

# CRUMA G-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.

**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 install the filters and connect into a plug.

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

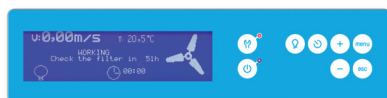
**TURNKEY** –Installation expenses are far less than traditional hoods because no ductwork and remote blower are required.

**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



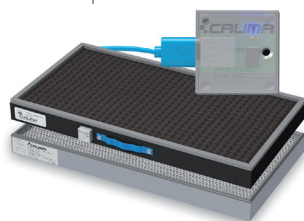
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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	160 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,32 m³	
Renewals inside the cabinet / min	8,13	
Total electrical power consumption	60 W	
Voltage-Frequency	110-220 V / 50-60 Hz	
LED light intensity	1275 lux	
Noise level	54 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,80 m³
	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.



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

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

Wood box 100% recyclable with international phytosanitary certificate.

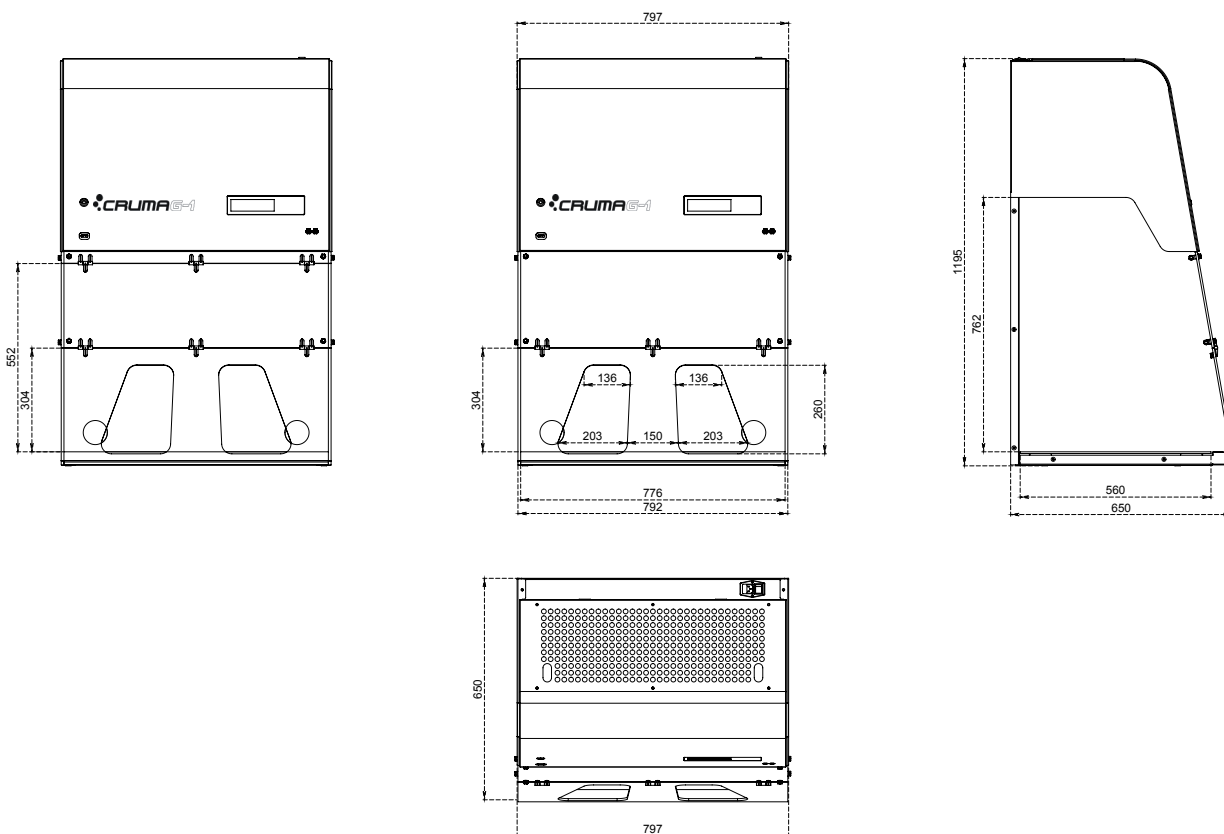


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## SIZES (mm)



### SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 16 Watts / 1500lm
Temperature sensor	Continuous monitoring of the temperature inside the cabinet
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

### OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in inox steel
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)






### MAIN STRUCTURE

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




## FILTER TYPES

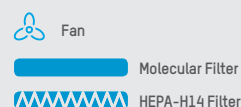
<b>Type A</b>	For <b>organic vapors</b> such as ketones, ethers, alcohols, xylenes ... Eventually it can be used for inorganic acids, but only if used in small quantities because this activated carbon is not impregnated and the excess of acid vapors could saturate it quickly.	<b>Type K</b>	For <b>NH<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>2</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 KI, 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: 2010) 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 2G</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 2GS</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 2GD</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	



## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 EUNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

## Filters with microchip and USB connection, *intelligent filtering*

Information storage and interaction with the alarm system.



We recognise our responsibility and dependence towards a healthy environment and, therefore, we destinate more than 7% of our annual budget in innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA G-2

The new Cruma G-2 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-2 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.

**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 install the filters and connect into a plug.

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

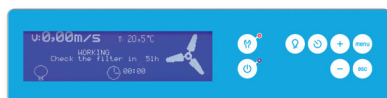
**TURNKEY** –Installation expenses are far less than traditional hoods because no ductwork and remote blower are required.

