

**Australian Standard  
AS1386.5 Type-Tested\***

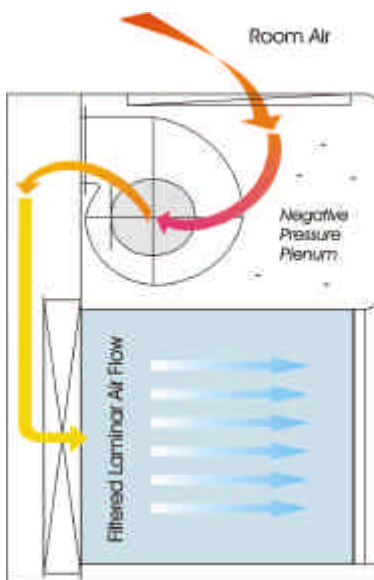


**Esco Airstream® Horizontal Laminar Flow Cabinet** offers proven protection for your samples and processes. With over thousands of units in use worldwide, this model offers a sensible balance of quality, performance features and cost-effectiveness. Like all Esco cabinets this model features many key innovations for which Esco is recognized for: **mini-pleat separatorless ULPA filter technology**, the best product protection in the world, external rotor motors, superior filter mechanical construction.

The cabinet is ergonomically designed with transparent UV-resistant tempered glass sides and an easy-to-clean 304-grade stainless steel work top.

Esco Airstream® laminar flow cabinets are also equipped with ULPA filters (typical efficiency of 99.9998% at 0.3 microns) that offer a significantly higher efficiency than conventional HEPA filters (99.99% at 0.3 microns) used by most other manufacturers.

**The intelligent blower system** automatically compensates to maintain airflow as the filter loads (additional manual adjustment can be carried out to further prolong filter life). This unique features eliminates the need for constant speed control adjustments, while ensuring optimum performance and product protection.



**Cabinet Airflow Profile**

- Room air is taken in from the top of the cabinet through a disposable pre-filter with 85% arrestance; this serves to trap larger particles and increase the life of the main filter.
- Air is forced evenly across the ULPA filter(s); the result is a stream of clean laminar air within the work zone of the cabinet; this dilutes and flushes all airborne contaminants from the interior.
- A nominal filter face velocity of 0.45 m/s or 90 fpm ensures that there is a sufficient number of air changes within the enclosed area of the cabinet in order to maintain cleanliness.
- The purified air travels across the internal work zone of the cabinet in a horizontal, unidirectional stream and leaves the main work chamber across the entire open front of the cabinet.

- Industrial-grade main body constructed of electro-galvanised steel; with an abrasion-resistant white oven-baked powder-coated finish.

- Durable and easy to clean stainless steel work surface will never rust, chip, or generate particles; raised edge at back of work zone prevents spills from damaging the filter.

- Permanently lubricated direct drive centrifugal blower(s); **energy efficient external rotor motor** type design reduces operating costs.

- Extremely low noise and vibration levels (less than 59dBA at working position) due to proprietary construction and mounting technology.

- Built-in solid state variable speed controller(s) (infinitely adjustable from zero to the maximum setting) with built-in RFI and noise filters is superior to conventional "step" controllers.

- Standard cabinet control system consists of separate switches / indicator lights for blower, lights and UV light (UV-light switch is interlocked with the light and blower switch for enhanced safety) plus a pressure gauge for airflow monitoring.

- Built-in warm white, **electronically ballasted** lighting offers excellent illumination throughout the work zone in order to reduce operator fatigue and is comfortable to the eyes. Light tubes are mounted out of the air stream for better airflow uniformity.

- ISO Class 3 air cleanliness within work zone as per ISO 14644.1 (equivalent to Class 1 as per US Federal Standard 209E, **100 times "cleaner"** than the usual Class 100 classification on cabinets offered by the competition). All materials used in the product are cleanroom compatible.

- High-quality polyester pre-filter and main **ULPA filter with a typical efficiency of 99.9997% at MPPS and 99.9998% at both 0.3 and 0.12 microns** provide the best product protection in the world; typical main ULPA filter lifespan is more than 3 years depending on the operating conditions.

- **Mini-pleat separatorless ULPA filter** technology reduces energy consumption and delivers increased laminar airflow uniformity for better product and cross contamination protection. ULPA filters are double scan tested, at the time of manufacturing, and after installation.

- Integral filter metal guard on the ULPA filter prevents accidental damage the filter media; seamless filter gasket is permanently molded on the filter frame and will not deteriorate over time; aerosol (DOP/PAO) challenge test port included.

