CAS

Contained Air Solutions

part of the Breeze Group

CLEAN AIR & CONTAINMENT SOLUTIONS

Designed For Your Process
Built For Your Success

CONTENTS

"I do have to say that the quality of the cabinets is really good, UKHSA are very pleased."

UKHSA

"We are very satisfied with our equipment and overall the customer service has been fantastic, we will definitely come back to CAS in future if we need anything."

Southampton Solent University

"Our service has just concluded, please pass on our thanks to the visiting engineers – we were impressed with their efficiency and how smoothly this service round went."

University of Cambridge

"I can confirm I am happy as the operator training has now also been completed successfully. The communications generally from CAS were excellent and the engineer was great when on site."

Expervent

I would like to express my heartfelt thanks and gratitude for the help and assistance provided to the KEMH engineering team during the recent visit."

KEMH

"ESP have had the pleasure of working with your CAS operatives this week. The team really couldn't have been any more accommodating."

GSK

REGISTERED ISOQAR

UKAS MANAGEMENT SYSTEMS

Certificate 7395

UK CA

CE

MADE IN BRITAIN

SafeContractor APPROVED

40+ YEARS OF EXPERIENCE
15,000+ SOLUTIONS DELIVERED

Contained Air Solutions is the UK's leading manufacturer of biological safety cabinets, clean air, and containment solutions. With over 40 years of experience, more than 15,000 units delivered, and 15% of our workforce dedicated to research, development, and design, we understand that your safety, the protection of your materials, and the safeguarding of your environment are crucial to effective contamination control.

That's why laboratories, cleanrooms, pharmaceutical facilities, and research centres around the world trust us to deliver solutions that create safer, more efficient controlled environments.

From standard in-stock models to fully bespoke solutions, we offer a personalised approach to deliver the exact solution you need to succeed.

Our free consultation and design service, combined with our complete in-house offering, means we're with you every step of the way, from design and manufacturing to installation, ongoing maintenance, and lifetime support.

Now proud to be part of the Breeze Group, uniting leading expertise and innovation in cleanroom and laboratory solutions.

WHY CHOOSE CAS?

We ensure you receive the solution you need to succeed with our free design service, product training, comprehensive warranty, and lifetime support. Whether it's a standard in-stock model or a fully custom solution, our expert team is with you every step of the way.

Free Consultation
On-site survey and a no-obligation quote tailored to your needs.

Free Design Service
Our expert design technicians create a solution for your needs.

Free Product Training
Dedicated support to master your new equipment.

Inclusive Warranty
3-year parts and labour (UK) 1-year parts (Global), with option to extend.

Lifetime Support
Accessible technical advice, service packages, and in-stock spare parts.

Full Project Support
In-house solution delivered by us at every stage (no third parties).

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BIOMAT1

CLASS 1 BIOLOGICAL SAFETY CABINETS

Class 1 Biological Safety Cabinets provide optimal protection for operators and the environment when handling potentially hazardous materials. Featuring a controlled airflow system that draws air through the open front, across the work surface, and filters the exhaust air, these cabinets effectively prevent the release of airborne particulate contaminants, ensuring a safe working environment.

✓ **Protects the operator and the environment**

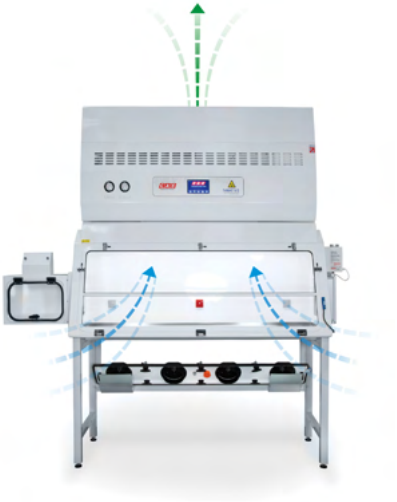
✓ **Compliant with BS EN 12469 and NSF 49 standards**

✓ **Type tested by the UK Health Security Agency (UKHSA)**

CLASS 1 AIRFLOW

Inward airflow travels through the open front, over the worksurface and is filtered before being discharged either by releasing back into the room (recirculating) or through a building extract system.

Blue: Inward environment air
Green: Filtered clean air



Lift-down UV resistant tempered glass visor for easy access and cleaning

Corrosion-resistant high-grade 316 stainless steel worksurface with curved edges for cleanability

Closure panel supplied as standard with optional fumigation closure panel available

See all benefits and features on pages 14-17

EXHAUST OPTIONS

- Recirculating - Double HEPA filters and vertical or horizontal discharge grille
- Ducted - Single HEPA filter and integral anti blowback damper
- Thimble - Double HEPA filters and integral anti blowback damper
- TriMAT - Constant exhaust bypass module for dual lab and cabinet air extraction

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	1200mm	1500mm	1800mm
External w/d/h (mm)	1200/630/1250	1500/630/1350	1800/630/1350
Internal w/d/h (mm)	1195/625/700	1495/625/700	1795/625/700
Weight (kg)	200	250	300
Exhaust air volume (m^3/s)	0.14	0.18	0.21
Noise level (dBA)	<60	<62	<65
Light level (lux)	900	900	900
Duct connection (mm)	160	200	200
Power consumption (kW)	0.4	0.5	0.6
Voltage AC	230V		
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)		
Construction	2mm mild steel		
Finish	Traffic white RAL 9016		
Inner worksurface	Grade 316 stainless steel		
Side windows	5mm UV resistant toughened glass		
Front visor	5mm toughened glass with 200mm open aperture – closed for fumigation using a closure panel (supplied as standard) or fumigation panel (optional extra)		
Standard	Type tested and approved to EN 12469:2000. Sited to BS 5726:2005.		

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BIOMAT1-HY

CLASS 1-HYBRID BIOLOGICAL SAFETY CABINETS

Class 1 Hybrid Biological Safety Cabinets offer flexibility with two configurations: Class 1, and full-barrier containment with an added gloveport closure panel. Both configurations provide optimal protection for operators and the environment when handling potentially hazardous materials, while preventing the release of airborne particulate contaminants.

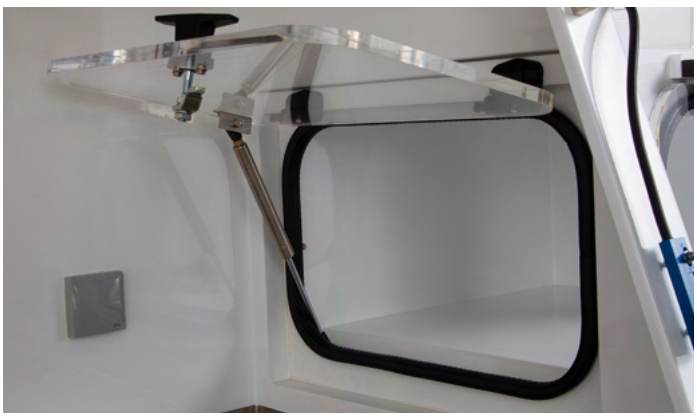
In the Class 1 configuration, a controlled airflow system draws air through the open front, across the work surface, and filters exhaust air, ensuring a safe and secure workspace.