**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



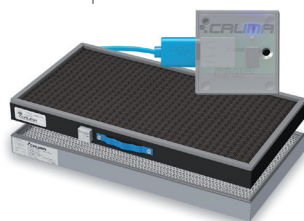
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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	160 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,40 m³	
Renewals inside the cabinet / min	6,47	
Total electrical power consumption	65 W	
Voltage-Frequency	110-220 V / 50-60 Hz	
LED light intensity	1100 lux	
Noise level	54 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,80 m³
	Weight	110 Kg

## SIZES (mm)

External Dimensions			Internal Dimensions		
Width	Depth	Height	Width	Depth	Height
997	650	1195	976	600	762

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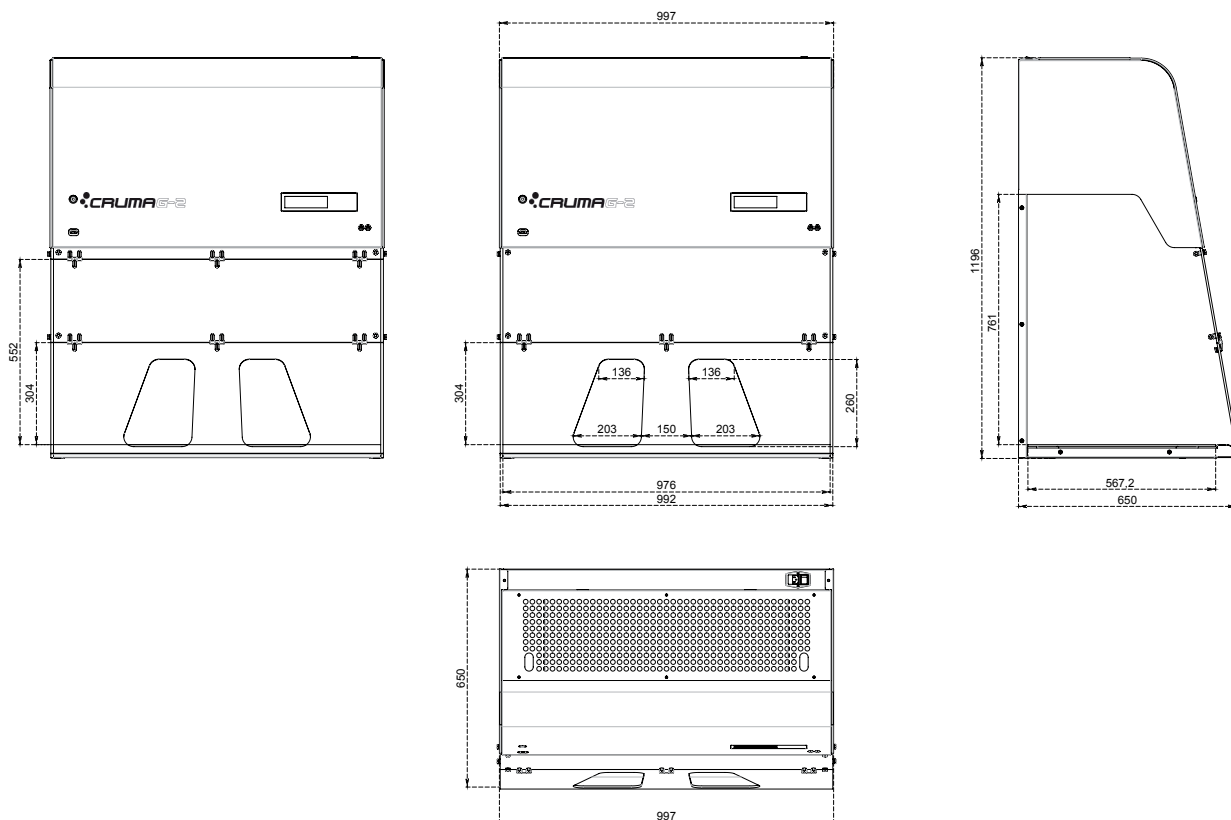
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## SIZES (mm)



### SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 16 Watts / 1500lm
Temperature sensor	Continuous monitoring of the temperature inside the cabinet
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

### OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in inox steel
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)






### MAIN STRUCTURE

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




## FILTER TYPES

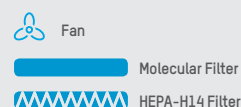
<b>Type A</b>	For <b>organic vapors</b> such as ketones, ethers, alcohols, xylenes ... Eventually it can be used for inorganic acids, but only if used in small quantities because this activated carbon is not impregnated and the excess of acid vapors could saturate it quickly.	<b>Type K</b>	For <b>NH<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>2</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 KI, 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: 2010) 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 2G</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 2GS</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 2GD</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	



## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 EUNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

## Filters with microchip and USB connection, *intelligent filtering*

Information storage and interaction with the alarm system.



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# CRUMA G-3

The new Cruma G-3 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-3 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.

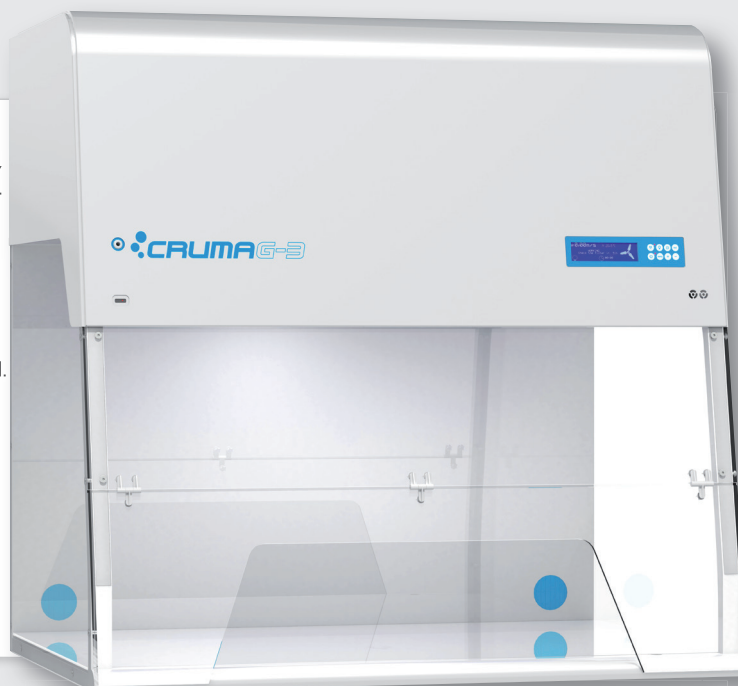
**CERTIFIED** –Made in Barcelona and certified by an external laboratory according to international standards, and complying with the criteria of ISO 9001 standard.

