



# Ultra Safe

## Class I Biological Safety Cabinets



# INTRODUCTION

*Ultrasafe Series Class 1 Biological Safety Cabinets provide class leading operator safety and performance with specially designed deep bed HEPA filters and superior ergonomic support through a clever window design, low operational noise and specially designed lighting.*

The **Ultrasafe Series Class I** cabinets use digital technology to maintain constant airflow during normal filter loading or temporary airflow obstruction from foreign objects. Our Pressure sensor monitoring ensures safe and uniform airflow across the entire work surface of the cabinet. We have added an Independent alarm systems immediately alert the user to any airflow obstruction. Our **Ultrasafe Series cabinets** have bespoke exhaust options to ensure the unit can be used for any room set-up!

## USER-FRIENDLY

Our Ultrasafe Class I cabinet's operations are effortlessly managed through low-voltage electronic touch controls (VDP) featuring a user-friendly digital display. Transparent UV-resistant safety glass on the side enhances interior illumination and visibility, creating a well-lit and spacious workspace

## ERGONOMIC DESIGN

Traditional BSCs are known to bring about user discomfort and ergonomic risks, such as maintaining a fixed, extended posture, experiencing restricted visibility within the line of sight, and having inadequate knee/leg room beneath the cabinet.

The innovative **Ultrasafe Series Class I Biosafety cabinet** has been meticulously designed with a slanted front, various work tray choices, and an optional electrically adjustable stand, delivering a vastly enhanced ergonomic user experience



## SAFETY AND COMFORT

User safety and comfort is paramount with all Clyde APAC manufactured Ultrasafe Class I Biological Safety Cabinets. The comfortable, 200mm front working aperture on the Ultrasafe does not compromise safety or sample containment while significantly reducing noise level. All our cabinets have been tested at nominal airflow velocities for added security.

# FLOOR STANDS

Ultrasafe Class I BSC Cabinets can also be supplied with a bespoke stand to suit the cabinet with options including:

- Floor stand, semi-adjustable (height to order)
- Electronically-controlled, height adjustable floor stand



*Class II Ultrasafe 120 Stand shown above*

# CUSTOMISABLE

## WORK SURFACES

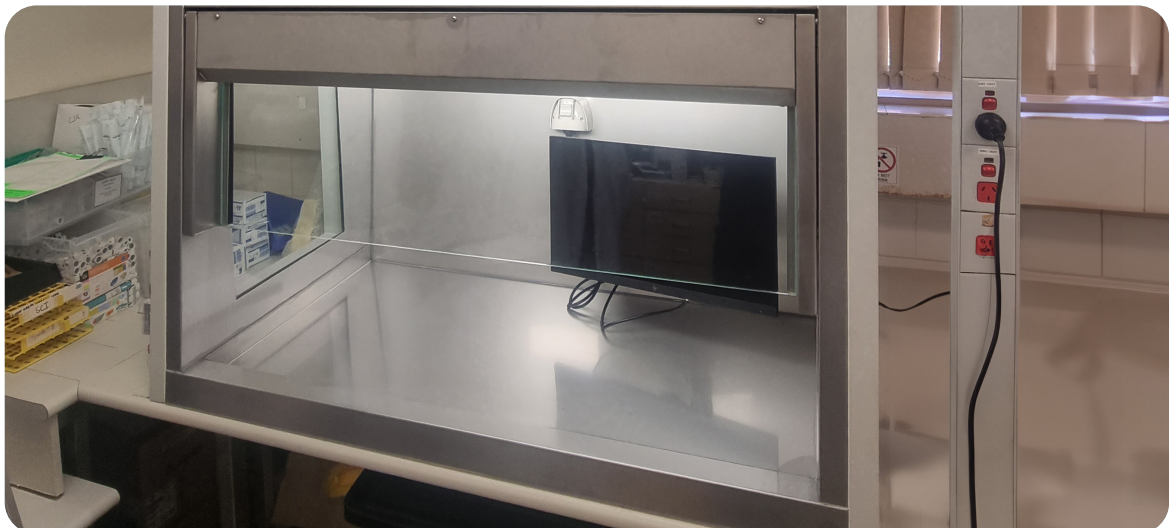
Scratch-free, high quality stainless steel work surfaces are available as single or segmented modules and are easy to clean or autoclave. The indented work modules easily trap spilled liquids.

