



**ES-FLV**

**900/1200/1500/1800**

# **VERTICAL LAMINAR FLOW HOOD**



Vertical laminar flow hood **ES-FLV900-1200-1500-1800** is indicated for handling of various materials in a sterile environment (guaranteed by the HEPA filter). It can be used in microbiology, bacteriology, serology, with not pathogen materials, and in cell culture. It provides excellent protection for personnel, through frontal air flow and electronically adjustable front screen provided with appropriate scale depending on the location of work, and for product, through vertical laminar flow, in class 100 (or ISO 5), parallel to the operator. The vertical laminar flow is an unidirectional air flow formed by parallel sterile thin thread of air which move at the same speed in every point, so an homogeneous current of air is produced without any turbulence. In a sterile environment obtained in this way, every contaminator set free in the working area is dragged for away by a sterile source of air. The air flow is cleaned by Hepa filter. The optimal opening (200 mm.) is calculated in relation to the power of the engine and the air flow (of entry/exit) to ensure a balance of 30% of air expelled, 70% recycled, 30% front intake. The motorfan, despite the power is extremely quiet and has adjustable speed. The rear panel and the work surface are drilled in stainless steel 304 2B glazed; work surface divided in modules to allow cleaning and sterilisation practice. The front screen opening is motorized, the lights are lateral to allow a clear view inside as it does not create shadows. The velocity of air flow is regulated by an electronic control circuit with a microprocessor.

## FEATURES

- Casing released in powdered painted steel acids resistant.
- Work surface divided in modules to allow cleaning and sterilisation practice and bottom panel in stainless steel Aisi 304 2B glazed.
- Cabinet is equipped with arms-rest, to improve the operator comfort.
- Front and lateral panels in tempered glass thickness 5 mm.
- Motorised frontal panel in tempered glass thickness 5 mm. Opening glass in work position 200 mm.
- Glass panel total opening 540 mm.
- Polycarbonate membrane control panel with microprocessor.
- Grey air/vacuum cock.
- N° 2 Electric service outlets IP55, inside the work room.
- Lighting by 2 fluorescent lights 15 W, 800 Lux.
- Germicide lamp 30W (substitute it every 1500 hours of utilisation).
- Digital hour counter of germicide lamp utilization, max 9999 hours. Possibility to program the hours use, by a timer, max 99 hours.
- In case of lack of tension if the germicide lamp is "ON", at the return of tension the germicide lamp switch
- on again and the display start to blink.
- Digital hour counter of Hepa filter utilization, max 9999 hours.
- Hepa absolute filter - tested M.P.P.S in accordance with C.E.N. 1822 global efficiency 99.995% classH14, that produce a vertical laminar flow in class 100 at 0.3 micron, in accordance with Fed Std 209E (Laser Test Royco 256), or class ISO 5 in accordance with ISO 14644.1.  
**On request hoods can be equipped with ULPA filter.**
- Attack with hose union to be grafted, for execution of the hepa filter efficiency DOP test.
- Alarm signal (AIR on display and acoustic alarm) for laminar flow interruption.
- Stand-by command, minimum air flow speed that allows to maintain the cabinet in sterile condition, when not in use.
- Low background noise, electric fan that meets the requirements of the directives EN 60335-1, EN 50178, EN 60950, approvals by VDE, CE, UL. Possibility to regulate air flow.
- Noise ≤ 60 dB
- It's not possible use germicide lamp with glass frontal panel opened (OPEN on display).
- With a complete frontal panel lowering don't starts the fan. If you improve to start the fan, on the display will appear "CLOS".

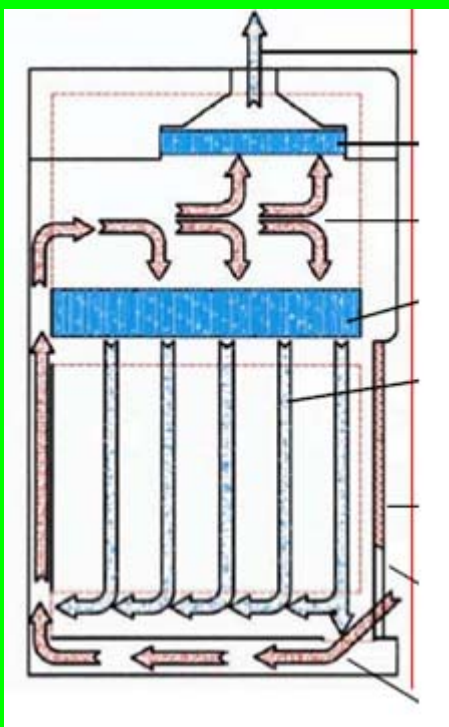
## TECHNICAL DATA

FLV	Work area dimension WxDxH (mm)	Overall dimension WxDxH (mm)	Overall dimension with support WxDxH (mm)	Average vertical laminar flow speed (m/s)	Average frontal barrier laminar flow speed (m/s)	Total / Ejected air volume (m <sup>3</sup> /h)	Weight (Kg)
900	926x640x650	1065x850x1360	1065x850x2160	0.40	0.45	1020/306	160
1200	1225x640x650	1365x850x1360	1365x850x2160	0.40	0.45	1155/350	180
1500	1530x640x650	1670x850x1360	1670x850x2160	0.40	0.45	1395/485	200
1800	1835x640x650	1975x850x1360	1975x850x2160	0.40	0.45	1590/530	220

## ELECTRICAL DATA

- Power supply 230 V- 50 Hz
- Electrical input 700 W + 440 W
- Lighting by 2 x 15 W – 800 Lux
- Germicide UV lamp: 30 W
- Overload fuses: 2 x 5 AF (5x20) mm.
- Connection outlet 10A

## AIR FLOW SCHEME AND PARTS LIST



Outlet air (30%)

HEPA expulsion filter (on request)

Contaminated air

HEPA working filter

Steril vertical laminar flow (70%) cl. 100 (o ISO 5)

Motorized frontal glass panel

Opening glass panel in working position/200 mm

Inlet air (30%)

## ES-700 class I



## ES-900 class II



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