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

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

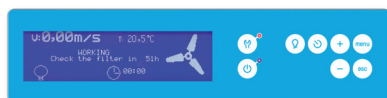
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## NEW FEATURES

### More information on the new LCD display



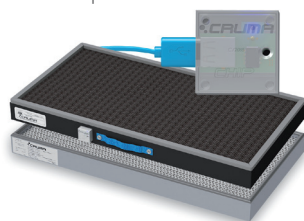
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- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### New features and components

- ✓ Initial air flow cycle adequacy and final purge cycle
- ✓ Fault LED
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- ✓ Expired filter alarm (by hours)
- ✓ Expired filter alarm (by date)
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...In general, in any kind of laboratory.

## TECHNICAL FEATURES

Number of filtration columns	2	
Number of filters	2 to 6	
Number of IP44 fans	2	
Average volume of treated air	270 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,67 m³	
Renewals inside the cabinet / min	4,2	
Total electrical power consumption	90 W	
Voltage-Frequency	110-220 V / 50-60 Hz	
LED light intensity	1200 lux	
Noise level	55 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	1,24 m³
	Weight	130 Kg

## SIZES (mm)

External Dimensions			Internal Dimensions		
Width	Depth	Height	Width	Depth	Height
1197	850	1195	1176	800	762

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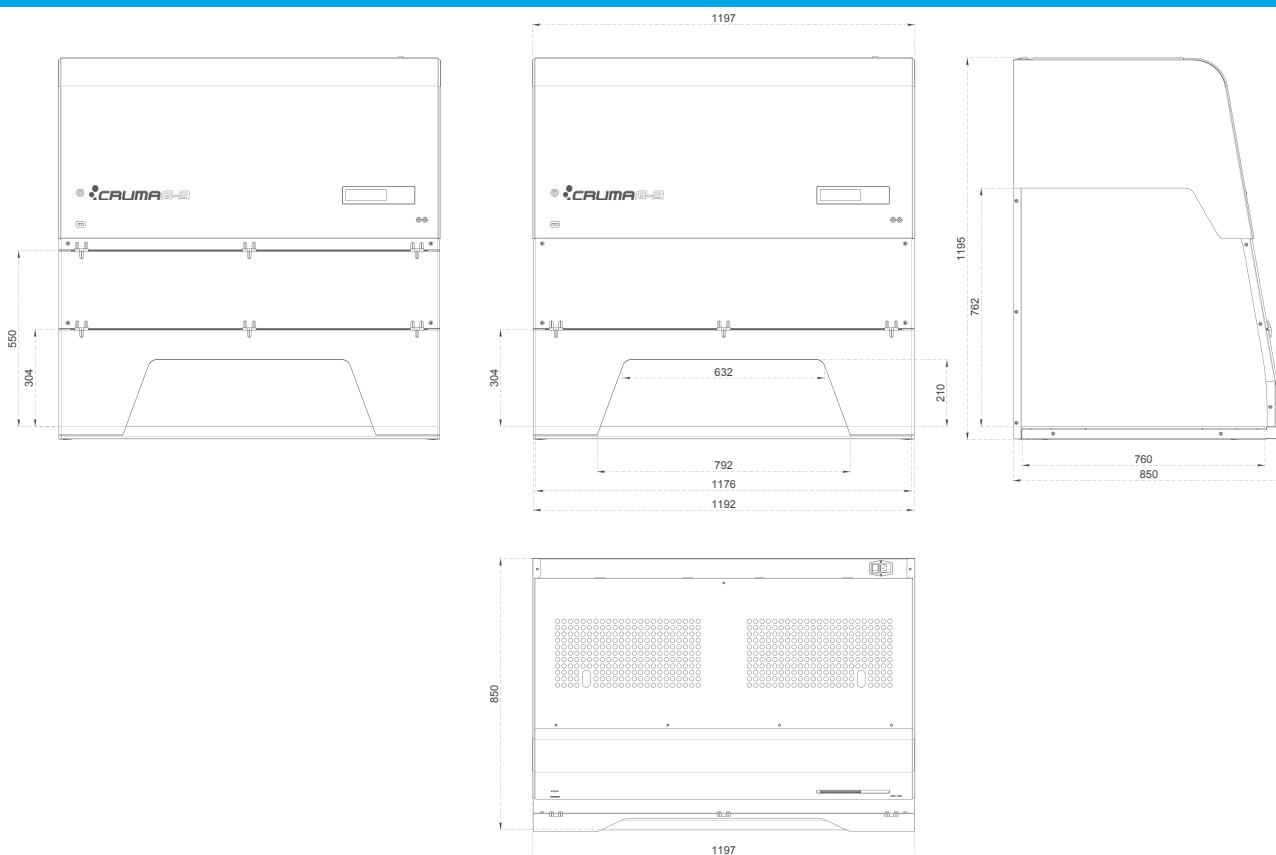


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60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
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Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in inox steel
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)






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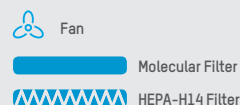
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<b>Type F</b>	For <b>formaldehyde vapors</b> and derivatives; also good for other organic compounds. Carbon impregnated with KI, so that it should never be used with inorganic acid vapors.	<b>Type D</b>	<b>HEPA H-14 filter</b> (High Efficiency Particulate Air, according to EN-1822: 2010) 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 2G</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 2GS</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 2GD</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	



## ACCORDING TO STANDARDS

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# CRUMA G-4

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Cruma G-4 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.

