

MAXISAFE CUSTOM BIOLOGICAL SAFTEY CABINET



DESIGNED FOR SAFETY AND PEACE OF MIND

CUSTOM BIOLOGICAL SAFETY CABINETS

ENGINEER BESPOKE SOLUTIONS

AES Environmental employs a team of engineers and to apply modern 3D modelling techniques in order to provide bespoke solutions for our customers. As many of the products are made-to-order, this gives the customer a chance to fulfil specific needs through customisation of the product. The customer is afforded the opportunity to sign-off at each stage of the project and is welcome to inspect current works at our factory in Minto, NSW. Some of our recent project builds include works for RMIT, Burnett Institute, Garvan Institute, VCCC and the CSIRO

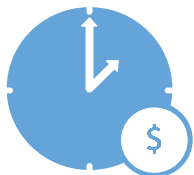


AUSTRALIAN MANUFACTURED

Since AES environmental is an Australian Company, all our products are manufactured in our factory located in Minto, NSW. Along with our main factory, we have local branches across Australia. The advantages of Local Manufacture include fast lead times and flexibility for made-to-order products.

COMPLIANCE TO STANDARDS

AES Environmental is a strong supporter of the standards that Australia maintains within the laminar products sphere, standards that are often regarded as the most stringent in the world. Along with Laminar standards, we ensure that our products meet Australian standards, as well as NATA and ISO standard (where applicable). Being an Australian manufacturer has resulted in a co-dependency with those standards, we ensure compliance so that our customers do not have to.



ON BUDGET AND ON TIME

At AES Environmental, we are able to offer our high quality, bespoke air-filtration products to fit all solutions for your business, including tight timeframes or budgets. The ability to work closely with our staff ensures that as the customer, you can ensure all criteria is met. As we manufacture all our products in Australia, we are able to have a high knowledge of timeframes and budgets, which is crucial to working with the parameters given.



MAXISAFE-VERTICAL LAMINAR FLOW BOOTH

APPLICATION

With more than 45 years of experience in air handling technologies, AES Environmental stand-alone Maxi-Safe Laminar Flow Booths are the optimal solution, when it is necessary to offer an economical solution to a wide range of processing application such as:

- Aseptic dispensing
- Assembly of electronics and optical components
- Cell culturing
- Media pouring
- Preparation of medical devices
- Sterility testing

Where the products, processes and at times the environment are sensitive to contamination.

DESIGN

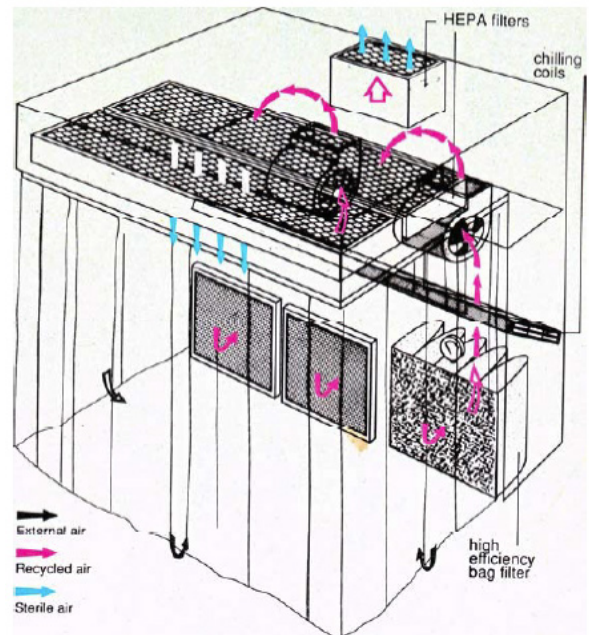
The booths operates by providing a clean, constant, turbulence free laminar down-flow of HEPA filtered air. This is achieved by pressurising the plenum chamber which then forces ambient air through HEPA filters to produce vertical laminar air flow inside the work zone.