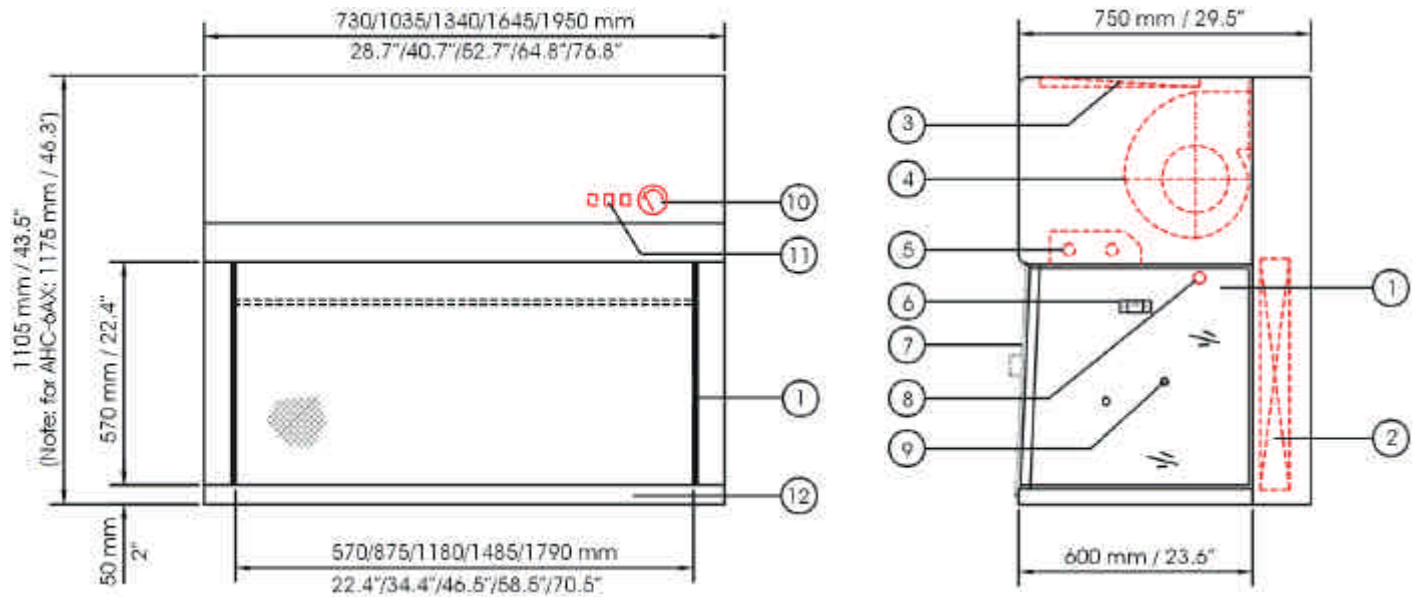
- UV-resistant tempered glass sides increase operator comfort and provide a high level of protection against harmful UV rays when a UV lamp is installed; tempered glass is also stronger and more durable compared to plastic materials.

- Designed to meet the safety requirements of IEC 61010-1 / EN 61010-1 / UL 3101-1 / CSA C22.2 No. 1010.1-92. Components are UL listed / recognised.

- Cabinet is shipped fully-assembled in wood crate; simply plug in the unit to a power source for operation - no local installation is required.

- **Extended warranty period of 3 years** excluding consumable parts and accessories.

\* Based on performance type-tests conducted on model AHC-4A1 by the Australian Institute of Medical and Veterinary Sciences



**Engineering Details**

- 1. Tempered Glass Side Panel
  - 2. ULPA Filter
  - 3. Pre-filter
  - 4. Blower
  - 5. Fluorescent Lamps
  - 6. Optional IV Bar
  - 7. Optional Front Cover
  - 8. Optional UV Light
  - 9. Plugged Service Fixture Provisions (2 One Each Side)
  - 10. Pressure Gauge
  - 11. Operating Switches
  - 12. Stainless Steel Work Surface
- *Work Zone Ceiling: Optional Electrical Outlet Retrofit Kit™ Provisions: 1 For 2ft/3ft Models, 2 For 4ft And Above*

**Optional Retrofit Kits™:** support stand, front cover, IV bar with hooks, service fixtures, germicidal UV lamp, electrical socket outlets.