**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 install the filters and connect 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.

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## NEW FEATURES

### More information on the new LCD display



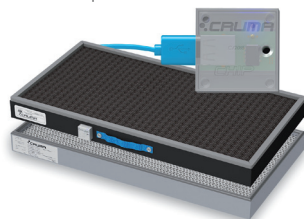
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- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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	2	
Number of filters	2 to 6	
Number of IP44 fans	2	
Average volume of treated air	385 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,89 m³	
Renewals inside the cabinet / min	3,1	
Total electrical power consumption	115 W	
Voltage-Frequency	110-220 V / 50-60 Hz	
LED light intensity	1800 lux	
Noise level	55 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	1,66 m³
	Weight	160 Kg

## SIZES (mm)

External Dimensions			Internal Dimensions		
Width	Depth	Height	Width	Depth	Height
1597	850	1195	1576	800	762

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

Because we are convinced of the quality of our products.



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

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

Wood box 100% recyclable with international phytosanitary certificate.

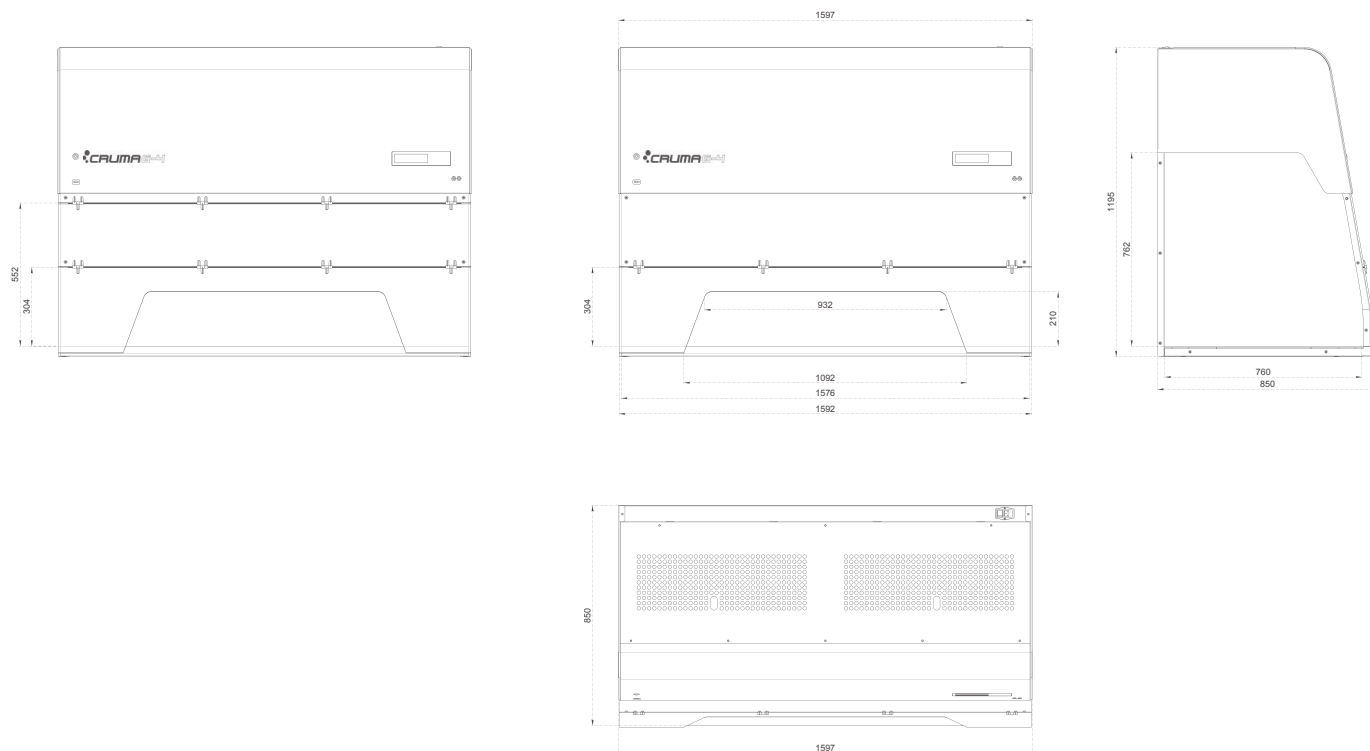


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**+34 93 370 61 62**

## SIZES (mm)



### SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 16 Watts / 1500lm
Temperature sensor	Continuous monitoring of the temperature inside the cabinet
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

### OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in inox steel
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)






### MAIN STRUCTURE

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




## 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>2</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 KI, 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: 2010) 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 2G</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 2GS</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 2GD</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 EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 EUNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*Information storage and interaction  
with the alarm system.

We recognise our responsibility  
and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA G-5

The new Cruma G-5 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-5 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.

**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 install the filters and connect into a plug.

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

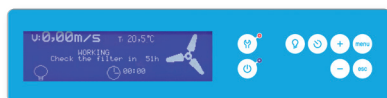
**TURNKEY** –Installation expenses are far less than traditional hoods because no ductwork and remote blower are required.

