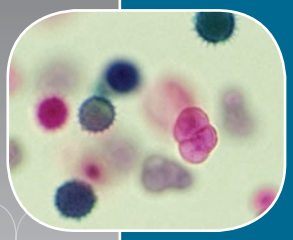
OptiMair™ Vertical Laminar Flow Clean Bench, Model ACB-4E

Enterprise® Laminar Flow Straddle Units, Model EQU/06-ESUS



*Airstream® Horizontal Laminar Flow Clean Bench Model LHG-4A-F_*

*Airstream® Horizontal Laminar Flow Clean Bench Model LHS-4A-F_*

Airstream® Vertical Laminar Flow Clean Bench Model LVG-4A-S_ (with Sliding Slash)

Airstream® Vertical Laminar Flow Clean Bench Model LVS-4A-S_ (with Sliding Slash)

Esco Laminar Flow Clean Benches

The World's Most Quiet and Safest Choice for Sample Protection Needs

Combined Catalogue

ESCO
WORLD CLASS. WORLDWIDE.

Esco Laminar Flow Clean Benches

Table of Contents

Welcome to Esco

Esco's Vision is to provide enabling technologies for scientific discoveries to make human lives healthier and safer.

The Esco Group of Companies is committed to deliver innovative solutions for the clinical, life sciences, research, industrial, laboratory, pharmaceutical, and IVF community. With the most extensive product line in the industry, Esco have passed a number of international standards and certifications, and is operating under ISO 90001, ISO 14001, and ISO 13485. Esco represents innovation and forward-thinking designs, that are of the highest standard quality since 1978.

Availability and Accessibility. Esco has headquarters in Singapore, Indonesia, and Philippines, with manufacturing facilities are located in Asia and Europe. Research and Development (R&D) is conducted worldwide spanning the US, Europe and Asia. Sales, services and marketing subsidiaries are located in 42 major markets including US, UK, Japan, China and India. Esco regional distribution centers are located in Singapore, Malaysia, Thailand, Vietnam, Myanmar, Indonesia, Philippines, Bangladesh, Hong Kong, Taiwan, South Korea, China, Japan, India, UAE, Central and South Africa, Denmark, Germany, Italy, Lithuania, Russia, United Kingdom, and USA. Because of our worldwide presence, you can be sure that Esco is within your reach.

High Quality, Reliable, and Dependable. Esco products are of high quality, reliable, and dependable; assuring customers of research accuracy. Cross functional teams from Esco Production, R&D, Quality Assurance, and Senior Management, are regularly assembled to review and implement areas for improvement.

Esco Cares for Your Safety. Esco focuses on providing safety not just for your samples but also for you and the environment.

Esco Cares for Your Comfort. Building ergonomic designs and reducing noise levels of the units ensures comfort for our users.

Esco Cares for the Environment. One in every four of Esco's employees is involved in R&D and a number of them evaluate new components and/or designs to produce energy efficient equipment. Being GREEN is more than just modifying parts used to produce a new energy efficient technology, it is also embodied in the every aspect of the company.

Customer Service and Support. Our service does not stop once purchase has been done. Esco gives on-time customer service and offers end-user seminars, service training, preventive maintenance, and provides educational materials and informative videos.

As Esco takes the opportunity to respond to the world's needs, we aim not only to contribute in the advancement of scientific discoveries but also in making the world a safer, healthier, and better place to live in.

Products and Application

Laboratory Equipment

Sample Preparation
- Class I Biological Safety Cabinets
- Class II Biological Safety Cabinets
- Class II Type A2 Biological Safety Cabinets
- Class II Type B1 Biological Safety Cabinets
- Class II Type B2 Biological Safety Cabinets
- Class III Biological Safety Cabinets
- Horizontal Laminar Flow Cabinets
- Vertical Laminar Flow Cabinets
- Laboratory Animal Research Workstations
- Laboratory Centrifuges

Sample Cultivation
- CO_2 Incubators, Direct Heat Air-Jacketed
- CO_2 Incubators with Cooling System
- CO_2 Incubators with Stainless Steel Exterior
- Laboratory Shakers

Sample Handling and Analysis

PCR Thermal Cyclers
- Conventional Thermal Cyclers

PCR Sample Handling
- Microplate Shakers
- PCR Cabinets

Sample Storage & Sample Protection Solutions
- Ultra-low Temperature Freezers
- Lab Refrigerators and Freezers
- Sample Database Management Software
- Intelligent Remote Monitoring Application Protocol
- Remote Monitoring, Datalogging, Programming Software
- Wireless Monitoring System

Chemical Research
- Ducted Fume Hood
- Ductless Fume Hood
- Filtered Storage Cabinet
- Powder Weighing Balance Enclosure
- Exhaust Blowers
- Fume Hood Airflow Monitor

General Equipment

Laboratory Thermostatic Products
- Laboratory Oven
- Forced Convection Laboratory Incubator
- Natural Convection Laboratory Incubator
- Refrigerated Laboratory Incubator

Forensic Sciences
- Evidence Drying Cabinet

Medical / IVF Equipment

Controlled Embryo Handling
- Esco Multi-Zone ART Workstation
- Esco Multi-Zone ART Workstation Class II
- AVT Anti-Vibration Table
- Semi-Closed Environment (SCE) IVF

Safe Embryo Culture
- MIRI® Multiroom Incubator
- MIRI® II Multiroom Incubator
- Mini MIRI® Humidified Incubator
- Mini MIRI® Dry Incubator
- CelCulture® CO_2 Incubator

Innovative Time Lapse Imaging
- MIRI® Time-Lapse Incubator

Accurate Quality Control
- MIRI® GA Gas and Temperature Validation Unit

Unique Consumables
- CultureCoin®

Healthcare

Esco Pharma Products

Airflow Containment
- Ceiling Laminar Airflow (CLAF)
- Cytoculture® Cytotoxic Safety Cabinet
- Pharmacon™ Downflow Booth
- Esco Garment Storage Cabinet
- Esco Glassware Hoods
- Laminar Flow Horizontal/Vertical Trolley (LFH/VT)
- Laminar Flow Straddle Units

Isolation Containment
- Advanced Processing Platform Isolator (APPI)
- Aseptic Containment Isoaltor (ACTI)
- Blood Cell Labelling Isolator
- Streamline® Closed Restricted Access Barrier System (SLC-RABS)
- Containment Barrier Isolator (CBI)
  - CBI-Unidirectional (CBI-U)
  - CBI-Turbulent (CBI-T)
  - CBI-Class III Biosafety Cabinet (CBI-III)
  - CBI-Convertible Class III/Class I Biosafety Cabinet (CBI-H)
- Isoclean® Healthcare Platform Isolator (HPI)
  - HPI-G3-Without Filter Below Work Zone
  - HPI-G3-With Filter Below Work Zone
  - HPI-Inflatable Seal (HPI-IS)
  - HPI-G3-K
- General Processing Platform Isolator
  - GPPI-Inflatable Seal (GPPI-IS)
  - GPPI-Static Seal (GPPI-SS)
- Streamline® Compounding Isolator
  - SCI - Isolator Configuration
  - SCI - Class III Biosafety Cabinet (SCI-III)
- Technetium Dispensing Isolator
- Turbulent Flow Aseptic Isolator
- Weighing and Dispensing Containment Isolator

Cross Contamination Facility Integrated Barrier
- BioPass™ Pass Through
- Cleanroom Air Showers
- Dynamic Pass Boxes/ Dynamic Floor Laminar Hatches
- Infinity® Air Shower Pass Box
- Esco Sputum Booth
- Infinity® Pass Boxes
- Infinity® Cleanroom Transfer Hatch
- Soft Capsule® Soft Wall Cleanroom

Ventilation Containment
- Ventilated Balance Enclosure

Esco VacciXcell Products

Bioreactors and Fermenters
- CelXrocker™
- CelCradle™
- CelCradle™ X
- StirCradle™
- StirCradle™PRO
- TideXcell™
- TideXcell™ Cell Harvesting System (TXCHS)
- VXL™ Hybrid Bioreactor

Cell Culture Monitoring, Media and Consumables
- Super Plus™
- Plus™ Vero
- Plus™ MDCK
- Plus™ MDCK II
- BioNOC™ II macrocarriers
- GlucCell™ Glucose Monitoring System
- CVD Kit

Filling Line Equipment
- Filling Line Isolators
- cRabs (close restricted access barriers)
- oRabs (open restricted access barriers)

Integrated Solutions
- Cell Processing Isolator
- Cell Processing Center

TaPestle Rx Products and Services

PRODUCTS

Pharmacy Automation and Compounding Supply
- Compounding Pharmacy Isolators (SCI, HPI, CBI, GPPI)
- Safety Cabinets and Enclosures (CYT, Class II BSC, VBE. LFC)
- Radiopharmacy Hoods and Isolators
- Aseptic Filling Systems

Healthcare and Laboratory Construction Components
- Prefabricated Walls (Airecell®)
- Prefabricated Containerized Facility (Prefab™)
- Series Ceiling Systems
- Hygienic/Hermetic Door Systems
- Surgical Scrub Sinks
- Vinyl Tiles and Epoxy
- Laboratory Fit-outs
  - Worktops
  - Frames
  - Specialty Storage cabinets
  - Service Spines & Reagent Shelving

SERVICES
- Conceptualization
- Planning
- Procurement
- Installation

FACILITY DESIGNS
- Process Architecture
- Biocontainment/Biosafety
- Pharmacy Compounding/Nuclear Medicine
- Cleanroom, Vaccine and Cell Processing
- Laboratory
- Containerized Facility
- ART/IVF
- Cold Chain

OVERVIEW

For Research Laboratories

Esco Laminar Flow Clean Benches are the premium selection for the discerning researcher, offering a combination of value, high quality construction, low operating noise levels, and a wide product range to suit all budgets from the industry leader. Laminar flow clean benches are used in applications where there is no generation of biohazardous materials, hence operator protection is not required.

Airstream® Gen 3 Laminar Flow Clean Benches

Esco Airstream® Laminar Flow Clean Benches are designed to provide superior product protection for your samples in research laboratories by preventing the entry of room and airborne contaminants. They are built with the latest laminar flow technology and innovation, and offers a wide range of options for user preferences.

- Horizontal Laminar Flow Clean Benches
- Vertical Laminar Flow Clean Benches

OptiMair™ Vertical Laminar Flow Clean Benches

OptiMair™ Vertical Laminar Flow Clean Benches provide ISO Class 3 air cleanliness within the work zone as per ISO 14644.1, which is significantly cleaner than the usual Class 5 classification. Like all Esco products, OptiMair™ clean benches are manufactured for the most demanding laboratory applications and designed for maximum chemical resistance and enhanced durability for a long service life.

For Industrial Process Protection

Enterprise® Laminar Flow Straddle Units

Esco Enterprise® Laminar Flow Straddle Units are designed for larger-scale process protection in industrial applications typically requiring multiple units connected in an assembly line configuration. Esco straddle units provide ISO Class 4 air cleanliness within the work zone as per ISO 14644.1.

Airstream® Gen 3 Laminar Flow Clean Benches (Glass and Stainless Steel Side Walls)

Esco Airstream® Horizontal Laminar Flow Clean Bench is built with the latest laminar flow technology and innovation to provide superior product protection for your samples and processes. It is powered by the latest generation DC ECM motor that saves up to 70% of energy compared to AC motor and offers stable airflow despite voltage fluctuation. Other key features include ULPA filtration system that creates ISO Class 3 work zone, Isocide™ antimicrobial coating that inhibits bacterial growth within 24 hours of exposure, Sentinel™ Gold Microprocessor Control and many more.

Enjoy the benefits of product protection with more product variants and sizes to suit more applications and user preferences.

Key features include:

- Energy saving DC ECM Blower
- ISOCIDE™ antimicrobial powder coating
- ULPA Filter with >99.999% efficiency at 0.1 – 0.2 µm
- Low noise
- Sentinel™ Gold Microprocessor Control System
- Recessed central work tray to contain spills
- Ergonomic design

Esco Laminar Flo

Esco is the world leader in premium laminar flow clean b
They are the premium selection for the discerning researcher and c
low operating noise levels, and a wi

Research Laboratories

Optimair™ Vertical Laminar FlowClean Bench

Airstream® Gen 3 Laminar Flow Clean Benches

Horizontal Models

Stainless Steel Side Walls

Glass Side Walls

Stainless Stee

*OptiMair™ Model: ACB-4E_*

*Airstream® Model: LHS-4F_*

*Airstream® Model: LHG-4F_*

Airstream® Model: LVS -4S_ (sliding sash)

ow Clean Benches

benches for the global industrial and life sciences market.
operator, offering a combination of value, high quality construction,
de product range to suit all budgets.

