

# CRUMAG-1

The new Cruma G-1 is perfect to remove low quantities of gaseous polluting agents and/or solid particles/aerosols from its working area in a simple, secure, efficient and cost effective way, protecting both the user and the environment.

Cruma G-1 ductless fume hood uses the patented\* Cruma Filtration System, without any exterior duct connection. All molecular and dust particles are absorbed and retained into the filtration system. \*Invention Patent No.2397598

**CERTIFIED** –Made in Barcelona and certified by an external laboratory according to international standards, and complying with the criteria of ISO 9001 standard.

**PLUG&PLAY** –It is sent from our warehouse assembled, and when unpacked it just needs to be connected into a plug.

**FLEXIBLE** –It can be used in hard-to-duct areas such as the center or bottom level of multi-level buildings.

**TURNKEY** –Installation expenses are far less than traditional hoods because no ductwork and remote blower are required.

**GREEN & SUSTAINABLE** –Unlike traditional fume hoods, costly tempered room air is not exhausted from the laboratory, resulting in lower energy costs.



## NEW FEATURES

### More information on the new LCD display



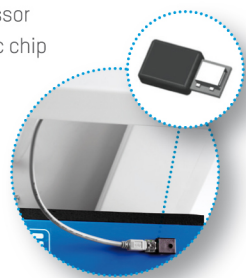
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### New features and components

- ✓ Initial air flow cycle adequacy and final purge cycle
- ✓ Fault LED
- ✓ Control of air flow through Microprocessor
- ✓ Activated carbon filters with electronic chip
- ✓ Internal temperature sensor
- ✓ LED illumination

### New alarms and scheduled warnings

- ✓ Open door warning
- ✓ Open door in off mode warning
- ✓ 60h of filter use warning
- ✓ Next validation warning
- ✓ Few hours of filter life warning
- ✓ Countdown timer warning
- ✓ Expired filter alarm (by hours)
- ✓ Expired filter alarm (by date)
- ✓ Temperature alarm
- ✓ Equipment without filter alarm
- ✓ Low barrier alarm



## USES

General chemistry involving small volumes of reagents or chemical compounds at ambient/moderate temperature in all types of laboratories:

- ✓ Research laboratories
- ✓ Quality control laboratories
- ✓ Clinical and hospital laboratories
- ✓ University and school laboratories

...In general, in any kind of laboratory.

## TECHNICAL FEATURES

Number of filtration columns	1	
Number of filters	1 to 3	
Number of IP44 fans	1	
Average volume of treated air	157 m <sup>3</sup> /h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,32 m <sup>3</sup>	
Renewals inside the cabinet / min	8,13	
Total electrical power consumption Voltage-	91 W	
Frequency	110-220 V / 50-60 Hz	
LED light intensity	900 Lux	
Noise level	45 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,80 m <sup>3</sup>
	Weight	95 Kg

## SIZES (mm)

External Dimensions			Internal Dimensions		
Width	Depth	Height	Width	Depth	Height
797	650	1195	776	600	762

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

Because we are convinced of the quality of our products.



Well done, well shipped.  
**Our responsible packaging**

Wood box 100% recyclable with international phytosanitary certificate.



