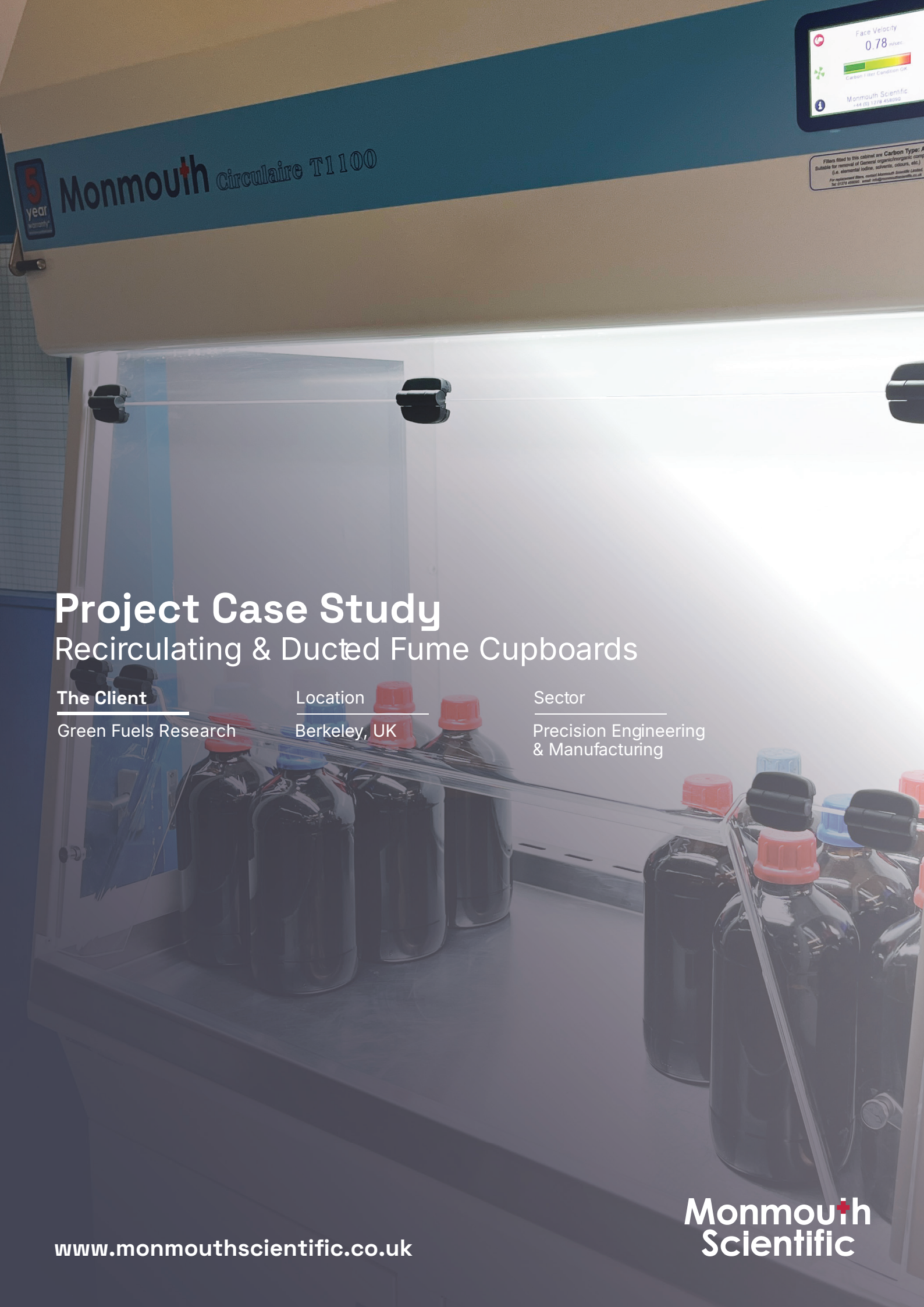




5 year warranty
Monmouth circulaire T1100

Face Velocity
0.78 m/sec

Carbon Filter Condition OK

Monmouth Scientific
Tel: 01179 458090

Filters fitted to this cabinet are Carbon Type A
Suitable for removal of Gaseous organic/volatile compounds
(i.e. elemental iodine, acetone, alcohols, esters, etc.)
For replacement data, request Monmouth Scientific Limited
Tel: 01179 458090 email: info@monmouthscientific.co.uk

Project Case Study

Recirculating & Ducted Fume Cupboards

The Client

Green Fuels Research

Location

Berkeley, UK

Sector

Precision Engineering
& Manufacturing

Green Fuels Research boosts lab efficiency with dual Fume Cupboards.

The Client

Green Fuels Research

Location

Berkeley, UK

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Green Fuels Research [GFR] is a leader in renewable fuels and bioenergy. Their research is centred on sustainable aviation and marine fuels, advanced agronomy systems, agricultural waste processing, and renewable catalysis.

By integrating innovative research with real-world applications, the team at Green Fuels Research is driving the global transition to cleaner, more sustainable energy solutions.

The Challenge

As GFRs' R&D activities expanded, the existing laboratory setup was no longer sufficient to accommodate the increasing volume of solvent extraction, biofuel research processes and more complex experiments.

The company found that more fume cupboards were necessary to maintain high safety standards and ensure an efficient workflow.

