

# Mk5 Series

## Safety Cabinet



Within the division of AES Environmental, the **Mk5 series** includes the latest safety cabinets from Email Air Handling. Designed and built in Australia, Email Air Handling cabinets are ideal for laboratories seeking reliable and easy to use equipment.

The **Mk5 range** includes models to cater for most typical applications, including Class I & II biological safety cabinets. Beyond this scope the company also has extensive experience in engineering products for specialist applications.

These cabinets have been made for critical working environments, so all equipment fully complies with the relevant Australian Standards.

HEPA/Absolute filters are installed, each one being factory tested to AS 4260.2 to ensure 99.99% minimum efficiency and scan tested to AS 1807.6. These filters are manufactured by Email Air Handling in Australia.

### **Biological Class I & II Cabinets**

Designed as modular workstations for use in laboratory applications, your Mk5 Class I & II cabinets protects the operator from the risks posed by biological agents while providing contaminant-free work zones for the protection of cultures and samples.

Mk5



## Features

- » A clever interlocking switch design prevents accidental exposure to UV light. Should the front window be opened whilst the cabinet is in use an override program ensures your safety by automatically adopting a class 1 bio-safety mode. This feature will auto-cancel when the front window is closed again.
- » The modern, proven control panel provides one touch access to all functions including servicing. A fully integrated self-diagnostic processor with digital status display backed up by an audible and visual alarm guarantees your safety.
- » An internally mounted, exhaust HEPA filter adds to the stylish features and modern design of the cabinet by freeing the outer shell from protrusions.
- » The work area is large, airy and bright. Light pours in through large toughened glass sides and a wide pneumatically assisted front window.
- » The stainless steel work tray is reversible on Class II models, giving you the choice of a flat work table or a generous spill containment tray.
- » An ergonomically designed flat front intake grille allows for optimum operator comfort and prolonged use with ease.
- » The low profile allows comfortable installation in 2700mm ceiling for top vented cabinets.
- » A large front opening (215mm) permits standard animal cages handling without compromising sterility and safety containment.
- » Performance and reliability of Class II cabinets are guaranteed by full compliance with AS 2252.
- » The new Mk5 Class II Cabinets also meet and exceed the performance requirements of EN12469 & NSF 49-Annex F. safety and performance requirements.
- » Heavy gauge stainless steel and superior materials are used throughout. Direct drive fans (2 or more), dynamically balanced for vibrations free operation, ensure large flow reserves for years of trouble-free operation.

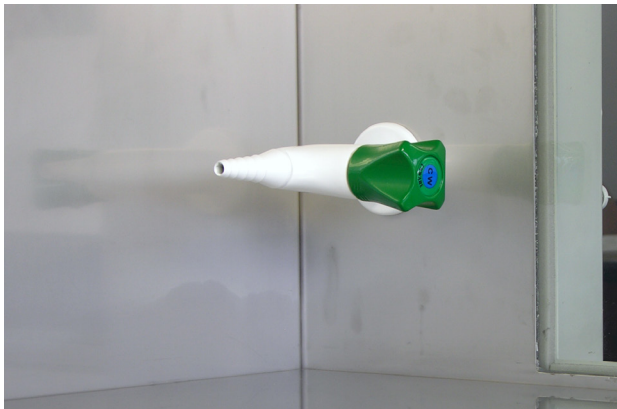
Not merely modified but designed & built to meet Australian standards.



## Accessories & Options

- » Gas tap (solenoid-interlocked)
- » Service taps (air, CO<sub>2</sub>, etc.)
- » Vacuum tap (disc filter holder)
- » Extra power outlet (1 x power outlet supplied as standard feature)
- » Choice of Top, L/H or R/H exhaust
- » Floor stand, semi-adjustable (height to order)
- » Electronically-controlled, height adjustable floor stand
- » Decontamination panel