Industrial Processes

Enterprise® Laminar Flow Straddle Units

Vertical Models

el Side Walls

Glass Side Walls

Airstream® Model: LVS -4F_ (fixed sash)

Airstream® Model: LVG -4S_ (sliding sash)

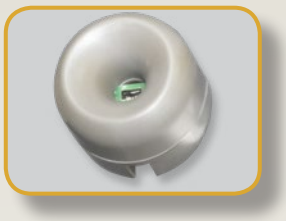
Airstream® Model: LVG-4F_ (fixed sash)

Enterprise® Model: EQUI06-ESUS

Rocker Switches

- *Easy to use switches*
- *Displays filter loading status*
- *Manually adjustable UV timer*

Note: Rocker switch models only available for USA

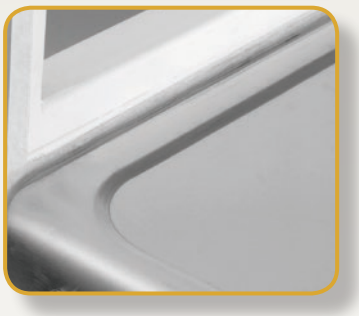


Sentinel™ Gold Microprocessor Controller

- *Displays all safety information on one screen*
- *Standby mode switch to further save energy*
- *Programmable UV timer to extend UV lamp life*

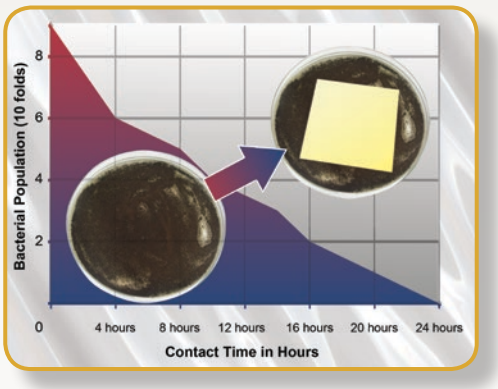
Ergonomic Control Panel Location

- *Centered and angled down for easy reach & viewing*
- *ADA-Compliant*



Work Top

- *The spill-retaining work top design with a recessed central area contains accidental liquid spills.*



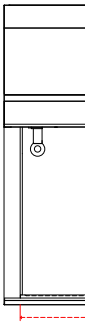
ISOCIDE™ Powder Coat

- *Silver-ion impregnated powder coat*
- *Inhibit microbial growth to improve safety*

Guide to Models

LH - - -

1st Placeholder Product Line		2nd Placeholder Flow		3rd Placeholder Side Wall		4th Placeholder Width		5th Placeholder Internal Height		6th Placeholder Control		7th Placeholder Window		8th Placeholder Electrical	
Laminar Flow	**L**	Horizontal	**H**	Glass	**G**	3 feet	**3**	2 feet	**A**	Sentinel™ Gold	**G**	Fixed	**F**	230 VAC, 50 / 60 Hz	**8**
				Stainless Steel	**S**	4 feet	**4**	2.5 feet	**B**	Rocker Switches	**S**			115 VAC, 50 / 60 Hz	**9**
						5 feet	**5**	3 feet	**C**						
						6 feet	**6**								
						8 feet	**8**								



Example Code: LHG-4BG-F8
Specifications: Laminar flow cabinet, Horizontal Flow, Glass sided walls, 4 ft width, 2.5 ft internal height, Sentinel™ Gold microprocessor controller, Fixed window and 230 VAC, 50/60 Hz

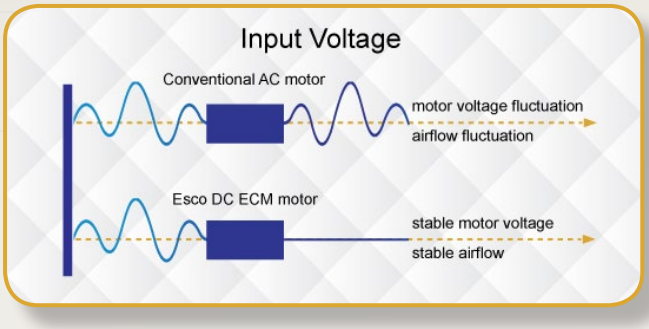
Airflow Sensor

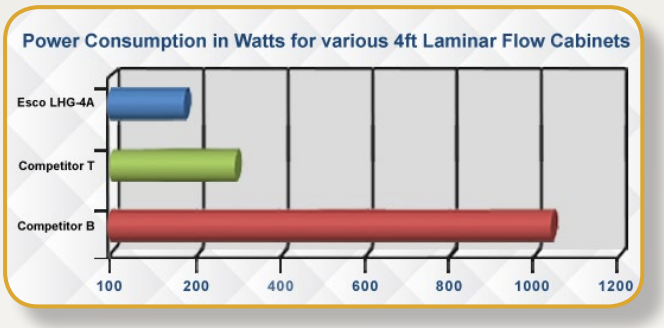
- *Monitors real-time airflow for safety*
- *Alert the user if airflow is insufficient*

Energy-Efficient DC ECM Motor

- *Powered by latest generation DC ECM motor, that is more efficient than legacy ECM and VFD motors*
- *70% Energy savings compared to AC motor*
- *Stable airflow, despite building voltage fluctuations & filter loading*
- *Standby mode to further reduce power consumption (Standby mode will provide ISO Class 5 workzone)*

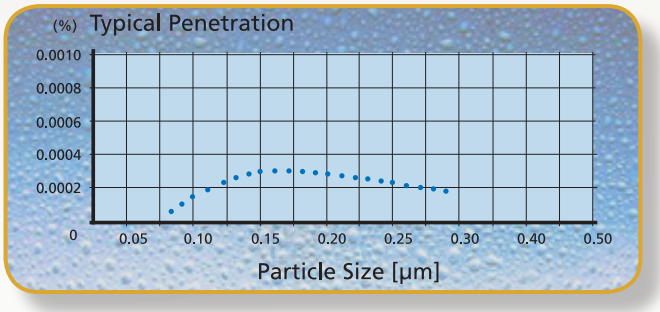
Airstream® Horizontal Laminar Flow Clean Bench, Model LHG-4





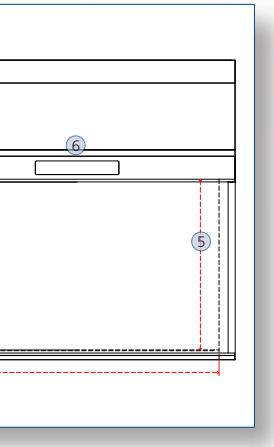
ULPA Filter

- *10x Filtration efficiency of HEPA filter creates ISO Class 3 work zone instead of industry-standard ISO Class 5*
- *10x Cleaner work zone than cabinets with HEPA filter*



Quiet Operation

- *World's leading low noise laminar flow cabinet*
- *Comfortable low noise at 55 dBA*
  **LHG-4B in open field condition*
- *Reduce fatigue and improve work concentration*

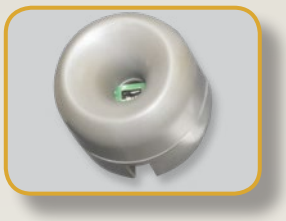


	Cabinet Performance	Air Quality	Filtration	Electrical Safety
Standards Compliance	IEST-RP-CC002.2, Worldwide	ISO 14644.1, Class 3, Worldwide AS 1386 Class 1.5, Australia JIS B9920, Class 3, Japan	EN-1822 (H14), Europe IEST-RP-CC001.3, Worldwide IEST-RP-CC007, Worldwide IEST-RP-CC034.1, Worldwide	IEC61010-1, Worldwide EN 61010-1, Europe UL61010-1, USA CAN/CSA-22.2, No.61010-1

Rocker Switches

- *Easy to use switches*
- *Displays filter loading status*
- *Manually adjustable UV timer*

Note: Rocker switch models only available for USA

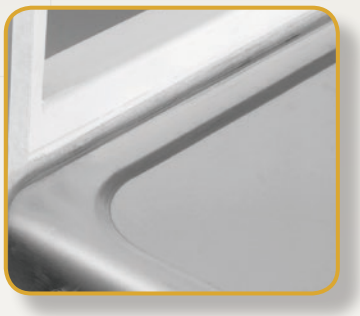


Sentinel™ Gold Microprocessor Controller

- *Displays all safety information on one screen*
- *Standby mode switch to further save energy*
- *Programmable UV timer to extend UV lamp life*

Ergonomic Control Panel Location

- *Centered and angled down for easy reach & viewing*
- *ADA-Compliant*



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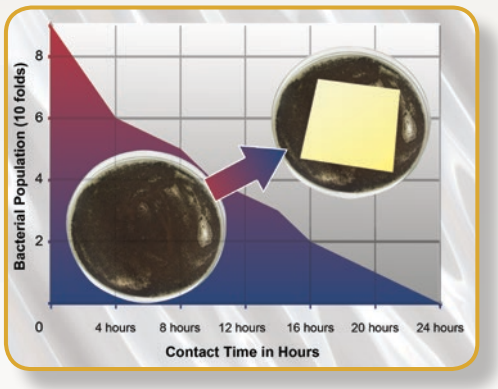

ISOCIDE™ Powder Coat

- *Silver-ion impregnated powder coat*
- *Inhibit microbial growth to improve safety*

Airstream® Vertical Laminar Flow Clean Bench, Model LVG-4

Guide to Models

L V - -

1st Placeholder **Product Line**		2nd Placeholder **Flow**		3rd Placeholder **Side Wall**		4th Placeholder **Width**		5th Placeholder **Internal Height**		6th Placeholder **Control**		7th Placeholder **Window**		8th Placeholder **Electrical**	
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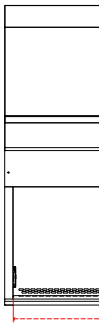

Airflow Sensor

- *Monitors real-time airflow for safety*
- *Alert the user if airflow is insufficient*

Energy-Efficient DC ECM Motor

- *Powered by latest generation DC ECM motor, that is more efficient than legacy ECM and VFD motors*
- *70% Energy savings compared to AC motor*
- *Stable airflow, despite building voltage fluctuations & filter loading*
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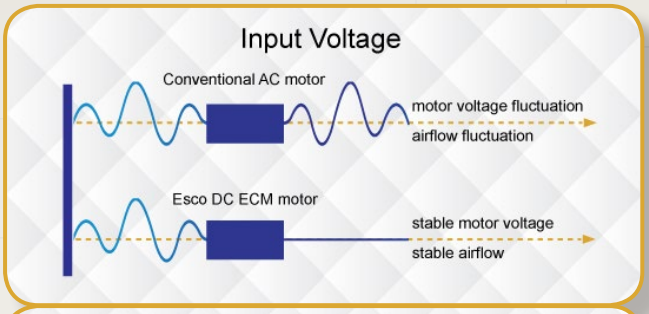

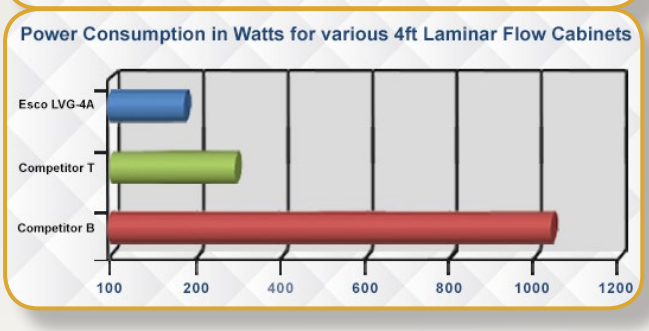

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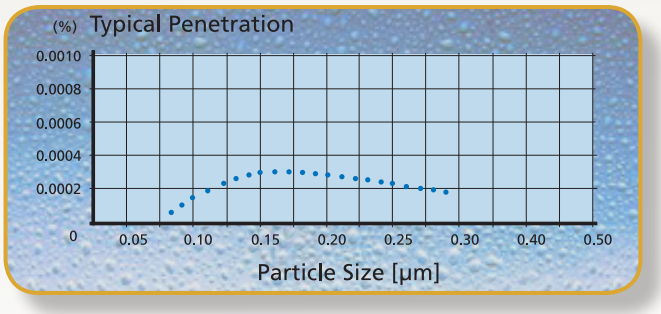
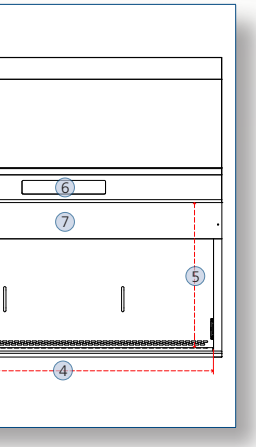


Sash Window

- *Polycarbonate Fixed Sash*
- *UV Resistant Tempered Glass Manual Sliding Sash*

Quiet Operation

- *World's leading low noise laminar flow cabinet*
- *Comfortable low noise at 52 dBA*
  **LVG-4A in open field condition*
- *Reduce fatigue and improve work concentration*



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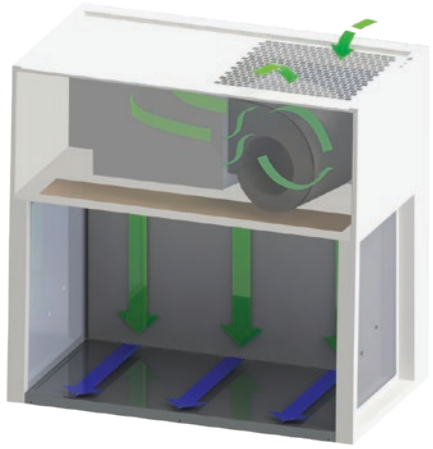
Airstream® Horizontal Laminar Flow Stainless Steel Side Wall Version

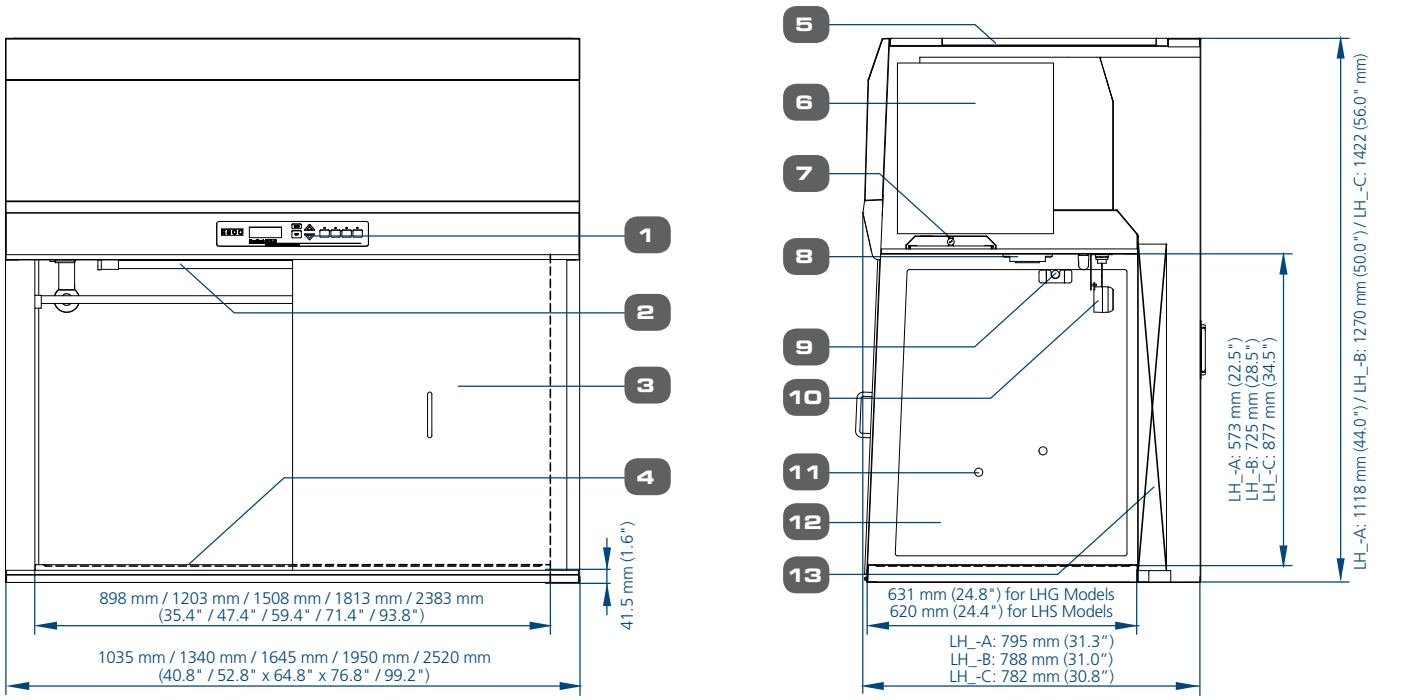
- Room air is taken in from the top of the clean bench through a disposable pre -filter with 85% arrestance; this serves to trap larger particles and increase the life of the main filter.
- Air is forced evenly across the ULPA/H14 filter(s); the result is a stream of clean laminar air within the workzone of the clean bench; 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 clean bench to maintain cleanliness.
- The purified air travels across the internal work zone of the clean bench in a horizontal, unidirectional stream and leaves the main work chamber across the entire open front of the clean bench.



