

# VERTICAL LAMINAR FLOW CABINET BIOHAZARD CLASS II TYPE A

## FLOW ACTIVA



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

Tel: 030/5123683  
[www.elmontsrl.com](http://www.elmontsrl.com)

Fax : 030/7457833

mob. 338/2614082

e-mail : [elmont.srl@tiscali.it](mailto:elmont.srl@tiscali.it)

Flow Activa is characterized by a modern and elegant design and by technically advanced electronics, has been studied for the global protection of the operator, product and environment, and intended for the handling of pathogenic microorganisms with low biological risk.

The Flow Activa is a vertical laminar flow cabinet in ISO 5 class (standard EN 14644-1), partial recirculation (about 70%) of the air through H14 class HEPA absolute filter, and partial expulsion (30%) of the treated air by a second H14 absolute filter, with air barrier to protect the operator through the introduction of air from the front opening, without crossing the work surface to make sure not damaging the product.

### Main features

- Robust external carpentry in sheet metal (thickness 12/10"), oven painted with polyepoxy powder, color RAL 7035 (very light grey)
- Internal rear panel in AISI 304L stainless steel with double bottom scotch-brite finish.
- Perforated worktop, made up of easily removable and autoclavable stainless steel segments
- Glazed side windows to control operations under the hood
- 6 mm thick tempered protective front glass with flap opening, and acoustic alarm for incorrect operating conditions. The framed glass is equipped with hydraulic pistons to keep the glass in the open position at 90° during cleaning operations.
- Front opening height: 200 mm (in working position) - max opening 540 mm
- Equipped with 2 absolute HEPA H14 filters, removable from the front, with efficiency higher than 99.995% MPPS on particles with a diameter equal to or greater than 0.3 µm, compliant with standard EN 1822:
- Dynamic sealing rigid plenum.
- Taken for DOP test on delivery flow and exhaust
- N° 1 high quality electronically controlled fan motor, capable of compensating the load losses due to the progressive clogging of the absolute filters
- Automatic adjustment of the air speed

### Control panel:

- On the control panel, which encloses the electronic board controlled by a new generation microprocessor, there are:
- Main switch with luminous O/I key
- Membrane keyboard (soft touch) with passive button controls.
- Digital display with indication of vertical laminar flow's speed and of the frontal barrier, in real time, expressed in m/s. Integrated emergency button with the possibility of increasing air flow's speed in expulsion and on the work surface (indirect increase of the operator protection barrier).
- Keys for:
- Activation of the safety solenoid valve on the gas cock (if the optional solenoid valve has been installed).
- Internal electric socket 230V/50Hz
- Turning on the fan motor.
- Turning on internal LED lamps.
- Turning on the UVC germicidal lamp (interlock with safety fluorescent lamp)
- Digital electronic counter of:
- General operation of the machine;
- UVC lamp operation (if installed);
- Countdown UVC lamp operation timer that can be set by the customer with auto-off at the end of the cycle, from 1 to 999 minutes.
- Audible and visual alarms for:
- Insufficient or too high LAF or BARRIER air speed.
- Front glass in wrong position;
- Clogged filters (incorrect flow rate);
- Defective operation of the fan motor;
- Visual pre-alarms with indication on the display of necessity for next replacement of:
- Germicidal UVC lamp lifetime over (optional)
- Reached limit of uses of installed filters (appears after 3900 hours of fan motor operation);
- Calibration and possible modification of parameters and settings directly from the keyboard without opening the control panel



## Technical features:

- External drain connection: 250 vert ( $\varnothing$  ext mm)) (optional to transform from class II type A, to type B3 — need second addition fan motor in expulsion)
  - Exhaust air flow: from 300 m<sup>3</sup>/h min to 500 m<sup>3</sup>/h
  - Noise level: < 60 dBA
  - Max thermal increase: < 4°C
  - Filtration efficiency: > 99.995% MPPS (on diam.0.3  $\mu$ m), class H14 standard EN1822
  - LAF average speed: adjustable between 0.35 m/s and 0.50 m/s
  - Barrier average speed: > 0.40m/sec
  - Light intensity on the work surface: > 800 lux
  - Power supply: 230 V; 50 Hz
- Nominal power:
- Mod. 90: 450 W
  - Mod.120: 480 W
  - Mod.150: 670 W
  - Mod.180: 700 W
- External dimensions (without stand):
- Mod. 90: 980 x 795 x 1400 mm (l x p x h)
  - Mod. 120: 1285 x 795 x 1400 mm (l x p x h)
  - Mod. 150: 1465 x 795 x 1400 mm (l x p x h)
  - Mod. 180: 1890 x 795 x 1400 mm (l x p x h)
- Internal useful dimensions:
- Mod. 90: 970 x 570 x 630 mm (l x p x h)
  - Mod. 120: 1275 x 570 x 630 mm (l x p x h)
  - Mod. 150: 1455 x 570 x 630 mm (l x p x h)
  - Front opening height: 1880 x 570 x 630 mm (l x p x h)
- Net weight:
- Mod. 90: 200 mm with glass in working position - max 540 mm
  - Mod. 120: 174 kg
  - Mod. 150: 224 kg
  - Mod. 180: 275kg
  - 275 kg



## Compliance

Hood with working area protected from vertical laminar flow in class ISO 5, bench version.  
The machines have been certified by a third-party company in compliance with the EN12469:2001 and UNI EN ISO 14644-1:2016 standards.

Built in compliance with:

- ISO 5 (standard EN 14644-1)
- UNI EN 12469:2001 standard
- Standard EN 1822 (for HEPA absolute filters)
- Italian Electrotechnical Committee (CEI 66.5)
- CEI 62.25 standards for class 1 fixtures for fixed installation
- Equipped with CE conformity mark

## Standard equipment

- n°1 perforated worktop that can be dismantled into autoclavable segments
- n°1 low noise centrifugal fan motor
- n°2 led lamps (10W in mod. 90; 13W in mod. 120; 20W in mod. 150; 24W in mod. 180)
- n°1 HEPA H14 absolute downflow filter
- n°1 HEPA H14 absolute filter in expulsion
- n°1 internal 4A - 230 V 50 Hz electrical socket for small instruments
- n°1 power supply cable 230 V - 50 Hz equipped with unel - schuko type plug

## Accessories on request

Special worktops with central blind area, front, rear and side slots.

Support stands (height 77 cm; worktop height 87 cm):

15/10 tubular sheet metal structure, very light gray (RAL 7035) epoxy powder coating, adjustable feet for correct positioning on the ground. Prepared for joining with the hood above by means of specific holes for the passage of the fixing screws.

Open frontally, for the introduction of the operator's legs when seated and/or for a possible extractable cabinet on wheels

Cabinets and chests of drawers

Additional taps and sockets

Total front closure panels

Bunsen burner with electronic control

Accessories for possible external ducting

Internal fan motor kit for barrier/expulsion air regulation

(Internal or remote expulsion fan motor kit required)