Additionally, the work zones can be customised to suit various applications. This can include the addition of:

- Sink within the workzone area
- PC Monitor Mounting

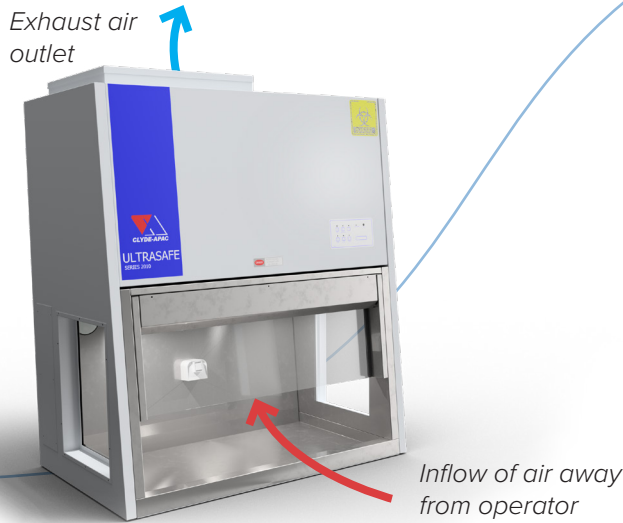
## OPTIONAL EXTRAS

- Choice of Top, Front, L/H or R/H exhaust
- Service taps (air, CO<sub>2</sub>, etc.)
- Vacuum tap (disc filter holder)
- Decontamination panel
- Extra power outlet (1 x power outlet supplied as standard feature)
- Gas tap (solenoid-interlocked)
- Additional Carbon Filter for odour



*Customised design for your PC monitor mounting*

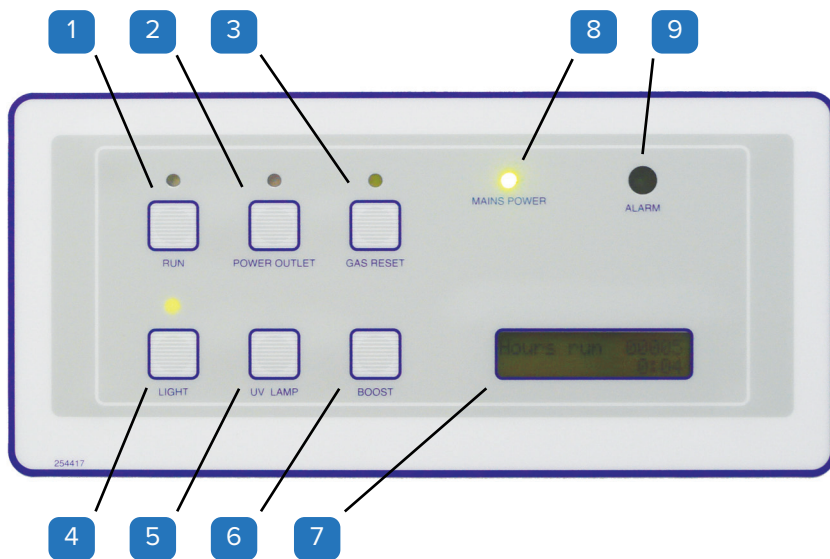
# HEPA FILTRATION SYSTEM



Air is drawn through the cabinet from the work access opening and discharged safely through the exhaust HEPA filter (exhaust position will depend on cabinet)

HEPA filters manufactured to AS4260, Grade 2 with a minimum efficiency of 99.99% at 0.3µm, equivalent to H14. Constructed with the use of H&V Material, The best in the world!

## OPERATION



Control Panel

1. Fan/post-use over-run switch
2. Power outlet switch
3. Gas reset switch\*
4. Fluorescent light switch
5. UV lamp switch\*
6. Boost mode switch
7. Display panel
8. Mains power indicator
9. Alarm indicator

High-efficiency filters and fans deliver quiet operation and safety. Negative pressure zones surround all positive pressure areas, eliminating the possibility of contaminated air bypassing the filter or escaping from the cabinet. Outer shells are gas-tight for safe decontamination.

A microprocessor is used to control the speed of the blower motors. This microprocessor also allows fingertip control of functions and status including:

- Cabinet performance and status clearly displayed in English.
- Boost mode.

# TESTING AND SERVICE

From years of experience in the design and manufacture of safety cabinets in Australia, the new generation Ultrasafe series cabinets have been designed with the end user in mind. Simple to operate and encompassing safety and reliability this stylish new cabinet is supported by our nationally focused spare parts and service divisions located in all major centres.

## AUSTRALIAN STANDARDS

Clyde APAC Class I biological safety cabinets comply with AS 2252.1 in all three vital areas:

- Cabinet design/construction
- Cabinet performance
- Air filter performance

Some cabinets on the Australian market do not comply in all of these areas. A decision to use such equipment should be taken only after careful consideration of the risk posed by the materials to be handled and with the agreement of those who will operate the equipment. (See current and proposed Health and Safety Regulations).