ULPA-filtered air

Room air / Inflow air

Airstream® Horizontal Laminar Flow Engineering Drawing



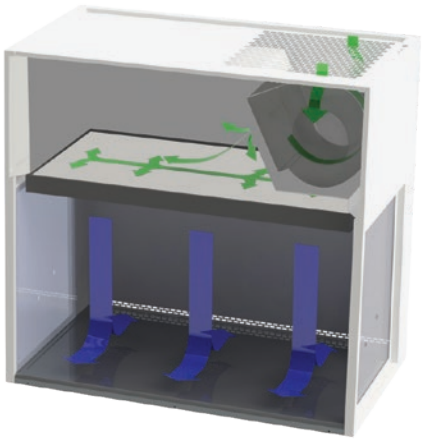
1. *Esco Sentinel™ Gold Microprocessor Controller / Simple Switches Control System*
2. *UV Light Retrofit Kit Provision*
3. *(Optional) Front Cover*
4. *Spill-retaining Stainless Steel Work Top*
5. *Pre-filter*
6. *DC ECM Blower*
7. *Fluorescent Lamp*
8. *Electrical Outlet Provision (maximum of 2)*
9. *IV Bar Retrofit Kit Provision*
10. *Air Flow Sensor*
11. *Service Fixture Retrofit Kit Provision (2 on each side)*
12. *Tempered Glass Side Walls (for LHG Variant) Stainless Steel Side Walls (for LHS Variant)*
13. *ULPA / H14 Filter*

Esco Horizontal and Vertical Laminar Flow Clean Benches Accessories

Model		3 feet Width	4 feet Width	5 feet Width	6 feet Width	8 feet Width
UV Lamp		UV-15A-L 5170251	UV-30A-L 5170255			UV-30A-L *2
Electrical Outlet		EO-				
IV Bar Horizontal Flow		IV-890 5170608	IV-1195 5170609	IV-1500 5170610	IV-1805 5170611	IV-2375 5170662
IV Bar Vertical Flow		IV-960 5170603	IV-1265 5170604	IV-1570 5170605	IV-1875 5170606	IV-2445 5170607
PVC Arm Rest		ME-W-REST 5170127				
Height-adjustable Lab Chair (Blue)		ME-LD-AR360 1150006				
Ergonomic Foot Rest		FT-REST 5170073				
Support Stand Telescoping with Castors (28" to 34")		STC-3A0 5130055	STC-4A0 5130056	STC-5A0 5130057	STC-6A0 5130058	STC-8A0 Gen2 5131146
Support Stand Telescoping with Leveling Feet (28" to 34")		STL-3A0 5130050	STL-4A0 5130051	STL-5A0 5130052	STL-6A0 5130053	STL-8A0 Gen2 5131150
Support Stand with Leveling Feet (28")		SAL-3A0 Gen2 5130170	SAL-4A0 Gen2 5130134	SAL-5A0 Gen2 5130171	SAL-6A0 Gen2 5130172	SAL-8A0 Gen2 5131124
Support Stand with Leveling Feet (34")		SAL-3B0 Gen2 5130174	SAL-4B0 Gen2 5130175	SAL-5B0 Gen2 5130176	SAL-6B0 Gen2 5130177	SAL-8B0 Gen2 5131125
Pre-filter	Horizontal	PF-4 5090003	PF-2 (2 pcs) 5090001	PF-3 and PF-4 5090002 and 5090003	PF-2 (3 pcs) 5090001	PF-2 and PF-4 (2 pcs) 5090001 and 5090003
	Vertical				PF-4 (2 pcs) 5090003	

Airstream® Vertical Laminar Flow Stainless Steel Side Wall Version

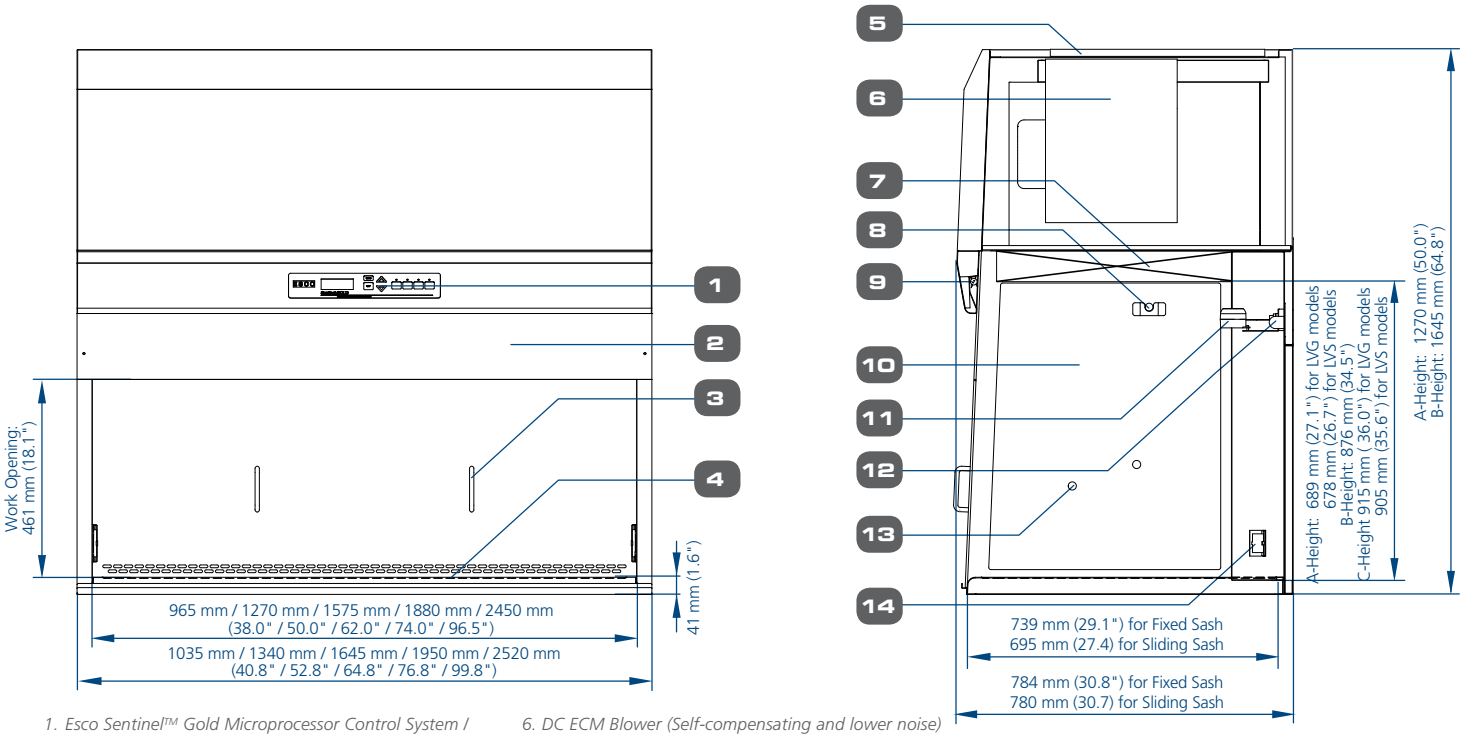
- Room air is taken in from the top of the clean bench through a disposable pre-filter with 85% arrestance; this serves to trap larger particles and increase the life of the main filter.
- Air is forced evenly across the ULPA/H14 filter(s); the result is a stream of clean laminar air within the workzone of the clean bench; 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 clean bench to maintain cleanliness.
- The purified air travels across the working zone of the clean bench in a vertical, unidirectional stream and leaves the main work chamber across the entire open front of the clean bench and through Auto-Purge™ slots at the back wall of the work zone which are designed to eliminate air turbulence and the possibility of dead air corners in the work zone.



ULPA-filtered air

Room air / Inflow air

Airstream® Vertical Laminar Flow Engineering Drawing



1. *Esco Sentinel™ Gold Microprocessor Control System / Simple Switches Control System*
2. *Fixed Sash (LV_-F variant) (Optional) Manual Sliding Sash (LV_-S variant)*
3. *Optional Front Cover*
4. *Stainless Steel Work Top*
5. *Pre-filter*
6. *DC ECM Blower (Self-compensating and lower noise)*
7. *ULPA filter*
8. *IV Bar Retrofit Kit Provision*
9. *Fluorescent Lamp*
10. *Tempered Glass Side Walls (for LVG Variant) Stainless Steel Side Walls (for LVS Variant)*
11. *Airflow Sensor*
12. *UV Lamp*
13. *Service Fixture Retrofit Kit Provision (2 holes on each side)*
14. *Electrical Outlet Retrofit Kit provison (1 outlet on each side)*

Esco Horizontal and Vertical Laminar Flow Clean Benches Front Cover					
	3 feet	4 feet	5 feet	6 feet	8 feet
LHG / LHS	FC-LHG / LHS-3A 5170601	FC-LHG / LHS-4A 5170602	FC-LHG / LHS-5A 5170585	FC-LHG / LHS-6A 5170586	
	FC-LHG / LHS-3B 5170587	FC-LHG / LHS-4B 5170588	FC-LHG / LHS-5B 5170589	FC-LHG / LHS-6B 5170590	
	FC-LHG / LHS-3C 5170627	FC-LHG / LHS-4C 5170591		FC-LHG / LHS-6C 5170592	FC-LHG / LHS-8C 5170593
LVG / LVS*	FC-LVG / LVS-3A 5170595	FC-LVG / LVS-4A 5170584	FC-LVG / LVS-5A 5170596	FC-LVG / LVS-6A 5170597	
		FC-LVG / LVS-4C 5170598	FC-LVG / LVS-5C 5170061	FC-LVG / LVS-6C 5170599	FC-LVG / LVS-8C 5170600

** For fixed sash models only (LVS-_F and LVG-_F)*

General Specifications, Airstream® Vertical Laminar Flow Clean Benches, A-Height (Interior Height: 2.25 ft / 0.7 m) with Sentinel™ Gold Microprocessor Control System

Stainless Steel Sides		LVS-3AG-F8 2120381	LVS-4AG-F8 2120382	LVS-5AG-F8 2120383	LVS-6AG-F8 2120384
			LVS-4AG-S8 2120759		LVS-6AG-S8 2120760
		LVS-3AG-F9 2120443	LVS-4AG-F9 2120445	LVS-5AG-F9 2120447	LVS-6AG-F9 2120449
			LVS-4AG-S9 2120762		LVS-6AG-S9 2120764
Glass Sides		LVG-3AG-F8 2120374	LVG-4AG-F8 2120369	LVG-5AG-F8 2120375	LVG-6AG-F8 2120407
			LVG-4AG-S8 2120701		LVG-6AG-S8 2120703
		LVG-3AG-F9 2120435	LVG-4AG-F9 2120437	LVG-5AG-F9 2120439	LVG-6AG-F9 2120441
			LVG-4AG-S9 2120761		LVG-6AG-S9 2120763
Nominal Size		0.9 meter (3′)	1.2 meter (4′)	1.5 meter (5′)	1.8 meter (6′)
External Dimensions without Base Stand (W x D x H)	Fixed Sash Models	1035 x 784 x 1270 mm (40.8″ x 30.8″ x 50.0″)	1340 x 784 x 1270 mm (52.8″ x 30.8″ x 50.0″)	1645 x 784 x 1270 mm (64.8″ x 30.8″ x 50.0″)	1950 x 784 x 1270 mm (76.8″ x 30.8″ x 50.0″)
	Sliding Sash Models		1340 x 780 x 1270 mm (52.8″ x 30.7″ x 50.0″)		1950 x 780 x 1270 mm (76.8″ x 30.7″ x 50.0″)
Internal Work Area, Dimensions (W x D x H)	LVG Models (Fixed Sash)	965 x 739 x 689 mm (38.0″ x 29.1″ x 27.1″)	1270 x 739 x 689 mm (50.0″ x 29.1″ x 27.1″)	1575 x 739 x 689 mm (62.0″ x 29.1″ x 27.1″)	1880 x 739 x 689 mm (74.0″ x 29.1″ x 27.1″)
	LVG Models (Sliding Sash)		1270 x 695 x 689 mm (50.0″ x 27″ x 27.1″)		1880 x 695 x 689 mm (74.0″ x 27″ x 27.1″)
	LVS Models (Fixed Sash)	965 x 739 x 678 mm (38.0″ x 29.1″ x 26.7″)	1270 x 739 x 678 mm (50.0″ x 29.1″ x 26.7″)	1575 x 739 x 678 mm (62.0″ x 29.1″ x 26.7″)	1880 x 739 x 678 mm (74.0″ x 29.1″ x 26.7″)
	LVS Models (Sliding Sash)		1270 x 695 x 678 mm (50.0″ x 27″ x 26.7″)		1880 x 695 x 678 mm (74.0″ x 27″ x 26.7″)
Internal Work Area, Space		0.6 m² (6.5 ft²)	0.8 m² (8.6 ft²)	1.0 m² (10.7 ft²)	1.3 m² (14.0 ft²)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		1117 m³/hr (657 cfm)	1471 m³/hr (866 cfm)	1824 m³/hr (1074 cfm)	2177 m³/hr (1281 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		51.6 dBA	52.4 dBA	55.6 dBA	57.6 dBA
Fluorescent Lamp Intensity at Zero Ambient		1000 Lux (93 foot candles)			
Cabinet Construction	Main Body	1.2 mm (0.05″) 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish			
	Work Zone	1.2 mm (0.05″) 18-gauge stainless steel, grade 304, with 4B finish			
	Side Walls	LVS Models: 1.2 mm (0.05″) 18 gauge stainless steel, grade 304, with 4B finish			
		LVG Models: UV Resistant tempered glass, 5 mm (0.2″), colorless and transparent			
	Sash Window	Fixed Sash: 5 mm (0.2") UV Resistant Polycarbonate Sash with 461 mm (18.1") opening			
		Manual Sliding Sash: 5 mm (0.2") UV Resistant Tempered Glass with counter-balance system and ergonomic handle			
Electrical Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	7.3 A	7.5 A	7.8 A	8.5 A
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	129	151	199	258
	Heat Rejected, BTU per Hour	440	515	679	880
Electrical Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	12 A	12.5 A	13.3 A	13.5 A
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	132	155	204	264
	Heat Rejected, BTU per Hour	450	529	696	908
Net Weight**		135 Kg (298 lbs)	158 Kg (348 lbs)	199 Kg (438 lbs)	208 Kg (459 lbs)
Shipping Weight**		167 Kg (368 lbs)	202 Kg (445 lbs)	256 Kg (564 lbs)	273 Kg (602 lbs)
Shipping Dimensions, Maximum (W x D x H)**		1120 x 900 x 1590 mm (44″ x 35″ x 62″)	1400 x 900 x 1590 mm (55″ x 35″ x 62″)	1720 x 900 x 1590 mm (68″ x 35″ x 62″)	2200 x 900 x 1590 mm (87″ x 35″ x 62″)
Shipping Volume, Maximum**		1.6 m³ (56.6 ft³)	2.0 m³ (70.6 ft³)	2.5 m³ (88.2 ft³)	3.3 m³ (116.5 ft³)

