

# CRUMABIO-1

The last generation microbiological safety laminar flow cabinets **CRUMA BIO CLASS II Type A2** with digital functions.

The cabinet design ensures complete integrity by close control of the airflow. Incoming air is filtered through the first HEPA filter and down through the work area in a laminar flow pattern. The descending air creates a protective barrier preventing any outside air entering the cabinet. The airflow is then re-directed from the base of the cabinet into a plenum where 30% is expelled through a second HEPA filter and 70%, along with 30% new make up air, is re-circulated back into the cabinet through the first HEPA filter.



## APPLICATIONS

- ✓ Manipulation of microorganisms, bacteria, fungi, viruses and parasites Risk categories 1, 2 and 3.
- ✓ Isolation and sample culture
- ✓ Quantification methods
- ✓ Microscopy techniques and sample preparation - Identification and classification of microorganisms
- ✓ Genetic Manipulation

## MAIN SPECIFICATIONS

- ✓ Microprocessor controlled motor blower (LCD) with volumetric sensor for exhausted air flow monitoring
- ✓ State of the art Microprocessor control system offering:
  - Large screen monitor
  - Automatic control of preset airflow volumes
  - Sliding sash window with smart control
  - Permanent monitoring of HEPA filters life span
  - Alarms. Multilevel alarms, with redundancy functions - Permanent display of working conditions
  - Highest air flow stability both in case of transitional disturbances or to progressive filter clogging
  - Semi-automatic fumigation cycle (EN12297 tested and certified)
  - Continuous monitoring of front barrier air flow for the highest operator safety
  - Low barrier alarm
  - Power failure alarm
- ✓ Volt-free contact for remote monitoring of exhaust fan
- ✓ Automatic reset of initial conditions in case of power failure
- ✓ C-shaped support stand for the easiest one man installation procedure

## CHARACTERISTICS

- ✓ Fully EN12469 certified by TÜV Hamburg
- ✓ State of the art microprocessor control system
- ✓ Large digital display, high resolution
- ✓ Air and aerosol-tight sliding sash, electrically operated by finger touch
- ✓ Alarms for low airflow and wrong front window position
- ✓ Sloped front and back wall for the most comfortable access
- ✓ Front access for filter maintenance and service
- ✓ C-shaped support stand for the easiest one man installation procedure
- ✓ Easy retrofit option kits

## TECHNICAL SPECIFICATIONS

Number of filters HEPA-H14	2	
Number of IP44 fans	1	
Average volume of treated air	±350 m³/h	
Average face velocity	0.50 m/s	
Total electrical power consumption	260 W	
Voltage-Frequency	110-230 V / 50-60 Hz	
Fluorescent Lamp / Light intensity	36 W / 900 Lux	
Noise level	49 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	2 m³
	Weight	250 Kg

It is not a typographical error,  
**2 year warranty**

Because we are convinced of the quality of our products.



\*More information  
[www.cruma.es](http://www.cruma.es)



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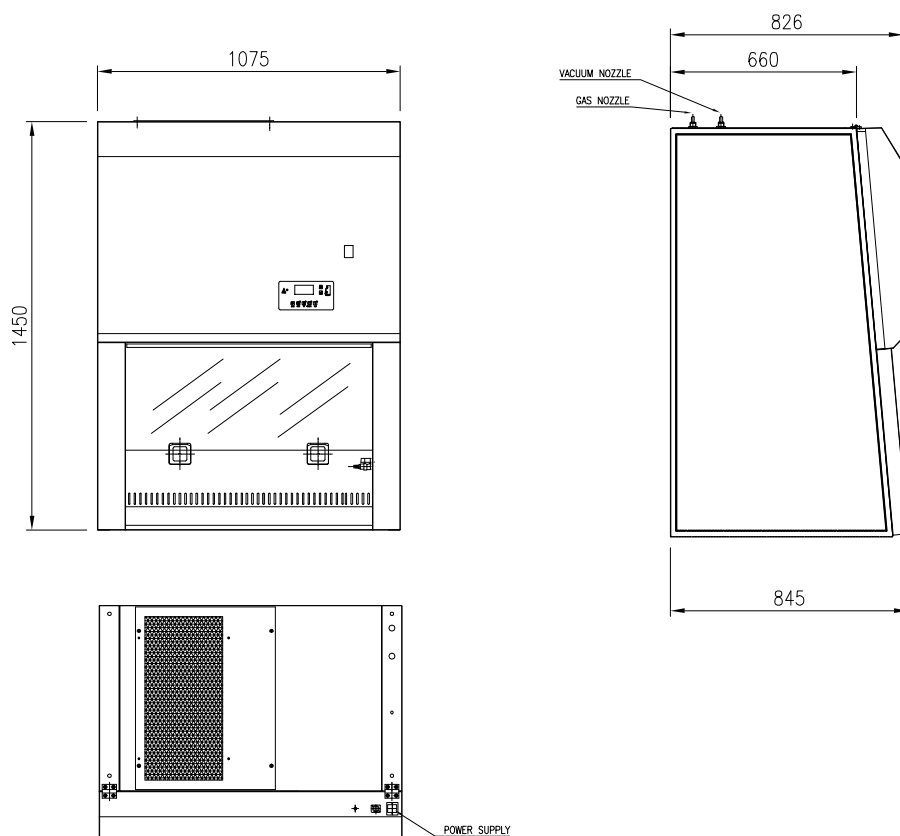
Do you need help or  
**technical assistance?**

