

*Esco Laminar Flow Storage Cabinet,  
Model EQU/04-LFSC*

## Laminar Flow Storage Cabinet

### Introduction

Esco laminar flow cabinets are the premium selection for the discerning user. It offers a combination of value, high quality construction, low operating noise levels, and a wide product range to suit all budgets, from an industry leader.

### Basic Principles

Esco laminar flow storage cabinets make a positive contribution to maintaining the cleanliness of a cleanroom environment.

- ULPA-filtered airflow keeps garments clean during storage and handling.
- High quality ULPA filters which utilizes an improved mini-pleated separation technique to maximize surface area improving efficiency and extending the filter life. Filters operate at a typical efficiency of >99.999% at 0.1 to 0.3 micron sizes, providing superior product protection over conventional HEPA filters.
- Enables garments to be stored in a visible and organized manner.
- Esco laminar flow cabinets provide ISO Class 3 air cleanliness within the work zone as per ISO 14644.1, 100 times cleaner than the usual Class 5 classification.
- An additional disposable pre-filter on all models traps large particles in the inflow air prior to reaching the main filter, protecting it against damage and prolonging its life.

### Standard Features

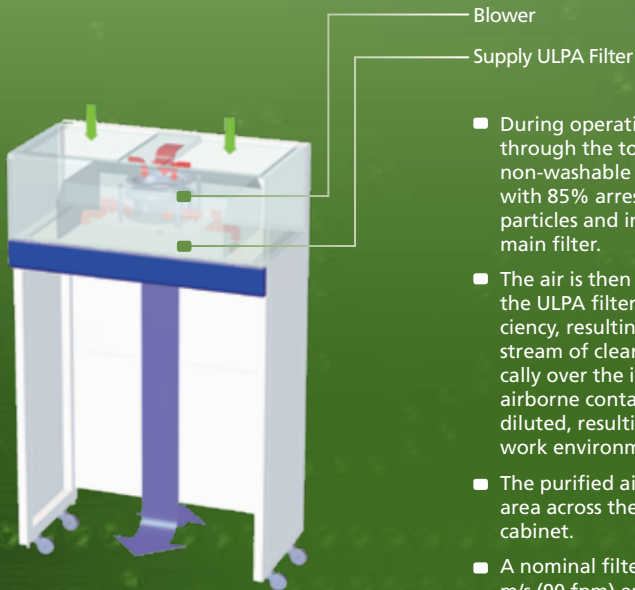
- Reliable rocker switches control the fan and lights and a Minihelic™ pressure gauge monitors cabinet operation.

- Built-in warm white, electronically ballasted, 5000k lighting provides excellent illumination of the work zone and reduces operator fatigue. The reliable lighting system is zero-flicker and instant start.
- All components are designed for maximum chemical resistance and enhanced durability for a long service life.
- The main body of the cabinet is constructed with industrial-grade electrogalvanized steel.
- The cabinet can be designed as mobile with caster wheels or static via built-in leveling feet.
- All cabinet components are clean room compatible. Isocide eliminates 99.9% of surface bacteria within 24 hours of exposure.

### Enhanced Filtration System

- Esco laminar flow cabinets provide ISO Class 3 air cleanliness within the work zone as per ISO 14644.1, 100 times cleaner than the usual Class 5 classification on cabinets offered by the competition.
- High quality ULPA filters utilizing an improved mini-pleated separation technique to maximizes surface area improves efficiency and extends the filter life. Filters operate at a typical efficiency of >99.999% at 0.1 to 0.3 micron sizes, providing superior product protection over conventional HEPA filters.

