



ES-1200/1500/1800 ASALAIR BIOHAZARD ATLANTIC CABINET



ES-1200-1500-1800 ASALAIR BIOHAZARD 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 work room, and that has been designed and build 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. 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.

Vertical laminar flow cabinet **ES-1200/1500/1800 ATLANTIC** was designed and built to allow manipulations in sterile environment of infectious agents that belong at the risk group 2 and 3.

The amount of ejected air is re-integrated with a same amount of external air aspired through the work frontal entrance, creating a frontal barrier that protect the operator; it prevents the aerosol escape, and the penetration of particles from the external.

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 sterilized air.

The utilisation of highest quality components, the working methods and the safety either for the environment and the operator, enable ASALAIR BIOHAZARD 1200-1500-1800 ATLANTIC to be classified according to the BS 5726 – DIN 12950 – NSF 49 - UNI 12469 class II type A2, with a laminar flow speed of 0.40 m/sec.

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 ASALAIR BIOHAZARD 1200-1500-1800 ATLANTIC cabinet must be connected with an outlet system to make the air come out 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 ASALAIR BIOHAZARD 1200 ATLANTIC cabinet uses an outlet channel already working on other machines, you'll have to put a non-return valve on the hood.

The outlet channel must have a diameter of at least 200 mm., with a capacity of:

- 400 m³/h for 1200 ATLANTIC
- 500 m³/h for 1500 ATLANTIC
- 600 m³/h for 1800 ATLANTIC

The outlet of air outside the room is needed if you manipulate volatile substances that are not hold by the Hepa filters.

The use of these substances must be limited since this hood partially recycles the air.

FEATURES

- Boîtier réalisé en poudre d'acier peint résistant aux acides.
- Internal ductwork in negative pressure air to prevent the passage of polluted air in the room.
- Stainless steel room Aisi 304 2B glazed with rounded edges to avoid contamination.
- Stainless steel low box Aisi 304 2B glazed below the workbench to impound fluids.
- Drilled working table AISI 304 2B glazed divided into different sections for a better cleaning and sterilisation.
- Frontal screen in toughened glass thickness 5 mm. with locking gas pistons and a micro-alarm if the glass is open.
- Frontal opening of air entrance height with glass closed (in work position): 200 mm.
- Frontal opening of air entrance height with open glass: 550 mm with 85° degree corner.
- Main switch with network cable and protection fuses.
- N°2 internal sockets inside the room. Protection IP 55.
- On the right side of the hood inside the control panel, with hose union to be grafted, for execution of the DOP Test (efficiency of the hepa filter).
- 3/8" Grey air/vacuum cock.
- 3/8" Yellow gas cock with safety solenoid valve.

- Energy saving fluorescent lamps, 900 Lux, placed outside the working area, easy to be replaced.
- Vertical laminar air flow and exhaust flow filtering by Hepa filters (High efficiency particulate air) tested M.P.P.S in accordance with C.E.N. 1822 global efficiency 99.995% class H14, 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.**
- Hepa filters, easy to be removed from the front part with a mechanic lifting system.
- N°2, principal and exhaust, low background noise electric fans that meet the requirements of the EN 60335-1, EN 50178, EN 60950 directive, VDE,CE, UL approvals. **For ATLANTIC 1800 (n°1 principal + n°2 for exhaust).**
- Self-adjusting fans to assure the front barrier and the laminar flow.
- Noise Db (A) < 60
- Plenum in negative pressure.
- Timed UV lamp socket. Possibility of programming, in hours, the operation of the germicidal lamp timer through with up to 99 hours.
- Preparation for the canalisation of the outlet outside the room.
- 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:
 - 400 m³/h for **ES-1200**
 - 500 m³/h for **ES-1500**
 - 600 m³/h for **ES-1800**
- 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
 - 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

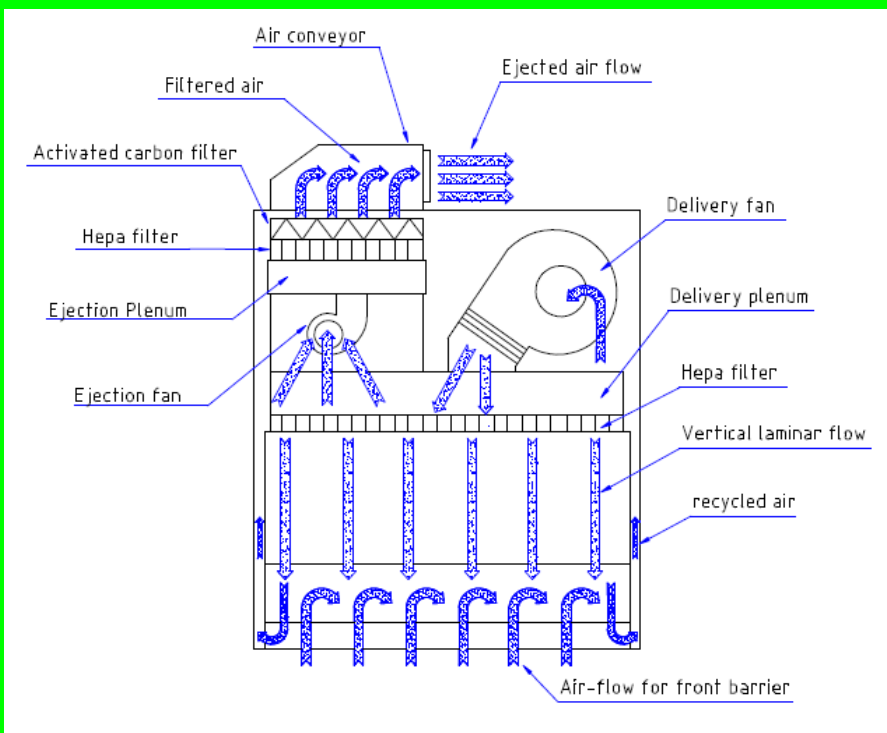
ATLANTIC	Work area dimensions WxDxH (mm)	External dimensions WxDxH (mm)	External dimensions with support WxDxH (mm)	Average vertical laminar flow speed (m/s)	Average frontal barrier laminar flow speed (m/s)	Total/Ejected air volume (m ³ /h)	Weight (Kg)
ES-1200	1185x590x650	1380x760x1500 (H: 1760 mm, air conveyor)	1380x760x2300	0.40	0.45	1350/400	200
ES-1500	1490x590x650	1865x760x1500 (H: 1760 mm, air conveyor)	1865x760x2300	0.40	0.45	1650/500	220
ES-1800	1795x590x650	1990x760x1500 (H: 1760 mm, air conveyor)	1990x760x1500	0.40	0.45	2000/600	240

ELETTRICAL DATA

- Feeding power: 230 V - 50 Hz
- Adsorption: 700 W + 440 W
- Lighting:
 - ATLANTIC 1200 : 3 x 20 W – 900 Lux
 - ATLANTIC 1500 : 4 x 20 W – 900 Lux
 - ATLANTIC 1800 : 5 x 20 W – 900 Lux
- Protection fuses : 2 fuses x 5AF (5x20) mm.
- Power outlet: 10 A



AIR FLOW SCHEME AND PARTS LIST



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