

# LAMINAR FLOW CABINET



Laminar Flow Cabinet provides unidirectional particle-free working environment within working zone to protect products from particles, environment contamination and from cross contamination.

KT Engineering offers a new adaptive ergonomic design, combined with a unique airflow management system which provides particle-free air quality in the laminar flow clean bench with precise control of airflow volumes and velocities.

## APPLICATION:

Laminar flow cabinet are used where a biologically clean, particle free work environment is essential. This includes:

- Pharmaceutical, electronics, chemical, medical, stem cell culture, IVF and food manufacturing
- Hospitals, pharmacies, laboratories, surgical suites.
- Haematology, oncology and pathology clinics.
- Universities, animal and research facilities.

Laminar flow cabinets available in both vertical and horizontal flow models.

## VERTICAL - LAMINARFLOWCABINET

In Vertical Laminar Flow modules the air is HEPA filtered and pass through the work zone in VERTICAL LAMINAR (unidirectional) air flow before it being exhausted through the front opening.

## HORIZONTAL - LAMINARFLOWCABINET

In Horizontal Laminar Flow modules the air is HEPA filtered and pass through the work zone in HORIZONTAL LAMINAR (unidirectional) air flow before it being exhausted through the front opening.

## FILTRATION AGENTS:

- The clean air in the work-area meets or exceeds ISO Standard Class 5 conditions defined per ISO Standard 14644-1 and Class 100 conditions as defined by Federal Standard 209E.
- Mini-pleat separatorless H14 HEPA filter with a typical efficiency of 99.999% at 0.3 microns reduces energy consumption and delivers increased laminar airflow uniformity for better product and cross contamination protection.
- Integral filter metal guard prevents accidental damage to HEPAfilter.
- Filter performance: IEST-RP-CC034.1, IEST-RP-CC007.1, IEST-RP-CC001.3 and En1822
- High-quality washable pre-filters.
- Aerosol-PAO challenge test port included (DOP Test).

## FEATURES:

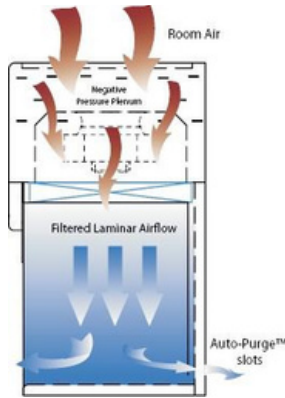
- The work surface is constructed of non-glare stainless steel 304, provides the work zone easy to clean. The interior surface will not chip, rust or generate particles.
- Highly quality electro-galvanized steel main frame with oven baked epoxy powder coating.
- Access to the HEPA filter direct from the chamber, for convenient replacement.
- Unidirectional air from the HEPA Filters @ 0.45 m/s (90 fpm)  $\pm$  20%.
- The Laminar Flow Cabinet is usually enclosed on the sides and kept under constant positive pressure in order to prevent the infiltration of contaminated room air.
- Double skin side walls.
- Built-in energy efficient tear-drop glare-free fluorescent lamp for illumination and minimizes airflow disruption.
- Glare-free UV lamp and disinfection purposes (Optional).
- Voltage-compensating blower(s) ensure stable airflow.
- Individually factory tested and commissioned after production; corresponding reports included with every unit.

## CONTROL FEATURES:

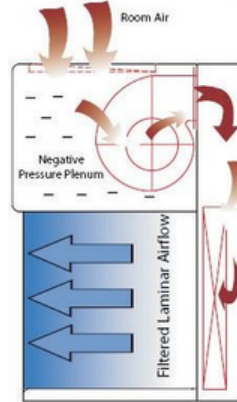
- Built-in solid state variable speed controller, adjustable from zero to the maximum setting.
- Control system consists of separate switches / indicator lights for:
  - blowers
  - light
  - electrical sockets
- Pressure gauge for airflow monitoring on the front panel.

# Air Flow Diagram - Engineering Diagram

**Vertical Laminar Air Flow**



**Horizontal Laminar Air Flow**



**Standard Accessories:**  
 Fluorescent Lights.  
 Electrical Sockets. DOP  
 Test ports. Magnehelic  
 Guages.

**Optional Accessories:**  
 Digital Air Flow Meter.  
 UV Light.  
 Service fixtures.

*(Other sizes also available)*

General Specifications	LC-LFC-V-4x2 (Vertical)	LC-LFC-H-4x2 (Horizontal)
External Dimensions ( WxDxH)	55" x 30" x 51"	55" x 30" x 45"
Internal Dimensions ( WxDxH)	51" x 27" x 29"	51" x 22" x 29"
Air Velocity	Average 0.45 m/s or 90 fpm (uniformity is +/-20%)	
Air Cleanliness Standard	ISO 14644-1 (Class 5), EC-GMP (A), FS-209E (Class 100)	
HEPA Filter Standard	IEST-RP-CC034.1, IEST-RP-CC007.1, IEST-RP-CC001.3 and EN1822	
Downflow HEPA Filter Type	H 14 HEPA filter with integral metal guards and filter frame gaskets; fully compliant with En1822 and IEST-RP-CC001.3 requirements.	
Downflow HEPA Filter Efficiency	99.999% at 0.3 microns.	
Pre Filter	Washable / Disposable	
Light Intensity	> 1200 lux on zero background.	
Noise Level	Typically < 70 dBA at initial blower speed of individual blower	
Main Body Construction	18 ~ 20 guage electro-galvanized steel.	
Work Surface Construction	18 guage stainless steel - 304	
Power Supply	220 V, Single Phase 50 hz / 60 hz.	

**Local Representative**