The full-barrier configuration draws air through the integrated side filter, across the work surface, and filters exhaust air whilst maintaining negative pressure, providing enhanced protection for occasional high-hazard tasks.

✓ **Versatility for diverse lab operations**

✓ **Protects the operator and the environment**

✓ **Compliant with BS EN 12469 and NSF 49 standards**

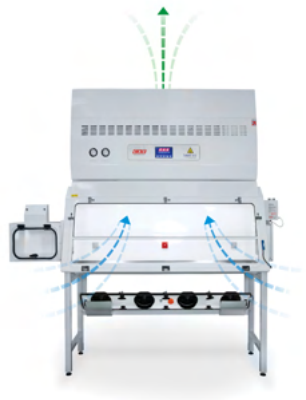


Transfer hatch allows for safe transfer of materials

Supplied glove port panel for full-barrier operation

CLASS 1 MODE

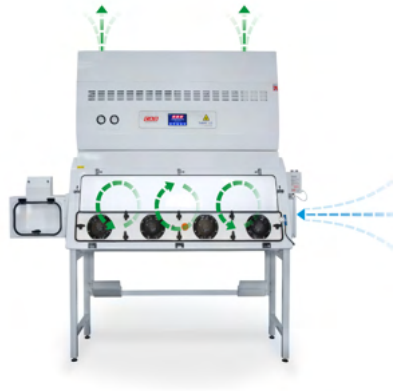
Inward airflow travels through the open front, over the worksurface and is filtered before being discharged either by releasing back into the room (recirculating) or through a building extract system.



FULL-BARRIER MODE

Inward airflow passes through a side filter before entering the work area, where it circulates and is filtered again before discharge. The discharged air can either be released back into the room (recirculating) or through a building extract system.

Blue: Inward environment air
Green: Filtered clean air



EXHAUST OPTIONS

- Recirculating - Double HEPA filters and vertical or horizontal discharge grille
- Ducted - Single HEPA filter and integral anti blowback damper
- Thimble - Double HEPA filters and integral anti blowback damper
- TriMAT - Constant exhaust bypass module for dual lab and cabinet air extraction

See all benefits and features on pages 14-17

PRODUCT SPECIFICATION * Typical specification based on TriMAT1-hybrid model*

Cabinet size	1200mm	1500mm	1800mm
External w/d/h (mm)	1200/630/1250	1500/630/1350	1800/630/1350
Internal w/d/h (mm)	1195/625/700	1495/625/700	1795/625/700
Weight (kg)	225	275	325
Exhaust air volume (m^3/s)	0.2	0.26	0.32
Noise level (dBA)	<58	<60	<62
Light level (lux)	900	900	900
Duct connection (mm)	200	250	250
Power consumption (kW)	0.4	0.5	0.6
Voltage AC	230V		
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)		
Construction	2mm mild steel		
Finish	Traffic white RAL 9016		
Inner worksurface	Grade 304 stainless steel		
Side windows	5mm UV resistant toughened glass		
Front visor	5mm toughened glass with 200mm open aperture – closed for fumigation using a closure panel (supplied as standard) or fumigation panel (optional extra)		
Standard	Compliant with EN 12469:2000. Sited to BS 5726:2005.		

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BIOMAT2

CLASS 2 BIOLOGICAL SAFETY CABINETS

Class 2 Biological Safety Cabinets provide advanced protection for operators, products, and the environment when handling sensitive materials or potentially hazardous substances.

Featuring a controlled airflow system with filtered inward and exhaust air, these cabinets maintain a constant vertical laminar flow over the work surface, ensuring a sterile workspace and preventing the release of airborne contaminants.

✓ **Protects the operator, product, and environment**

✓ **Compliant with BS EN 12469 and NSF 49 standards**

✓ **Type tested by the UK Health Security Agency (UKHSA)**

CLASS 2 AIRFLOW

Inward airflow travels through the open front and is directed underneath the worksurface. From there, it is filtered and delivered as laminar downflow air to the working area. The air is then drawn back under the worksurface, where it mixes with the incoming airflow. This mixture is channelled through the return air plenum, with approximately 70% recirculated as downflow and 30% discharged from the cabinet. The discharged air can either be released back into the room (recirculating) or through a building extract system.

Blue: Inward environment air
Green: Filtered clean air

Motorised sliding sash option with cleaning mode for full access

Corrosion-resistant high-grade stainless steel inner working area

Split or single piece lift up worktray for ease of cleaning

- Heated base plate available for temperature sensitive processes
- Eco mode reduces fan speed, turns lights off and lowers visor

See all benefits and features on pages 14-17

EXHAUST OPTIONS

- Recirculating - Double HEPA filters and vertical or horizontal discharge grille
- Ducted - Single HEPA filter and integral anti blowback damper
- Thimble - Double HEPA filters and integral anti blowback damper
- TriMAT - Constant exhaust bypass module for dual lab and cabinet air extraction

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	900mm	1200mm	1500mm	1800mm
External w/d/h (mm)	900/705/1420	1200/705/1420	1500/705/1540	1800/705/1540
Internal w/d/h (mm)	810/560/700	1110/560/700	1410/560/700	1710/560/700
Weight (kg)	210	230	290	330
Exhaust air volume (m^3/s)	0.1	0.13	0.17	0.2
Re-circ air volume (m^3/s)	0.13	0.19	0.24	0.29
Noise level (dBA)	<49	<49	<52	<58
Light level (lux)	>1000	>1000	>1000	>1000
Duct connection (mm)	160	160	200	200
Power consumption (kW)	0.19	0.19	0.27	0.35
Voltage AC	230V			
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)			
Outer construction	2mm mild steel			
Finish	Traffic white RAL 9016			
Inner liner	Grade 316 stainless steel			
Worktray	Grade 316 stainless steel			
Side windows	5mm UV resistant toughened glass			
Front visor hinged	5mm toughened glass with 200mm open aperture – closed for fumigation using a closure panel (supplied as standard) or fumigation panel (optional extra)			
Standard	Type tested and approved to EN 12469:2000. Sited to BS 5726:2005.			

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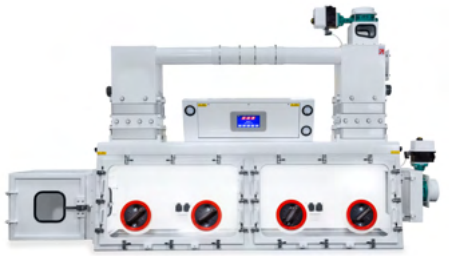
BIOMAT3

CLASS 3 BIOLOGICAL SAFETY CABINETS

Class 3 Biological Safety Cabinets provide the highest level of protection for operators, products, and the environment when handling the most hazardous materials (up to HG4). Inflow air is filtered before entering the fully enclosed work area, and exhaust air passes through a double filter.

