

EMAIL AIRHANDLING



- VALUE
- INNOVATION
- DURABILITY
- SUPPORT

Mk5 Series
Safety Cabinets

The **Mk5** Series are the latest safety cabinets from Email Air Handling (A Division of AES Environmental).

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 laminar flow, class I & II biological, animal handling and cytotoxic drug 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.

Downflow (laminar flow) Cabinets

Many critical applications in the medical, pharmaceutical, scientific and electronics fields demand an ultra-clean work environment that is free from biological and particulate contamination.

The **Mk5** downflow cabinets are intended for work with non-hazardous materials in such applications

Biological Class II Cabinets

Designed as a modular workstation for use in laboratory applications, your **Mk5** Class II cabinet protects the operator from the risks posed by biological agents while providing a contaminant-free work zone for the protection of cultures/samples. This model can also be manufactured to Class I specification if preferred.

Cytotoxic Drug Safety Cabinets

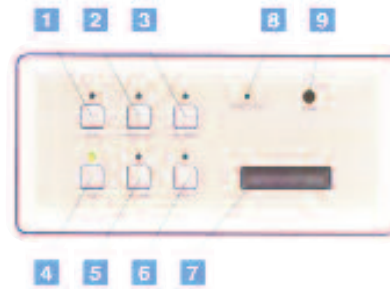
Cytotoxic drug safety cabinets are defined as the primary barrier against exposure to aerosols that are produced in the preparation, manipulation and dispensing of cytotoxic drugs.

In addition to product and personnel protection, the **Mk5** Cytotoxic contains extra HEPA filtration to protect all serviced components of the cabinet from harmful contamination.

Mk5

Control Panel

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



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 & Cytotoxic 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.

*Not merely modified but designed & built
to meet Australian Standards.*

- 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 Part 2 and its 2004 revision. Cytotoxic cabinets are compliant to AS 2567-2000.
- 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.



Optional gas tap



Reversible work tray



Glass sides & large front access opening

The new MK5 adds a new dimension to advanced engineering, quality and equipment levels, making it the perfect tool for a busy laboratory.

Operation

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.

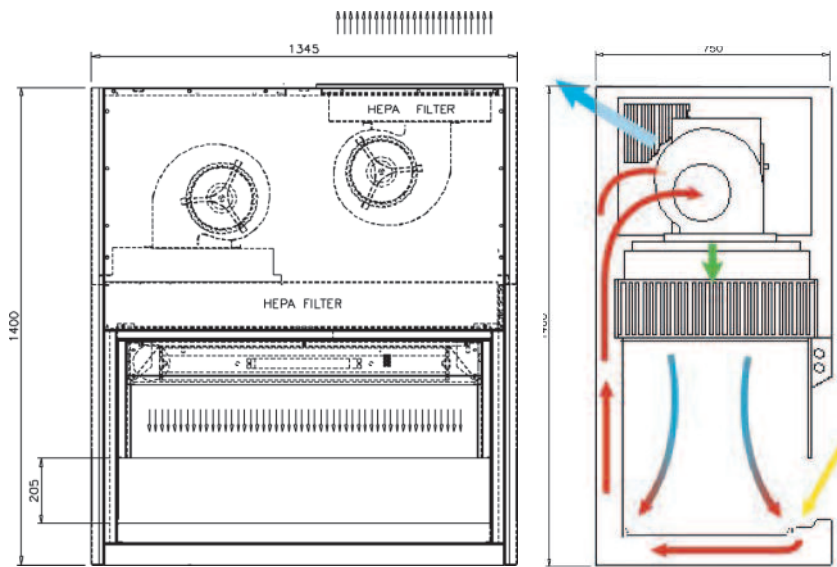
In Cytotoxic models, the airflows combine in the sump area beneath the work floor and pass through an extra HEPA filter before recirculation via a return air plenum, to the top housing.