Specifications are subject to change without notice.
**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*
***Cabinet only, excludes optional stand.*

General Specifications, Airstream® Horizontal Laminar Flow Clean Benches, A-Height (Interior Height: 2 ft / 0.6 m) with Sentinel™ Gold Microprocessor Control System

Stainless Steel Sides		**LHS-3AG-F8 2120377**	**LHS-4AG-F8 2120378**	**LHS-5AG-F8 2120379**	**LHS-6AG-F8 2120380**
		LHS-3AG-F9 2120425	**LHS-4AG-F9 2120427**	**LHS-5AG-F9 2120429**	**LHS-6AG-F9 2120431**
Glass Sides		**LHG-3AG-F8 2120387**	**LHG-4AG-F8 2120368**	**LHG-5AG-F8 2120372**	**LHG-6AG-F8 2120373**
		LHG-3AG-F9 2120417	**LHG-4AG-F9 2120419**	**LHG-5AG-F9 2120421**	**LHG-6AG-F9 2120423**
Nominal Size		0.9 meter (3′)	1.2 meter (4′)	1.5 meter (5′)	1.8 meter (6′)
External Dimensions (W x D x H)	Without Base Stand	1035 x 795 x 1118 mm (40.8″ x 31.3″ x 44.0″)	1340 x 795 x 1118 mm (52.8″ x 31.3″ x 44.0″)	1645 x 795 x 1118 mm (64.8″ x 31.3″ x 44.0″)	1955 x 795 x 1118 mm (76.8″ x 31.3″ x 44.0″)
Internal Work Area, Dimensions (W x D x H)	LHG Models	898 x 631 x 573 mm (35.4″ x 24.8″ x 22.5″)	1203 x 631 x 573 mm (47.4″ x 24.8″ x 22.5″)	1508 x 631 x 573 mm (59.4″ x 24.8″ x 22.5″)	1813 x 631 x 573 mm (71.4″ x 24.8″ x 22.5″)
	LHS Models	898 x 620 x 573 mm (35.4″ x 24.4″ x 22.5″)	1203 x 620 x 573 mm (47.4″ x 24.4″ x 22.5″)	1508 x 620 x 573 mm (59.4″ x 24.4″ x 22.5″)	1813 x 620 x 573 mm (71.4″ x 24.4″ x 22.5″)
Internal Work Area, Space		0.5 m² (5.4 ft²)	0.7 m² (7.5 ft²)	0.9 m² (9.6 ft²)	1.0 m² (10.8 ft²)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		834 m³/hr (491 cfm)	1117 m³/hr (657 cfm)	1400 m³/hr (824 cfm)	1683 m³/hr (911 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		53.2 dBA	55.8 dBA	58.4 dBA	60.0 dBA
Fluorescent Lamp Intensity at Zero Ambient		1045 Lux (97 foot candles)	1139 Lux (106 foot candles)	984 Lux (91 foot candles)	1221 Lux (113 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05″) 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish			
	Work Zone	1.2 mm (0.05″) 18-gauge stainless steel, grade 304, with 4B finish			
	Side Walls	LHS Models: 1.2 mm (0.05″) 18 gauge stainless steel, grade 304, with 4B finish LHG Models: UV absorbing tempered glass, 5 mm (0.2″), colorless and transparent			
Electrical Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	7 A	7.3 A	7.6 A	8 A
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	140	171	211	249
	Heat Rejected, BTU per Hour	478	583	720	850
Electrical Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	11.3 A	11.4 A	11.4 A	11.5 A
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	144	175	216	255
	Heat Rejected, BTU per Hour	491	597	737	870
Net Weight**		100 Kg (220 lbs)	145 Kg (320 lbs)	167 Kg (368 lbs)	212 Kg (467 lbs)
Shipping Weight**		132 Kg (291 lbs)	200 Kg (440 lbs)	224 Kg (494 lbs)	277 Kg (611 lbs)
Shipping Dimensions, Maximum (W x D x H)**		1120 x 900 x 1590 mm (44″ x 35″ x 62″)	1400 x 900 x 1590 mm (55″ x 35″ x 62″)	1720 x 900 x 1590 mm (68″ x 35″ x 62″)	2200 x 900 x 1590 mm (87″ x 35″ x 62″)
Shipping Volume, Maximum**		1.6 m³ (56.6 ft³)	2.0 m³ (70.6 ft³)	2.5 m³ (88.2 ft³)	3.3 m³ (116.5 ft³)

Specifications are subject to change without notice.
**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*
***Cabinet only, excludes optional stand.*

General Specifications, Airstream® Horizontal Laminar Flow Clean Benches, B-Height (Interior Height: 2 ½ ft / 0.8 m) with Simple Switches Control System

Glass Side, Simple Switches		**LHG-3BS-F9 2120705**	**LHG-4BS-F9 2120716**	**LHG-5BS-F9 2120717**	**LHG-6BS-F9 2120718**
Stainless Steel Side, Simple Switches		**LHS-3BS-F9 2120661**	**LHS-4BS-F9 2120663**	**LHS-5BS-F9 2120665**	**LHS-6BS-F9 2120667**
Nominal Size		0.9 meter (3')	1.2 meter (4')	1.5 meter (5')	1.8 meter (6')
External Dimensions (W x D x H)	Without Base Stand	1035 x 788 x 1270 mm (40.8" x 31.0" x 50.0")	1340 x 788 x 1270 mm (52.8" x 31.0" x 50.0")	1645 x 788 x 1270 mm (64.8" x 31.0" x 50.0")	1950 x 788 x 1270 mm (76.8" x 31.0" x 50.0")
Internal Work Area, Dimensions (W x D x H)*	LHG Models	898 x 631 x 725 mm (35.4" x 24.8" x 28.5")	1203 x 631 x 725 mm (47.4" x 24.8" x 28.5")	1508 x 631 x 725 mm (59.4" x 24.8" x 28.5")	1813 x 631 x 725 mm (71.4" x 24.8" x 28.5")
	LHS Models	898 x 620 x 725 mm (35.4" x 24.4" x 28.5")	1203 x 620 x 725 mm (47.4" x 24.4" x 28.5")	1508 x 620 x 725 mm (59.4" x 24.4" x 28.5")	1813 x 620 x 725 mm (71.4" x 24.4" x 28.5")
Internal Work Area, Space		0.5 m² (5.4 ft²)	0.7 m² (7.5 ft²)	0.9 m² (9.6 ft²)	1.0 m² (10.8 ft²)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		1055 m³/hr (621 cfm)	1413 m³/hr (832 cfm)	1771 m³/hr (1042 cfm)	2129 m³/hr (1253 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		52.8 dBA	55.4 dBA	58.0 dBA	59.6 dBA
Fluorescent Lamp Intensity at Zero Ambient		1279 Lux (119 foot candles)	1394 Lux (130 foot candles)	1204 Lux (112 foot candles)	1494 Lux (139 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05") 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish.			
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish.			
	LHG Side Walls	UV-absorbing tempered glass, 5 mm (0.2"), colorless and transparent			
	LHS Side Walls	Interior: 1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish. Exterior: 1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester powder-coated finish.			
Electrical Power Rating 9: 110-130 VAC, 50 / 60Hz, 1 phase**	Cabinet Full Load Amps (FLA)	12.3 A	12.4 A	12.4 A	12.5 A and 6.5 A (2 Power Inlet)
	Optional Outlets (FLA)	6 A			
	Cabinet Nominal Power (W)	154	188	273	343
	Heat Rejected, BTU per Hour	525	641	932	1170
Net Weight***		108 Kg (238 lbs)	156 Kg (344 lbs)	180 Kg (397 lbs)	228 Kg (503 lbs)
Shipping Weight***		140 Kg (308 lbs)	211 Kg (465 lbs)	237 Kg (522 lbs)	293 Kg (646 lbs)
Shipping Dimensions, Maximum (W x D x H)***		1120 x 900 x 1590 mm (44" x 35" x 62")	1400 x 900 x 1590 mm (55" x 35" x 62")	1720 x 900 x 1590 mm (68" x 35" x 62")	2200 x 900 x 1590 mm (87" x 35" x 62")
Shipping Volume, Maximum***		1.6 m³ (56.6 ft³)	2.0 m³ (70.6 ft³)	2.5 m³ (87 ft³)	3.3 m³ (118.6 ft³)

Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*
***Additional voltages may be available; contact Esco for ordering information.*
****Clean bench only; excludes optional stand.*

General Specifications, Airstream® Horizontal Laminar Flow Clean Benches, C-Height (Interior Height: 3 ft / 0.9 m) with Simple Switches Control System

Stainless Steel Side, Simple Switches		LHS-4CS-F9 2120675	LHS-6CS-F9 2120679	LHS-8CS-F9 2120681
Nominal Size		1.2 meter (4')	1.8 meter (6')	2.4 meter (8')
External Dimensions (W x D x H)	Without Base Stand	1340 x 782 x 1422 mm (52.8" x 30.8" x 56.0")	1950 x 782 x 1422 mm (76.8" x 30.8" x 56.0")	2520 x 782 x 1422 mm (99.2" x 30.8" x 56.0")
Internal Work Area, Dimensions (W x D x H)*		1203 x 620 x 877 mm (47.4" x 24.4" x 34.5")	1813 x 620 x 877 mm (71.4" x 24.4" x 34.5")	2383 x 620 x 877 mm (93.8" x 24.4" x 34.5")
Internal Work Area, Space		0.7 m^2 (7.5 ft^2)	1.0 m^2 (10.8 ft^2)	1.4 m^2 (15.0 ft^2)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial set point		
Air Volume		1709 m^3/hr (1006 cfm)	2576 m^3/hr (1516 cfm)	3385 m^3/hr (1992 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm		
Sound Emission per IEST-RP-CC002.2*		56.4 dBA	59.4 dBA	62.3 dBA
Fluorescent Lamp Intensity At Zero Ambient		1304 Lux (121 foot candles)	1001 Lux (93 foot candles)	1136 Lux (106 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05") 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish.		
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish.		
	LHS Side Walls	Interior: 1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish. Exterior: 1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester powder-coated finish.		
Electrical Power Rating 9: 110-130 VAC, 50 / 60Hz, 1 phase**	Cabinet Full Load Amps (FLA)	12.3 A	12.5 A and 6.5 A (2 Power Inlet)	13 A and 7 A (2 Power Inlet)
	Optional Outlets (FLA)	6 A		
	Cabinet Nominal Power (W)	217	400	432
	Heat Rejected, BTU per Hour	740	1365	1481
Net Weight***		167 Kg (368 lbs)	236 Kg (520 lbs)	317 Kg (699 lbs)
Shipping Weight***		222 Kg (489 lbs)	301 Kg (663 lbs)	397 Kg (875 lbs)
Shipping Dimensions, Maximum (W x D x H)***		1400 x 900 x 1590 mm (55" x 35" x 62")	2200 x 900 x 1590 mm (87" x 35" x 62")	2720 x 950 x 1590 mm (107" x 37" x 62")
Shipping Volume, Maximum***		2.0 m^3 (70.6 ft^3)	3.3 m^3 (118.6 ft^3)	4.1 m^3 (144.8 ft^3)

Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*

***Additional voltages may be available; contact Esco for ordering information.*

****Clean bench only; excludes optional stand.*

General Specifications, Airstream® Horizontal Laminar Flow Clean Benches, B-Height (Interior Height: 2.5 ft / 0.8 m) with Sentinel™ Gold Microprocessor Control System