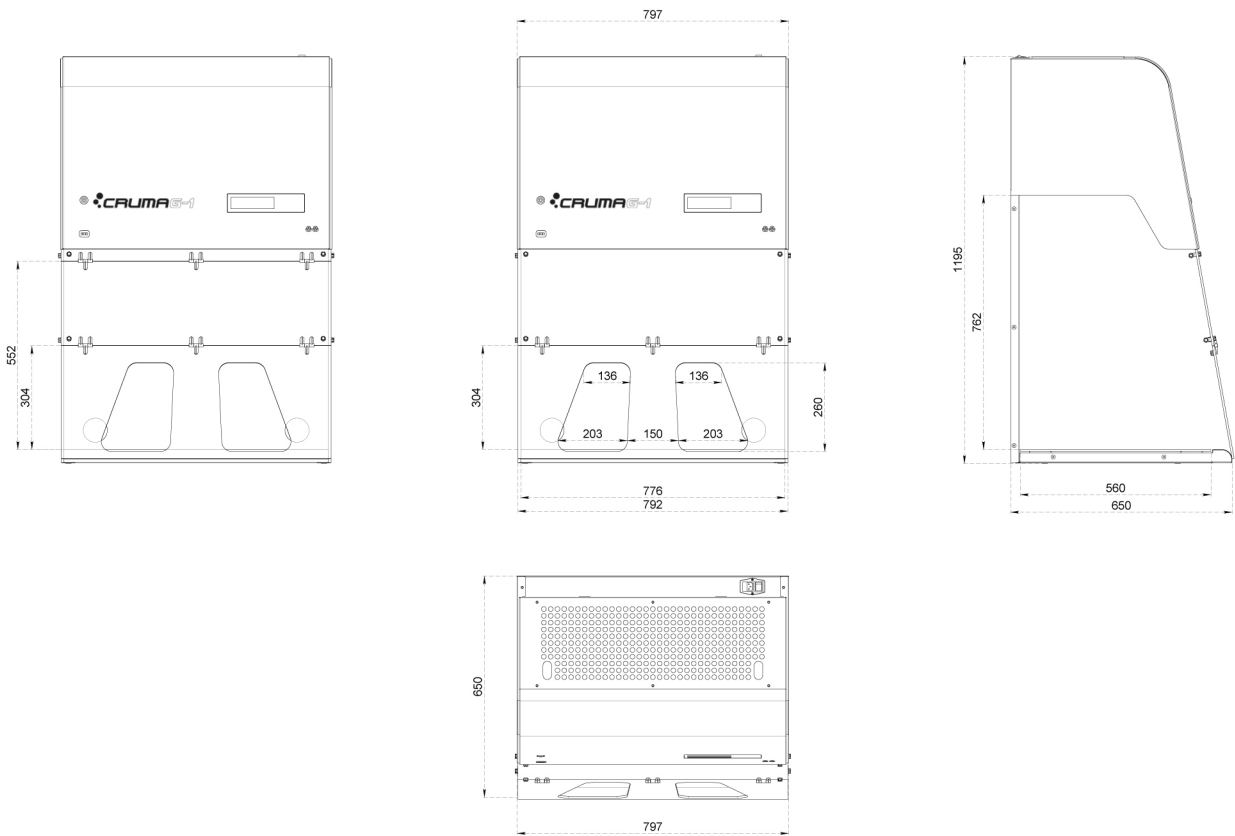
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our 1% engagement

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## SIZES (mm)



### SERIAL EQUIPMENT

<b>Electronic circuit with large format LCD screen</b>	Security levels: level 1 for users and level 2 for maintenance users
<b>Electronic anemometer device</b>	Electronic sensor monitoring continuously air face velocity
<b>Photocell sensor device for open door detection</b>	Electric device with open door alarm
<b>Electronic control device for filters replacement</b>	The filters incorporate a microchip with miniUSB connection that identifies the type of filter installed, the expiry date and the serial no.
<b>Illumination</b>	96 LED Tube high light intensity and low power consumption - 16 Watts / 700 Lux
<b>Temperature sensor</b>	Continuous monitoring of the temperature inside the cabinet
<b>Sampling system to analyze the filtered air at the exhaust</b>	To detect the level of filter saturation
<b>60 hours alarm</b>	Countdown timer according to French NF X 15-211:2009
<b>Electronic cronometre with audible alarm</b>	To program the work inside the fume hood
<b>Clock and calendar</b>	Display of date and time
<b>Working surface 1</b>	Spill retention tray (2-10 liters) with working surface in white tempered glass
<b>64 Prefilter</b>	64 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
<b>Cable entry holes (2)</b>	Access to the rear wall for cables and / or services entry
<b>Chemical Listing</b>	Guide of retained products by type of filter
<b>Warranty</b>	7 years