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## SIZES (mm)



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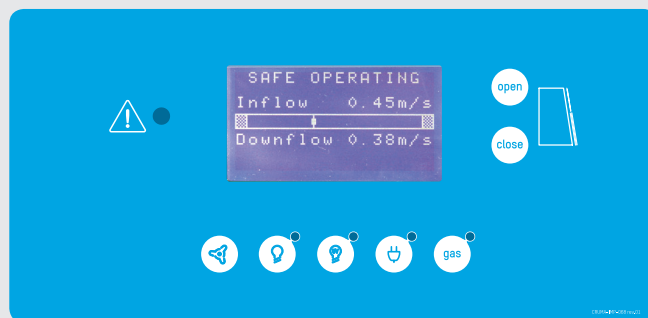
External Dimensions			Internal Dimensions		
Width	Depth	Height	Width	Depth	Height
1075	840	1450	924	600	700

## MAIN STRUCTURE

External metal parts	1.2 mm galvanized steel, coated with antiacid polymer powder resin thermo-hardened at 200 °C
Internal metal parts	Stainless Steel internal surfaces with 2B finishing (including spillage tray). Solid work surface in 3 sections and special designed front grill at the air barrier that cannot be obstructed by the operator's arms
Front door	Electrically operated from control panel sliding multilayer safety glass window

## ACCORDING TO STANDARDS

Cabinet	CEN-12469
Filters	EN-779: 1996 (HEPA & ULPA Filters) EN-1822:1998 (HEPA & ULPA Filters)
Quality	UNE EN ISO 9001:2008



## KEYBOARD MEMBRANE

Membrane keyboard commands for opening and closing the front window, activation of service outlets, electrical socket, gas solenoid valve, lighting and predisposed key to activate the connector kit germicidal lamp under the condition of complete closure of front of the machine, given the presence of the relevant position sensors.

All available accessories can be mounted without any structural modification of the cabin.

Provision for possible expulsion for channel adapters or additional filters.

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## MECHANICAL AND FUNCTIONAL SPECIFICATIONS

Sloped front design for the highest operational comfort. Sloped back side of the working chamber for the best down flow disbution (cabinet carcass EN12298 tested and certified for air tightness)

Utilities inlets from the top of the cabinet

Stainless Steel internal surfaces with 2B finishing (including spillage tray). Solid work surface (3 sections) and special designed front grill

Electrically operated sliding multilayer safety glass window (max opening at 120°)

Comfortable 200mm front opening

Easy to install retrofit options through lateral sides.

Exposed exhaust HEPA filter for easy visual integrity check

H14 class High Efficiency Particulate Airfilters with 99.995% efficiency on 3micron particles (most penetrating particle diameter) (EN 1822-1 and EN 13091:1999 tested and certified)

Both exhaust and Main Filters are equipped with a micromesh membran elocated downstream which acts as airspeed equalizer expansion plenum, as well as a clear indicator of filter damages

Filter change and maintenance from the front of the cabinet

Exhaust transitions easily installable

Key operated. The key can be removed when the unit is in SAFE mode, in order to avoid unwanted operation. In case of power failure, the cabinet is reset to original working conditions

Self calibration cycle performed when cabinet is switched on

High speed rinse and set up cycle performed, before reaching the SAFE operating mode.

