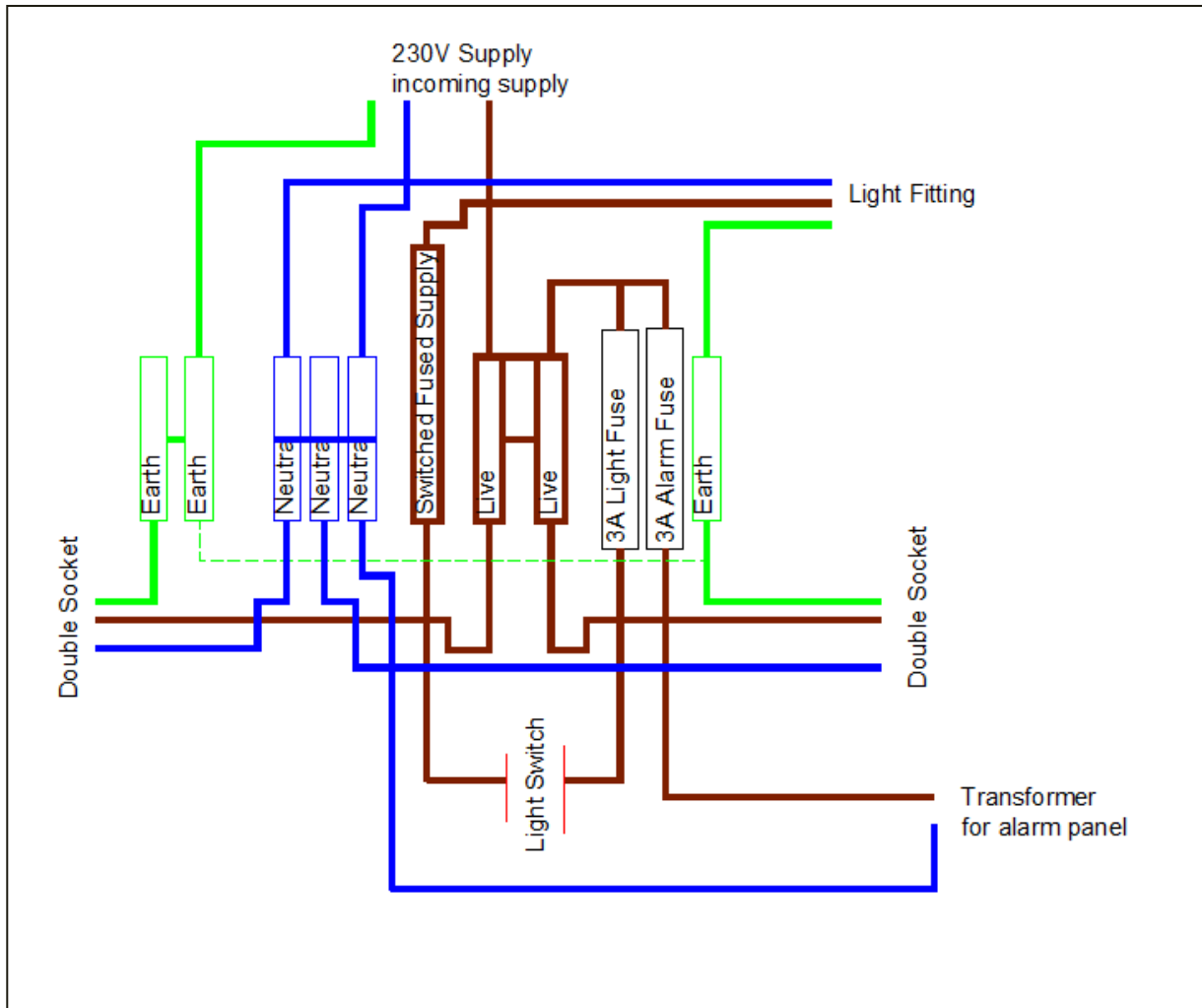
Please contact our office for advice on replacement parts.

Phone +44(0) 01278 458090 Option 2

Fax +44(0) 01278 458091

Services@monmouthscientific.co.uk

### Internal Wiring Schematic



### SECTION 3: SPECIFICATION OF THE CABINET

**Model:** Ductaire Titan  
**Size:** 1 x 1000mm(W) x 2400(H) x 900(D)  
**Chamber:** 316g Stainless Steel  
**Work base:** 316g Stainless Steel

	Manufacturer	Connection
<b>Services:</b>	NONE	
<b>Drainage:</b>	NONE	
<b>Storage:</b>	NONE	
<b>Power:</b>	2 x D.S.S.O.	
<b>Light:</b>	LED	
<b>Alarm Type:</b>	AFA 1000E VAV alarm panel and controller c/w VAV actuator and damper	

**Extract System**

None

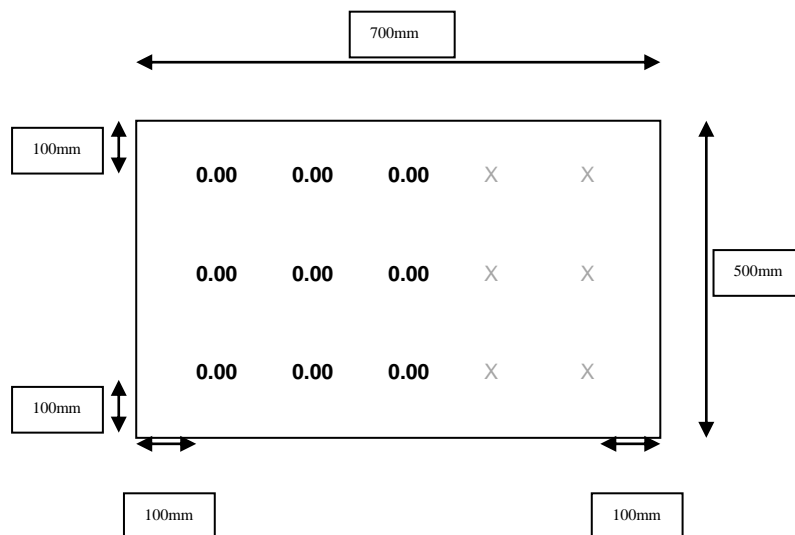
## SECTION 4: FACE VELOCITY PROFILE RESULTS

### Face Velocity Profile Results

Fume Cupboard Type: Ductaire Titan	Fume Cupboard Ref: XXXX	Fume cupboard width: 1000mm
Sash width: 700mm	Sash height: 500mm (recommended)	

Identification of grid point positions.

Grid spacing  $\leq 400\text{mm}$



Anemometer:	Anemometer Serial:	Calibration Date:
Tested By:	Test Date:	
Average Velocity Reading:		
Notes:		

**Monmouth Scientific Ltd**

Units 5 & 6 Kilnside

East Quay

Bridgwater

Somerset TA6 4DB

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

+44(0)1278 458090

Copyright © Monmouth Scientific Ltd 2016. All rights reserved