# PHARMACEUTICAL MANUFACTURING

Industry Collection



Monmouth Scientific

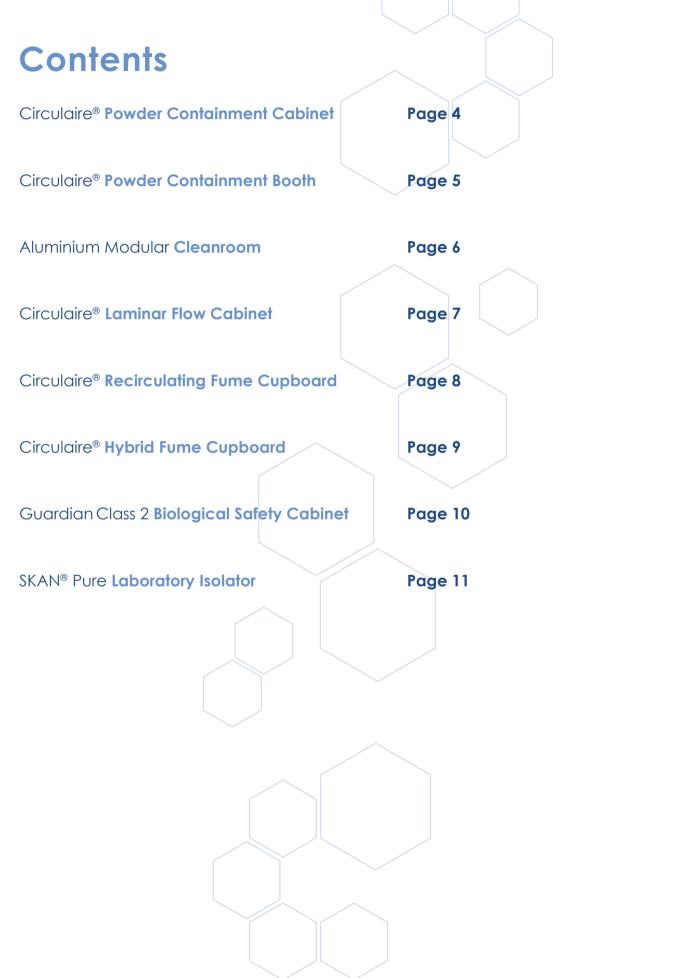
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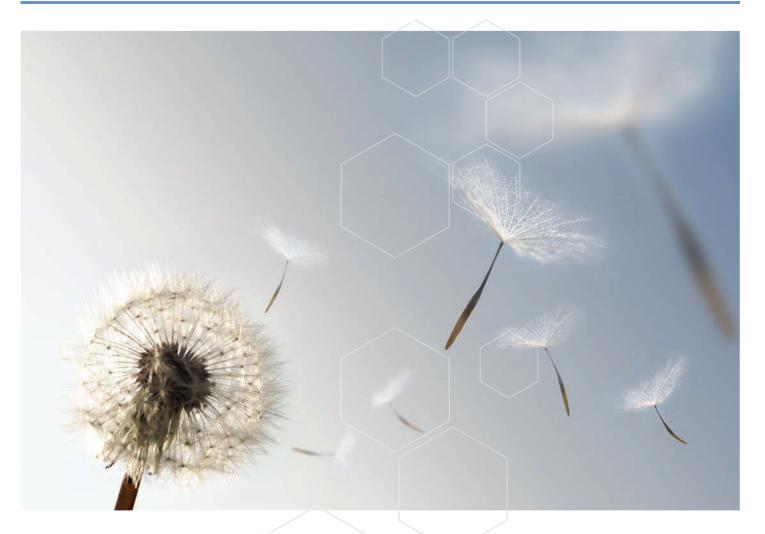






### THE MARKET LEADER IN CLEAN AIR SOLUTIONS





### Clean Environments for a Sustainable Future

At Monmouth Scientific we create clean environments to help scientists and technicians work safely & effectively.

Environmentally responsible and sustainable Recirculating Technology is the core of our expertise.

A UK market leader in clean air solutions, we employ cutting-edge technologies and innovative engineering to ensure that our products consume minimal energy while delivering optimal performance.

Our specialised *Pharmaceutical Manufacturing Industry Collection* has been expertly developed to offer a range of products that enable the safe use of powders, chemicals and biohazard materials linked to the research and production of pharmaceuticals.

In an evolving market, we help our clients maintain optimal standards whilst providing the best protection for your personnel and applications.

From powder containment systems and ISO Class cleanrooms to fume cupboard and biological safety solutions, we are a trusted partner to research and manufacturing in the pharmaceutical sector.