Operators work through gloves attached to glove ports, ensuring complete physical barrier protection. This design offers the ultimate safeguard for your processes, personnel, and products.



Standard 2 or 4 Glove

Double Chamber

Double Sided

Fully enclosed maximum containment level

Compliant with BS EN 12469 and NSF 49 standards

Type tested by the UK Health Security Agency (UKHSA)

CLASS 3 AIRFLOW

Inward airflow passes through a filter before entering the work area, where it circulates and is filtered again before discharge. The discharged air can either be released back into the room (recirculating) or through a building extract system.

Blue: Inward environment air
Green: Filtered clean air

Transfer hatches for safe material transfer

Removable visor and uninterrupted access to the interior for ease of cleaning

Integrated service and data connections tailored to your application

See all benefits and features on pages 14-17

EXHAUST OPTIONS

- Recirculating - Double HEPA filters and vertical or horizontal discharge grille
- Ducted - Double HEPA filters and integral anti blowback damper
- Thimble - Double HEPA filters and integral anti blowback damper
- TriMAT - Constant exhaust bypass module for dual lab and cabinet air extraction

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	1200mm	1500mm	1800mm
External w/d/h (mm)	1200/640/1370	1500/640/1370	1800/630/1370
Internal w/d/h (mm)	1194/634/694	1494/634/694	1794/634/694
Weight (kg)	300	320	340
Exhaust air volume (m^3/s)	0.08	0.08	0.08
Noise level (dBA)	<65	<65	<65
Light level (lux)	>750	>750	>750
Duct connection (mm)	160	160	160
Power consumption (kW)	0.4	0.4	0.4
Voltage AC	230V		
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)		
Construction	Fully welded 3mm 316L stainless steel		
Finish	Traffic white RAL 9016		
Hatch construction	2mm 316L stainless steel		
Hatch windows	5mm UV resistant toughened glass		
Fumigation	Formaldehyde, Vaporised Hydrogen Peroxide, or Formalin		
Front visor	5mm UV resistant toughened glass		
Standard	Type tested and approved to EN 12469:2000 and sited to BS 5726:2005		

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BIOMAT3/1

CLASS 3/1 HYBRID BIOLOGICAL SAFETY CABINETS

Class 3/1 Hybrid Biological Safety Cabinets offer the flexibility to operate in either Class 3 or Class 1 configurations.

In Class 3 mode, they provide full barrier gas-tight containment, ensuring the highest level of safety for the operator, product and environment.

A supplied interchangeable screen allows for Class 1 operation when needed, combining flexibility with optimal protection for both users and materials.

Both configurations effectively prevent the release of airborne particulate contaminants when handling potentially hazardous materials, ensuring a safe and controlled workspace that adapts to your operational needs.

Class 3

Class 1

✓ **Versatility for diverse lab operations**

✓ **Protects the operator, sample and the environment**

✓ **Compliant with BS EN 12469 and NSF 49 standards**

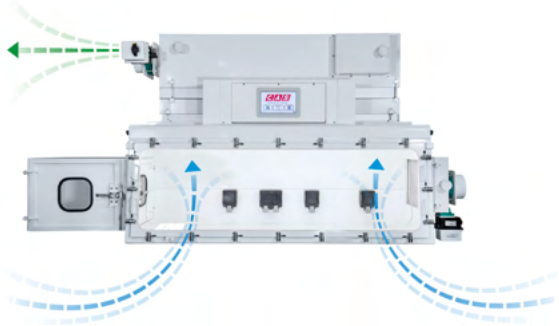
Transfer hatch allows for safe transfer of materials

Fumigation door for convenient decontamination

CLASS 1 AIRFLOW

Inward airflow travels through the open front, over the worksurface and is filtered before being discharged either by releasing back into the room (recirculating) or through a building extract system.

Blue: Inward environment air
Green: Filtered clean air



CLASS 3 AIRFLOW

Inward airflow passes through a side filter before entering the work area, where it circulates and is filtered again before discharge. The discharged air can either be released back into the room (recirculating) or through a building extract system.

EXHAUST OPTIONS

- Recirculating - Double HEPA filters and vertical or horizontal discharge grille
- Ducted - Double HEPA filters and integral anti blowback damper
- Thimble - Double HEPA filters and integral anti blowback damper
- TriMAT - Constant exhaust bypass module for dual lab and cabinet air extraction

See all benefits and features on pages 14-17

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	1200mm	1500mm	1800mm
External w/d/h (mm)	1200/640/1370	1500/640/1370	1800/630/1370
Internal w/d/h (mm)	1194/634/694	1494/634/694	1794/634/694
Weight (kg)	300	320	340
Exhaust air volume class 3 (m^3/s)	0.08	0.08	0.08
Exhaust air volume Class 1 (m^3/s)	0.14	0.18	0.21
Noise level (dBA)	<65	<65	<65
Light level (lux)	>750	>750	>750
Duct connection (mm)	160	160	160
Power consumption (kW)	0.19	0.27	0.35
Voltage AC	230V		
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)		
Construction	Fully welded 3mm 316L stainless steel		
Finish	Traffic white RAL 9016		
Front visor	5mm UV resistant toughened glass		
Standard	Compliant with EN 12469:2000 and sited to BS 5726:2005		

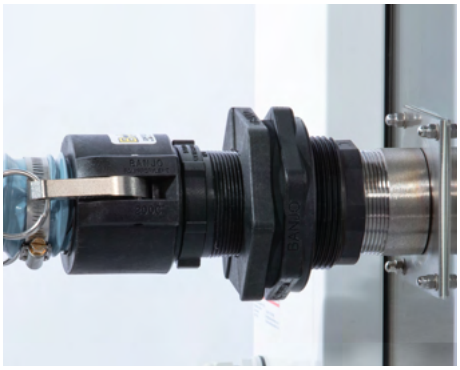
FEATURES & BENEFITS

EFFICIENT WORKFLOWS

Streamlining processes by connecting utilities and instruments:

- Gas taps and compressed air
- Power sockets
- Data connections
- Fully sealed service ports
- Third-party device integration solutions
- Waste collection chutes + more

Every detail is designed for facilities to be within reach and protected.

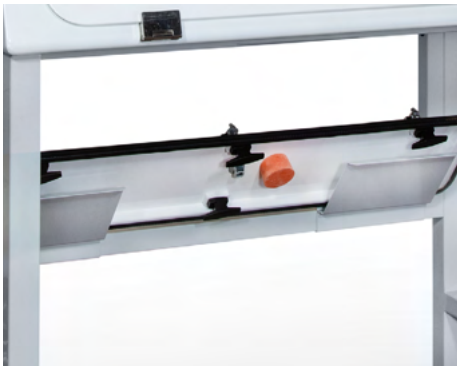


CONVENIENT DECONTAMINATION

Simplifying procedures and reducing the need for additional steps:

- Fumigation closure panels
- Built-in fumigation connections
- Manual or motorised isolation dampers
- Integrated formalin vaporizer and UV options
- Automatic fumigation and UV disinfection modes

These features are designed to aid in safe and efficient decontamination processes.



