



ES-900 ASALAIR BIOHAZARD ATLANTIC CABINET



ASALAIR BIOHAZARD ES-900 ATLANTIC, is a microbiological safety cabinet in class II type A2 with vertical laminar flow and with frontal entrance through which the operator can work in the workroom, and that has been designed and built to protect operator, increase the product protection by external contamination and to diminish environment biological risks, by the absolute hepa filtration of the ejected air flow.

The vertical laminar flow cabinet ASALAIR BIOHAZARD 900 ATLANTIC, was designed and built to allow manipulations in sterile environment of infectious agents that belong at the risk group 2 and 3.

Inhaled air frontally pass under the work surface and laterally to the lateral walls of the work room. It doesn't enter in the work zone, thanks to the vertical laminar flow that in the same time comes down in all the work room, and joins itself, under the work surface. This zone, thanks to the fans aspiration, is in negative pressure.

Produced air flow is uniform and unidirectional, formed by a number of little parts of parallel and sterile air that move themselves at the same speed in all points so that a homogeneous current of air with no turbulence is produced.

In a sterilised zone, each polluting substance in the working area is pushed away by a source of sterilised air.

Rooms belonging to class II (according to the NSF 49:2002) are different mainly because of the ratio of volumes of recycled air inside the working area, inside the room and/or outside:

- **Type A1** (30% ejected air inside the room – 70% recycled air). Front speed = 0.38 m/sec. May have positive pressure contaminated ducts and plenum.
- **Type A2** (30% ejected air outside the room – 70% recycled air). Front speed = 0.45 m/sec. Have ducts and plenum under negative pressure.
- **Type B1** (70% ejected air outside the room – 30% recycled air). Front speed = 0.5 m/sec. Contain negative pressure plenum.
- **Type B2** (100% ejected air outside the room). Front speed = 0.5 m/sec. Does not re-circulate air within the cabinet.

In the type A2, air cabinet may be re-circulated back into the laboratory room or ducted out of the building by means of a thimble connection.

The compensation is done thanks to the air intake through the frontal grid that creates an air barrier thus preventing the exit of polluted aerosol.

If the cabinet must be connected with an outlet system to eject the air from the room, the connector's length must not be over 4 metres otherwise contact the producing firm to have an additional motor-fan installed since the length of the outlet channel might even cause a loss of charge higher than the one being supplied by the outlet fan.

If the cabinet will be connect to an outlet duct already connect to other cabinets, you'll have to put a non-return valve in the conveyor.

The outlet duct must have a diameter of at least 150 mm., with a capacity of 300 m³/h. The ejection outside the room is needed if you manipulate volatile substances that are not hold by the Hepa filters.

Anyway, the use of these substances must be limited since this cabinet partially recycles the air.

FEATURES

- Steel supporting structure with anti-acid epoxidated painting.
- Adsorption area in negative pressure to avoid the polluted air entrance in the work room.
- Stainless steel room AISI 304 2B glazed with rounded edges to avoid contamination.
- Extractable stainless steel work surface AISI 304 2B glazed, for salvage liquids
- Tilted front panel, to facilitate operator's movement.
- Front sash in temperate glass thickness 5 mm with motorized movement and work entrance height 200 mm.
- Power switch, connection outlet 10A, power cable and overload fuses
- N°2 electric internal auxiliary socket inside the work room. IP 55 protection
- 3/8" Grey air/vacuum cock.
- 3/8" Yellow gas cock (press. max 2 bar) + safety solenoid valve
- Air/vacuum and gas connections positioned in the upper side of the cabinet to minimize the overall.
- Fluorescent lamp, 30 W, placed outside the work area, easy to be replaced.
- UV lamp housing, when not in use.
- Nr. 1 UV lamp -15 W. (accessory on demand) to position inside the work zone.
- Two, for vertical laminar flow and expulsion flow, hepa absolute filters, composed of microfibers of glass fiber knit with epoxy resin in one rigid frame, tested M.P.P.S in accordance with C.E.N. 1822 global efficiency 99.995% class H14, that produce a vertical laminar flow in class 100 at 0.3 micron, in accordance with Fed Std 209E (Laser Test Royco 256) or in class ISO 5 in accordance with ISO 14644.1. On request equipped with ULPA filters.
- Attack with hose union to be grafted, for execution of the hepa filter efficiency DOP test.
- Hepa filters, easy to be removed from the front part with a mechanic lifting system.
- Activated carbon filter, on demand.
- N°2 low background noise electric fans that meet the requirements of the EN 60335-1, EN 50178, EN 60950 directive, VDE,CE, UL approvals.
- Noise Db (A) < 60

- Timed Uv lamp socket. In case of glass front screen open, is not possible use uv lamp with glass frontal panel open
- Cabinet is supplied with arms-rest, to improve the operator comfort.
- External ejection canalisation pre-arrangement.
- Pressure switch of good seal of plenum.
- Possibility to connect PC with outlet RS 232 or USB (accessory on request, on the LCD board).
- Laminar flow speed m/s 0.40.
- Frontal barrier laminar flow speed m/s 0.45
- Ejected air volume 300 m³/h.
- 70% Air re-circulated
- 30% Ejected air
- Controls and programming LCD panel, touch screen 5.7" TFT display (320x240 pixels) with:
 - Personalizable access user code
 - Touch controls and operating parameters can be easily understood by graphic symbols
 - Animated operating parameters
 - Language selection ITALIAN or ENGLISH
 - Settable date and clock
 - Visual and audible alarms: fan failure, vertical laminar flow lack, front barrier flow lack, air ejection volume insufficiency, open glass, pressure in the plenum lack, hepa filter clogging.
 - Touch controls selectable on display:
 - ✓ on/off fans
 - ✓ on/off lighting
 - ✓ on/off Uv lamp (if present), in continuous or timed
 - ✓ on/off outlet service
 - ✓ on/off solenoid valve for gas cock
 - ✓ automatic raising/lowering of the front glass, with the the power of the fans, up to the work position, or manual to allow cleaning of work area
 - Views on display:
 - ✓ vertical laminar air flow speed in m/s
 - ✓ inlet air flow speed – front barrier in m/s
 - ✓ air ejection volume in m³/h
 - ✓ main and ejection hepa filters use counter, max 9999 hours (possibility to zeroes)
 - ✓ lighting lamp use counter max 9999 hours (possibility to zeroes)
 - ✓ uv lamp use counter max 9999 hours (possibility to zeroes)
 - ✓ timer, hours / minutes, to set the use of uv lamp, max 99 hours and 59 minutes