### Circulaire® Powder Containment Cabinet



RECIRCULATING TECHNOLOGY



**ENERGY EFFICIENT** 



REAR PLENUM AIR EXTRACTION



CONTROL MEDIUM TO HEAVY POWDERS



HIGH QUALITY HEPA FILTERS



OPTIONAL STAINLESS STEEL CONSTRUCTION



The Circulaire® Powder Containment Cabinet is designed to contain powders whilst supporting the sensitivity of micro and semi-micro balances. Operating personnel and the surrounding environment are effectively protected whilst accurate measurements are achieved.

#### PRECISE WEIGHING & PERSONAL PROTECTION

The well-lit, transparent working area and ergonomic design provide a comfortable working environment whilst a protective flow of air into the cabinet is maintained. Additionally, a stable ceramic work surface and low vibration conditions ensures no impact to the use of precision balances.

Recirculating technology and two consecutive HEPA H14 filters retain particles from the working area, ensuring that cabinets do not require linking to traditional ducting. This allows for easy maneuverability and repositioning whilst ensuring low energy consumption.

Additionally, the cabinet uses a high efficiency fan and LED lighting together with an ECO mode for even further power savings.

#### **Product Specification** (W x D x H)

Model	PCC90	PCC120	PCC150	
External Dimensions	1203mm x 942mm x 2562mm	1503mm x 942mm x 2562mm	1803mm x 942mm x 2562mm	
Working Dimensions	900mm x 1300mm	1200mm x 1300mm	1500mm x 1300mm	
Air Volume	389m³/hr	488m³/hr	578m³/hr	
Air Velocity	189m³/hr	288m³/hr	338m³/hr	
Primary Filter	H14 HEPA Filter - 99.97% efficient at 0.3µm			
Secondary Filter	Activated Carbon			
Power Consumption	150 watts (Max.)	200 watts (Max.)	250 watts (Max.)	
Sound Level	Circa. 48dB	Circa. 52dB	Circa. 55dB	

### Circulaire® Powder Containment Booth



The Circulaire® Powder Containment Booth offers first class operator protection from both powders and particulates.

#### FIRST CLASS OPERATOR PROTECTION

The booth is designed specifically for control of powders whilst dispensing from drums to a balance or smaller container.

The unit's open front design allows for very easy access to the working area for the transfer and maneuvering of a range of differing size drums whilst the high velocity rear extraction offers excellent containment, filtering air up to 1350m<sup>3</sup>/hr at an air velocity of up to 0.9m/s.

The 1800mm wide booth is 2600mm high and utilises H14 HEPA Filters, 99.997% efficient @ 0.3µm, to meet COSHH compliance. The system is designed for a 950mm high work surface (not included), for balance placement on one side, the opposite side will be left open.

### Product Specification $(W \times D \times H)$

Model	PCB1800	
External Dimensions	1800mm x 750mm x 2600mm (Fixed) or 2735mm (Mobile)	
Internal Dimensions	1700mm x 600mm x 1800mm	
Air Velocity	Adjustable to 0.9m/sec	
Air Volume	Adjustable to 1350m3/hr	
Primary Filter	H14 HEPA Filter - 99.97% efficient at 0.3µm	
Power Consumption	960 watts (Max.)	
Sound Level	circa. 60db(A)	

### Aluminium Modular Cleanroom



RAPID ASSEMBLY



MODULAR LAYOUTS



**ENERGY EFFICIENT** 



CUSTOM-BUILD SPECIFICATIONS



ISO CLEAN ENVIRONMENT



HIGH QUALITY
HEPA FILTERS



Our custom-built, ISO Class Aluminium Modular Cleanrooms create controlled manufacturing environments, providing you with a clean working area, classified for your process and application.

#### MODULAR. EXPANDABLE & ADAPTABLE

Constructed from free-standing aluminium framework and assembled on site in just a few hours. Extra smooth aluminium surfaces and 45° angles ensure the prevention of particle buildup.

Each Aluminium Modular Cleanroom is entirely bespoke, allowing us to accommodate sizes from small to large scale constructions.

Clean Air Modules (CAM) use H14 HEPA filters with 99.997 % efficiency at 0.3 microns to create a positive pressure and clean air environment within the room. A variety of levels of cleanliness can be achieved in accordance with ISO Cleanroom Standards.

The construction is lightweight and can be dismantled and relocated if required. With a choice of different size standard elements, a variety of working areas can be constructed. Panel walling is constructed from aluminium composite and window panes from non-break polycarbonate.

The Cleanrooms can be built with or without changing/entrance areas constructed as sliding doors, hinged doors, strip curtains or a combination of the three. Transfer hatches can be built in to allow the safe and easy passing of items into the clean air environment.