VERSATILE ERGONOMICS

Suiting any space and enabling comfortable operation:

- Arm rests
- Convenient storage shelves
- Height-adjustable, fixed, or DDA-compliant support stands
- Integrate existing equipment
- Standard and customisable sizes to suit any workspace
- Versatile extract and filter locations

These additions create a practical working environment that suits any space and enhances operator comfort.

ADVANCED OPERATION

Facilitating effortless and confident operation:

- A 7 inch touchscreen for effortless control of every feature
- Motorised sliding visor option for convenient access (Class 2)
- A real-time animated airflow status diagram to confirm safety
- BMS and API connection for seamless building integration
- Heated base plate available for temperature sensitive processes (Class 2)

These innovative features are designed to enhance operational efficiency and ensure seamless control.

ENHANCED SAFETY

Prioritising the protection of operators and processes:

- Third-party device integration to enhance security
- Emergency stop buttons for immediate shutdown
- Material transfer hatches
- UV light guarding for added protection
- Uninterrupted power supply integration

Each safety feature is designed to minimise risks and provide protection against potential hazards.

INTUITIVE FUNCTIONALITY

Maintaining optimal performance for safe operation:

- Audio and visual status alerts
- Filter dirty and service-due notifications
- Visor operation and position monitor
- Filter pressure monitoring (digital or gauge)
- Add carbon filtration for gases or odours

These smart functionalities provide peace of mind by ensuring safety and control at all times.



EASY MAINTENANCE

Simplifying maintenance and cleaning processes:

- Hinged lift-down, motorised sliding, or removable visors
- Sash cleaning mode (Class 2 with sliding sash)
- Convenient filter test ports for straightforward servicing
- Powder-coated smooth non-porous outer surfaces
- Single or multi-piece lift-up corrosion-resistant stainless steel worktrays

Each unit is designed to provide uninterrupted access, both internally and externally.


SUSTAINABLE SOLUTIONS

Contributing to a healthier planet whilst reducing ownership costs:

- EC fans using up to 50% less electricity and 70% more efficient than alternatives
- Longer lifespan with speed control to optimise airflow and extend filter life
- Eco-friendly LED lighting for cost-effective, energy-efficient illumination
- High-efficiency H14 HEPA filtration with prefilter to extend filter life
- Eco mode reduces fan speed, turns lights off and lowers visor (Class 2 with sliding sash)
- Designed to adapt and evolve with changing laboratory needs

These energy-efficient features are integrated to enhance efficiency whilst maintaining optimal performance.

Some features are optional extras not included in base models.

Have a feature in mind that's not shown here?

Contact our experts to custom design your perfect solution.

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LAMINAR FLOW SOLUTIONS

Laminar flow cabinets and solutions, such as booths and modules, provide a continuous stream of filtered, particle-free clean air that flows uniformly over the work surface, ensuring sensitive materials are protected from contamination.

With integrated service connections and near-instant sterile working conditions upon startup, laminar flow solutions from Contained Air Solutions are available in a variety of versatile configurations to suit any requirement.

Configurations available:

- Vertical Laminar Flow Cabinets
- Horizontal Laminar Flow Cabinets
- Hybrid Laminar Flow Solutions
- Laminar Flow Booths
- Laminar Flow Modules
- Bespoke Laminar Flow Solutions

Vertical

Horizontal

Product protection

Compliant with BS EN ISO 14644-1 standards

ISO Class 5 or 4 clean air environment

FEATURES INCLUDE

- **Filter Monitoring -** Filter pressure monitoring available to monitor performance
- **Advanced Controls -** Tactile switches or touchscreen control options for ease of operation
- **High Efficiency Filtration -** High efficiency H-14 HEPA filtration with prefilter to extend filter life
- **LED Lighting -** Energy efficient LED lighting
- **Variable Speed Fans -** Energy efficient EC fans with variable speed to maximize filter lifetime
- **Safe Operation -** With audio and visual airflow warning alerts
- **Maximum Visibility -** With toughened glass side panels
- **Easy to Clean -** Stainless steel corrosion-resistant inner worksurface
- **Service Connections -** Electrical power sockets, service taps, vacuum, gas valves, and data connections for convenient workflows
- **Support Stand -** Fixed or DDA compliant motorised height adjustable to support any working arrangement
- **Convenient Disinfection -** Integrated UV sterilization option

HORIZONTAL LAMINAR FLOW AIRFLOW

Horizontal Laminar Flow Cabinets create a clean, particle-free environment by directing HEPA-filtered air horizontally across the work surface. This unidirectional airflow ensures a sterile workspace, making them ideal for applications where product protection is the priority.

VERTICAL LAMINAR FLOW AIRFLOW

Vertical Laminar Flow Cabinets provide a clean, particle-free environment by directing HEPA-filtered air downward across the work surface. This unidirectional airflow prevents product contamination while reducing the risk of particles being blown toward the operator.

Blue: Inward environment air
Green: Filtered clean air

APPLICATIONS INCLUDE:

- Sterile Product Preparation
- Microbial Research
- Tissue Culture and Cell Culture
- Electronics Manufacturing and Repair

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	900mm	1200mm	1500mm	1800mm
External w/d/h (mm)	900/750/1302	1200/750/1302	1500/750/1302	1800/750/1302
Internal w/d/h (mm)	800/500/730	1100/500/730	1400/500/730	1700/500/730
Weight (kg)	175	200	225	250
Power consumption (kW)	0.09	0.13	0.16	0.19
Noise level (dBA)	<60			
Light level (lux)	800			
Air velocity (m/sec)	0.45			
Voltage AC	230V			
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)			
Construction	2mm mild steel			
Finish	Traffic white RAL 9016			
Inner worksurface	Grade 316 stainless steel			
Side windows	5mm UV resistant toughened glass			
Standard	BS EN ISO 14644-1 Class 4 or 5. EU GMP Grade A			

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PHARMACEUTICAL ISOLATORS

Pharmaceutical isolators provide a fully enclosed, high-integrity workspace for the safe handling of sensitive or hazardous materials.

Designed with unidirectional airflow and glove ports for secure operator access, they create a contained, controlled clean air environment.

Maintain aseptic conditions for sterile processes with positive pressure configurations, or safely handle hazardous substances with negative pressure chambers. Both options are available with 2- or 4-glove port setups, comprehensive utility connections, and a wide range of accessories to support a seamless workflow.