**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



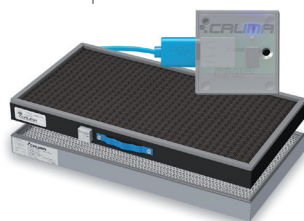
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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	2	
Number of filters	2 to 6	
Number of IP44 fans	2	
Average volume of treated air	464 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	1,01 m³	
Renewals inside the cabinet / min	2,7	
Total electrical power consumption	115 W	
Voltage-Frequency	110-220 V / 50-60 Hz	
LED light intensity	1600 lux	
Noise level	55 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	1,86 m³
	Weight	180 Kg

## SIZES (MM)

External			Internal		
Longitud	Width	Height	Longitud	Width	Height
1797	850	1195	1776	800	762

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

Because we are convinced of the quality of our products.



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

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

Wood box 100% recyclable with international phytosanitary certificate.

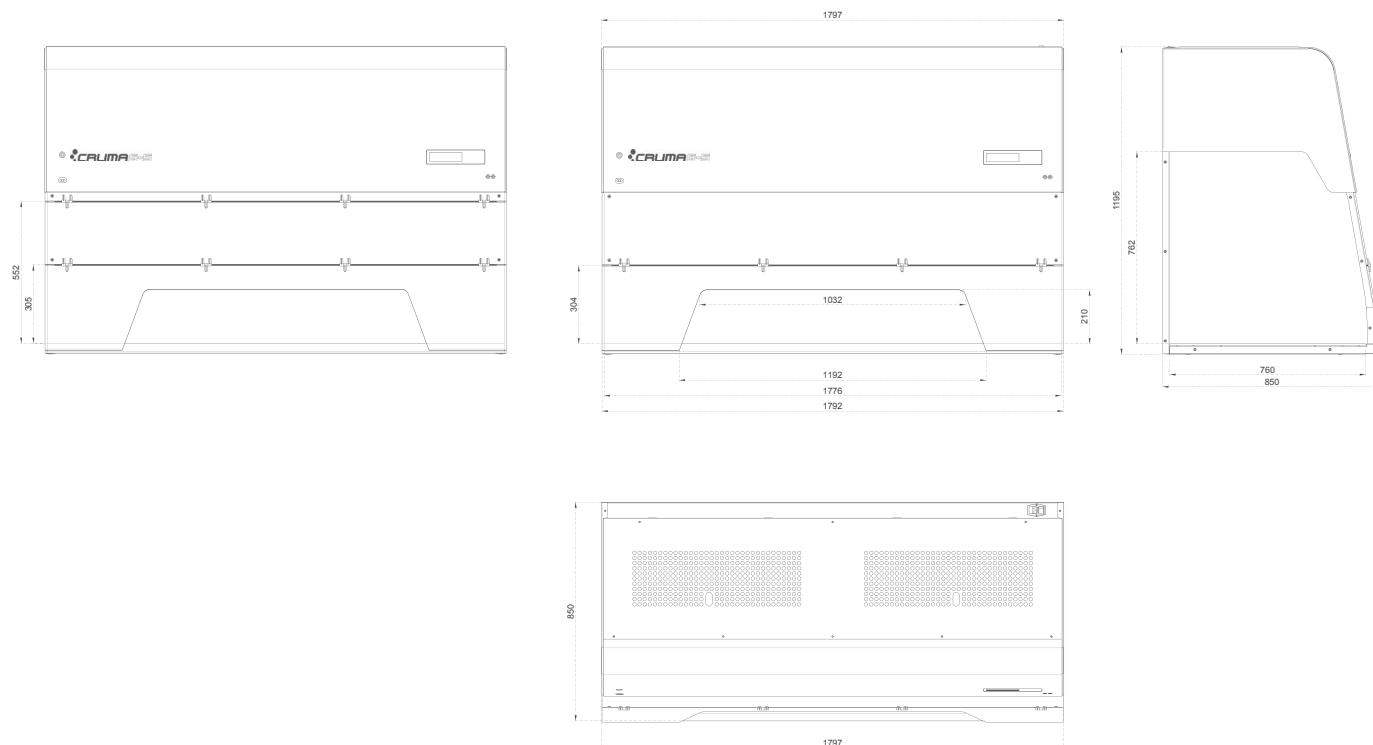


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## SIZES (mm)



### SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 16 Watts / 1500lm
Temperature sensor	Continuous monitoring of the temperature inside the cabinet
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

### OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in inox steel
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)

### MAIN STRUCTURE






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






## FILTER TYPES

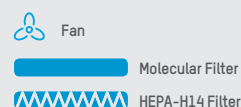
<b>Type A</b>	For <b>organic vapors</b> such as ketones, ethers, alcohols, xylenes ... Eventually it can be used for inorganic acids, but only if used in small quantities because this activated carbon is not impregnated and the excess of acid vapors could saturate it quickly.	<b>Type K</b>	For <b>NH<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>2</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 KI, 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: 2010) 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 2G</b> Liquid compounds/products handling with security molecular filter	
<b>Type GS</b> Handling of liquid and particles compounds/products		<b>Type 2GS</b> Liquid and particles compounds/products handling with molecular security filter	
		<b>Type 2GD</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	



## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 EUNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

## Filters with microchip and USB connection, *intelligent filtering*

Information storage and interaction with the alarm system.



We recognise our responsibility and dependence towards a healthy environment and, therefore, we destinate more than 7% of our annual budget in innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA670

**Perfect for small working spaces.** This ductless fume hood is recommended to remove from the working area gaseous polluting agents and/or solid particles/aerosols in a simple, efficient and cost effective way, protecting both the user and the environment.