### OPTIONAL EQUIPMENT

<b>Molecular detector</b>	Automatic Alarm Device for detection of saturation in organic vapors filters (required for Class I according to standard NF X 15-211:2009)
<b>Movilair</b>	Stand with wheels and internal tray in Epoxy coated steel
<b>Tubular steel stand</b>	Support stand in Epoxy coated steel
<b>Working surface 2</b>	Spill retention tray (2-10 liters) with working surface in phenolic resin
<b>Working surface 3</b>	Spill retention tray (2-10 liters) with working surface in inox steel
<b>Transparent rear back panel</b>	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
<b>Voltage / Frequency</b>	125 V / 50 Hz
<b>Filter test kit</b>	Dräger pump with reactive colorimetric tubes (pack 10u)
<b>Junction frame</b>	Allows to join two units of the same model without internal divisions

### MAIN STRUCTURE

<b>Metal parts:</b> base frame, rear wall and head	1.2 mm galvanized coated steel with anti acid polymer resin powder heat-hardened at 200 °C
<b>Front and side panels</b>	Transparent polymethylmethacrylate 6 mm thick (light transmission of 93%)

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## FILTER TYPES

<b>Type A</b>	For <b>organic vapors</b> such as ketones, ethers, alcohols, xylenes ... Eventually it can be used for inorganic acids, but only if used in small quantities because this activated carbon is not impregnated and the excess of acid vapors could saturate it quickly.	<b>Type K</b>	For <b>NH<sub>3</sub> vapors and amines</b> ; also good for other organic compounds. Carbon with metal salt complexes impregnation.
<b>Type BE</b>	For <b>inorganic acid vapors</b> as H <sub>2</sub> SO <sub>4</sub> , HCl, HNO <sub>3</sub> , and volatile sulfur compounds such as H <sub>2</sub> S, SO <sub>3</sub> , ... It can be used with organic vapors because the activated carbon incorporates impregnation of metal compounds and neutralizing salts. It is also suitable to filter organic and inorganic compounds when they are in similar proportions.	<b>Type ABEK</b>	<b>Mixed type</b> to be used when the ratios between organic, inorganic and NH <sub>3</sub> /amines are similar.
<b>Type F</b>	For <b>formaldehyde vapors</b> and derivatives; also good for other organic compounds. Carbon impregnated with Cu leads, so that it should never be used with inorganic acid vapors.	<b>Type D</b>	<b>HEPA H-14 filter</b> (High Efficiency Particulate Air, according to EN-1822: 1998) for filtering dust and smoke particles.

## MODULAR FILTRATION COLUMN FOR GASES AND PARTICLES (according to NFX 15-211:2009)

CLASS 2		CLASS 1	
<b>Type G</b> Handling of liquid compounds/products		<b>Type 26</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 26S</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 26D</b> Handling of liquid compounds in clean room with molecular security filter	

## FILTRATION COLUMN FOR POWDERS

<b>Type D</b> Handling of powder compounds	
<b>Type DD</b> Handling of powder compounds in clean room	
<b>Type 2DD</b> Handling of powder and molecular compounds in clean room with molecular security filter	

Fan  
 Molecular Filter  
 HEPA-H14 Filter

## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS 7258: 94 (UK) BS 7989: 2001 (UK) ANSI/ASHRAE 110-1995 (USA)
<b>Filters</b>	CSA Z 316.5-94 (Canada) EN-779: 1996 (HEPA & ULPA Filters) EN-1822:1998 (HEPA & ULPA Filters) EN-141:2001 (Gas Filters)
<b>Quality</b>	UNE EN ISO 9001:2008

Filters with microchip and USB connection, *intelligent filtering*

Information storage and interaction with the alarm system.

**cloup**

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