Visual display of SAFE conditions. Pre-warning before actual alarm conditions are reached (visual and acoustic alarms)

Soft touch control with keys for standard service utilities. Interconnected UV and fluorescent lights

Exhaust and recirculating flow rates ensure 25 air changes/min in the working area (30% 70% split)

Front barrier air speed  $\geq 0.5 \text{ m/s}$

Aperture protection Factor (Apf)  $\geq 1.5 \times 10^5$

Cleanability Index CC grade. (EN 12296 tested and certified)

## SERIAL EQUIPMENT

Counter

Taking electrical service

Combustible line of gas

Delivering tap compressed gas or vacuum

Prepared for the use of UV kit

## OPTIONAL EQUIPMENT

Taps additional gaseous fluids.

Acces for different electrical equipment put on the car.

A second line of fuel gas.

Spray formalin and related accessories to cycle semi-automatic decontamination.

Passive extraction kit for external expulsion.

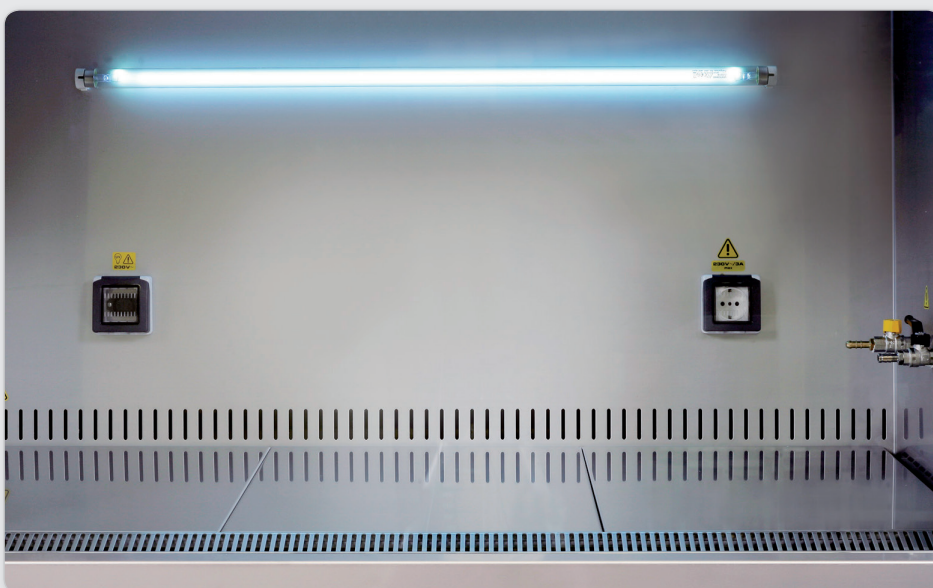
Motorized Kit for external extraction expulsion.

Kit motorized bike extraction fan remote for external expulsion.

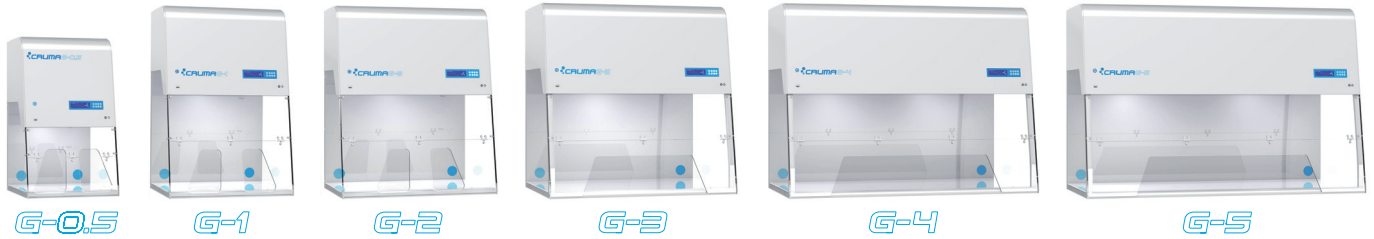
Activated carbon filters or additional HEPA expulsion.

UV lamp

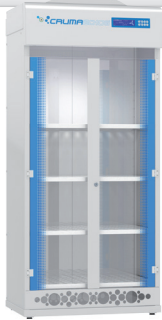
Tubular table support



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