Atlantis (India)Applications Engineering Pvt. Ltd

Laminar Air Flow Horizontal

Horizontal Flow Laminar Flow Systems "Cleanair" Series "C"
Technical Know-How C.E.E.R.T.-Pilani Through N.R.D.C. (Govt Of India)

Variants :- Wooden/MS Powder- Coded/ Stainless Steel.

The basic elements of our Clean Air System are Pre-filter, Heavy Duty Blower Assembly, HEPA (High Efficiency Particular Air) Filter (Absolute Filter) and the work area. The "CLEANAIR" Laminar Flow Benches which are indispensible in all precision work laboratories utilises the proven Laminar Air Flow principles of the air cleanliness as per the latest International organisation for Standardization (ISO-14644-1) Class ISO-5, almost identical to U.S. Fedral Standard 209E (Class 100)

Double Filteration:

Fresh Air is drawn through the Pre-Filter and passed through maximum efficiency Absolute HEPA Filter. Ultra clean air moves, horizontally in Laminar Flow, across the work area at a velocity of approx 90 + 20 ft. per minute. This velocity of Ultra clean air makes it virtually impossible for the operator, positioned in front of the work area, to contaminate it. All contamination generated by him such as hair, salt, skin flakes, etc. is blown away by the Ultra clean air Flow.

HEPA Filters:

HEPA Filter is the heart of the CLEAN AIR Flow System. It removes all particles from the air, which are larger then 0.3 micron size. We use HEPA Filters fabricated out of a continuous sheet of fire-retardant, water repellant, micro-fibre-glass filteration media tested for DOP Penetration Tests. While we ensure that these specifications are fully met by the HEPA Filter. This results in very low filteration velocity of about 5 ft./minute, ensuring that a Laminar Air flows across the work table with minimum eddies.

The DOP Test:

The most accurate and demanding test of any filter used today for precision research work was developed by the U.S. Army Chemical Corps. It incorporates a DOP Smoke generator and a forward Light Spectrophotometer. The test determines the filter efficiency by measuring the percentage of 0.3 micron smoke particles.

Technical Data:

* Horizontal Clean Air Laminar Flow at approximately 90 + 20 ft/minute.
* Open Front.
* Wood top canopy at 2 ft. (approx.) height from work table.
* Efficiency down to 0.3 micron (DOP) dust particles is 99.97%.
* Conform to Air Cleanliness tests as per the specification of U.S. Federal Standard 209 (Class 100) latest version.
* Total Height of the "CLEANAIR": 5.6 ft. (Approx.)
* Work Area (Table Top):
  - o 4 x 2 ft.; 6 x 2 ft.
  - o 8 x 2 ft.; (Approx.) or as per your requirements
* Illumination: 2 x 40 watts, 230, VAC Flourascent Lite.
* Heavy Duty Blower(s) with 1/4 H.P. Single Phase 50 Hz. Motor, to deliver air at 550 CFM (Approx.) 50 mm WG Pressure.

Construction Data:

Cabinet: Thick commercial ply board, seasoned sagwan wood, aluminium sections etc. for maximum stability and bacteria free operation. All the wooden parts are affixed outside with best quality-sunmica/formica so as to make the "CLEANAIR" Laminar Flow Bench to suit the elegance of your Laboratory, and inside enamel painted.

Work Table: Commercial ply board with white sunmica laminated, easily cleanable. Side panels made of thick both sides laminated ply.

"CLEANAIR" Cabinet is complete with other common features like separate switches for AIR, LITE PUV and indicating lamp, mains cord and plug, protection fuse etc.

Extras and Spares:

Front door made of clear thick Perspex sheet in two sections with hinges-the upper at an angle.

Pre-filter cleanable, made of synthetic fibre, 400 x 580mm size, 50mm thick, pressure drop 5mm W.G. (Approx) for 90% efficiency down to 10 microns.

Absolute (HEPA) Filter-24 x 24 x 6". for 99.97% efficiency down to 0.3 micron (DOP).

Static Pressure Inclined Tube Manometer minus 10 to plus 60mm WG to monitor dust built up across the HEPA Filters-Air Fitle Gauge.

U.V. Tube 30 Watts, 230 VAC in the work area.
* S.S. (AISI-304 Quality) table top in lieu of laminated top.
* Drawer with lock and key.
* LPG/AIR/VACUUM Pet-cock.
* 5/15 Amp. Switch/Socket fitted.

Standard availability in 2/2", 3/2", 4/2", 6/2" 8/2" and any other size.

N.B.: Due to continuing research and development, the information contained herein is subject to change without prior notice.