**CRUMA 670** ductless fume hood uses the Cruma filtration system. Cruma ductless fume hoods designed to handle low toxic products are made of steel plate with antiacid polymerized epoxy coating and methylpropileno of high resistance.

**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** –The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** –No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** –It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

**ENERGY SAVINGS** –The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

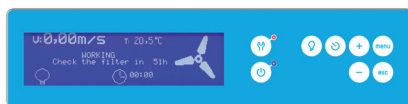
**CERTIFIED** –Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## NEW FEATURES

### More information

#### on the new LCD display



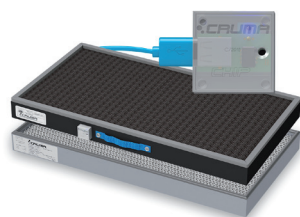
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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

### 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)
- ✓ 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 2
Number of IP44 fans	1
Average volume of treated air	108 m³/h
Average face velocity	0,50 m/s
Internal volume of the cabinet	0,181 m³
Renewals inside the cabinet / min	9,94
Total electrical power consumption	56 ± 3 W
Voltage-Frequency	110-230 V - 50-60 Hz
LED light intensity	15W / 1300 lux
Noise level	57± 3 dB
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume 0,33 m³ Weight 58 Kg

## SIZES (MM)

External			Internal		
Width	Depth	Height	Width	Depth	Height
600	600	937	576	563	630

It is not a typographical error,  
**7 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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Wood box 100% recyclable with international phytosanitary certificate.

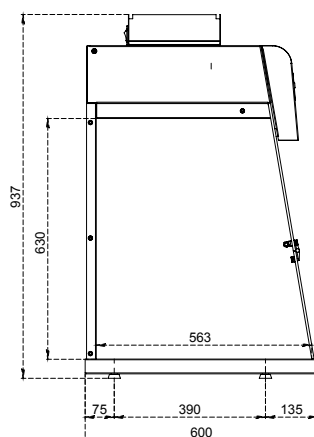
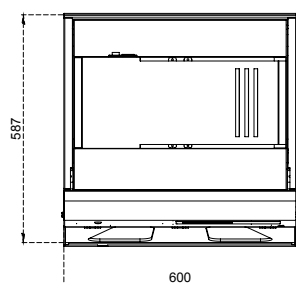
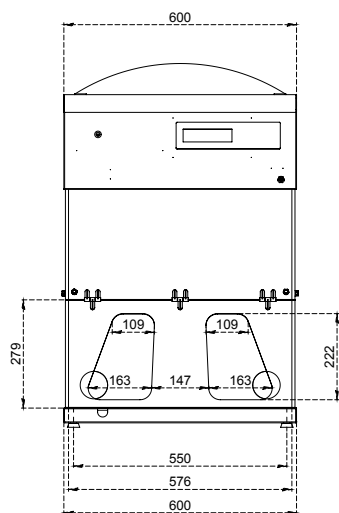


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## SIZES (mm)



## SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 15W /1300 lux
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

## OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in stainless steel
Transparent rear back pannel	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)

## MAIN STRUCTURE



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

## 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>2</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 KI 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: 2010) for filtering dust and smoke particles.

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

### CLASE 2

<b>Type G</b> Handling of liquid compounds/products		<b>Type GS</b> Handling of liquid and particles compounds/products	
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## FILTRATION COLUMN FOR POWDERS

**Type D**  
Handling of powder compounds



Fan



Molecular Filter  
HEPA-H14 Filter

## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 UNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*

Information storage and interaction  
with the alarm system.



We recognise our responsibility  
and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA 870

This model is perfect to be joined to another hood of similar measures or to a CRUMA 990. Ideal to remove from the working area gaseous polluting agents and/or solid particles/aerosols in a simple, efficient and cost effective way, protecting both the user and the environment. **CRUMA 870** ductless fume hood uses the CRUMA filtration system.

Cruma ductless fume hoods designed to handle low toxic products are made of steel plate with antiacid polymerized epoxy coating and methylpropileno of high resistance.

**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** – The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** – No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** – It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

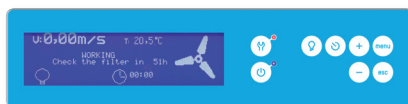
**ENERGY SAVINGS** – The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

**CERTIFIED** – Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## NEW FEATURES

### More information on the new LCD display



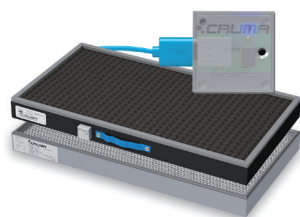
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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

### 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)
- ✓ 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 2	
Number of IP44 fans	1	
Average volume of treated air	160 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,287 m³	
Renewals inside the cabinet / min	9,25	
Total electrical power consumption	57± 3 W	
Voltage-Frequency	110-230 V - 50-60 Hz	
LED light intensity	15W /1100 lux	
Noise level	57± 3 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,43 m³
	Weight	77 Kg

## SIZES (MM)

External			Internal		
Width	Depth	Height	Width	Depth	Height
800	600	1037	776	563	730

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

Because we are convinced of the quality of our products.



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

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

Wood box 100% recyclable with international phytosanitary certificate.