General Specifications	AHC-2AX	AHC-3AX	AHC-4AX	AHC-5AX	AHC-6AX
External Dimensions (Width x Depth x Height)	730 x 750 x 1105 mm 28.7" x 29.5" x 43.5"	1035 x 750 x 1105 mm 40.7" x 29.5" x 43.5"	1340 x 750 x 1105 mm 52.7" x 29.5" x 43.5"	1645 x 750 x 1105 mm 64.8" x 29.5" x 43.5"	1950 x 750 x 1175 mm 76.8" x 29.5" x 43.5"
Internal Work Zone (Width x Depth x Height)	670 x 600 x 570 mm 22.4" x 23.6" x 22.4"	875 x 600 x 570 mm 34.4" x 23.6" x 22.4"	1180 x 600 x 570 mm 46.6" x 23.6" x 22.4"	1485 x 600 x 570 mm 58.5" x 23.6" x 22.4"	1790 x 600 x 570 mm 70.5" x 23.6" x 22.4"
Air Volume (At Initial Velocity)	600 cmh / 350 cfm	900 cmh / 530 cfm	1205 cmh / 710 cfm	1500 cmh / 880 cfm	1800 cmh / 1060 cfm
Laminar Airflow Velocity	Average of 0.45 m/s or 90 fpm measured 150mm / 6" from filter face for 45 air changes / minute (uniformity is +/-20%)				
Standards Compliance	Individually performance tested and certified at factory under controlled conditions for: General requirements: IEST-RP-CC002.2 and AS1386.5 Air cleanliness: ISO 14664.1 Class 3, IEST-G-CC1001, IEST-G-CC1002 and other equivalent air cleanliness requirements Filter performance: IEST-RP-CC034.1, IEST-RP-CC007.1, IEST-RP-CC001.3 and EN1822 Electrical safety: IEC 61010-1 / EN 61010-1 / UL 3101-1 / CSA C22.2 No. 1010.1-92				
Air Cleanliness Within Working Area	ISO 14644.1 Class 3, US Federal Standard 209E Class 1 / M1.5, AS 1386 Class 1.5, JIS B9920 Class 3, BS5295 Class C, Class M10,000 as per KS 27030.1 and other equivalent cleanliness classifications of the VDI 2083 and AFNOR X44101				
Main Filter Type	ULPA filter with integral metal guards and filter frame gaskets; fully compliant with EN1822 and IEST-RP-CC001.3 requirements				
Main Filter Efficiency Ratings	Minimum: 99.9991% at 0.3µm / 99.9985% at 0.12µm / 99.9982% at MPPS Typical: 99.9998% at 0.3µm / 99.9998% at 0.12µm / 99.9997%at MPPS				
Pre-Filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated				
Noise Level	Typically <59 dBA at initial blower speed setting measured as per IEST-RP-CC002.2, based on 4 feet cabinet, subject to acoustic properties of test environment				
Light Intensity	>800 lux / >75 foot candles, measured at work surface level (zero background) as per IEST-RP-CC002.2				
Main Body Construction	1.5mmt / 0.06" / 16 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish				
Side Window Construction	Colourless and transparent UV-absorbing 6mm / 0.24" tempered glass				
Work Surface Construction	1.2mmt / 0.05" / 18 gauge stainless steel grade 304				
Maximum Power Consumption / Current	220-240VAC / 50Hz 1Ph 584W / 2.54A	600W / 2.61A	614W / 2.67A	634W / 2.76A	1631W / 7.09A
	110-130VAC / 60Hz 1Ph 828W / 6.90A	844W / 7.03A	858W / 7.15A	878W / 7.32A	1666W / 13.88A
Net Weight (Approximate)	92 kgs / 203 lbs	112 kgs / 247 lbs	133 kgs / 293lbs	161 kgs / 355 lbs	208 kgs / 443 lbs
Max Shipping Weight	185 kgs / 408 lbs	200 kgs / 440 lbs	223 kgs / 492 lbs	251 kgs / 553 lbs	297 kgs / 655 lbs
Max Shipping Dimensions (W x D x H)	900 x 950 x 1630 mm 35.4" x 37.4" x 64.2"	1200 x 950 x 1630 mm 47.2" x 37.4" x 64.2"	1500 x 950 x 1630 mm 59.0" x 37.4" x 64.2"	1800 x 950 x 1630 mm 70.9" x 37.4" x 64.2"	2100 x 950 x 1730 mm 82.7" x 37.4" x 64.2"
Max Shipping Volume	1.39 cbm / 49.1 cbf	1.86 cbm / 48.4 cbf	1.74 cbm / 65.7 cbf	2.79 cbm / 98.5 cbf	3.45 cbm / 121.8 cbf

**ESCO® Esco Biotechnology Equipment Division**

Esco Biotech is a highly focused manufacturer of laminar flow, biohazard safety and other HEPA-filtered cabinets for the laboratory with a history of quality cabinets since 1978. We are highly oriented towards the international marketplace, with sales in more than 60 countries and 90% of turnover exported. Our products have been independently tested to standards such as AS1807.5 and EN12469. Products are manufactured under an ISO 9001 registered quality system.

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