Positive or Negative pressure chamber

Compliant with ISO 14644-7 standards

ISO Class 5 clean air environment

FEATURES INCLUDE

- **Safe Operation -** With audio and visual airflow and visor alerts and integrable UPS
- **Exhaust Options -** Recirculating and ducted exhaust models available. With manual or motorised isolation dampers
- **EC Fan Technology -** Energy efficient and variable speed fans for optimal performance
- **High Efficiency Filtration -** High efficiency gel seal H-14 HEPA filtration for optimal seal with prefilter to extend filter life
- **2 or 4 glove configuration** - Choice of 2 or 4 access ports to suit various applications
- **LED Lighting -** Energy efficient LED lighting
- **Automated Pressure Testing -** Confidently confirm integrity with integrable pressure decay testing
- **Convenient Disinfection -** UV sterilization option and built in fumigation mode
- **Full Containment -** Full access to the contained workspace through sealed glove ports
- **Transfer Hatches** - Interlocking transfer hatches and sliding trays for safe transfer of materials
- **Utility Connections -** Cameras, electrical power sockets, service taps, vacuum, and data connections all available for efficient workflows
- **Support Stand -** Fixed or DDA compliant motorised height adjustable to support any working arrangement
- **Fully Accessible -** Hinged lift down UV resistant tempered glass visor for easy access and cleaning
- **Easy Maintenance -** Air sampling ports and pressure decay lids for convenient servicing

POSITIVE PRESSURE ISOLATOR

Used when aseptic conditions are the priority, ensuring that the environment inside the isolator is sterile and free from contaminants, particularly for pharmaceutical products that need protection from external contamination.

How it Works:

The interior of the isolator is maintained at a higher pressure than the surrounding environment, preventing any ingress of room air. The workspace is continuously bathed in a downflow of clean, filtered air to maintain aseptic conditions.

Applications Include:

- Sterile Drug Compounding
- Aseptic Fill-Finish Operations
- Chemotherapy and Injectable Preparations (CIVAS)
- TPN Compounding
- IV Preparations
- Gene Therapy and Vaccine Production

Blue: Inward environment air
Green: Filtered clean air

NEGATIVE PRESSURE ISOLATOR

Used when containment of hazardous materials is the primary concern, ensuring that substances do not escape the isolator and potentially expose operators or the environment.

How it Works:

The interior of the isolator is maintained at a lower pressure than the surrounding environment, preventing the escape of hazardous materials. The workspace is continuously bathed in a downflow of clean, filtered air to maintain effective containment.

Applications Include:

- Cytotoxic Drug Preparation
- High-Potency Drug Manufacturing
- Handling Hazardous Pharmaceuticals
- Sterile Hazardous Material Compounding
- Handling Infectious Pathogens

PRODUCT SPECIFICATION *Typical specification based on standard models*

Cabinet size	2 Glove	4 Glove
External w/d/h (mm)	2250/690/2150	3040/690/2150
Internal w/d/h (mm)	1100/530/800	1800/530/800
Weight (kg)	380	450
Exhaust air volume (m^3/sec)	0.08	0.08
Hatch air volume (m^3/sec)	0.08	0.08
Noise level (dB (A)	<58	<58
Light level (lux)	>1000	>1000
Duct connection (mm)	160	160
Power consumption (kW)	0.50	0.65
Air change working area	2400 times/hour	
Air change transfer hatch	1800 times/hour	
Voltage AC	230V	
Filtration	H-14 HEPA (standard) @ 0.3µ 99.995% efficiency (ULPA available)	
Construction	Fully welded 3mm 316L stainless steel	
Hatch Construction	Fully welded 2mm 316L stainless steel	
Finish	Traffic white RAL 9016	
Front visor	5mm UV resistant toughened glass	
Standard	Designed in compliance with EN ISO 14644-7:2004	

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DOWNFLOW TABLES

Downflow tables provide operator protection for processes where localised extraction is required to prevent exposure to light fumes, airborne particles, or biological material — without the need for full containment.

A constant downward airflow draws contaminants away from the operator, through the perforated work surface, and into a multi-stage filtration system, before safely discharging clean air back into the environment.

FEATURES INCLUDE

- **EC Fan Technology-** Energy efficient and variable speed fans for optimal performance
- **High Efficiency Filtration -** High efficiency gel seal H-14 HEPA filtration for optimal seal with prefilter to extend filter life
- **Carbon Filtration -** Option to filter odours or gases
- **Safe Operation -** With uninterrupted power supply (UPS) integration and emergency shut-down buttons
- **UV Disinfection -** Option with programmable auto duration
- **7inch Touchscreen -** For ease of operation with animated real-time airflow display of status
- **Efficient Workflow -** With a range of accessories, tool trays, shelving, and hanging rails to support your process
- **Unrestricted Access -** Configurable fixed and removable panels for the access your process demands
- **Ergonomic Working -** With fixed or DDA compliant motorised height adjustable and mobile stands available to support any working arrangement
- **Easy Cleaning -** With lift up perforated worktrays, curved edges, built-in water drainage and integral sink
- **Waste Chutes -** Integrated chutes and hatches available to increase process efficiency
- **Heated Base -** Option for temperature sensitive processes

Touchscreen for ease of operation

Motorised height-adjustable mobile stand for full mobility

DOWNDRAFT AIRFLOW

A constant downward airflow draws contaminants away from the operator, through the perforated work surface, and into a multi-stage filtration system (tailored to application), before safely discharging clean air back into the environment.

Blue: Inward environment air
Green: Filtered clean air

APPLICATIONS INCLUDE

- Dissection and grossing
- Handling non-hazardous powders
- Light duty chemical handling
- Non-hazardous particulate generating activities

Each unit is custom-designed to your requirements.

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TRIMAT BYPASS SYSTEM

A SIMPLER, COST-EFFECTIVE SOLUTION FOR LABORATORY AIR EXTRACTION

The TriMAT Bypass System revolutionises the way cleanroom air is extracted. Designed to integrate seamlessly with CAS' full range of Biological Safety Cabinets, this innovative system optimises laboratory airflow, enhances safety, and simplifies air handling design—all while reducing overall costs.

EXCLUSIVE TO CONTAINED AIR SOLUTIONS

- **Simplified Air Handling** Eliminate the need for separate extract systems. The TriMAT system allows significant additional room extract volume to be drawn through the biological safety cabinet's exhaust duct
- **Compliance with Guidelines:** Providing containment and sterile conditions for drug formulation, compounding, and quality control
- **Constant Room Pressure Stability:** The system maintains a constant exhaust volume, ensuring stable negative pressure within the room at all times
- **Reduced Infrastructure Complexity:** Efficiently serve both the room and multiple biological safety cabinets with a single, cost-effective extract system
- **Enhanced Safety in Emergencies:** If a remote fan fails, audio-visual alarms activate and the system switches to recirculating mode, filtering exhaust air via double HEPA for operator safety

Seamlessly integrates with all CAS Biological Safety Cabinets.

Class 3 TriMAT

Class 1-Hybrid TriMAT

Configurable as a base mounted exhaust module to accommodate lower ceiling heights.

Class 1 Base TriMAT

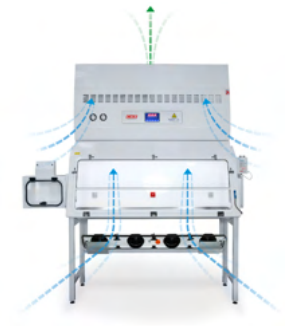
Class 2 Base TriMAT

HOW THE TRIMAT BYPASS SYSTEM WORKS

The TriMAT system is seamlessly integrated within the exhaust module of the CAS Biological Safety Cabinet.