Stainless Steel Sides		**LHS-3BG-F8 2120463**	**LHS-4BG-F8 2120465**	**LHS-5BG-F8 2120467**	**LHS-6BG-F8 2120469**
		LHS-3BG-F9 2120503	**LHS-4BG-F9 2120505**	**LHS-5BG-F9 2120507**	**LHS-6BG-F9 2120509**
Glass Sides		**LHG-3BG-F8 2120453**	**LHG-4BG-F8 2120455**	**LHG-5BG-F8 2120457**	**LHG-6BG-F8 2120459**
		LHG-3BG-F9 2120493	**LHG-4BG-F9 2120495**	**LHG-5BG-F9 2120497**	**LHG-6BG-F9 2120499**
Nominal Size		0.9 meter (3′)	1.2 meter (4′)	1.5 meter (5′)	1.8 meter (6′)
External Dimensions (W x D x H)	Without Base Stand	1035 x 788 x 1270 mm (40.8″ x 31.0″ x 50.0″)	1340 x 788 x 1270 mm (52.8″ x 31.0″ x 50.0″)	1645 x 788 x 1270 mm (64.8″ x 31.0″ x 50.0″)	1950 x 788 x 1270 mm (76.8″ x 31.0″ x 50.0″)
Internal Work Area, Dimensions (W x D x H)	LHG Models	898 x 631 x 725 mm (35.4″ x 24.8″ x 28.5″)	1203 x 631 x 725 mm (47.4″ x 24.8″ x 28.5″)	1508 x 631 x 725 mm (59.4″ x 24.8″ x 28.5″)	1813 x 631 x 725 mm (71.4″ x 24.8″ x 28.5″)
	LHS Models	898 x 620 x 725 mm (35.4″ x 24.4″ x 28.5″)	1203 x 620 x 725 mm (47.4″ x 24.4″ x 28.5″)	1508 x 620 x 725 mm (59.4″ x 24.4″ x 28.5″)	1813 x 620 x 725 mm (71.4″ x 24.4″ x 28.5″)
Internal Work Area, Space		0.5 m² (5.4 ft²)	0.7 m² (7.5 ft²)	0.9 m² (9.6 ft²)	1.0 m² (10.8 ft²)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		1055 m³/hr (621 cfm)	1413 m³/hr (832 cfm)	1771 m³/hr (1042 cfm)	2129 m³/hr (1253 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		52.8 dBA	55.4 dBA	58.0 dBA	59.6 dBA
Fluorescent Lamp Intensity at Zero Ambient		1279 Lux (119 foot candles)	1394 Lux (130 foot candles)	1204 Lux (112 foot candles)	1494 Lux (139 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05″) 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish			
	Work Zone	1.2 mm (0.05″) 18-gauge stainless steel, grade 304, with 4B finish			
	Side Walls	LHS Models: 1.2 mm (0.05″) 18 gauge stainless steel, grade 304, with 4B finish LHG Models: UV absorbing tempered glass, 5 mm (0.2″), colorless and transparent			
Electrical Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	7 A	7.3 A	7.6 A	8 A and 3 A (2 Power Inlet)
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	160	207	255	302
	Heat Rejected, BTU per Hour	546	702	870	1030
Electrical Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase	Cabinet Full Load Amps (FLA)	11.3 A	11.4 A	11.4 A	11.5 A and 6.5 A (2 Power Inlet)
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	163	211	260	308
	Heat Rejected, BTU per Hour	556	720	887	1051
Net Weight**		108 Kg (238 lbs)	156 Kg (344 lbs)	180 Kg (397 lbs)	228 Kg (503 lbs)
Shipping Weight**		140 Kg (308 lbs)	200 Kg (441 lbs)	237 Kg (522 lbs)	293 Kg (646 lbs)
Shipping Dimensions, Maximum (W x D x H)**		1120 x 900 x 1590 mm (44″ x 35″ x 62″)	1400 x 900 x 1590 mm (55″ x 35″ x 62″)	1720 x 900 x 1590 mm (68″ x 35″ x 62″)	2200 x 900 x 1590 mm (87″ x 35″ x 62″)
Shipping Volume, Maximum**		1.6 m³ (56.6 ft³)	2.0 m³ (70.6 ft³)	2.5 m³ (88.2 ft³)	3.3 m³ (116.5 ft³)

Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*

***Cabinet only, excludes optional stand.*

General Specifications, Airstream® Horizontal and Vertical Laminar Flow Clean Benches, C-Height (Interior Height: 3 ft / 0.9 m) with Sentinel™ Gold Microprocessor Control System

Model	Nominal Size	External Dimension (W x D x H)	Internal Dimension (W x D x H)	Sound Emission per IEST-RP-CC002.2*	Fluorescent Lamp Intensity at Zero Ambient	Cabinet Full Load Amps (FLA)	Cabinet Nominal Power (W)	Heat Rejected, BTU per Hour	Shipping Weight**	Shipping Dimensions, Maximum (W x D x H)**	Shipping Volume, Maximum**
VERTICAL LAMINAR FLOW (Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase)											
LVS-4CG-F8 2120565	4 ft (1.2 m)	1340 x 774 x 1645 mm (52.8" x 30.5" x 64.8")	1270 x 739 x 905 mm (50.0" x 29.1" x 35.6")	52.5 dBA	904 Lux (84 fc)	7.5 A	213	727	243 Kg (536 lbs)	1490 x 900 x 1750 mm (58.7" x 35.4" x 68.9")	2.3 m³ (81.2 ft³)
LVS-6CG-F8 2120569	6 ft (1.8 m)	1950 x 774 x 1645 mm (76.8" x 30.5" x 64.8")	1880 x 739 x 905 mm (74.0" x 29.1" x 35.6")	53.2 dBA	1062 Lux (99 fc)	8.5 A	392	1337	330 Kg (661 lbs)	2070 x 900 x 1750 mm (81.5" x 35.4" x 68.9")	3.3 m³ (116.5 ft³)
LVS-8CG-F8 2120686	8 ft (2.4 m)	2520 x 774 x 1645 mm (99.2" x 30.5" x 64.8")	2450 x 739 x 905 mm (96.5" x 29.1" x 35.6")	59.8 dBA	1100 Lux (102 fc)	8.5 A and 3.5 A	422	1446	455 Kg (1003 lbs)	2720 x 950 x 1750 mm (107" x 37.4" x 68.9")	4.5 m³ (158.9 ft³)
LVG-4CG-F8 2120555	4 ft (1.2 m)	1340 x 774 x 1645 mm (52.8" x 30.5" x 64.8")	1270 x 739 x 915 mm (50.0" x 29.1" x 36.0")	52.5 dBA	904 Lux (84 fc)	7.5 A	213	727	243 Kg (536 lbs)	1490 x 900 x 1750 mm (58.7" x 35.4" x 68.9")	2.3 m³ (81.2 ft³)
LVG-6CG-F8 2120559	6 ft (1.8 m)	1950 x 774 x 1645 mm (76.8" x 30.5" x 64.8")	1880 x 739 x 915 mm (74.0" x 29.1" x 36.0")	53.2 dBA	1062 Lux (99 fc)	8.5 A	392	1337	330 Kg (661 lbs)	2070 x 900 x 1750 mm (81.5" x 35.4" x 68.9")	3.3 m³ (116.5 ft³)
VERTICAL LAMINAR FLOW (Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase)											
LVS-4CG-F9 2120605	4 ft (1.2 m)	1340 x 774 x 1645 mm (52.8" x 30.5" x 64.8")	1270 x 739 x 905 mm (50.0" x 29.1" x 35.6")	52.5 dBA	904 Lux (84 fc)	11.5 A	217	741	243 Kg (536 lbs)	1490 x 900 x 1750 mm (58.7" x 35.4" x 68.9")	2.3 m³ (81.2 ft³)
LVS-6CG-F9 2120609	6 ft (1.8 m)	1950 x 774 x 1645 mm (76.8" x 30.5" x 64.8")	1880 x 739 x 905 mm (74.0" x 29.1" x 35.6")	53.2 dBA	1062 Lux (99 fc)	13.5 A	400	1365	330 Kg (661 lbs)	2070 x 900 x 1750 mm (82" x 35.4" x 68.9")	3.3 m³ (116.5 ft³)
LVS-8CG-F9 2120687	8 ft (2.4 m)	2520 x 774 x 1645 mm (99.2" x 30.5" x 64.8")	2450 x 739 x 905 mm (96.5" x 29.1" x 35.6")	59.8 dBA	1100 Lux (102 fc)	14 A and 8A	434	1481	455 Kg (1003 lbs)	2720 x 950 x 1750 mm (107" x 37.4" x 68.9")	4.5 m³ (158.9 ft³)
LVG-4CG-F9 2120595	4 ft (1.2 m)	1340 x 774 x 1645 mm (52.8" x 30.5" x 64.8")	1270 x 739 x 915 mm (50.0" x 29.1" x 36.0")	52.5 dBA	904 Lux (84 fc)	11.5 A	217	741	243 Kg (536 lbs)	1490 x 900 x 1750 mm (58.7" x 35.4" x 68.9")	2.3 m³ (81.2 ft³)
LVG-6CG-F9 2120599	6 ft (1.8 m)	1950 x 774 x 1645 mm (76.8" x 30.5" x 64.8")	1880 x 739 x 915 mm (74.0" x 29.1" x 36.0")	53.2 dBA	1062 Lux (99 fc)	13.5 A	400	1365	330 Kg (661 lbs)	2070 x 900 x 1750 mm (81.5" x 35.4" x 68.9")	3.3 m³ (116.5 ft³)
HORIZONTAL LAMINAR FLOW (Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase)											
LHS-4CG-F8 2120545	4 ft (1.2 m)	1340 x 782 x 1422 mm (52.8" x 30.8" x 56.0")	1203 x 620 x 877 mm (47.4" x 24.4" x 34.5")	56.4 dBA	934 Lux (87 fc)	7.3 A	246	840	222 Kg (489 lbs)	1400 x 900 x 1590 mm (55.1" x 35.4" x 62.5")	2.0 m³ (70.6 ft³)
LHS-6CG-F8 2120549	6 ft (1.8 m)	1950 x 782 x 1422 mm (76.8" x 30.8" x 56.0")	1813 x 620 x 877 mm (71.4" x 24.4" x 34.5")	59.4 dBA	1001 Lux (93 fc)	8 A and 3 A	359	1225	301 Kg (664 lbs)	2200 x 900 x 1590 mm (86.6" x 35.4" x 62.5")	3.3 m³ (116.5 ft³)
LHS-8CG-F8 2120704	8 ft (2.4 m)	2520 x 782 x 1422 mm (99.2" x 30.8" x 56.0")	2383 x 620 x 877 mm (93.8" x 24.4" x 34.5")	62.3 dBA	1136 Lux (106 fc)	8.3 A and 3.3 A	388	1324	397 Kg (875 lbs)	2720 x 950 x 1590 mm (107.0" x 37.4" x 62.5")	4.1 m³ (144.8 ft³)
LHG-3CG-F8 2120533	3 ft (0.9 m)	1035 x 782 x 1422 mm (40.8" x 30.8" x 56.0")	898 x 631 x 877 mm (35.4" x 24.8" x 34.5")	54.2 dBA	1195 Lux (111 fc)	7 A	190	648	147 Kg (324 lbs)	1120 x 900 x 1590 mm (44" x 35.4" x 62.5")	1.6 m³ (56.5 ft³)
LHG-4CG-F8 2120535	4 ft (1.2 m)	1340 x 782 x 1422 mm (52.8" x 30.8" x 56.0")	1203 x 631 x 877 mm (47.4" x 24.8" x 34.5")	56.4 dBA	934 Lux (87 fc)	7.3 A	246	840	222 Kg (489 lbs)	1400 x 900 x 1590 mm (55.1" x 35.4" x 62.5")	2.0 m³ (70.6 ft³)
LHG-6CG-F8 2120539	6 ft (1.8 m)	1950 x 782 x 1422 mm (76.8" x 30.8" x 56.0")	1813 x 631 x 877 mm (71.4" x 24.8" x 34.5")	59.4 dBA	1001 Lux (93 fc)	8 A and 3 A	359	1225	301 Kg (664 lbs)	2200 x 900 x 1590 mm (86.6" x 35.4" x 62.5")	3.3 m³ (116.5 ft³)
HORIZONTAL LAMINAR FLOW (Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase)											
LHS-4CG-F9 2120585	4 ft (1.2 m)	1340 x 782 x 1422 mm (52.8" x 30.8" x 56.0")	1203 x 620 x 877 mm (47.4" x 24.4" x 34.5")	56.4 dBA	934 Lux (87 fc)	11.4 A	250	853	222 Kg (489 lbs)	1400 x 900 x 1590 mm (55.1" x 35.4" x 68.9")	2.0 m³ (70.6 ft³)
LHS-6CG-F9 2120589	6 ft (1.8 m)	1950 x 782 x 1422 mm (76.8" x 30.8" x 56.0")	1813 x 620 x 877 mm (71.4" x 24.4" x 34.5")	59.4 dBA	1001 Lux (93 fc)	11.5 A and 6.5 A	365	1245	301 Kg (664 lbs)	2200 x 900 x 1590 mm (86.6" x 35.4" x 62.5")	3.3 m³ (116.5 ft³)
LHS-8CG-F9 2120719	8 ft (2.4 m)	2520 x 782 x 1422 mm (99.2" x 30.8" x 56.0")	2383 x 620 x 877 mm (93.8" x 24.4" x 34.5")	62.3 dBA	1136 Lux (106 fc)	12 A and 6 A	394	1344	397 Kg (875 lbs)	2720 x 950 x 1590 mm (107.0" x 37.4" x 62.5")	4.1 m³ (144.8 ft³)
LHG-3CG-F9 2120573	3 ft (0.9 m)	1035 x 782 x 1422 mm (40.8" x 30.8" x 56.0")	898 x 631 x 877 mm (35.4" x 24.8" x 34.5")	54.2 dBA	1195 Lux (111 fc)	11.3 A	193	659	147 Kg (324 lbs)	1120 x 900 x 1590 mm (44" x 35.4" x 62.5")	1.6 m³ (56.5 ft³)
LHG-4CG-F9 2120575	4 ft (1.2 m)	1340 x 782 x 1422 mm (52.8" x 30.8" x 56.0")	1203 x 631 x 877 mm (47.4" x 24.8" x 34.5")	56.4 dBA	934 Lux (87 fc)	11.4 A	250	853	222 Kg (489 lbs)	1400 x 900 x 1590 mm (55.1" x 35.4" x 62.5")	2.0 m³ (70.6 ft³)
LHG-6CG-F9 2120579	6 ft (1.8 m)	1950 x 782 x 1422 mm (76.8" x 30.8" x 56.0")	1813 x 631 x 877 mm (71.4" x 24.8" x 34.5")	59.4 dBA	1001 Lux (93 fc)	11.5 A and 6.5 A	365	1245	301 Kg (664 lbs)	2200 x 900 x 1590 mm (86.6" x 35.4" x 62.5")	3.3 m³ (116.5 ft³)

SPECIFICATIONS AVAILABLE FOR ALL MODELS AND SIZES

Cabinet Construction	Main Body	1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester powder-coated finish
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish
	Side Walls	LVG-LHG: UV absorbing tempered glass, 5 mm (0.2"), colorless and transparent
		LVS-LHS: 1.2 mm (0.05") 18 gauge stainless steel, grade 304, with 4B finish
Average Airflow Velocity		0.45 m/s (90 fpm) at initial set point
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm
Electrical		Power Rating 8: 220-240 VAC, 50 / 60 Hz, 1 phase
		Power Rating 9: 110-130 VAC, 50 / 60 Hz, 1 phase

Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*

***Cabinet only, excludes optional stand.*

General Specifications, Airstream® Vertical Laminar Flow Clean Benches, A-Height (Interior Height: 2 ¼ ft / 0.7 m) with Simple Switches Control System