# CERTIFICATION

All biological safety cabinets, laminar flow cabinets and workstations should be certified by a NATA-Accredited laboratory. Additional testing and certification is recommended as follows:

- On site prior to use
- After maintenance or filter replacement
- After re-location
- Annually
- In special circumstances, e.g. if faulty operation is suspected.



AES Environmental maintains an ISO 9001:2015 quality management system to ensure process and product conformance.

**Please note:** Specifiers and intending users should see AS2252.1 which sets out the intended applications and limitations of these cabinets.

## GENERAL SPECIFICATION ULTRASAFE CLASS I BSC

Model		Class I Ultrasafe 90	Class I Ultrasafe 120	Class I Ultrasafe 150	Class I Ultrasafe 180
Part No.		1687-6000/90CL1	1687-6000/120CL1	1687-6000/150CL1	1687-6000/180CL1
Nominal Size		0.9m (3')	1.2m (4')	1.5m (5')	1.8m (6')
External Dimensions (WxDxH)		1035x790x 1570mm	1350x790x 1570mm	1650x790x 1570mm	1975x790x 1570mm
Internal Work Zone Dimensions (WxDxH)		870x530x 645mm	1180x530x 645mm	1480x530x 645mm	1810x530x 645mm
Test Opening		260mm	260mm	260mm	260mm
Fans: 240V single phase direct drive		1	1	1	1
Average Airflow Velocity (Inflow to grille)		1m per second at set point			
Airflow Velocity	Inflow	120 L/s	150 L/s	190 L/s	230 L/s
	Exhaust	120 L/s	150 L/s	190 L/s	230 L/s
Sound Emission		< 58.8 dB (A)	< 60.2 dB (A)	< 62.8 dB (A)	< 62.8 dB (A)
HEPA Filter Typical Efficiency Exhaust		99.995% at 0.1 to 0.3 microns to AS4260/EN1822			
Germicidal UV Lamp AS1807:2021 Clause 4.5		400mW/m <sup>2</sup>			
Fluorescent Lamp Intensity AS1807:2021 Clause 4.5		800 Lux			
Certification to Australian Standards		AS1807: 2021 Clause 4.1/ Clause 4.3/ Clause 4.4/ Clause 4.5/ Clause 4.7/ Clause 4.9/ Clause 4.10			
Cabinet Construction AS2252.1 - 2002	Main Body	1.2mm powder coated Zinc seal mild steel			
	Work Surface	1.2mm type 304 stainless steel with B2 finish			
	Side Walls and Sump	1.2mm type 304 stainless steel with B2 finish			
Front viewing window		6mm laminated glass	6mm laminated glass	6mm laminated glass	6mm laminated glass
Cabinet Net Weight (kg)		210	250	280	300
Shipping Dimensions		1085x800x1650mm	1400x800x1650mm	1650 x 800 x 1650mm	2025 x 800 x 1650mm
Total Shipping Weight (kg)		240	280	310	330
Shipping Volume		1.4322m <sup>3</sup>	1.848m <sup>3</sup>	2.178m <sup>3</sup>	2.673m <sup>3</sup>



# GET TO KNOW US

AES Environmental is a family owned, engineering and manufacturing business. The company comprises of major brands situated in the Air Filtration, Pollution Control and Life Sciences markets. Those brands and products are market-leading names within their fields ensuring that AES Environmental is capable of fulfilling its goal of providing the market with a single, integrated source for air filtration, clean room and pollution control needs.

Whatever business area you operate in, effective air filtration and pollution control is vital for your products, processes and people. All our products are manufactured in Australia and along with that, we offer installation and service Australia wide, that you can always rely on.

AES Environmental consists of an Australian head office and manufacturing location in Sydney, NSW, manufacturing and service operations in Perth, WA, Adelaide, S.A. and service operations in Melbourne, Vic. Internationally the business operates manufacturing facilities in Bangkok, Thailand and Newcastle Upon-Tyne, UK.


However large or small the need, with expertise in just about every area of industrial and process filtration and separation, we're ready to help to deliver the products and 'hands-on' support to help you build a better future.


© 2024 AES Environmental | Bulletin No. 05S.09.23 AES351 REV2


*In keeping with our policy of continuing product improvement, we reserve the right to alter specifications without notice.*


## GET IN TOUCH!

### AES HEAD OFFICE SYDNEY

 9A Pembury Rd, Minto, 2566

 1300 550 116

 [sales@aesenvironmental.com.au](mailto:sales@aesenvironmental.com.au)

 [aesenvironmental.com.au](http://aesenvironmental.com.au)