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 plain English
- boost mode
- built-in stopwatch

CLASS II SAFETY CABINETS



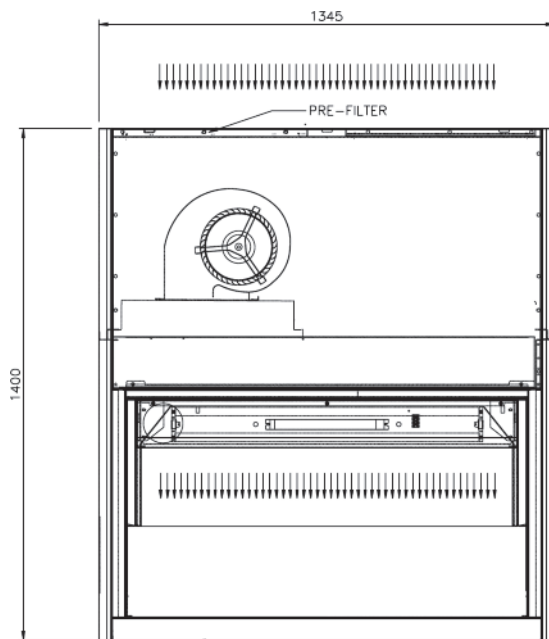
Mk5. 1200
Model shown

*Laminar air flow
pattern through a
Class II cabinet.*

Specifications - Class II Biological Safety Cabinets

| 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 0.3 micron | 99.997% to 0.3 micron |
| Lighting | 800 Lux at work surface | 800 Lux at work surface | 800 Lux at work surface |
| Germicidal UV lamp | 400mW/m ² | 400mW/m ² | 400mW/m ² |
| 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 ³ /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 / AS1807.6 / AS 1807.15 / AS 1807.20 / AS 1807.22 / 1807.23 | | |

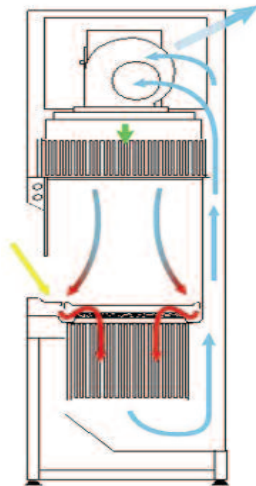
CLASS I SAFETY CABINETS



Specifications - Class I Cabinets

| 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 wxdxh (mm) | 1180 x 640 x 620 | 1810 x 640 x 620 |
| Outer dimensions wxdxh (mm) | 1345 x 720 x 1400 | 1975 x 720 x 1400 |
| Weight (kg) | 200 | 270 |
| Construction | | |
| Front screen | 6mm Laminated glass | 6mm Laminated glass |
| Internal work area & tray | 304 stainless steel | 304 stainless steel |
| Outer construction | Mild steel with powder coating | Mild steel with powder coating |