Glass Side, Simple Switches		**LVS-3AS-F9 2120706**	**LVS-4AS-F9 2120707**	**LVS-5AS-F9 2120708**	**LVS-6AS-F9 2120709**
Stainless Steel Side, Simple Switches		**LVG-3AS-F9 2120712**	**LVG-4AS-F9 2120713**	**LVG-5AS-F9 2120714**	**LVG-6AS-F9 2120715**
Nominal Size		0.9 meter (3')	1.2 meter (4')	1.5 meter (5')	1.8 meter (6')
External Dimensions (W x D x H)	Without Base Stand	1035 x 824 x 1270 mm (40.8" x 32.4" x 50.0")	1340 x 824 x 1270 mm (52.8" x 32.4" x 50.0")	1645 x 824 x 1270 mm (64.8" x 32.4" x 50.0")	1950 x 824 x 1270 mm (76.8" x 32.4" x 50.0")
Internal Work Area, Dimensions (W x D x H)*	LVG Models	965 x 739 x 689 mm (38.0" x 29.1" x 27.1")	1270 x 739 x 689 mm (50.0" x 29.1" x 27.1")	1575 x 739 x 689 mm (62.0" x 29.1" x 27.1")	1880 x 739 x 689 mm (74.0" x 29.1" x 27.1")
	LVS Models	965 x 739 x 678 mm (38.0" x 29.1" x 26.7")	1270 x 739 x 678 mm (50.0" x 29.1" x 26.7")	1575 x 739 x 678 mm (62.0" x 29.1" x 26.7")	1880 x 739 x 678 mm (74.0" x 29.1" x 26.7")
Internal Work Area, Space		0.6 m² (6.5 ft²)	0.8 m² (8.6 ft²)	1.0 m² (10.7 ft²)	1.3 m² (14.0 ft²)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		1117 m³/hr (657 cfm)	1471 m³/hr (866 cfm)	1824 m³/hr (1074 cfm)	2177 m³/hr (1281 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		51.6 dBA	52.4 dBA	55.6 dBA	57.6 dBA
Fluorescent Lamp Intensity at Zero Ambient		980 Lux (94 foot candles)	904 Lux (84 foot candles)	894 Lux (83 foot candles)	1062 Lux (99 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05") 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish.			
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish.			
	LVG Side Walls	UV-absorbing tempered glass, 5 mm (0.2"), colorless and transparent			
	LVS Side Walls	Interior: 1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish. Exterior: 1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester powder-coated finish.			
Electrical Power Rating 9: 110-130 VAC, 50 / 60Hz, 1 phase**	Cabinet Full Load Amps (FLA)	13 A	13.5 A	14.3 A	14.5 A
	Optional Outlets (FLA)	6 A			
	Cabinet Nominal Power (W)	132	155	204	264
	Heat Rejected, BTU per Hour	450	529	696	908
Net Weight***		135 Kg (298 lbs)	158 Kg (348 lbs)	199 Kg (438 lbs)	208 Kg (459 lbs)
Shipping Weight***		167 Kg (368 lbs)	202 Kg (445 lbs)	256 Kg (564 lbs)	273 Kg (602 lbs)
Shipping Dimensions, Maximum (W x D x H)***		1120 x 900 x 1590 mm (44" x 35" x 62")	1400 x 900 x 1590 mm (55" x 35" x 62")	1720 x 900 x 1590 mm (68" x 35" x 62")	2200 x 900 x 1590 mm (87" x 35" x 62")
Shipping Volume, Maximum***		1.6 m³ (56.6 ft³)	2.0 m³ (70.6 ft³)	2.5 m³ (88.2 ft³)	3.3 m³ (116.5 ft³)

Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*

***Additional voltages may be available; contact Esco for ordering information.*

****Clean bench only; excludes optional stand.*

General Specifications, Airstream® Vertical Laminar Flow Clean Benches, C-Height (Interior Height: 3 ft / 0.9 m) with Simple Switches Control System

Stainless Side, Simple Switches		LVS-4CS-F9 2120710	LVS-5CS-F9 2120720	LVS-6CS-F9 2120711	LVS-8CS-F9 2120689
Nominal Size		1.2 meter (4')	1.5 meter (5')	1.8 meter (6')	2.4 meters (8')
External Dimensions (W x D x H)	Without Base Stand	1340 x 814 x 1645 mm (52.8" x 32.0" x 64.8")	1645 x 814 x 1645 mm (64.8" x 32.0" x 64.8")	1950 x 814 x 1645 mm (76.8" x 32.0" x 64.8")	2520 x 814 x 1645 mm (99.2" x 32.0" x 64.8")
Internal Work Area, Dimensions (W x D x H)*		1270 x 739 x 905 mm (50.0" x 29.1" x 35.6")	1575 x 739 x 905 (62.0" x 29.1" x 35.6")	1880 x 739 x 905 mm (74.0" x 29.1" x 35.6")	2450 x 739 x 905 mm (96.5" x 29.1" x 35.6")
Internal Work Area, Space		0.8 m^2 (8.6 ft^2)	1.0 m^2 (10.7 ft^2)	1.3 m^2 (14.0 ft^2)	1.6 m^2 (17.2 ft^2)
Average Airflow Velocity		0.45 m/s (90 fpm) at initial setpoint			
Air Volume		1432 m^3/hr (843 cfm)	1776 m^3/hr (1045 cfm)	2120 m^3/hr (1248 cfm)	2762 m^3/hr (1626 cfm)
ULPA Filter Typical Efficiency		> 99.999% at particle size between 0.1 to 0.2 µm			
Sound Emission per IEST-RP-CC002.2*		52.6 dBA	53.0 dBA	53.2 dBA	59.8 dBA
Fluorescent Lamp Intensity At Zero Ambient		904 Lux (84 foot candles)	894 Lux (83 foot candles)	1062 Lux (99 foot candles)	1100 Lux (8102 foot candles)
Cabinet Construction	Main Body	1.2 mm (0.05") 18-gauge electro-galvanized steel with white oven-baked epoxy-polyster powder-coated finish.			
	Work Zone	1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish.			
	LVS Side Walls	Interior: 1.2 mm (0.05") 18-gauge stainless steel, grade 304, with 4B finish. Exterior: 1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester powder-coated finish.			
Electrical Power Rating 9: 110-130 VAC, 50 / 60Hz, 1 phase**	Cabinet Full Load Amps (FLA)	13.5 A	14.3 A	14.5 A and 8.5 A (2 Power Inlet)	15 A and 9 A (2 Power Inlet)
	Optional Outlets (FLA)	5 A			
	Cabinet Nominal Power (W)	217	304	400	434
	Heat Rejected, BTU per Hour	740	1037	1365	1481
Net Weight***		194 Kg (428 lbs)	244 Kg (538 lbs)	255 Kg (560 lbs)	352 Kg (776 lbs)
Shipping Weight***		243 Kg (536 lbs)	308 Kg (679 lbs)	330 Kg (661 lbs)	455 Kg (1003 lbs)
Shipping Dimensions, Maximum (W x D x H)***		1490 x 900 x1750 mm (59" x 35" x 69")	1790 x 900 x 1750 mm (70" x 35" x 69")	2070 x 900 x 1750 mm (82" x 35" x 69")	2720 x 950 x 1750 mm (107" x 37" x 69")
Shipping Volume, Maximum***		2.3 m^3 (81 ft^3)	2.8 m^3 (99.6 ft^3)	3.3 m^3 (116.5 ft^3)	4.5 m^3 (158.9 ft^3)

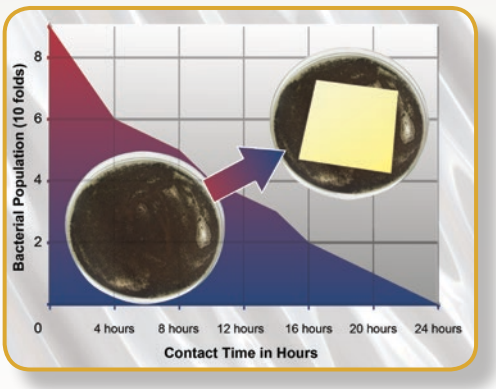
Specifications are subject to change without notice.

**Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3 dBA above these values.*
***Additional voltages may be available; contact Esco for ordering information.*
****Clean bench only; excludes optional stand.*

AC Blower

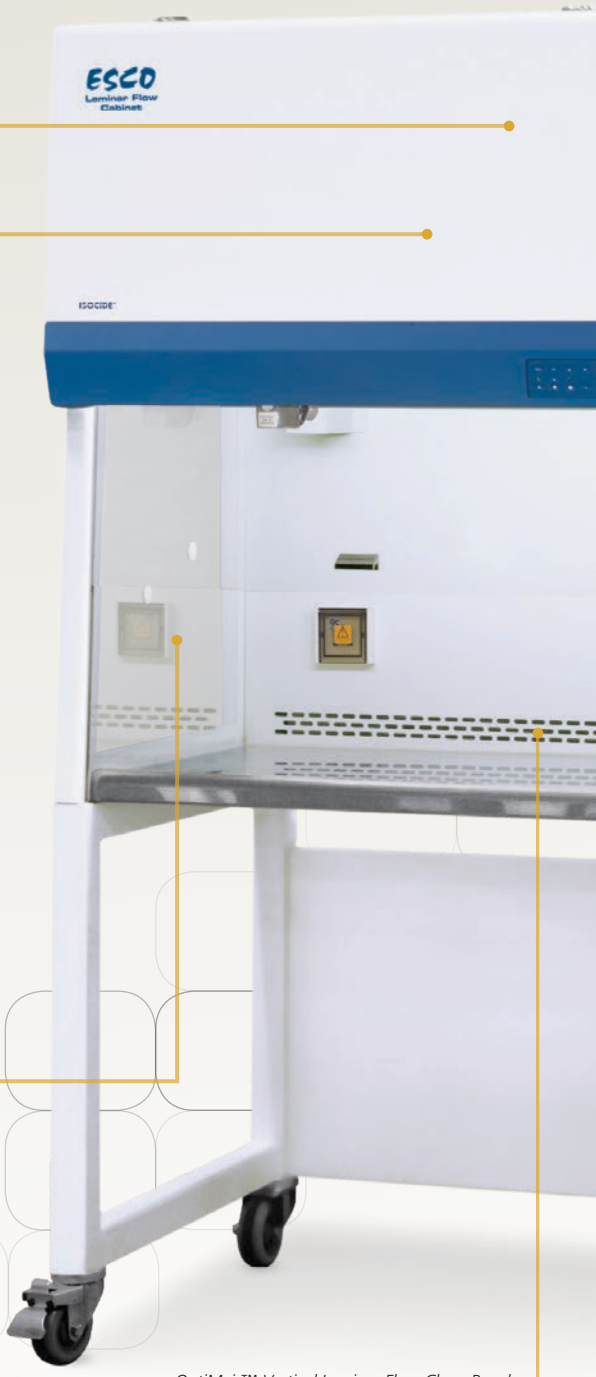
ULPA Filter

Tempered Glass Side Wall

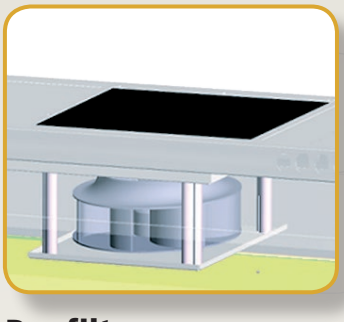


ISOCIDE™ Powder Coat

Auto-Purge Slots



*OptiMair™ Vertical Laminar Flow Clean Bench, Model ACB-4E_*



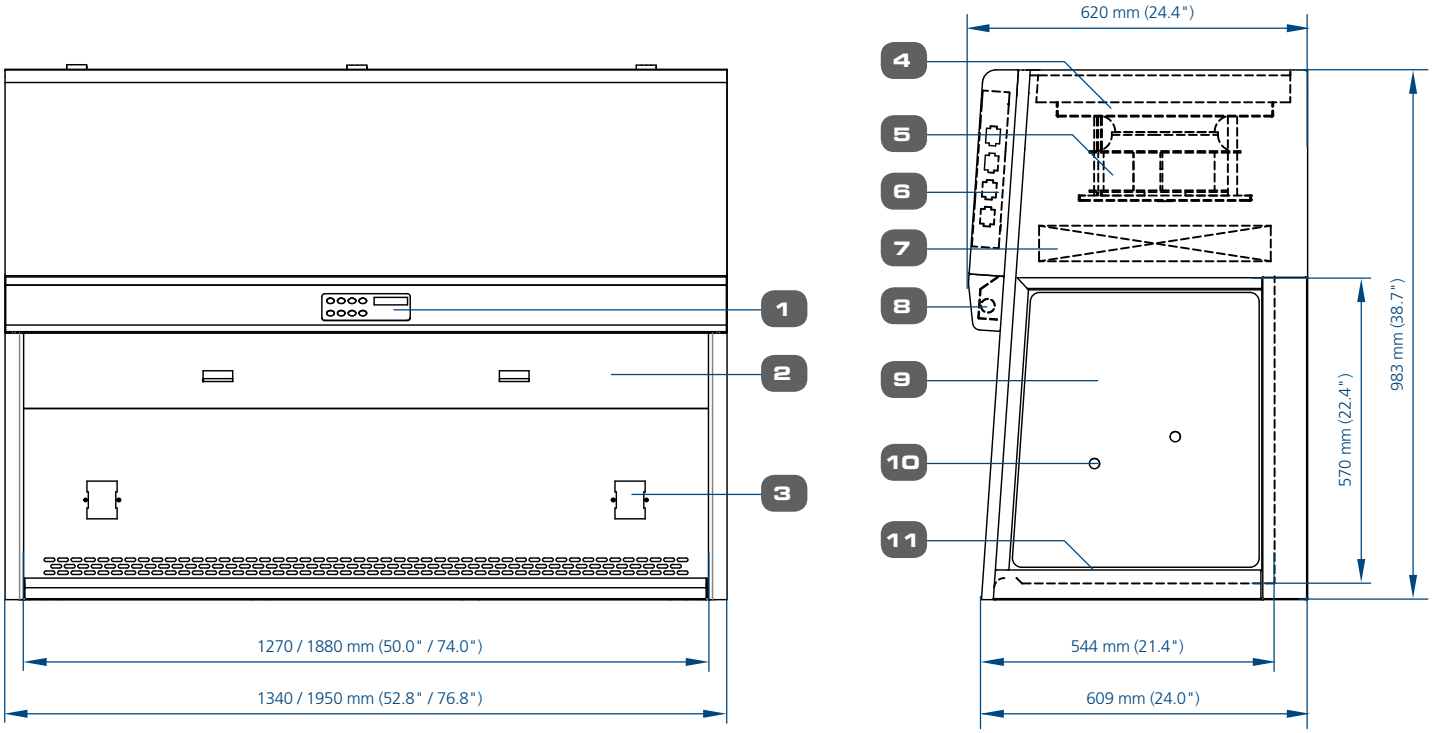
Pre-filter

Sentinel™ Delta Controller

Sliding Sash Window

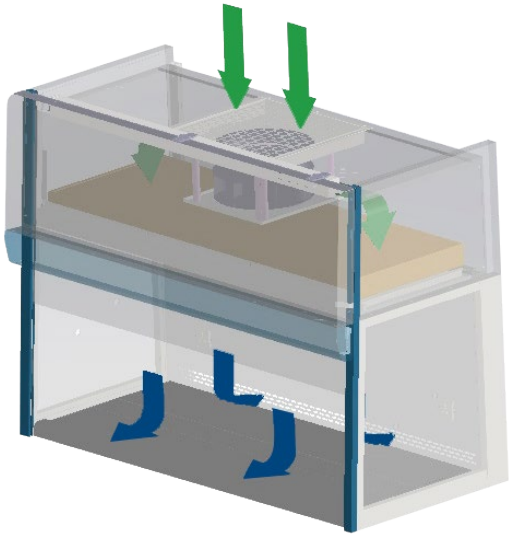
Stainless Steel Work Tray

OptiMair™ Vertical Laminar Flow Engineering Drawing



1. *Sentinel™ Silver Microprocessor Controller*
2. *Tempered Glass Sliding Sash Window*
3. *Electrical Outlet*
4. *Pre-filter*
5. *AC Blower*
6. *Electrical Panel*
7. *ULPA Filter*
8. *Fluorescent Lamp*
9. *Tempered Glass Side Wall*
10. *Service Fixture Retrofit Kit Provision*
11. *Stainless Steel Work Tray*

OptiMair™ Airflow Diagram



- During operation, room air is drawn through the top of the clean bench through a washable pre-filter with 20% arrestance, trapping larger particles and prolonging the life of the main filter.
- The air is then forced evenly through the ULPA filter resulting in a unidirectional stream of clean air projected vertically over the internal work zone. All airborne contaminants are flushed and diluted, resulting in a particulate free work environment.
- The purified air then leaves the main work chamber across the entire open front of the clean bench and through Auto-Purge™ slots at the back wall of the work zone to eliminate air turbulence and the possibility of dead-air corners in the work zone.
- A nominal filter face velocity of 0.30 m/s (60 fpm) ensures that there is sufficient number of air changes within the enclosed area of the clean bench in order to maintain cleanliness.