## Cabinet Filtration System



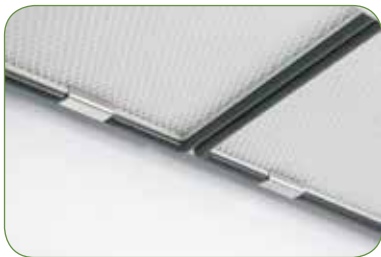
- During operation, room air is drawn through the top of the cabinet via a non-washable polyurethane pre-filter with 85% arrestance, trapping larger particles and increasing the life of the main filter.
- The air is then forced evenly through the ULPA filter with >99.999% efficiency, resulting in a unidirectional 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 cabinet.
- A nominal filter face velocity of 0.45 m/s (90 fpm) ensures that there is a sufficient amount of air changes within the enclosed area of the cabinet in order to maintain cleanliness.

- Esco laminar flow storage cabinets incorporate permanently lubricated direct drive centrifugal blowers.
- The energy efficient external rotor motor design reduces operating costs, noise, and vibration levels.
- Built-in solid state variable speed controllers with integral noise filters offering flexible adjustment from zero to maximum setting.
- Each cabinet is individually factory tested for safety and performance in compliance with international standards.
- All electrical components are UL listed or UL recognized, ensuring superior electrical safety.
- All Esco laminar flow storage cabinets meet general safety requirements set by independent testing laboratories.

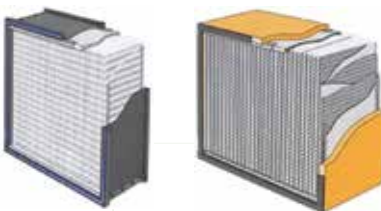
- ULPA-filtered air
- Unfiltered / potentially contaminated air
- Room air / Inflow air

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	Cabinet Performance	Air Quality	Filtration	Electrical Safety
Standards Compliance	EN 12469 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-CC007.1, Worldwide IEST-RP-CC034.1, Worldwide	IEC 61010-1, Worldwide EN 61010-1, Europe UL 61010-1, USA CAN/CSA-22.2, No.61010-1



Mini-pleat Separatorless Filter (left) vs. Conventional Aluminium Separator Filter (right)



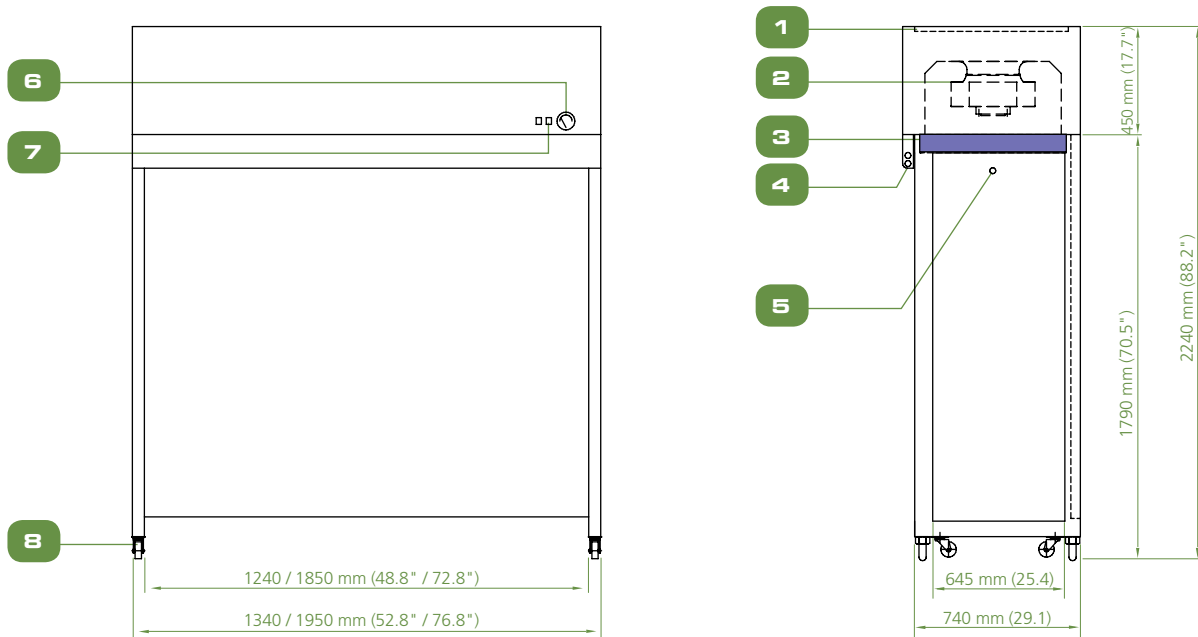
Esco cabinets use Swedish Camfil Farr® mini-pleat filters without aluminum separators to increase filter efficiency, minimize the chance of leakage, and to prolong filter life. Filters include a lightweight aluminum frame for structural stability and elimination of swelling common to conventional wood frames.