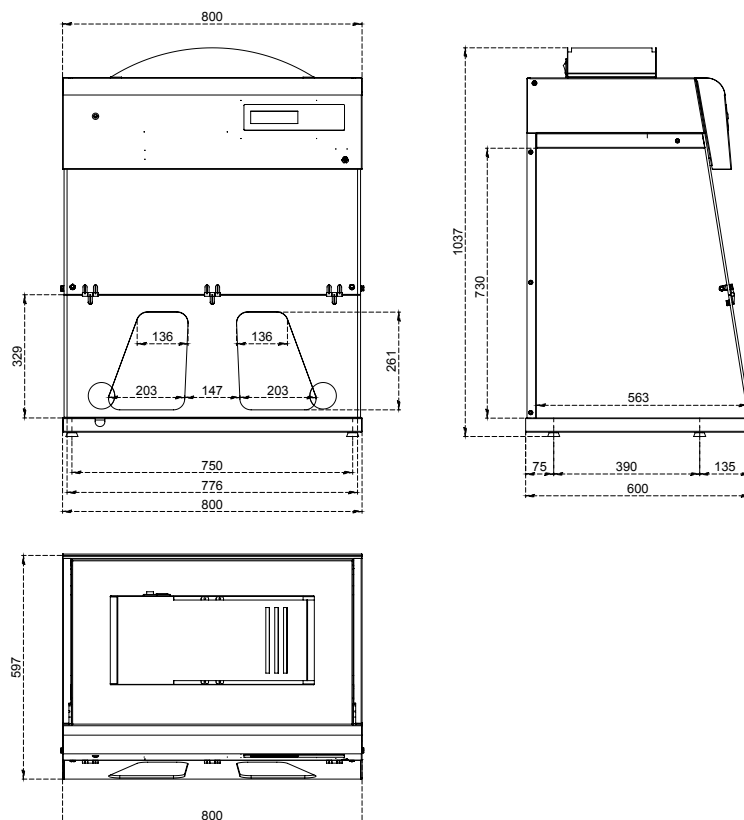
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## SIZES (MM)



## SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 15W / 1100 lux
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

## OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in stainless steel
Transparent rear back pannel	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)

## MAIN STRUCTURE



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

## 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>2</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 KI 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: 2010) for filtering dust and smoke particles.

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

### CLASE 2

<b>Type G</b> Handling of liquid compounds/products		<b>Type GS</b> Handling of liquid and particles compounds/products	
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## FILTRATION COLUMN FOR POWDERS

**Type D**  
Handling of powder compounds



Fan



Molecular Filter  
HEPA-H14 Filter

## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 UNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*

Information storage and interaction  
with the alarm system.



We recognise our responsibility  
and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA 990

To remove from a large working area gaseous polluting agents and/or solid particles/aerosols in a simple, efficient and cost effective way, protecting both the user and the environment. **CRUMA 990** ductless fume hood uses the CRUMA filtration system.

Cruma ductless fume hoods designed to handle low toxic products are made of steel plate with antiacid polymerized epoxy coating and methylpropileno of high resistance.

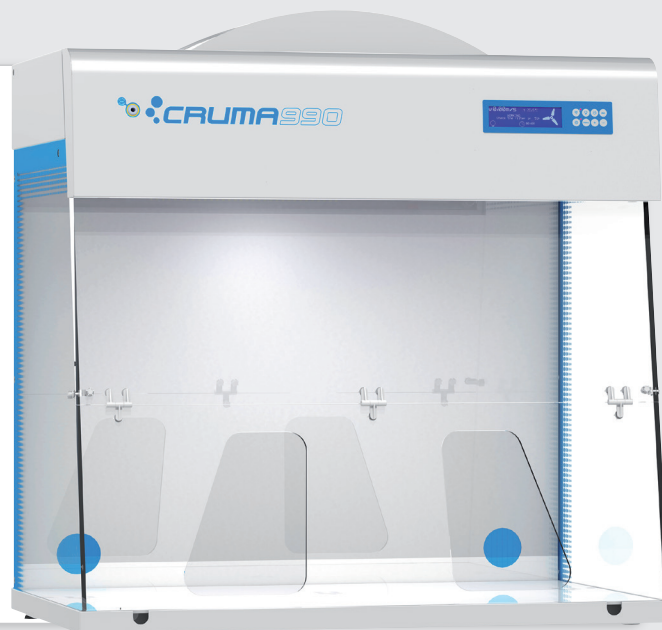
**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** –The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** –No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** –It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

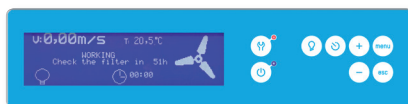
**ENERGY SAVINGS** –The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

**CERTIFIED** –Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## NEW FEATURES

### More information on the new LCD display



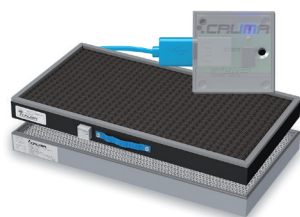
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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

### 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)
- ✓ 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 2
Number of IP44 fans		1
Average volume of treated air		160 m³/h
Average face velocity		0,50 m/s
Internal volume of the cabinet		0,361 m³
Renewals inside the cabinet / min		7,35
Total electrical power consumption		60± 3 W
Voltage-Frequency		110-230 V - 50-60 Hz
LED light intensity		15W / 1100 lux
Noise level		57± 3 dB
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,52 m³
	Weight	90 Kg

## SIZES (MM)

External			Internal		
Width	Depth	Height	Width	Depth	Height
1000	600	1037	976	563	730