Contaminants produced during media preparation are swept down and away from the operator as laminar air-flow bathes the booths internal work zone with clean air which has been filtered through Grade H14 HEPA filters. This process ensures that the stringent requirements of Class 5 (ISO), necessary for the protection of products and operators during filling, transfer and packaging are met.

The air is then mixed with ambient air from outside of the booth which has been drawn in from under the protective solid wall or flexible PVC curtain, through a bank of prefilters located at the base of the rear work zone wall. The air is then recirculated with 30% being exhausted to ambient at ceiling height via a second HEPA filter. This procedure ensures that negative pressure within the working space is maintained, thus guaranteeing that there will be no breach of the containment boundary.

CONSTRUCTION

AES Environmental Maxi-Safe down flow booths are constructed in powder coated mild steel, 304 or 316 stainless steel or a combination of both. With a variety of standard dimensions (height, width and safe working depths) our booths can also be custom engineered to any size.



Typical design of a recirculating laminar down flow

OPTIONS

- UV Lights
- Power Outlets
- Magnahelic Gauge
- Air Conditioning System
- Carbon Filters
- Stainless Steel External Sides
- RS 232 Ports
- Swivelling Lockable Castors
- 6mm Laminated Safety Glass Front Doors
- 6mm Laminated Safety Glass Sides
- Stainless Steel Electrically Height
- Adjustable Preparation Table



FANS

Variable speed direct drive centrifugal fan/blowers enable separate airflow adjustment throughout the filter life and allow adjustment of the supply air velocity.

FILTERS

AES Environmental HEPA Filters are tested to 99.999% Efficiency by Hot DOP to AS 4260 to ensure full protection. All filters are tested in strict accordance with the requirements of Standards Australia and the performance of the pre-filters and final filters are continuously monitored by Magnahelic differential pressure gauges.



HEAT GENERATION

In dealing with applications involving powder materials, optimum temperatures and relative humidity's need to be maintained.

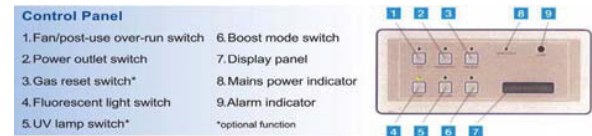
It must be borne in mind that both a filling machine motor and the unit's fans will generate a considerable amount of heat. As an option, cooling can be achieved by the fitting of an air-conditioning system.

ASSURANCE

Every booth is factory tested and certified by a NATA registered laboratory to establish compliance with performance requirements of AS1386, Part 5.

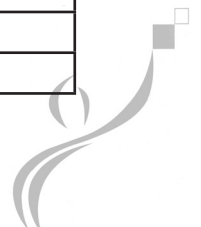
CONTROL PANEL

A modern, proven control panel provides one touch access to all functions including servicing. A fully integrated self-diagnostic processor with digital status display up by an audible and visual alarm guarantees your safety.



SPECIFICATIONS								
Model Code	Overall Dimensions (mm)			Work Area Dimensions (mm)			Power	Power Kw
	W	D	H	W	D	H		
VLFB20	2400	2200	2700	1900	1800	2100	240V 60Hz	1.5
VLFB24	2400	2200	2700	2300	1800	2100	240V 60Hz	1.85
VLFB36	3600	2200	2700	3500	1800	2100	240V 60Hz	2.1

Model Code	Heat Generated Kca/Hr	Lighting (Lux)	Noise Level
VLFB20	1300	1000	56dB(A)
VLFB24	1600	1000	59dB(A)
VLFB36	1900	1000	61dB(A)