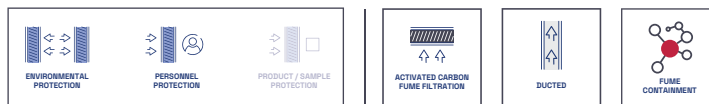


The Solution

Project Specification

- Circulaire® CT1100 Recirculating Fume Cupboard [Monmouth Scientifice].
 - Recirculating design optimises the handling of solventless samples.
 - Frees up existing ducted fume cupboards for more demanding solvent extraction tasks.
- Airone XP 1500 Ducted Fume Cupboard [Safelab Systems].
 - Capable of handling solvent extraction processes with high chemical emissions.
 - Guarantees efficient operation for critical R&D tasks involving high-risk chemicals.

The Result



Multiple staff members can now work at the same time on various aspects of biofuel research and development, leading to greater efficiency and a more collaborative environment.

Resources are also allocated more effectively with the introduction of a ductless fume cupboard, which is designated for non-solvent tasks and helps maintain a safer, more organised laboratory.

All critical solvent extraction processes are carried out within the ducted fume cupboard to ensure safe handling of volatile or hazardous materials, maintain a controlled environment, and protect personnel from potential chemical vapours and spills.

By confining these processes to a well-ventilated and contained area, the laboratories experienced significantly reduced downtime and minimised risk of accidents or contamination, particularly



during high-volume or complex experimental work.

The dual fume cupboard solution enables GFR to complete research projects more quickly and efficiently, accelerating the pace of their biofuel innovation and product development.

The design offers the flexibility to expand resources and infrastructure seamlessly, ensuring the company can easily scale its operations to meet evolving research and development needs.

”

We are expanding our capabilities, and one key issue that became evident is the shortage of fume cupboards. We needed to increase our lab capability. The previous setup wasn't enough to guarantee efficient operation, especially for solvent extraction activities.

The new recirculating fume cupboard enabled work on solventless samples, freeing up space in the ducted fume cupboards.

Monmouth Scientific and Safelab Systems provided an excellent service from day one through installation and maintenance. The extra fume cupboards help increase the volume and efficiency of our R&D work.

Dr. Sergio Lima, Research Director

Circulaire® Recirculating Fume Cupboard

Features & Benefits

INFO

- Recirculating Technology
- Energy Efficient
- Ultra-Deep Carbon Filters
- Auto-Airflow Compensation
- Touchscreen Interface
- Airflow Safety Monitoring



The Solution

The Circulaire® Recirculating Fume Cupboard is an advanced laboratory fume cupboard designed to provide protection against hazardous fumes and vapours.

Featuring a touchscreen interface, it offers intuitive control and monitoring, ensuring a safe and efficient working environment.

This non-ducted hood is ideal for workspaces where external venting is impractical, providing flexibility without compromising safety.

How it Operates

The Fume Cupboard operates by drawing in contaminated air from the work area and passing it through a series of high-efficiency filters.

The filtration system typically includes pre-filters for particulates and main filters with activated carbon.

The clean air is then recirculated back into the working environment.

Technical Information

INFO

	CT800	CT1100	CT1400	CT1800
External Dimensions* (W x D x H)	800mm x 700mm x 1284mm	1100mm x 700mm x 1284mm	1400mm x 700mm x 1284mm	1800mm x 700mm x 1284mm
Internal Dimensions (W x D x H)	784mm x 650mm x 840mm	1084mm x 650mm x 840mm	1384mm x 650mm x 840mm	1784mm x 650mm x 840mm
Face Velocity	0.55m/sec - Automatically Maintained			
Airflow	300m³/hr	475m³/hr	650m³/hr	890m³/hr
Primary Filter	Large Capacity CARBON or HEPA			
Power Consumption	57 watts	100 watts	110 watts	160 watts
Sound Level	circa. 48db(A)	circa. 54db(A)		circa. 55db(A)

*CTPro - 1345mm high + sliding sash & large touchscreen.

Airone XP4 Ducted Fume Cupboard

Features & Benefits

INFO

- BS:EN14174 Compliant
- Double Walled Construction
- Variable Air Volume [VAV] System
- BREEAM Compliant
- Digital Control System
- Epoxy Coated Steel Construction



The Solution

The Airone XP ducted fume cupboard is a high specification double walled fume cupboard, available with either air bypass or energy saving VAV (Variable Air Volume) technology.

The XP range is available in a choice of sizes and can be bench mounted, free standing or supplied as a walk-in unit.

An extensive list of options allows services and materials to be tailored to each customers individual needs.

How it Operates

The VAV model automatically minimises the amount of indoor (conditioned) air being pulled through the cupboard and expelled outside as the sash is raised and lowered, whilst maintaining full operator protection.

In the air bypass model a constant volume of air is pulled through the cupboard under all operating conditions.

Technical Information

INFO

	1200 XP4	1500 XP4	1800 XP4	2000 XP4
External Dimensions* (W x D x H)	1200mm x 900mm x 2400mm	1500mm x 900mm x 2400mm	1800mm x 900mm x 2400mm	2000mm x 900mm x 2400mm
Internal Dimensions (W x D x H)	900mm 645mm x 1200mm	1200mm 645mm x 1200mm	1500mm 645mm x 1200mm	1700mm 645mm x 1200mm
Air Volume	810m³/hr	1080m³/hr	1350m³/hr	1530m³/hr
Lighting	2no. 8W 2ft LED	2no. 8W 2ft LED	2no. 17W 4ft LED	2no. 17W 4ft LED
Duct Spigot	250mm Ø	315mm Ø	315mm Ø	315mm Ø
Storage Cabinet	1no. 1100mm	1no. 500mm + 1no. 900mm	1no. 500mm + 1no. 1100mm	2no. 900mm

Controlled clean environments for critical applications

Fume Containment | Biological Safety | Modular Cleanrooms | Powder Handling | Laminar Flow

Monmouth⁺
Scientific

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