

# PROGRAMMABLE LAMINAR FLOW BENCH

## Feed back controlled

**Introduction & Operating principle :** MLFB series of laminar flow are Cabinets create particle-free working environments by projecting air through a filtration system and exhausting it across a work surface in a laminar or uni-directional air stream. They provide an excellent clean air environment for a number of laboratory requirements. These are enclosed bench designed to prevent contamination of semiconductor wafers, biological samples, or any particle sensitive materials. Air is drawn through a filter and blown in a very smooth, laminar flow towards the user. The cabinet is usually made of stainless steel with no gaps or joints where spores might collect. These controlled benches are available in horizontal and vertical configurations, and with variety of airflow patterns and acceptable uses. Laminar flow cabinets may have a UV-C germicidal lamp to sterilize the interior and contents before usage to prevent contamination of experiment by sterilizing the interior and no contact is to be made with a laminar flow hood during this time. These finds application in medicine, biology, pharmaceutical, infection control, Cosmetics & Synthetics, genetic engineering, Petrochemical, Paper and Environments application, pipe line cleaning, Metal Finishing and Corrosion Control ,petrochemical , Polymer manufacturing , Medicines, biotechnology, medicine , Process control and Chemical Engineering ,Semiconductors/ Ceramics application .

These are Horizontal and vertical laminar flow mode. Horizontal Laminar Flow Cabinets receive their name due to the direction of air flow which comes from above but then changes direction and is processed across the work in a horizontal direction. The constant flow of filtered air provides material and product protection. Vertical Laminar Flow Cabinets function equally well as horizontal Laminar Flow Cabinets with the laminar air directed vertically downwards onto the working area. The air can leave the working area via holes in the base. Vertical flow cabinets can provide greater operator protection

- Features:** 1 Horizontal and open type, easy operation; 2. Changeable airflow control and low noise system, 3. Clean bench case is electrostatic powder coated plate that is shining and neat; SS304 is used as working table. 4. Material: Cold rolled steel plate with powder coated or stainless steel (SS201 or SS304).



MLFB-02020



Vertical laminar flow Bench



MLFB-03020

### Electrical and mechanical specifications of Ultrasonic cleaner

200.0< Pr<50000 watts

| Model:  | MLFB-03020               | MLFB-01020               | MLFB-03020                 | MLFB-010020                 | MLFB-20020                  |
|---|--------------------------|--------------------------|----------------------------|-----------------------------|-----------------------------|
| External size/internal size                         | 3.0/(option)<br>8x4x6"   | 10.0/(option)<br>8x5x10" | 30.0/(option)<br>18x14x18" | 100.0/(option)<br>36x16x16" | 200.0/(option)<br>36x24x24" |
| Operating volt/power( volt/watts)                   | 220/100                  | 220/500                  | 220/750                    | 220/2000                    | 220/2000                    |
| Temperature cont range °C/<br>Air flow rate(m3/min) | -50 to + 100<br>300 cmph | 50 to + 100<br>800 cmph  | -50 to + 100<br>1200       | -50 to + 100<br>1400cmph    | -50 to + 100<br>1600 cmph   |
| Flow Response time-milli sec                        | 10                       | 16                       | 23                         | 50                          | 50                          |
| Filter efficiency                                   | Critically damp          | Critically damp          | Critically damp            | Critically damp             | Critically damp             |
| Control scheme                                      | Feedforward/<br>cascade  | Feedforward/<br>cascade  | Feedforward/<br>cascade    | Feedforward/ca<br>scade     | Feedforward/<br>cascade     |
| Ultraviolet lamps:                                  | 40/80 watts              | 40/80 watts              | 40/80 watts                | 40/80 watts                 | 40/80 watts                 |

### Electrical and mechanical specifications of laminar flow bench:

Operating power supply :220 volts/50HZ or 110 volts D.C.

Power: as in data sheet

Flow rate : as above

Temperature control range : upto 100 ° C.

Display accuracy : temperature/flow rate

Permissible humidity : 90%

Permissible ambient temperature : 60°C

Ultra-violet lamp power: 40/80 watts

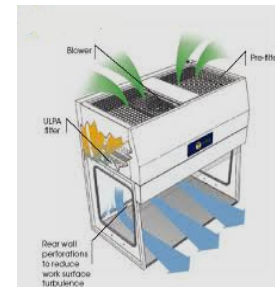
Protection : overload/short circuit.

Power efficiency : 95%

Cooling : air cooled

Control : feed back/feed forward power control with temperature profile control as preset / with 0-12 volts D.C. signal output. Automatic temperature control according to preset

profile of temperature w.r.t. time with high degree of repeatability and accuracy. Digital display for temperature, stirring speed (optional). Facility to interface with PC.



Air circulation pattern

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