TESTING AND CERTIFICATION

TESTING

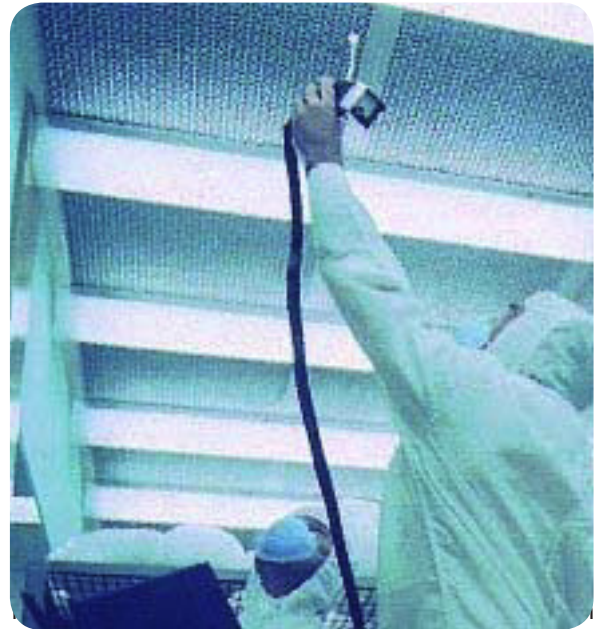
Your investment in health and safety by using laminar products is one that requires regular monitoring and testing. This is to ensure an environment free from biological or other hazardous particulates contamination.

Regular maintenance will ensure protection for your workers and the sterility of products which may require manipulation in these special areas. AES Environmental provides a comprehensive testing and certification services for all clear air applications.



The essential service is your assurance that the stated performance criteria of your laminar flow cabinet, booth and facility is maintained. We also certify that the work area has a cleanliness level that is equal to or better than Class 3.5, that is, less than 3.5 particles per litre of 0.5 micrometres and greater in size.

Our laboratory is National Association of Testing Authorities (NATA) registered to perform field-testing of all High Efficiency Particulate Air (HEPA) are filter installations, (HEPA Filters demand an efficiency greater that 99.97 percent to a 0.3 micrometre test aerosol).



registers laboratories in many fields of testing. To meet NATA requirements, a laboratory must have appropriately qualified testing and administrative personnel as well as equipment, capable of measuring performance with a very high degree of accuracy and consistency

All equipment is registered and regularly calibrated to the appropriate standard and the registered laboratory is periodically re-assessed to ensure maintenance of standards.





SPECIAL SERVICES

Mechanical Inspection — This includes the motor/ blower unit, vibration mountings, switch functions, gaskets, pre-filters and HEPA filters.

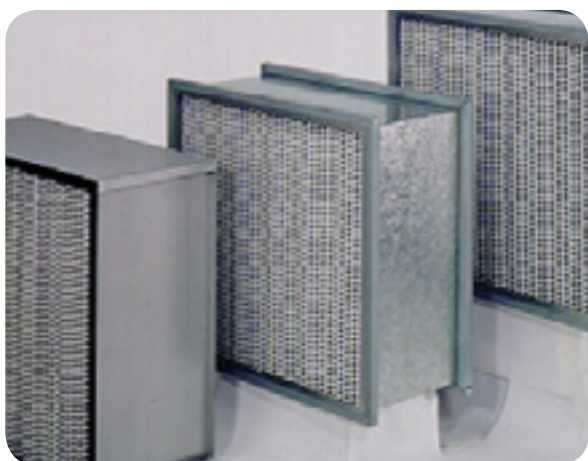
Check for System Integrity — challenge for filter leakage to AS 1807.6 and AS 1807.7

Ensure the work area is not violated by room air — test for induced air leakage in the work zone.

Prevent cross contamination in the work area — check and adjust air velocity and uniformity of airflows.

Establish HEPA filter life and performance — measure static pressure of filters and electronic motor current.

Check environment factors — measure light output, sound level and germicidal ultraviolet lamp efficiency.



Repair and Adjust to specification

— when necessary and whenever possible, on-site repairs are included in our service.

CERTIFICATION

To certify that the performance meets Australian Standard specifications — a certificate of compliance, which is issued under the terms of AES Environmental Accreditation by NATA, is available following the completion of each service program. Additionally, a full report is issued which shows the result of each test and the accuracy of the result.

The certification process guarantees that the installation will comply with following standards (as applicable):

- AS ISO 14644-1/ AS ISO 14644-3
- AS 2252.6: Clean Work Stations
- AS 1386: Cleanrooms and Work Stations
- AS 1807: Testing Methods



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

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.

© 2019 AES Environmental Bulletin No. 255.09.19 AES300 Rev0

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



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