Normal cabinet operations - Cabinet ON

- Cabinet and room exhaust is extracted through the dedicated duct
- Cabinet air is double HEPA filtered before entry to bypass module
- Room air is drawn through a non-filtered grille (Containment level II), or room air is single HEPA filtered (Containment level III)
- Total volume set and maintained by upstream constant volume regulator



Normal cabinet operations - Cabinet OFF

- Cabinet is switched off, automatically closing internal gas tight damper to isolate cabinet from room exhaust
- Total air volume now taken through bypass grille
- This arrangement allows the cabinet to be fumigated whilst maintaining negative pressure operations within the laboratory

Emergency Operation - Room Extract Fail

- Cabinet is switched on and running normally
- Room extract failure is detected by onboard pressure sensor
- Audible and visual alarms alert the operator to room extract failure
- Cabinet maintains operation allowing user to conclude work in safety and shut down
- Exhaust air is returned to the laboratory via the double HEPA filters mounted on the cabinet
- Once cabinet is shut down it cannot restart until room exhaust system is operational

KEY TECHNICAL INFORMATION

Nominal Extract Volumes:

The TriMAT system is engineered for precise air extraction, tailored to the specific dimensions and type of each biological safety cabinet. This ensures optimal airflow management, improving both efficiency and safety in your cleanroom or containment laboratory.

The TriMAT system is designed for flexibility—individual cabinet exhaust volumes can be adjusted to meet the specific needs of each installation, providing you with a custom solution for maximum performance and efficiency.

Discover how the TriMAT Bypass System can enhance your cleanroom's air handling efficiency, see more on our website or contact us today to speak to an expert.

Cabinet Type	1200mm	1500mm	1800mm
Class 1	0.2 m^3/s	0.26 m^3/s	0.33 m^3/s
Class 2	0.19 m^3/s	0.23 m^3/s	0.27 m^3/s
Class 3	0.11 m^3/s	0.11 m^3/s	0.11 m^3/s

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CUSTOM SOLUTIONS

TAILORED PRODUCTS AND BESPOKE CLEAN AIR AND CONTAINMENT SOLUTIONS.

Designed for you

Solutions tailored to your specific workflow, space, and processes.

Tailor your safety

Handle sensitive or hazardous materials exactly how you need to.

Work with ease

Streamline your workflow with customised features that save time and reduce hassle.

Unleash your potential

With customised solutions, we deliver exactly what you need to succeed.

DESIGNED FOR YOUR PROCESS. BUILT FOR YOUR SUCCESS.

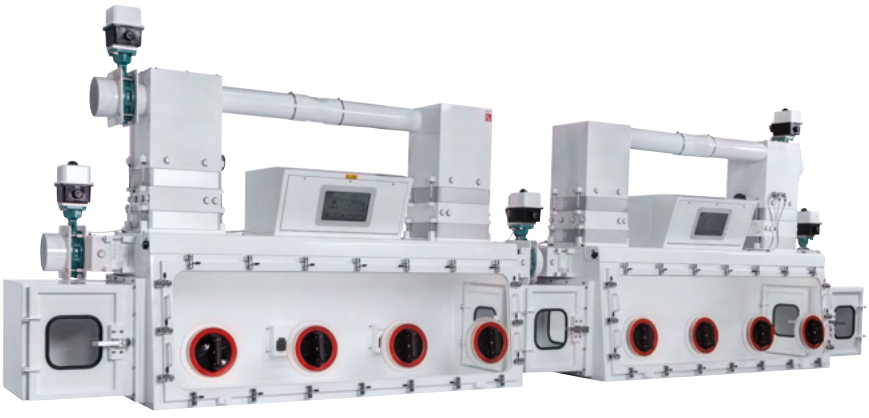
Whether you need a tailored version of an existing product or a completely bespoke solution, with over 40 years of experience and 15% of our workforce dedicated to R&D and design, we specialise in delivering the solution you need to succeed.

AT CONTAINED AIR SOLUTIONS, WE DON'T JUST MANUFACTURE PRODUCTS – WE DELIVER SOLUTIONS.

Tailor our products with:

- Additional activated carbon filtration
- Full stainless steel and highly polished finishing
- Service taps (vacuum, gasses etc)
- CCTV monitoring and recording systems
- Fixed or motorised height adjustable stands
- Rails, arm rests, shelves, and storage options
- Custom dimensions and configurations
- Personalised colours, branding, and lighting

+ more!



SOME OF OUR PREVIOUS CUSTOM SOLUTIONS:

PathMAT Class 1 cabinet for pathology applications

With a top-access design, allowing operators to look directly down onto the working area and integrated magnifying glass for closer specimen analysis.

Vertical laminar flow cabinet

Complete with wrap around blackout curtain, UV lighting and integrated specialised device. See more on our website!

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CLASS 1 & 2
ROBOTIC BIOLOGICAL SAFETY CABINETS

Robotic Biological Safety Cabinets are available in Class 1 (operator and environment protection) or Class 2 (operator, product, and environment protection) configurations.

Complying with EN 12469 and NSF49 safety standards, these advanced solutions are expertly designed to accommodate robotic instruments and automated processes, ensuring a safe, secure, and controlled environment.

Class 1 and 2 Biological Safety Cabinets are suitable for work with all biological agents up to ACDP Hazard Group HG3 and Biosafety Level BSL-3.

✓ **Protects the operator, the environment, and the automated process (class 2)**

✓ **Compliant with BS EN 12469 and NSF 49 standards**

✓ **ISO 14644 class 5 clean air environment**

CLASS 1 AIRFLOW

Operator and environment protection

Inward airflow travels through the open front, over the worksurface and is filtered before being discharged either by releasing back into the room (recirculating) or through a building extract system.

See more on class 1 cabinets on pages 4-5

CLASS 2 AIRFLOW

Operator, product and environment protection

Inward airflow travels through the open front and is directed underneath the worksurface. From there, it is filtered and delivered as laminar downflow air to the working area. The air is then drawn back under the worksurface, where it mixes with the incoming airflow. This mixture is channelled through the return air plenum, with approximately 70% recirculated as downflow and 30% discharged from the cabinet. The discharged air can either be released back into the room (recirculating) or through a building extract system.