Room air / Inflow air
ULPA-filtered air

Applications
Media plate preparation for general laboratory use
Mycology and Food Microbiology
Plant and Mammalian Cell Culture
Clinical Pharmacy and Hospital Protocols
Non-hazardous biotechnology procedures

General Specifications, OptiMair™ Vertical Laminar Flow Clean Benches			
Model		**ACB-4E_**	**ACB-6E_**
Nominal Size		1.2 meter (4')	1.8 meters (6')
External Dimensions (W x D x H)	Without Base Stand	1340 x 620 x 983 mm (52.8" x 24.4" x 38.7")	1950 x 620 x 983 mm (76.8" x 24.4" x 38.7")
	With Optional Base Stand, 711 mm (28") type	1340 x 620 x 1694 mm (52.8" x 24.4" x 66.7")	1950 x 620 x 1694 mm (76.8" x 24.4" x 66.7")
Internal Work Area, Dimensions (W x D x H)		1270 x 524 x 570 mm (50.0" x 20.6" x 22.4")	1880 x 524 x 570 mm (74.0" x 20.6" x 22.4")
Usable Work Zone		0.67 m^2 (7.2 sq.ft.)	0.99 m^2 (10.7 sq.ft.)
Initial Airflow Velocity		0.3 m/s (60 fpm)	
Air Volume		566 m^3/h (333 cfm)	850 m^3/h (500 cfm)
ULPA Filter Typical Efficiency		99.99% for particles size at 0.3 microns	
Sound Emission Per IEST-RP-CC002.2*		<61 dBA	<63 dBA
Fluorescent Lamp Intensity At Zero Ambient		>1000 Lux (74 foot candles)	
Cabinet Construction	Main Body	1.2 mm / 0.05" / 18 gauge electro-galvanized steel with white oven-baked epoxy powder-coated finish	
	Work Zone	1.2 mm (0.05"() 18 gauge stainless steel, grade 304, 4B finish	
	Side Walls	Tempered glass	
Electrical Power Rating 1: 220-240 VAC, 50Hz, 1Ø	Cabinet Full Load Amps (FLA)	6.3 A	6.5 A
	Optional Outlets FLA	5 A	
	Cabinet Nominal Power	275 W	285 W
	Cabinet BTU	938	972
Electrical Power Rating 3: 220-240 VAC, 60Hz, 1Ø	Cabinet Full Load Amps (FLA)	1.3 A	1.6 A
	Optional Outlets FLA	5 A	
	Cabinet Nominal Power	198 W	
	Cabinet BTU	676	
Net Weight**		140 kg (308 lbs)	182 kg (400 lbs)
Shipping Weight**		178 kg (392 lbs)	231 kg (508 lbs)
Shipping Dimensions, Maximum (W x D x H)**		1430 x 749.5 x 1233 mm (56.3" x 29.5" x 48.5")	2110 x 749.5 x 1233 mm (83.1" x 29.5" x 48.5")
Shipping Volume, Maximum**		1.32 m^3 (46.6 cu.ft)	1.95 m^3 (68.9 cu.ft)

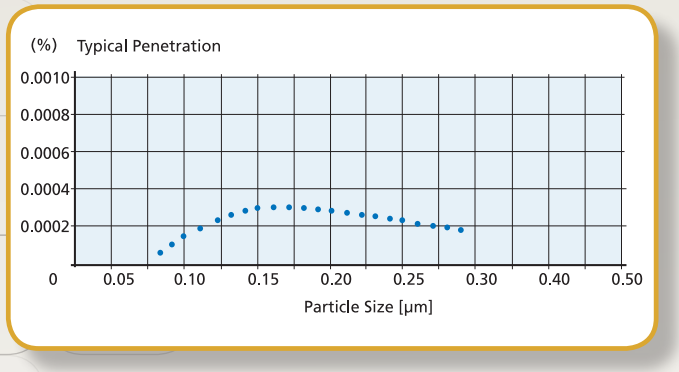
**Noise reading in open field condition/ anechoic chamber.*
***Cabinet only; excludes optional stand.*

Accessories for OptiMair™ Vertical Laminar Flow Clean Benches	
Model	Description
SF-2U	Universal Service Fixture Kit, Suitable for Air/Gas/Vac, Field Installed
SPA-4E0	Support Stand, Adjuster and wheel
IV-XXX-XXX	IV Bar Kit, Includes 6 Hooks, Specify Model When Ordering, Field Installed

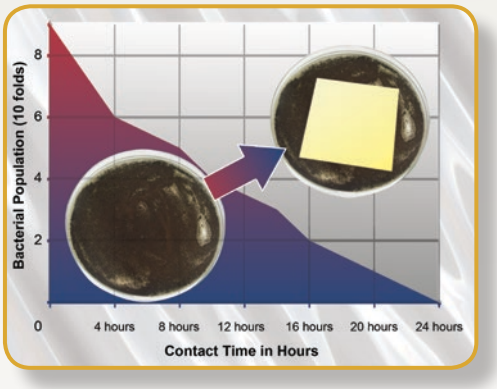
Note: 2 Universal (European / American / Japanese / Asia-Pacific) electrical outlets are standard on all OptiMair™ clean benches.

	Cabinet Performance	Air Quality	Filtration	Electrical Safety
Standards Compliance	AS 1386.5, Australia IEST-RP-CC002.2, Worldwide	ISO 14644.1, Class 4, Worldwide IEST-G-CC1001, Worldwide IEST-G-CC1002, Worldwide	EN-1822 (H13), Europe IEST-RP-CC001.3, Worldwide IEST-RP-CC007.1, Worldwide IEST-RP-CC034.1, Worldwide	UL 61010-1, USA CAN/CSA-22.2, No.61010-1 EN 61010-1, Europe IEC 61010-1, Worldwide

AC Blower



ULPA Filter



ISOCIDE™ Powder Coat

Acrylic Fixed Sash

Enterprise® Laminar Flow Straddle Units, Model EQUI06-ESUS

Standards Compliance	Cabinet Performance	
	IEST-RP-CC002.2, Worldwide	ISO 146 IEST-C IEST-C

** Type-tested for cross-contamination and product protection using t*

Magnehelic Gauge

Light and Blower Switch

Acrylic Side Panels

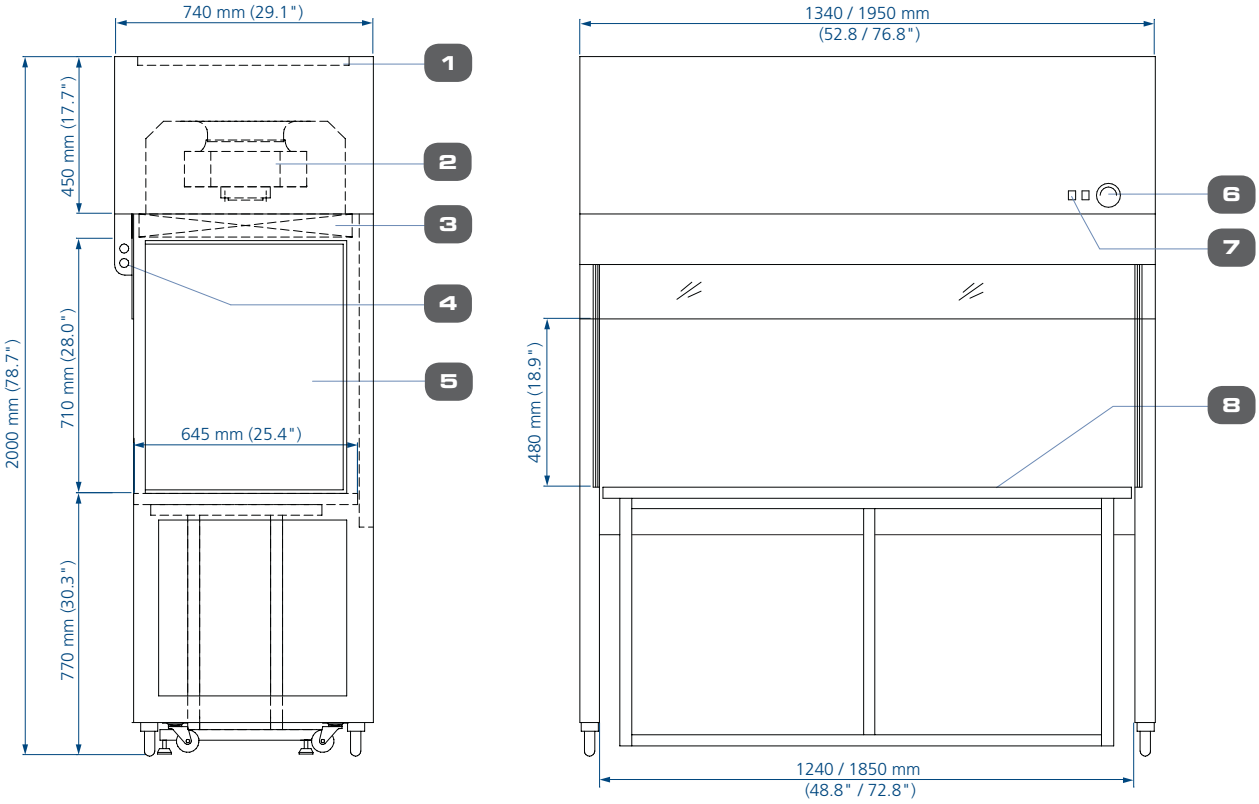
Stainless Steel Table

Caster Wheel and Leveling Feet

Air Quality	Filtration	Electrical Safety
44.1, Class 4, Worldwide G-CC1001, Worldwide G-CC1002, Worldwide	EN-1822 (H14), Europe IEST-RP-CC001.3, Worldwide IEST-RP-CC007.1, Worldwide IEST-RP-CC034.1, Worldwide	UL 61010-1, USA CAN/CSA-22.2, No.61010-1 EN 61010-1, Europe IEC 61010-1, Worldwide

the microbiological testing methods adapted from this biological safety cabinet standard.

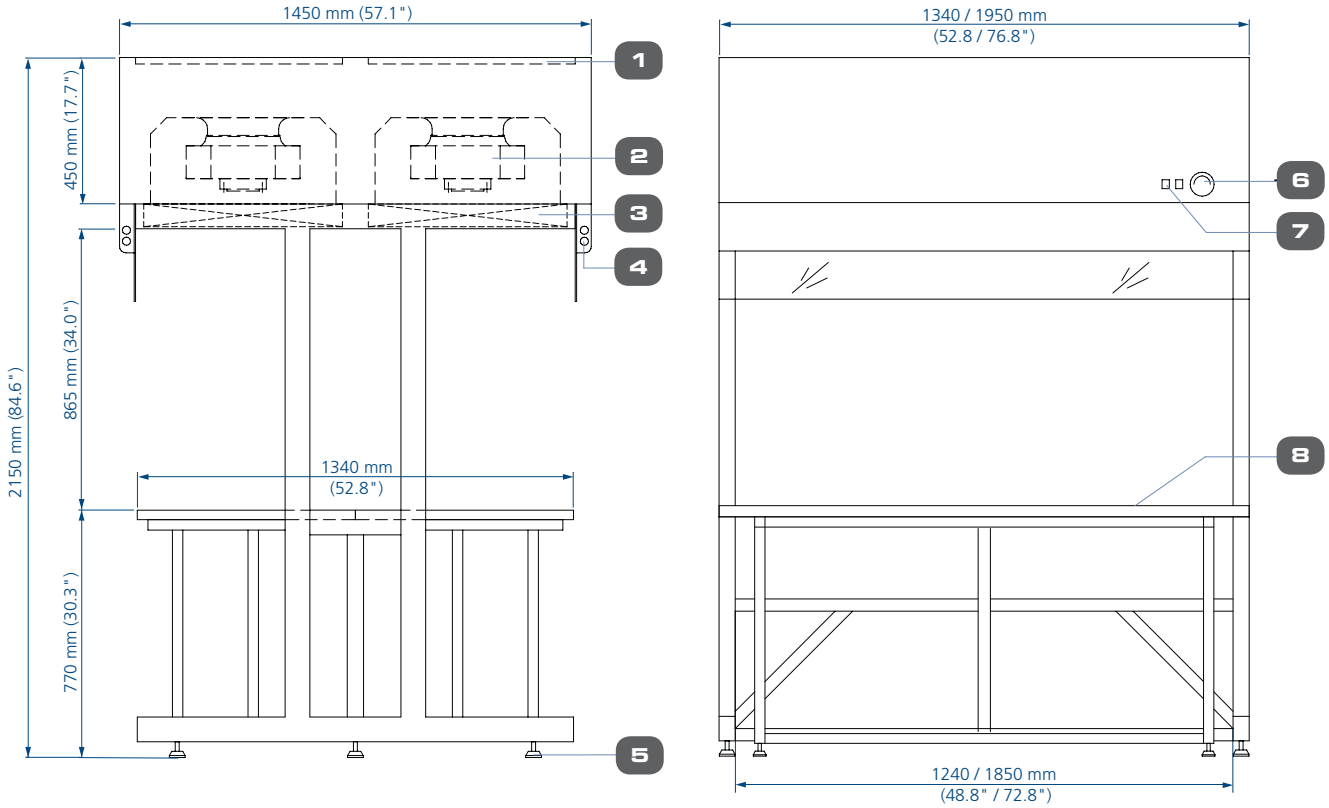
Model EQU/0_-ESUS Enterprise Laminar Flow Single Straddle Unit Engineering Drawing



