



**CREATING
SAFER
LABORATORIES**



HWS & VWS SERIES II LAMINAR FLOW CABINETS





APPLICATIONS

HWS (Horizontal-flow) & VWS (Vertical-flow) Series cabinets are designed to provide a high degree of protection for process products and apparatus in laboratory and production facilities. 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.

Typical applications include:

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

HWS & VWS Series cabinets are intended for work with non-hazardous materials in such applications.

DESCRIPTION

HWS & VWS Series cabinets are self-contained Class 3.5 horizontal (HWS) or vertical (VWS) laminar flow work stations designed for installation on standard laboratory benches, or on optional floor stands. Cabinets are available with nominal work zone width of 900mm 1200mm or 1800mm.

Each cabinet is factory-tested and built to comply with the AES Environmental quality management system. These units can be certified on-site by a NATA-Accredited laboratory to establish compliance with the performance requirements of AS2252.6 - 2011.

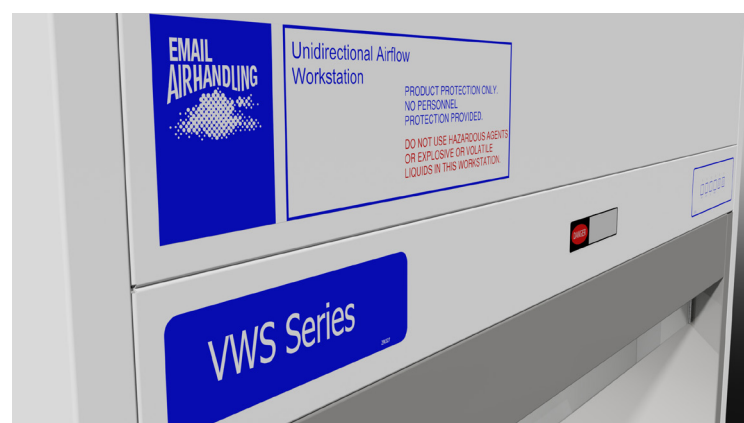
HWS & VWS cabinets contain pre-filters and HEPA/Absolute filters, the design of the filtration system enables removal of airborne contamination from air passed through to the work area.

The large filter face is matched to a plenum design that ensures a smooth laminar (unidirectional) flow of clean air through the work area and prevents entrainment of outside air.

In HWS cabinets, air is passed through the work zone in a smooth, horizontal direction, the blower fan and mounting position are designed to maximize airflow. The deeper rear plenum ensures unobstructed airflow to the HEPA filter face. As a result, the cabinet is quieter with reduced vibration and longer service life for the HEPA filter.

In VWS cabinets, a portion of the laminar flow air recirculates to the top plenum to give better airflow control and minimise turbulence in the work area. This also increases the HEPA filter service life.

An optional application of sound-deadening coatings in the upper plenum areas of both cabinet styles minimises noise and vibration, this option is particularly useful if work is conducted in ultra-quiet environments.