See more on class 2 cabinets on pages 8-9

See all benefits and features on pages 32-33

PRODUCT SPECIFICATION *Typical specification based on class 2 model*

Cabinet size	1200mm	2000mm	2500mm	3000mm
External w/d/h (mm)	1200/1050/2670	2000/1500/2670	2500/1500/2670	3000/1500/2650
Internal w/d/h (mm)	1030/900/950	1830/1100/950	2350/1100/950	2850/1100/950
Exhaust air volume (m^3/s)	0.15	0.27	0.34	0.42
Noise level (dBA) @1m	<65	<65	<65	<65
Light level (lux)	>750	>750	>750	>750
Duct connection (mm)	200	200	250	250
Voltage AC	110 - 230V			
Filtration	H-14 HEPA @ 0.3µ 99.995% efficiency (ULPA and carbon available)			
Construction	2mm mild steel			
Finish	White RAL 9016			
Work surface	Grade 316s stainless steel powder coated white RAL 9016			
Side windows	12mm UV resistant cast acrylic			
Front visor hinged	Mild Steel powder coated white RAL9016 C/W 8mm acrylic vision panel			
Standard	Designed to comply with EN 12469, ISO 14644, NSF49 standards			

Product specific technical data to be advised during consultation/design stage
Recirculating, Ducted, Thimble, and TriMAT Bypass models available

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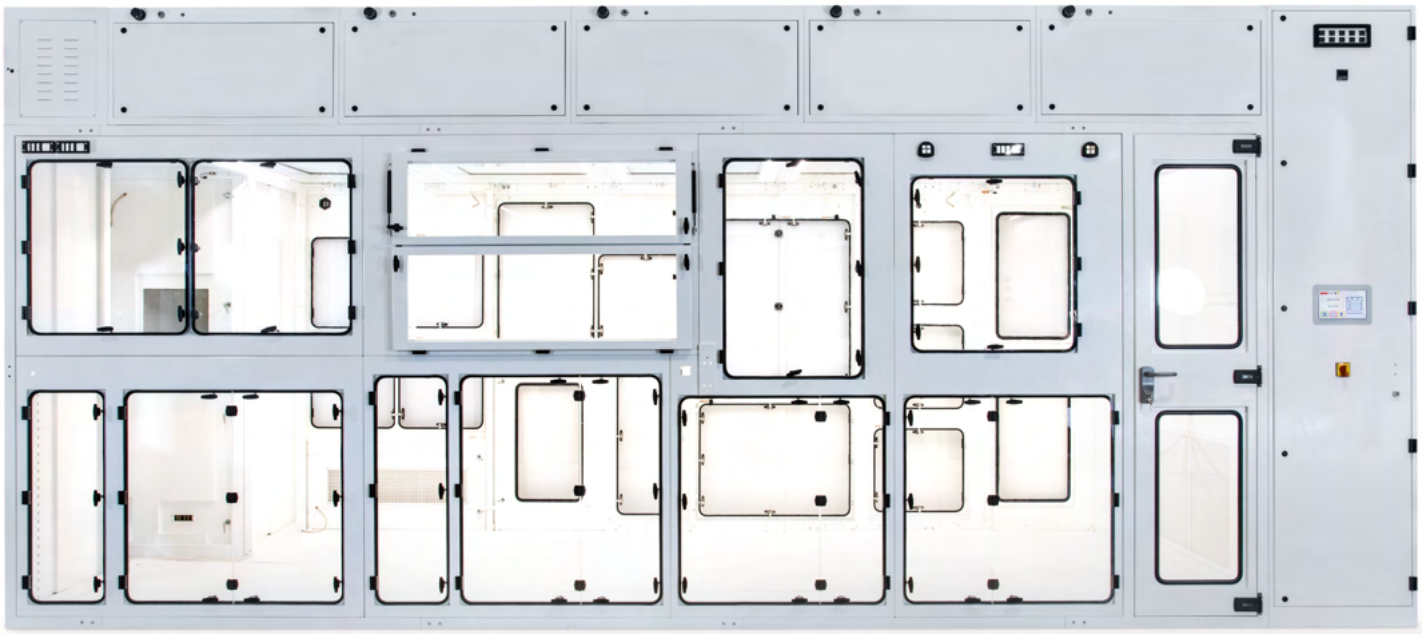
ROBOTIC ENCLOSURES

Robotic Enclosures are expertly designed to house large-scale automated systems. Using a controlled and filtered airflow system, these enclosures can meet the Class 1 or Class 2 protection standards of EN 12469 or provide an ISO 14644 clean air environment, ensuring a safe, secure, and controlled workspace for your automated processes.



Protects the operator, the environment, and the automated process (class 2)

Compliant with BS EN 12469 and NSF 49 standards

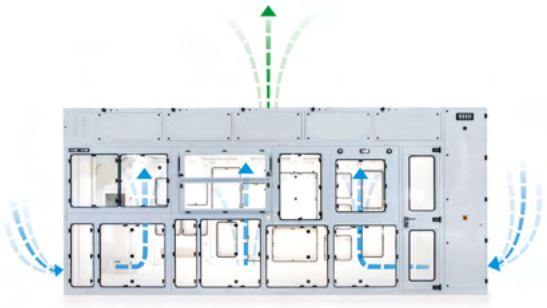
ISO 14644 class 5 clean air environment

CLASS 1 ENCLOSURE AIRFLOW

Operator, product and environment protection

Inward airflow enters the enclosure through low-level grilles, travels through the internal working area and is filtered before being discharged. The filtered air is either released back into the room (recirculating) or through a building extract system.

When a door is opened, the extract air volume increases to preserve internal negative pressure and sustain inflow air speeds to ensure operator protection.



Blue: Inward environment air
Green: Filtered clean air

CLASS 2 ENCLOSURE AIRFLOW

Operator and environment protection

Inward airflow enters the enclosure through low-level grilles and is diverted underneath the sterile working area. It is then filtered and delivered as downward laminar air to the working area. The air is then drawn back under the working area, where it mixes with the incoming airflow. This mixture is channelled through the return air plenum, with approximately 70% recirculated as downflow and 30% discharged from the cabinet. The discharged air can either be released back into the room (recirculating) or through a building extract system.

When a door is opened, the extract air volume increases to preserve internal negative pressure and sustain inflow air speeds to ensure operator protection.

Blue: Inward environment air
Green: Filtered clean air

See all benefits and features on pages 32-33

PRODUCT SPECIFICATION *Typical standard construction – Enclosures are configured to your exact requirements*

Voltage AC	110 - 230V
Filtration	H-14 HEPA @ 0.3µ 99.995% efficiency (ULPA and carbon available)
Construction	2mm mild steel
Finish	White RAL 9016
Windows	8mm UV resistant cast acrylic or polycarbonate
Hinged doors	Mild steel powder coated white RAL9016 C/W 8mm acrylic or polycarbonate vision panel
Standard	Designed to comply with EN 12469, ISO 14644, NSF49 standards

Full technical specification available at design stage

FEATURES & BENEFITS - AUTOMATION




EFFICIENT WORKFLOWS

Streamlining processes by connecting utilities and instruments:

- Gas taps and compressed air
- Power sockets
- Data connections
- Fully sealed service ports
- Third-party device integration solutions
- Waste collection chutes + more

Every detail is designed for facilities to be within reach and protected.

ERGONOMIC WORKING

Enabling operators to work comfortably while reducing physical strain:

- Support stands with convenient storage shelves
- Mobile docking station trolleys for ease of moving equipment
- Slide-out work trays to simplify loading and unloading
- Flexible arms and shelves for devices and computers
- A wide range of accessories and add-ons to suit any application

These additions create a practical working environment that enhances operator comfort.