1. *Pre-filter*
2. *AC Blower*
3. *ULPA Filter*
4. *Fluorescent Lamp*
5. *Acrylic Side Walls*
6. *Pressure Gauge*
7. *Operating Switches*
8. *Isolated Stainless Steel Table*

General Specifications, Enterprise® Laminar Flow Single Straddle Unit			
Model		EQU/04-ESUS 2020324	EQU/06-ESUS 2020326
Nominal Size		1.2 meter (4')	1.8 meter (6')
External Dimensions (W x D x H)		1340 x 740 x 2000 mm (52.7" x 29.1" x 78.7")	1950 x 740 x 2000 mm (76.7" x 29.1" x 78.7")
Internal Work Area, Dimensions (W x D x H)		1240 x 645 x 710 mm (48.8" x 25.4" x 28.0")	1850 x 645 x 710 mm (72.8" x 25.4" x 28.0")
Usable Work Zone		1230 x 645 mm (48.4" x 25.4")	1840 x 645 mm (72.4" x 25.4")
Initial Airflow Velocity		Average of 0.45 m/s or 90 fpm (+/- 20%)	
Air Volume		1205 m^3/h	1810 m^3/h
Pre-Filter		Washable non-woven polyester fibers with 90% arrestance and 20% efficiency	
HEPA Filter Typical Efficiency		99.99% at partical size 0.3 µm	
Sound Emission Per IEST-RP-CC002.2		65 dBA	67 dBA
Fluorescent Lamp Intensity At Zero Ambient		1000 Lux (92.9 foot-candles)	
Cabinet Construction	Main Body	1.5 mm (0.06") electro-galvanised steel with white oven-baked Isocide™ epoxy powder-coated finish.	
	Work Zone	1.2mm (0.05") 18 gauge stainless steel grade 304	
Net Weight		300 kg (661 lbs)	400 kg (881 lbs)
Shipping Weight		350 kg (772 lbs)	450 kg (992 lbs)
Shipping Dimensions, Maximum (W x D x H)		1950 x 950 x 1380 mm 76.8" x 37.4" x 54.3"	2050 x 950 x 1500 mm 80.7" x 37.4" x 59.1"
Electrical 220-240 VAC, 50 Hz, 1ø	Cabinet Full Load Amps (FLA)	1.8 A	4 A
	Cabinet Nominal Power	378 W	628 W
	Cabinet BTU	1290	2143

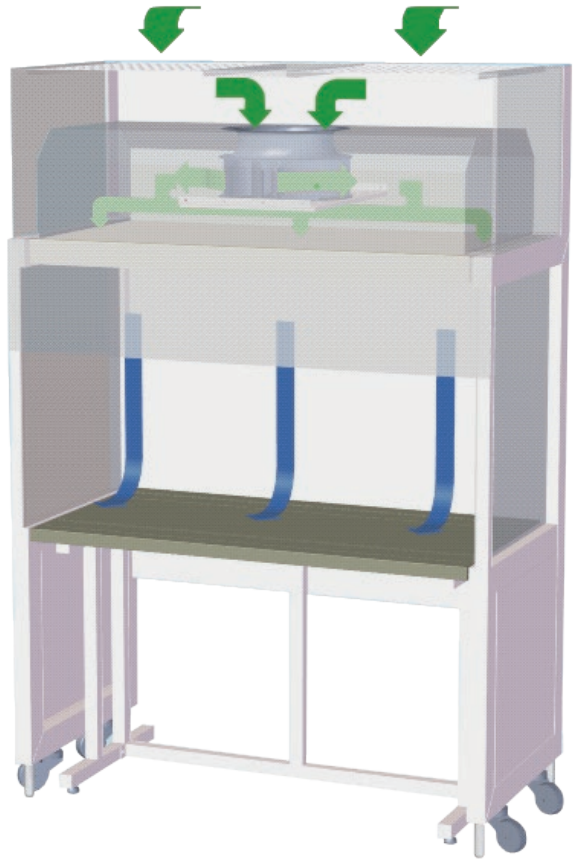
Model EQU/0_-ESUD Enterprise Laminar Flow Double Straddle Unit Engineering Drawing



1. *Pre-filter*
2. *AC Blower*
3. *ULPA Filter*
4. *Fluorescent Lamp*
5. *Leveling Feet*
6. *Pressure Gauge*
7. *Operating Switches*
8. *Isolated Stainless Steel Table*

General Specifications, Enterprise® Laminar Flow Double Straddle Unit			
Model		EQU/04-ESUD 2020320	EQU/06-ESUD 2020322
Nominal Size		1.2 meter (4')	1.8 meter (6')
External Dimensions (W x D x H)		1340 x 1450 x 2150 mm (52.7" x 57.1" x 84.6")	1950 x 1450 x 2150 mm (76.7" x 57.1" x 84.6")
Internal Work Area, Dimensions (W x D x H)		1240 x 1340 x 865 mm (48.8" x 52.8" x 34")	1850 x 1340 x 865 mm (72.8" x 52.8" x 34")
Usable Work Zone		1240 x 1340 (48.8" x 52.8")	1850 x 1340 (72.8" x 52.8")
Initial Airflow Velocity		Average of 0.45 m/s or 90 fpm (+/- 20%)	
Air Volume		2410 m^3/h	3610 m^3/h
Pre-Filter		Washable non-woven polyester fibers with 90% arrestance and 20% efficiency	
HEPA Filter Typical Efficiency		99.99% at partical size 0.3 µm	
Sound Emission Per IEST-RP-CC002.2		65 dBA	67 dBA
Fluorescent Lamp Intensity At Zero Ambient		1000 Lux (92.9 foot-candles)	
Cabinet Construction	Main Body	1.5 mm (0.06") electro-galvanised steel with white oven-baked Isocide™ epoxy powder-coated finish.	
	Work Zone	1.2mm (0.05") 18 gauge stainless steel grade 304	
Net Weight		600 kg (1323 lbs)	800 kg (1764 lbs)
Shipping Weight		650 kg (1433 lbs)	850 kg (1874 lbs)
Shipping Dimensions, Maximum (W x D x H)		1500 x 900 x 2200 mm (59.0" x 35.4" x 86.6")	2100 x 900 x 2200 mm (82.7" x 35.4" x 86.6")
Electrical 220-240 VAC, 50 Hz, 1ø	Cabinet Full Load Amps (FLA)	3.6 A	8 A
	Cabinet Nominal Power	756 W	1256 W
	Cabinet BTU	2580	4286

EQU/0_-ESUS Enterprise Laminar Flow Straddle Unit Airflow Diagram



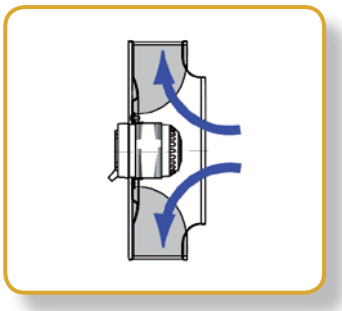
- During operation, room air is drawn through the top of the straddle unit via a washable polyurethane pre-filter with 20% arrestance, trapping larger particles and increasing the life of the main filter.
- The air is then forced evenly through the ULPA filter with >99.999% efficiency, resulting in a unidirectional stream of clean air projected vertically over the internal work zone. All airborne contaminants are flushed and diluted, resulting in a particulate-free work environment.
- The purified air then leaves the storage area across the entire open front of the straddle unit.
- A nominal filter face velocity of 0.45 m/s (90 fpm) ensures that there is a sufficient number of air changes within the enclosed area of the straddle unit in order to maintain cleanliness.

Room air / Inflow air

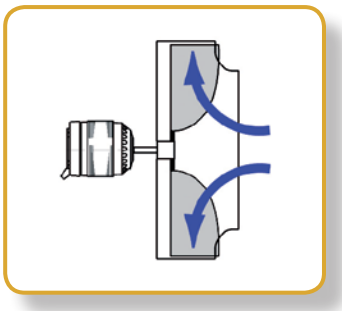
ULPA-filtered air

Esco Centrifugal Fan with External Rotor Motor vs. Conventional Fan with Standard Motor

- Esco cabinets use German made ebm-papst® permanently lubricated, centrifugal motor/blowers with external rotor designs.
- Integrated blades narrow the profile and eliminate need for a motor shaft.
- Motors are selected for energy efficiency, compact design, and flat profile. The completely integrated assembly optimizes motor cooling.
- All rotating parts are unitized and balanced for smooth, quiet, vibration-free operation.



Esco Centrifugal Fan with External Rotor Motor



Conventional Fan with Standard Motor

Applications
Cleanrooms, Electronics Assembly, Semiconductors, Aerospace, Pharmaceutical, Medical Devices Industries
Mycology and Food Microbiology
Plant and Mammalian Cell Culture
Clinical Pharmacy and Hospital Use
Applications benefiting from the isolated work surface frame design which virtually eliminates vibration

providing reliable product protection and energy-efficient technology

Green Product

Airstream®
Horizontal Laminar Flow Clean Bench
Model LHG-4A

Airstream®
Vertical Laminar Flow Clean Bench
Model LVS-4A

OptiMair™
Vertical Laminar Flow Clean Bench,
Model ACB-4E

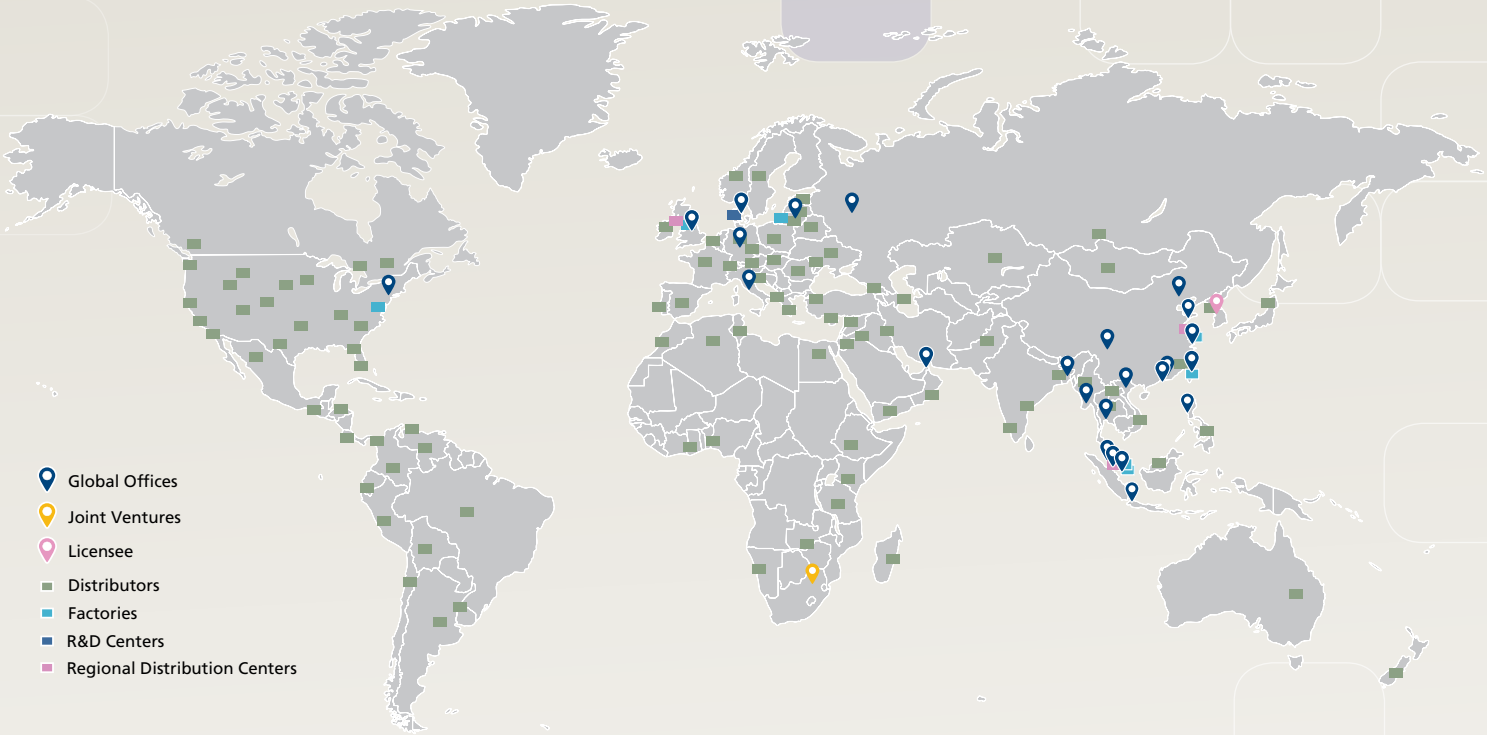
Enterprise®Laminar Flow Straddle Units,
Model EQU/06-ESUS

It's what Esco Laminar Flow Clean Benches do.

#Escogoesgreen

ESCO GLOBAL NETWORK

42 LOCATIONS IN 21 COUNTRIES ALL OVER THE WORLD



ART Equipment
Biological Safety Cabinets
CO_2 Incubators
Compounding Pharmacy Equipment
Containment / Pharma Products
Ductless Fume Hoods
Lab Animal Research Products
Laboratory Centrifuges
Laboratory Fume Hoods
Laboratory Ovens and Incubators
Laboratory Shakers
Laminar Flow Clean Benches
PCR Cabinets
PCR Thermal Cyclers
Powder Weighing Balance Enclosures
Ultra-low Temperature Freezers

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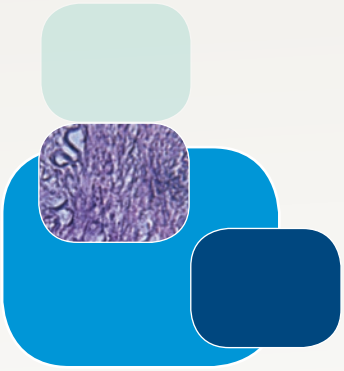

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