### Product Specification (WxDxH)

\*ALSO MANUFACTURED TO CUSTOM SIZE REQUIREMENTS AND AVAILABLE WITH OPTIONAL CHANGING ATRIUMS

Model*	4M MODULE	6M MODULE	9M MODULE	12M MODULE
External Dimensions	2000mm x 2000mm x 2350mm	3000mm x 2000mm x 2350mm	3000mm x 3000mm x 2350mm	4000mm x 3000mm x 2350mm

**Primary Filter** H14 HEPA Filter - 99.97% efficient at 0.3µm

### Circulaire® Laminar Flow Cabinet



Circulaire® Vertical and Horizontal Laminar Flow Cabinets offer clean air to ISO Class 4 using ULPA particulate filters protecting samples and sensitive processes from particle contamination.

#### CONTAMINATION FREE ENVIRONMENTS

The workstations create a controlled, ultra-clean airflow that moves in a unidirectional manner, minimising the risk of contaminants entering the working area.

Air is initially drawn through an easy-change, high-quality EU4 pre-filter to remove all gross particulate before being pushed through a U15 ULPA filter, removing 99.9998% of all particles at 0.12 µm in size.

### Product Specification (W x D x H)

Model	VLFT1000	VLFT1200	VLFT1500	VLFT1800	HLFT1000	HLFT1200	HLFT1500	HLFT1800
External Dimensions	1000mm x 650mm x 1255mm	1200mm x 650mm x 1255mm	1500mm x 650mm x 1255mm	1800mm x 650mm x 1255mm	1000mm x 721mm x 1166mm	1200mm x 721mm x 1166mm	1500mm x 721mm x 1166mm	1800mm x 721mm x 1166mm
Internal Dimensions	984mm x 648mm x 730mm	1184mm x 648mm x 730mm	1484mm x 648mm x 730mm	1784mm x 648mm x 730mm	984mm x 540mm x 715mm	1184mm x 540mm x 715mm	1484mm x 540mm x 715mm	1784mm x 540mm x 715mm
Air Cleanliness	>ISO Class 4 (Class10)							
Airflow	850m³/hr	1050m³/hr	1325m³/hr	1600m³/hr	950m³/hr	1175m³/hr	1325m³/hr	1600m³/hr
Airflow Speed	0.4m/s							
Primary Filter	U15 ULPA - 99.9998% efficient at 0.12µm							
Power Consumption	65 watts	70 watts	80 watts	90 watts	65 watts	70 watts	80 watts	90 watts
Sound Level	circa. 51db(A)	circa. 52db(A)	circa.	54db(A)	circa. 50db(A)	circa. 52db(A)	circa. 5	i4db(A)

### Circulaire® Recirculating Fume Cupboard



The Circulaire® Recirculating Fume Cupboard feature the very latest in air filtration technology, can be installed anywhere within your workspace and thanks to our advanced carbon technology, require no ducting to an external environment.

#### MAXIMUM FILTRATION EFFICIENCY

Airflow is guided towards the interior in order to prevent released aerosols from leaving the controlled working area. Our range of Activated Carbon Filters have a high retention capacity to effectively trap solvent vapours at the source.

Recirculating clean air back into your laboratory or working environment ensures that non-ducted solutions are more environmentally friendly than a ducted option, and the impact of exhausting fumes to the outside atmosphere is substantially reduced.

#### Product Specification (W x D x H) \*CTPRO - 1345MM HIGH + INCLUDES SLIDING SAFETY SASH CT800 CT1800 Model CT1100 CT1400 800mm x 700mm 1100mm x 700mm 1400mm x 700mm 1800mm x 700mm **External Dimensions\*** x 1284mm x 1284mm x 1284mm x 1284mm 784mm x 650mm 1084mm x 650mm 1384mm x 650mm 1784mm x 650mm **Internal Dimensions** x 840mm x 840mm x 840mm x 840mm **Face Velocity** 0.55m/sec - Automatically Maintained Airflow 300m3/hr 475m3/hr 650m3/hr 890m<sup>3</sup>/hr Large Capacity CARBON or HEPA **Primary Filter** 160 watts **Power Consumption** 57 watts 100 watts 110 watts **Sound Level**

### Circulaire® Hybrid Fume Cupboard



The highly energy efficient Circulaire® Hybrid Fume Cupboard is setting new standards for environmentally responsible and sustainable choices in laboratory and research facilities.

#### **COMBINING SAFETY & SUSTAINABILITY**

Our green hybrid process results in a 60% decrease in extraction of conditioned laboratory air that with ducted fume cupboards would be lost to atmosphere.