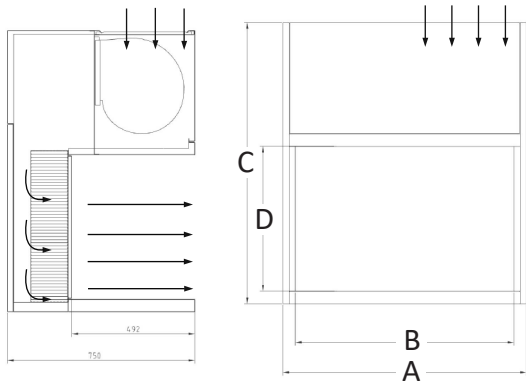


CONSTRUCTION

CABINET	The housing is constructed of locally sourced steel and consists of a high-quality powdercoated finish to provide a suitably solvent, alkali and acid resistant laboratory grade coating. The work area is fully constructed from stainless steel, with inward folds to avoid sharp edges. A removable, washable metal screen protects the HEPA filter from mechanical damage.
FANS	A direct-drive fan is regulated by a speed controller to enable airflow to be maintained through filter life. Fans and filter plenums are designed to provide quiet operation and low vibration level.
HEPA FILTERS	Clyde-Apac® Microseal™ HEPA filters, are certified for compliance to AS 4260. Each filter is individually certified to be leak-free in accordance with AS 1807.6. A manufacturer endorsed test label fitted with an extract of the test report is affixed to each filter. A prefilter extends the life of the exhaust HEPA filter and protects it from the mechanical damage during cleaning of the work zone.
PRE-FILTERS	An easily-accessed, washable pre-filter arrests not less than 90% of particles 5 micron and larger, thus prolonging HEPA filter life. A warning light in the control panel signals the need for pre-filter service.
ELECTRICAL	A low voltage touch control panel is located on the front of the cabinet. Glare-free lamps provide a minimum lighting intensity of min 650 lux at the work floor.



HWS CABINET



PHYSICAL DATA (MM)

MODEL	A	B	C	D	KG
HWS 90	980	880	1130	580	120
HWS 120	1280	1180	1130	580	150
HWS 120/75	1280	1180	1280	730	180
HWS180	1890	1790	1130	580	200
HWS180/75	1890	1790	1280	730	230

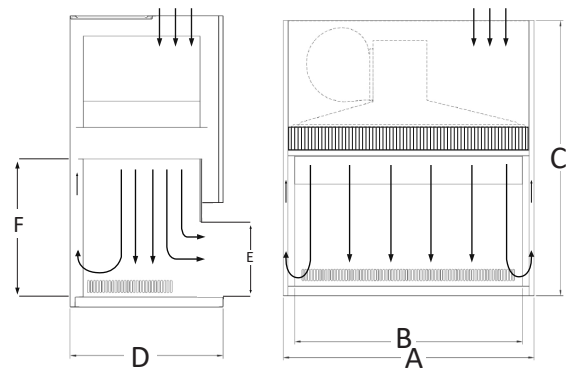
STANDARD FEATURES

- Stainless steel work zone
- Low voltage touch controls
- Pre-filter service
- Glare-free fluorescent lighting
- Comprehensive operation manual
- Power outlet

OPTIONS

- Hourmeter
- Manometer
- Service taps for air, gas and vacuum
- Extra quiet operation
- Floor stand (fixed height)
- Floor stand (electric height - adjustable)
- Germicidal UV lamp
- UV shield/ work zone cover

VWS CABINET



PHYSICAL DATA (MM)

MODEL	A	B	C	D	E	F	KG
VWS 90	1000	880	1420	712	550	690	150
VWS 120	1342	1180	1420	712	550	690	200
VWS 180	1962	1800	1420	712	550	690	270

- Stainless steel work zone
- Pre-filter service
- Partial airflow recirculation
- Comprehensive operation manual
- Low-voltage touch controls
- Glare-free fluorescent lighting
- Quiet, low-vibration operation

- IV hanging rail
- Hourmeter
- Manometer
- Service taps for air, gas and vacuum
- Extra quiet operation
- Floor stand (fixed height)
- Floor stand (electric height - adjustable)
- Double-sided operation
- Recirculating available
- IVF available
- Germicidal UV lamp
- UV shield/ work zone cover



ON-SITE TESTING

HWS & VWS Series cabinets are factory tested and certified by a NATA-Accredited laboratory. Additional testing and certification is recommended as follows:

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

OTHER PRODUCTS

- UltraSafe™ Cabinet Series
- CSV™ Cabinet Series
- CG2000™ Cytotoxic Drug Safety Cabinets

PERSONNEL PROTECTION

HWS & VWS cabinets provide protection for products or experiments, but do not protect personnel from aerosols of hazardous materials that may be handled in the cabinet. For applications where personnel and environmental protection is required, Clyde-Apac Class I or Class II biological safety cabinets, or cytotoxic drug safety cabinets (as applicable) should be considered.



AES Environmental maintains an ISO 9001:2008 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.

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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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