CYTOTOXIC DRUG SAFETY CABINETS

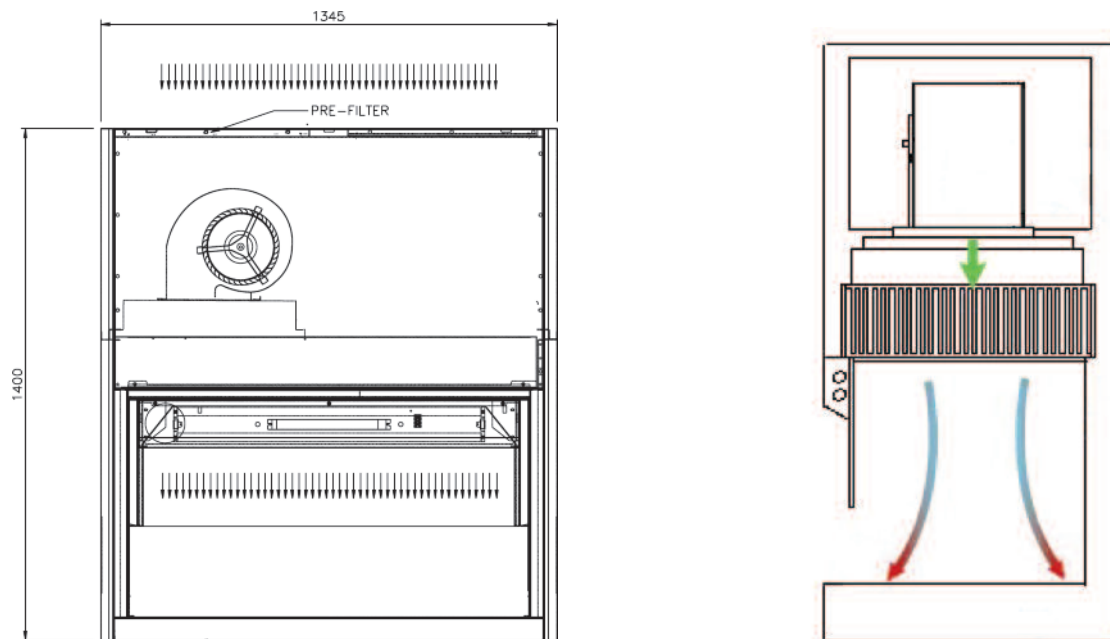


Laminar air flow pattern through a Cytotoxic cabinet.

Specifications - Cytotoxic Drug Safety Cabinets

| Operation | Mk 5 Series 1200mm CDSC | Mk 5 Series 1800mm CDSC |
|---|---|------------------------------------|
| Filters HEPA | 99.997% to 0.3 micron | 99.997% to 0.3 micron |
| Lighting | 800 Lux at work surface | 800 Lux at work surface |
| Germicidal UV lamp | 400mW/m ² | 400mW/m ² |
| Electrical supply | 240v/50 Hz | 240v/50 Hz |
| Power Consumption (Kw) | 1 | 1.5 |
| Fans | 3 x 240V Single Phase Direct Drive | 3 x 240V Single Phase Direct Drive |
| Exhaust air volume (m ³ /Hr) | 1044 | 1548 |
| Noise Level | 65dBA at 1m | 65dBA at 1m |
| Discharge Options | Left, Side, Right, Top | Top only |
| Dimensions | | |
| Work Aperture | 210mm | 190mm |
| Work area w x d x h (mm) | 1180 x 560 x 620 | 1760 x 560 x 620 |
| Outer dimensions w x d x h (mm) | 1345 x 750 x 2216 | 1990 x 750 x 2380 |
| Weight (kg) | 360 | 630 |
| Construction | | |
| Front screen | 6mm Laminated glass | 6mm Laminated glass |
| Internal work area & tray | 304 stainless steel | 304 stainless steel |
| Outer construction | Mild steel with powder coating | Mild steel with powder coating |
| Manufacturing Compliance to | AS2567-2000 | |
| Certification to | AS 1807.1 / AS 1807.5 / AS1807.6 / AS 1807.15 / AS 1807.20 / AS 1807.22 / 1807.23 | |

DOWNFLOW CABINETS



Specifications - Downflow Cabinets

| Operation | 3300/612 Downflow 1200 | 3300/618 Downflow 1800 |
|-----------------------------|--------------------------------|--------------------------------|
| 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 wxdxh (mm) | 1180 x 640 x 620 | 1810 x 640 x 620 |
| Outer dimensions wxdxh (mm) | 1345 x 720 x 1400 | 1975 x 720 x 1400 |
| Weight (kg) | 200 | 270 |
| Construction | | |
| Front screen | 6mm Laminated glass | 6mm Laminated glass |
| Internal work area & tray | 304 stainless steel | 304 stainless steel |
| Outer construction | Mild steel with powder coating | Mild steel with powder coating |

Accessories & options

- Gas tap (solenoid-interlocked)
- Service taps (air, CO2, 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



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 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).

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