TECHNICAL DATA

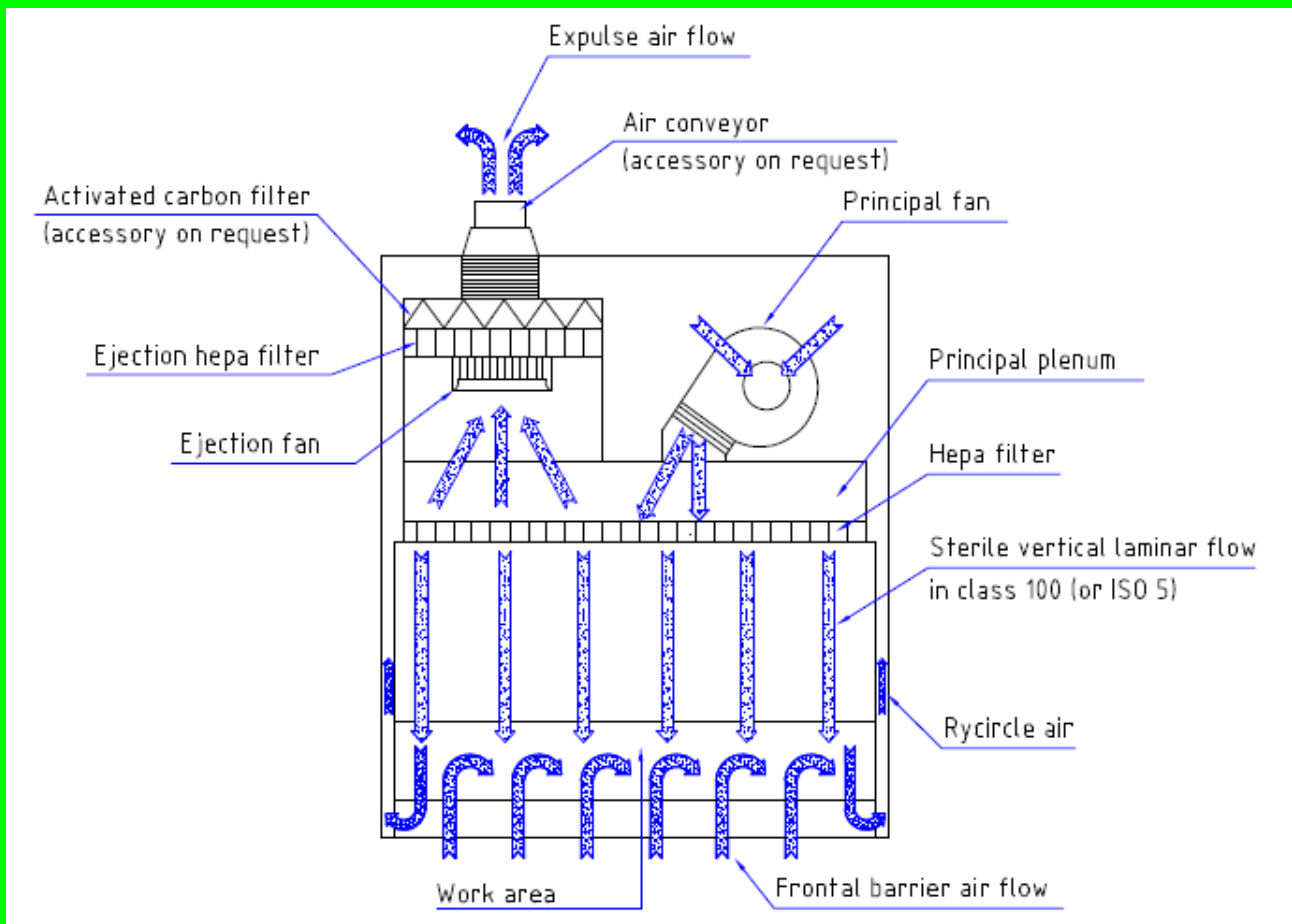
- Work area in stainless steel AISI 304 2B glazed dimensions, WxDxH: 873x600x500 mm.
- External dimensions WxDxH: 1050x780x1500 mm.
- Weight: 190 kg.

ELECTRIC SPECIFICATION

- Feeding power: 230 V- 50 Hz
- Absorption: 700 W + 440 W
- Lighting lamp : 1x30 W – 700 Lux
- UV lamp : 15W
- Protection fuses: 2 fuses x 5 AF (5x20) mm.
- Network connection intake: 10°



PART LIST AND FLOW SCHEME



ESSE 3 Via Garibaldi 30
14022Castelnuovo D.B. (AT)
tel +39 011 99 27 706
fax +39 011 99 27 506
e-mail esse3@chierinet.it
web : www.esse3-medical.com