## General Specifications, Laminar Flow Storage Cabinet

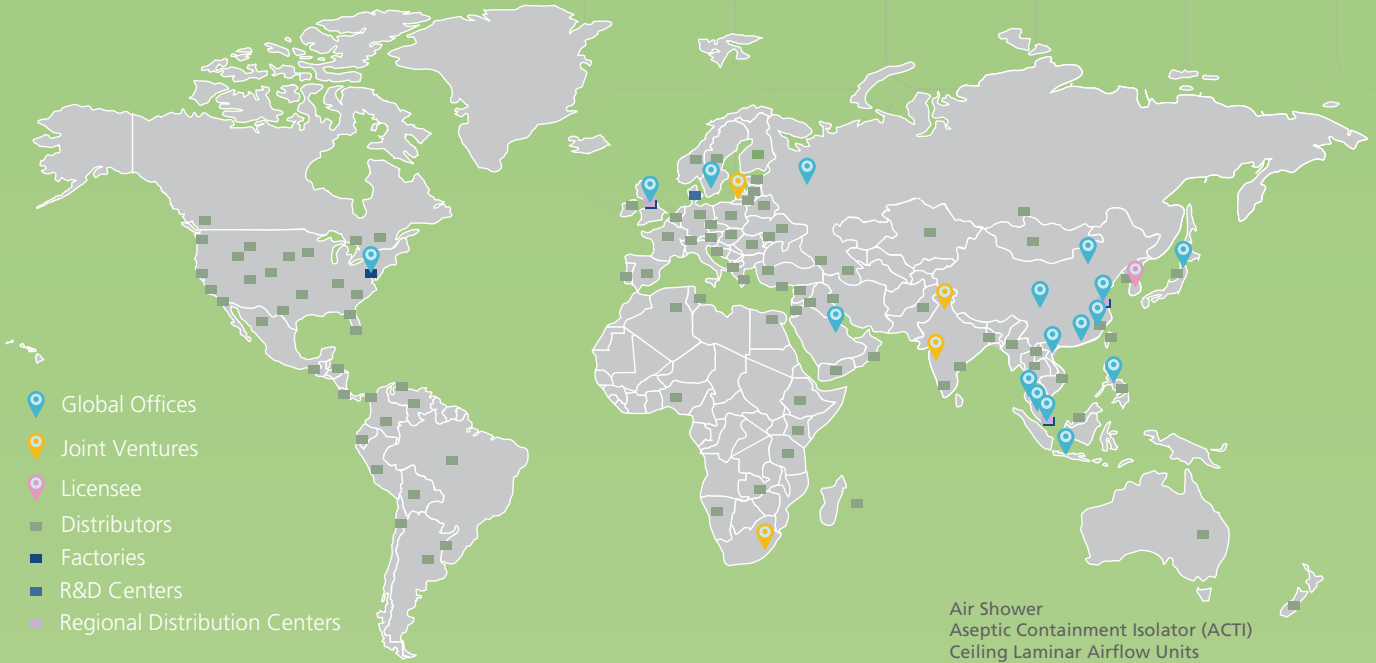
Model	EQU/04-LFSC	EQU/06 LFSC	
Nominal Size	1.2 meters (4')	1.8 meters (6')	
External Dimensions (W x D x H)	1340 x 740 x 2240 mm 52.8" x 29.1" x 88.2"	1950 X 740 X 2240 mm 76.8" x 29.1" x 88.2"	
Internal Storage Area, Dimensions (W x D x H)	1240 x 645 x 1790 mm 48.8" x 25.4" x 70.5"	1850 x 645 x 1790 mm 72.8" x 25.4" x 70.5"	
Storage Capacity	16 garments on hangers (4' model)	24 garments on hangers (6' model)	
Average Airflow Velocity	0.45 m/s (90 fpm)		
Pre-Filter	Disposable and non-washable polyester fibers with 85% arrestance / EU3 rated		
ULPA Filter Typical Efficiency	99.999% for particles size at 0.3 microns		
Sound Emission Per IEST-RP-CC002.2	61 dBA	63 dBA	
Fluorescent Lamp Intensity At Zero Ambient	>800 Lux (74 foot candles)		
Cabinet Construction	Main Body 1.2mm (0.05") 18 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish		
Electrical	220-240V, AC, 50Hz, 1Ø	EQU/04-LFSC	EQU/06-LFSC
	Cabinet Nominal Power	378 W	628 W
	Cabinet Full Load Amps (FLA)	1.8 A	4 A
	Cabinet BTU	1290	2143
Net Weight	150 kg (331 lbs)	220 kg (484 lbs)	
Gross Weight	229.5 kg (506 lbs)	311.6 kg (687 lbs)	
Shipping Dimensions, Maximum (W x D x H)	2150 x 950 x 1610 mm 84.6" x 37.4" x 63.4"	2150 x 950 x 1610 mm 84.6" x 37.4" x 63.4"	
Shipping Volume, Maximum	3.29 m <sup>3</sup> (116 cu.ft.)	3.29 m <sup>3</sup> (116 cu.ft.)	

