

TECHNICAL FEATURES VERTICAL LAMINAR FLOW BIOHAZARD CABINET CLASS II A/B3

BIO ACTIVA VE



Registered office, production and offices: via G. Di Vittorio 1
25030 Adro (BS) – Italy

Tel: 030/5123683

Fax : 030/7457833

mob. 338/2614082

www.elmontsrl.com

e-mail : elmont.srl@fiscali.it



Elmont S.R.L.
*Apparecchiature elettromedicali i
Cappe da laboratorio*

BIO ACTIVA VE has been designed for the overall protection of the operator, product and environment.

Class II biohazard cabinets are hoods with front opening, air intake from outside to inside, vertical laminar sterile air flow inside the cabinet and HEPA absolute filter in expulsion.

The hood is characterized by a modern and elegant design, by technically advanced electronics and remarkable simplicity of use and maintenance.

Main features

- External carpentry in 12/10 thick sheet metal, painted with polyepoxy powder, color RAL 7035
- Internal working chamber in AISI 304 stainless steel scotch-brite finish with rounded corners
- Perforated worktop, in AISI 304 stainless steel with scotch-brite finish, divided into sectors that can be easily removed and sterilized in an autoclave
- Front shatterproof tempered protective glass (thickness 6 mm) that can be opened with motorized vertical ups and downs (tilt approx. 6°) and completely, for introduction of bulky objects into the work chamber or to facilitate cleaning, with acoustic alarm in a wrong operating condition, equipped with glass support gasket in total closure, without the need for a front closing panel.
- Front opening height: 200 mm (in working position), from zero to 495 mm (in raised glass position).
- Ø 250 mm collar for external ducting of expelled air (optional)
- Two absolute filters (HEPA), removable from the front and top, with efficiency higher than 99.995% MPPS (ex 99.999% on particles with a diameter equal to or greater than 0.3 µm), in class H14
- Dynamic sealing rigid plenum
- N° 2 electronically controlled fan motors capable of compensating the load losses due to the progressive clogging of the absolute filters
- Taken for DOP test on delivery flow and exhaust

- Automatic adjustment of downflow air speed and exhaust air (frontal barrier)
- Arrangement for valved taps (opt)
- N° 1 internal IP65 electrical socket - 800W, 230 V - 50 Hz for small instruments

Control panel

- On the control panel, which encloses the electronic board controlled by a
- new generation microprocessor, there are:
- O/I main switch
- Membrane keyboard with passive button controls
- Electronic card equipped with a small graphic display with numerous information in real time
- Emergency button for the possibility of increasing the speed of the expelled air flow (operator protection barrier)
- Button for operating the safety solenoid valve (if installed) on the gas tap
- Buttons for:
- Lighting led lamp and UVC (if installed) interlocked with each other
- Insertion of power supply from the internal electrical socket
- Up/down electric window lifter
- Digital electronic hour meter for general machine operation (available for consultation)
- Digital electronic hour counter for UVC lamp operation
- Digital electronic hour meter for electrical outlet operation
- Timer in minutes of lamp operation UVC countdown settable by the customer with auto-off at the end of the cycle
- Operation timer of the internal electrical outlet with countdown that can be set by the customer with automatic switch-off at the end of the cycle (maximum time: 24 hours). During the countdown, the time remaining until shutdown will be displayed
- Audible and visual alarms for:
- Front glass in a wrong position: it is canceled automatically when the glass is closed.
- Faults in downflow and/or exhaust (frontal barrier) due to both clogging of the filters and/or faulty operation of the fan motors.
- Low Downflow Rate Alarm: Activates when the air speed read by the main sensor drops below the set minimum limit.
- High downflow speed alarm: it activates when the air speed read by the main sensor rises

above the minimum set limit.