The inflow air is drawn in through the front aperture, mixing with the contaminated air from the working chamber before being drawn into the advanced multi-stage Activated Carbon/HEPA Filters.

Cleaned and free of contaminants, without contaminating the building exhaust air, airflow is then guided through internal ventilation where it is divided so just 40% is extracted to the duct extract system. The remaining 60% is recirculated back into the working chamber to provide containment and operator safety.

### Product Specification $(W \times D \times H)$

Model	HFC1200	HFC1500	HFC1800
External Dimensions	1203mm x 942mm x 2562mm	1503mm x 942mm x 2562mm	1803mm x 942mm x 2562mm
Working Dimensions	900mm x 1300mm	1200mm x 1300mm	1500mm x 1300mm
Total Airflow	389m³/hr	488m³/hr	578m³/hr
Recirculated Airflow	189m³/hr	288m³/hr	338m³/hr
Exhausted Airflow	200n	n³/hr	240m³/hr
Filter	Activated Carbon, H14 HEPA or Activated Carbon/HEPA Combination		
Power Consumption		1.8 kw (Max.)	
Sound Level	Circa.	56gB	Circa. 55dB

### Guardian Class 2 Biological Safety Cabinet



RECIRCULATING TECHNOLOGY



**ENERGY EFFICIENT** 



ISO 4 CLEAN ENVIRONMENT



HIGH QUALITY HEPA FILTERS



HEALTH PROTECTION
AGENCY TESTED



OPTIONAL STAINLESS STEEL CONSTRUCTION



The Guardian Class 2 Biological Safety Cabinets keep your team safe while handling potentially hazardous materials.

GUARANTEED SAMPLE. PERSONNEL & ENVIRONMENTAL PROTECTION

Our state-of-the-art biosafety solution is equipped with H14 HEPA Filters to create an ISO Class 4 Clean Environment.

Air drawn in via the front aperture into the cabinet (personnel protection) prevents aerosols generated during microbiological processes from escaping through the front opening.

HEPA-filtered, laminar airflow (sample protection) cascades from the front face of the cabinet creating an air curtain while continually flushing the enclosure of airborne particles and ensuring the sample is protected from contamination. The contaminated air makes its way into a HEPA-filter system (environmental protection) before it is safely exhausted from the enclosure.

#### Product Specification (W x D x H)

\*OPTIONAL HEPA OUTLET +46MM/OPTIONAL CARBON OUTLET +55MM OPTIONAL DOUBLE HEPA & CARBON OUTLET +129MM

Model	MSC800	MSC1200	MSC1800	
External Dimensions	800mm x 750mm x 1321mm *	1200mm x 750mm x 1321mm *	1800mm x 750mm x 1321mm *	
Internal Dimensions	707mm x 510mm		1707mm x 510mm x 741mm	
Air Cleanliness	ISO Class 4 (Class 10)			
Primary Filter	H14 HEPA Filter - 99.97% efficient at 0.3µm			
Power Consumption	100 watts	320 watts		
Sound Level	circa. 5	4dB(A)	circa. 56dB(A)	

### SKAN Pure Laboratory Isolator





RECIRCULATING TECHNOLOGY



**ENERGY EFFICIENT** 



ISO 5 CLEAN ENVIRONMENT



+/- PRESSURE OPERATION



H2O2 AUTOMATED DECONTAMINATION



AIRFLOW SAFETY MONITORING



The SKAN Pure Laboratory Isolator guarantees ISO Class 5 containment inside the enclosure and is ideally suited for aseptic and aseptic-toxic processes.

#### CLOSED CONTAINMENT FOR SAFE HANDLING

Closed containment ensures safe handling conditions even when working with highly hazardous products and a fast, reproducible H2O2 skanfog decontamination cycle enables optimum cleanliness and validation of the system.

The modular, space saving design requires no connection to HVAC due to the integrated SKAN nanox catalyst system to allow autonomous operation.

The unit has two working chamber sizes available, either with two or four glove ports. The airlock (equipped as standard with a shelf) can be available on the right, on the left or on both sides.

### Product Specification $(W \times D \times H)$

Model	PURE-2 GLOVE	PURE-4 GLOVE	
External Dimensions	2811mm x 955mm x 2277mm	3300mm x 955mm x 2277mm	
Internal Dimensions	1410mm x 715mm x 629mm	1895mm x 715mm x 629mm	
Glove Ports	2	4	
Air Volume	-60 or 60+ (TBD at Order)		
Chamber + Airlocks	Chamber + 2 x Airlocks		
Power Consumption	3800 watts (Max.)		
Sound	65db(A) (Max.)		

# Monmouth Scientific

CLEAN ENVIRONMENTS FOR A SUSTAINABLE FUTURE





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