### Model LFSC Esco Laminar Flow Storage Cabinet



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|------------------------|-----------------------|
| 1. Pre-filter          | 6. Pressure gauge     |
| 2. Blower              | 7. Operating switches |
| 3. ULPA filter         | 8. Castors            |
| 4. Fluorescent lamps   |                       |
| 5. Stainless steel rod |                       |

# ESCO GLOBAL NETWORK



- Air Shower
- Aseptic Containment Isolator (ACTI)
- Ceiling Laminar Airflow Units
- Cleanroom Transfer Hatch
- Containment Barrier Isolator (CBI)
- Compounding Aseptic Isolator
- Compounding Aseptic Containment Isolator
- Downflow Booth (DFB)
- Dynamic Floor Label Hatch
- Dynamic Pass Box
- Evidence Drying Cabinet
- Laminar Flow Storage Cabinet
- General Processing Platform Isolator (GPPI)
- Healthcare Platform isolator
- Laminar Flow Horizontal Trolley
- Laminar Flow Straddle Units, Single and Double Laminar Flow Vertical Trolley
- Pass Box
- Soft Wall Cleanroom
- Sputum Booth
- Ventilated Balance Enclosure (VBE)
- Weighing and Dispensing Containment Isolator (WDCI)

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**Esco Pharma Pte Ltd**  
 21 Changi South Street 1 Singapore 486777 • Tel: +65 65420833  
 Fax: +65 65426920 • Email: [csis.pharma@escoglobal.com](mailto:csis.pharma@escoglobal.com)

**Esco Technologies, Inc.**  
 2512 Metropolitan Drive, Suite 120 B  
 Feasterville- Trevose, PA 19053-6738  
 Tel: 215 322 2155 • Email: [eti.pharma@escoglobal.com](mailto:eti.pharma@escoglobal.com)

**Esco Gb Ltd**  
 Unit 2 R-Evolution @ Gateway 36, Kestrel Way, Barnsley, S70 5SZ  
 Tel: +44 (0) 1226 360 799 • Email: [egb.pharma@escoglobal.com](mailto:egb.pharma@escoglobal.com)

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