- Low exhaust air speed alarm: it is activated when the air speed read by the secondary sensor falls below the minimum limit set.
- High exhaust air speed alarm: it is activated when the air speed read by the secondary sensor rises above the minimum limit set;
- Main fan not connected or faulty alarm: it is activated when there is no current circulating with the fan powered, i.e. when it does not work
- Secondary fan not connected or faulty alarm: it is activated when there is no current circulating with the fan powered, i.e. when it does not work.
- Visual pre-alarms with indication on the display of the need for next replacement for:
- UVC lamp end of life (appears after 3900 lamp operating hours).
- The usage limit of the installed filters has been reached (appears after 3900 hours of

fan motor operation).

- Possibility to choose the sound of the buzzer (among the various preset by default).
- Display of the event, stored in the alarm history, resettable.
- Possibility of entering startup passwords.
- Working chamber temperature display.
- Stand by system: when active, it makes the machine work in energy saving mode with a lower laminar flow.
- Possibility of using the language of the preferred graphic display between Italian and English (other languages on request).



Technical features:

· External drain connection:	250 vert (Ø ext mm) (optional to transform from class II type A, to type B3)
· Exhaust air flow:	variable, 400 m ³ /hour model 120
· Noise level:	< 60 dBA
· Thermal increase:	< 4°C
· Efficiency of filtration:	> 99.995%MPPS
· LAF average speed:	by default 0.40 m/s modifiable
· Barrier average speed:	default > 0.45 m/sec modifiable
· Light intensity on the work surface:	> 800 lux
· Power supply:	230V; 50/60Hz
Nominal power:	
· Form 90:	620W
· Form 120:	660W
· Mod.150:	690W
· Form 180:	900W
· Exhaust air flow:	from 400 to 600 m ³ /h
External dimensions (excluding stand):	
· Mod. 90:	980 x 800 x 1440 mm (wxdxh)
· Form 120:	1285 x 800 x 1440 mm (wxdxh)
· Model 150:	1465 x 800 x 1440 mm (wxdxh)
· Form 180:	1890 x 800 x 1440 mm (wxdxh)
Internal useful dimensions:	
· Mod. 90:	910 x 680 x 610 mm (wxdxh)
· Form 120:	1220 x 680 x 610 mm (wxdxh)
· Model 150:	1395 x 680 x 610 mm (wxdxh)
· Form 180:	1825 x 680 x 610 mm (wxdxh)
Gross weight:	
· Mod. 90:	220kg
· Form 120:	270kg
· Model 150:	300kg
· Form 180:	340kg
Net weight:	
· Mod. 90:	190kg
· Form 120:	220kg
· Model 150:	245kg
· Form 180:	285kg

Compliance:

Safety cabinet against biological risks (BIOHAZARD), with work area protected from vertical laminar flow in class ISO 5 (standard UNI EN ISO 14644-1), bench version, classified class II type A/B3 and therefore suitable for handling medium-risk pathogens.

Built in compliance with:

- European standard EN 1822
- UNI EN 12469: 2000 standard
- 2006/42/EC Machinery Directive
- 2014/30/EU Electromagnetic Compatibility Directive
- CEI EN 61010-1:2010 (Safety requirements for electrical equipment, measurement, control and laboratory use)
- EN14644-1 standard in ISO class 5



Composition of the standard cabinet

Equipped with:

- n° 1 perforated 304L stainless steel worktop that can be dismantled into autoclavable segments
- n° 2 internal fan motors
- n° 3 white light led lamps
- n° 1 HEPA H14 downflow filter
- n° 1 HEPA H14 exhaust filter
- n° 1 Internal socket 800W max – 230V 50Hz for small instruments
- n° 1 Power supply cable 230 V - 50 Hz equipped with type UNEL – schuko plug

Principal optional accessories:

Special Tray worktops

Floor stands (height 77 cm; worktop height 87 cm)

Metal cabinets and chests of drawers

Gas valve taps (preparation on the inside left side wall)

Solenoid valve for gas tap

Additional internal electrical outlet type UNEL-schuko 230 V- on the right

UVC germicidal lamp installation in fixed internal location

Accessories on request

Accessories for possible external ducting