CONVENIENT DECONTAMINATION

Simplifying procedures and reducing the need for additional steps:

- Built-in fumigation connections
- Manual or motorised isolation dampers
- Integrated formalin vaporizer and UV options
- Automatic fumigation and UV disinfection modes
- Fumigation closure panel options for cabinets

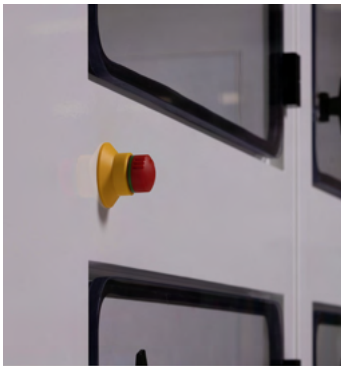
These features are designed to aid in safe and efficient decontamination processes.

ADVANCED OPERATION

Facilitating effortless and confident operation:

- A touchscreen for effortless control of every feature
- A real-time animated airflow status diagram to confirm safety
- Reminders and alerts for system status and upcoming service
- BMS and API connection for seamless integration

These innovative features are designed to enhance operational efficiency and ensure seamless control.




ENHANCED SAFETY

Prioritising the protection of operators and processes:

- Third-party device integration to enhance security
- Safety sensors to control internal equipment
- Emergency stop buttons for immediate shutdown
- Machine guards to protect against moving parts
- UV light guarding for added protection
- Uninterrupted power supply integration

Each safety feature is designed to minimise risks and provide protection against potential hazards.

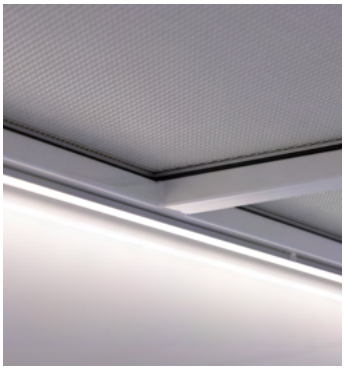
EASY MAINTENANCE

Taking the hassle out of maintenance and cleaning:

- Hinged lift-up or removable panels
- Handle-operated, lockable doors
- Simplified external filter and fan access
- Convenient filter test ports for straightforward servicing

Each unit is designed to provide uninterrupted access, both internally and externally.






INTUITIVE FUNCTIONALITY

Maintaining optimal performance for safe operation:

- Audio and visual light alerts
- Automatic airflow adjustments when door opened
- Automatic fumigation and UV modes
- Airflow and integrable filter pressure monitoring
- Chilled water or DX systems to maintain environmental temperatures

These smart functionalities provide peace of mind by ensuring safety and control at all times.

ENERGY EFFICIENT

Contributing to a healthier planet whilst reducing ownership costs:

- EC fans using up to 50% less electricity and 70% more efficient than alternatives
- Speed control functionality to optimise airflow and extend filter life
- Long lasting and energy saving high efficiency particulate air filtration
- Eco-friendly LED lighting for cost-effective, energy-efficient illumination

These energy-efficient features are integrated to enhance efficiency whilst maintaining optimal performance.

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SERVICE & PARTS SUPPORT

KEEPING YOU SAFE, YOUR PRODUCTS PROTECTED, AND YOUR ENVIRONMENT SAFEGUARDED

Our comprehensive service packages ensure your systems perform at their best while maintaining the highest standards of safety and containment.

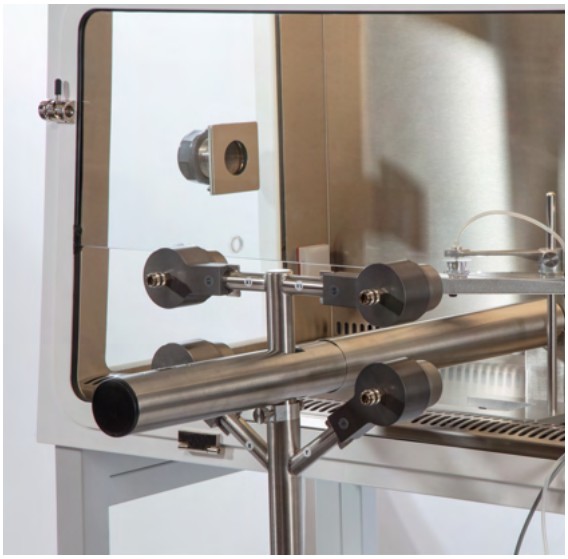
With service coverage across the UK, Europe, and the US, you can rely on us for expert maintenance and repair of your biological safety cabinets, laminar flow cabinets, fume cupboards, automation enclosures, and more.

Whether it's CAS equipment or that of other manufacturers, our experienced team is here to keep your equipment operating safely and efficiently throughout its entire lifecycle.

- **Expert engineers** with in-depth training and knowledge on all types of clean air equipment
- **Pre-scheduled service visits** to ensure your equipment is always properly maintained
- **On-the-spot repairs** with our stock of high-quality original parts, reducing downtime and the need for repeat visits
- **Full compliance assurance** with safety standards across multiple industries (e.g., pharmaceutical, healthcare, research)
- **Multi-brand support** we can service equipment from any manufacturer under one unified service package
- **Technical support** available remotely for our service customers, which can eliminate the need for a site visit

By choosing a CAS service package, you benefit from:

- **Minimised downtime** to ensure your operations run seamlessly
- **Full compliance** with the latest safety standards and regulations
- **Extended equipment life** through expert care and preventative maintenance
- **Lifetime support** with accessible, remote, and in-person expert technical assistance
- **Priority service** our service customers receive full and priority support
- **Cost savings** across all our parts and services



YOUR ONE-STOP FUMIGATION & SERVICE SOLUTION:

Combine fumigation services into your service package – let us take care of all your servicing, fumigation, and maintenance needs.

No service missed

One of our customer service representatives will contact you before your service due date to ensure no services is missed.

Keeping your equipment performing safely and minimising disruptions to ensure no services are missed.

On the spot repairs

Using in-stock, high-quality original parts, with our engineers carrying critical spares for all CAS and MAT cabinets.

Ensuring we reduce your downtime, eliminate the need for repeat visits, and save you any unnecessary costs.

Maintenance for all

Ensuring compliance with safety and operational standards, we can maintain any manufacturer's equipment. Including arranging fumigation decontamination prior to your service.

Enabling you to combine all on-site equipment under one comprehensive service package.

Compliance with standards	Equipment covered
EN 12469	Biological safety cabinets
EN 14175	Laminar flow cabinets
BS 5726	Robotic enclosures
ISO 14644	Power control booths
P601	Fume cupboards
The Orange Guide	Ventilated extract tables
EU GMP Annex 1	Downflow booths
COSHH	Downdraft tables
HSG 258	Room HEPA Filters

Thorough examination and testing (TExT) of local exhaust ventilation (LEV) systems

40+ YEARS OF EXPERIENCE
15,000+ SOLUTIONS DELIVERED

Contained Air Solutions is the UK's leading manufacturer of biological safety cabinets, clean air, and containment solutions.

CAS
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part of the Breeze Group

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