Gas tap



Floor stand



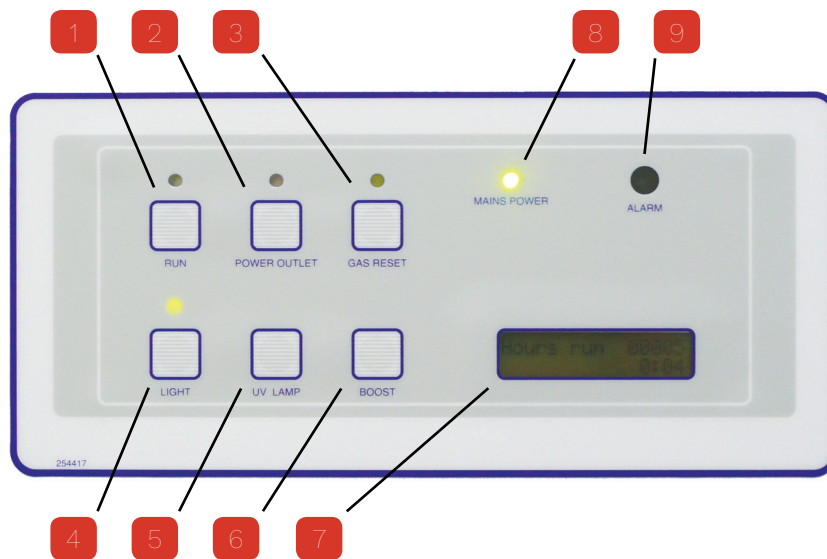
Glass sides & large front access opening



AES Environmental maintains an ISO 9001:2008 quality management system to ensure process and product conformance.



## 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

\*optional function

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.

In operation, vertical laminar airflow through a HEPA filter bathes the work tray, dividing and passing around the perimeter to create a biologically clean work area.

### In Class II & Cytotoxic Cabinets

An air barrier across the work access opening, into the sump, reduces potential risks to personnel from airborne contaminants in the work zone.

In Class II models, the airflows mix in the sump before recirculation via a return air plenum to the top housing. Exhaust air is passed through a HEPA filter for return to the laboratory.

Separate fan/filter arrangements allow independent adjustment to maintain an effective air barrier.

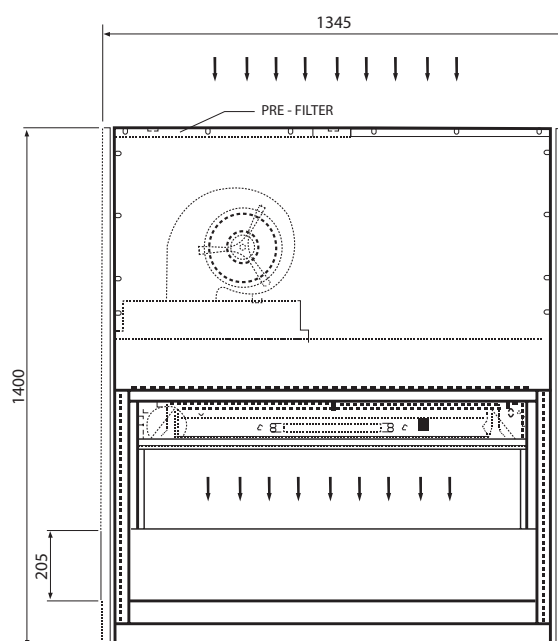
A microprocessor is used to control the speed of the blower motors. This microprocessor also allows fingertip control of functions and status including:

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





## Class I Safety Cabinets

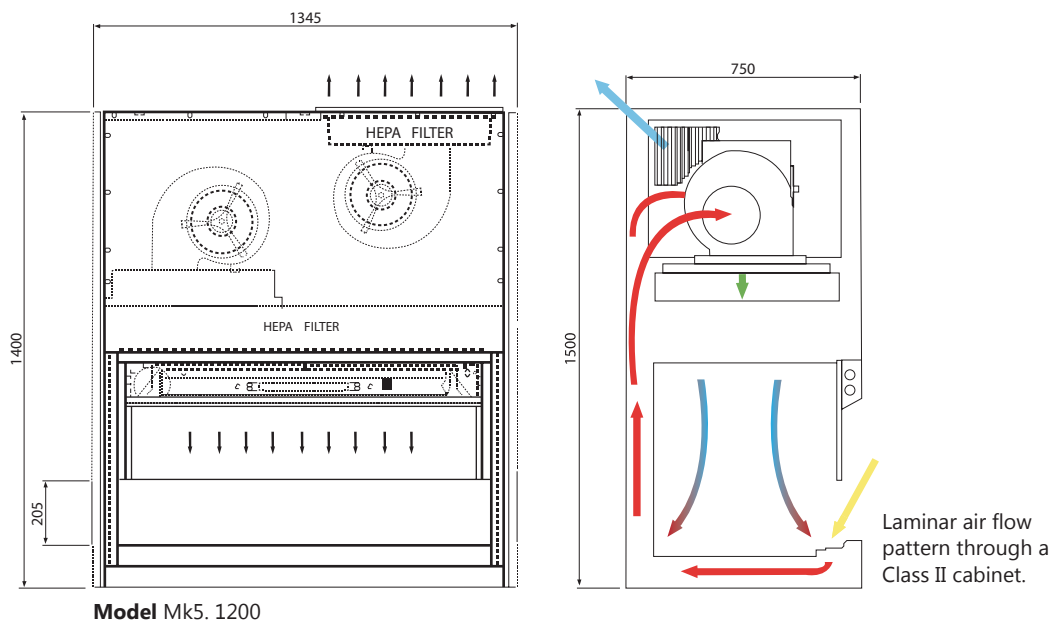


## Specifications

OPERATION	CLASS I 1200mm	CLASS I 1800mm
Lighting	800 Lux at work surface	800 Lux at work surface
Electrical supply	240v/50 Hz	240v/50 Hz
Power Consumption (KW)	0.5	1
HEPA Filter	99.997%	99.997%
Noise Level	<65dBA at 1m	<65dBA at 1m
DIMENSIONS		
Working height of glass	525mm	525mm
Work area W x D x H (mm)	1180 x 640 x 620	1810 x 640 x 620
Outer dimensions W x D x H (mm)	1345 x 720 x 1400	1975 x 720 x 1400
Weight ((kg)	200	270
CONSTRUCTION		
Front screen	6mm Laminated glass	
Internal work area & tray	304 Stainless Steel	
Outer construction	Mild steel with powder coating	



## Class II Safety Cabinets



## Specifications

OPERATION	Mk 5. 900 CLII BSC	Mk 5. 1200 CLII BSC	Mk 5. 1800 CLII BSC
Filters HEPA	99.997% to 0.3 micron	99.997% to .3 micron	99.997% to .3 micron
Lighting	800 Lux at work surface	800 Lux at work surface	800 Lux at work surface
Germicidal UV lamp	400mW/m <sup>2</sup>	400mW/m <sup>2</sup>	400mW/m <sup>2</sup>
Electrical supply	240v/50 Hz	240v/50 Hz	240v/50 Hz
Power Consumption (Kw)	0.7	0.7	1.1
Fans	2 x 240V Single Phase Direct Drive	2 x 240V Single Phase Direct Drive	3 x 240V Single Phase Direct Drive
Exhaust air volume (m <sup>3</sup> /Hr)	780	1044	1548
Noise Level	65dBA at 1m	65dBA at 1m	65dBA at 1m
Discharge Options		L/H, R/H, Front or Top	
DIMENSIONS			
Work Aperture	205mm	205mm	205mm
Work area W x D x H (mm)	870 x 560 x 620	1180 x 560 x 620	1810 x 560 x 620
Outer dimensions W x D x H (mm)	1035 x 750 x 1500	1345 x 750 x 1500	1975 x 750 x 1500
Weight ((kg)	195	210	300
CONSTRUCTION			
Front screen	6mm Laminated glass		
Internal work area & tray	304 Stainless Steel		
Outer construction	Mild steel with powder coating		
Manufacturing Compliance to	AS 2252.2 - 2004 Part 2		
Certification to	AS 1807.1 / AS 1807.5 / AS 1807.6 / AS 1807.15 / AS 1807.20 / AS 1807.22 / 1807.23		



## Support

From years of experience in the design and manufacture of safety cabinets in Australia, the new generation Mk5 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.

### WARNING

Email Class I & II biological safety cabinets comply with AS 2252.2 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).



### The Company

AES Environmental is an Australian owned manufacturing business producing products under Clyde-Apac, Email Air Handling and Vokes brand names for industries that are as varied as industrial plants, commercial buildings, power stations, food processing, healthcare, science and electronics. AES Environmental considers the Australian Standards as a core component of its product mix and has developed an export market in 25 countries, promoting Australian Standards, engineering and manufacturing solutions. AES Environmental, a trusted manufacturer capable of delivering reliable product solutions to highly-critical applications, where the control of hazardous airborne contamination is often critical to process and personnel.

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



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