It is not a typographical error,  
**7 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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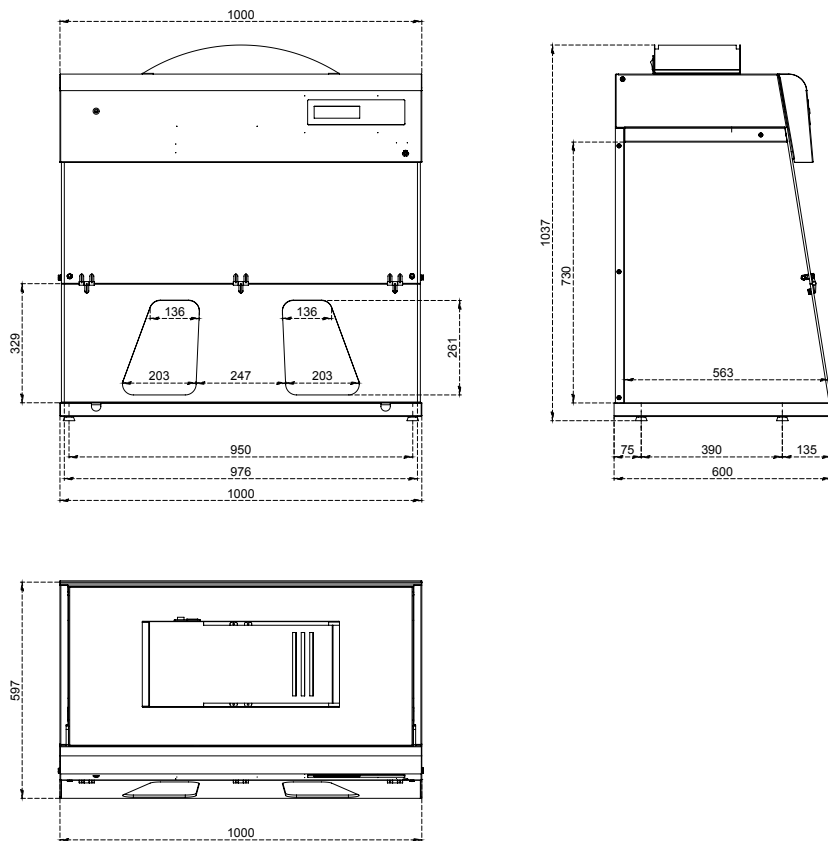


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## SIZES (MM)



## SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 15W / 1100 lux
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

## OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in stainless steel
Transparent rear back pannel	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)

## MAIN STRUCTURE



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

## 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>2</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 KI 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: 2010) for filtering dust and smoke particles.

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

### CLASE 2

<b>Type G</b> Handling of liquid compounds/products		<b>Type GS</b> Handling of liquid and particles compounds/products	
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## FILTRATION COLUMN FOR POWDERS

**Type D**  
Handling of powder compounds



Fan



Molecular Filter  
HEPA-H14 Filter

## ACCORDING TO STANDARDS

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 UNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*

Information storage and interaction  
with the alarm system.



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and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement



# CRUMA1010

Perfect for applications at **high temperature** (max. 60°C) that require a **high working space**. This model is ideal to remove gaseous polluting agents and/or solid particles/aerosols from the working space in a simple, efficient and cost effective way, protecting both the user and the environment. **CRUMA 1010** ductless fume hood uses the CRUMA filtration system.

Cruma ductless fume hoods designed to handle low toxic products are made of steel plate with antiacid polymerized epoxy coating and methylpropileno of high resistance.

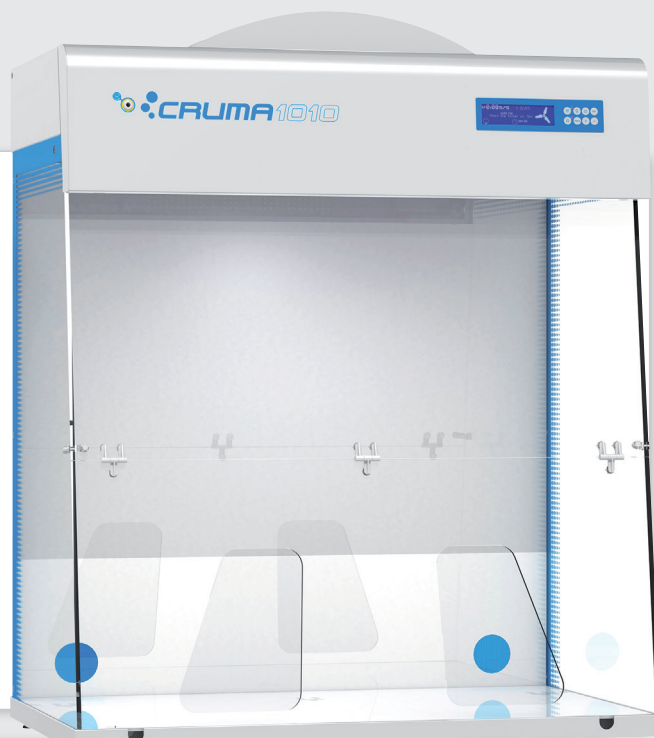
**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** –The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** –No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** –It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

**ENERGY SAVINGS** –The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

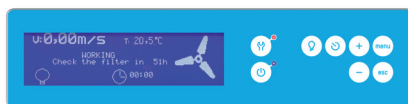
**CERTIFIED** –Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## NEW FEATURES

### More information

#### on the new LCD display



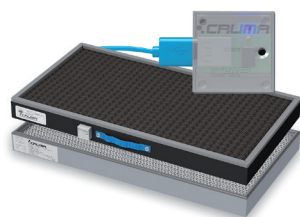
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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

### 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)
- ✓ 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 2
Number of IP44 fans		1
Average volume of treated air		160 m³/h
Average face velocity		0,50 m/s
Internal volume of the cabinet		0,458 m³
Renewals inside the cabinet / min		5,8
Total electrical power consumption		59± 3 W
Voltage-Frequency		110-230 V - 50-60 Hz
LED light intensity		15W / 825 lux
Noise level		57± 3 dB
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,52 m³
	Weight	95 Kg

## SIZES (mm)

External			Internal		
Width	Depth	Height	Width	Depth	Height
1000	600	1237	976	563	930

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

Because we are convinced of the quality of our products.



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

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

Wood box 100% recyclable with international phytosanitary certificate.

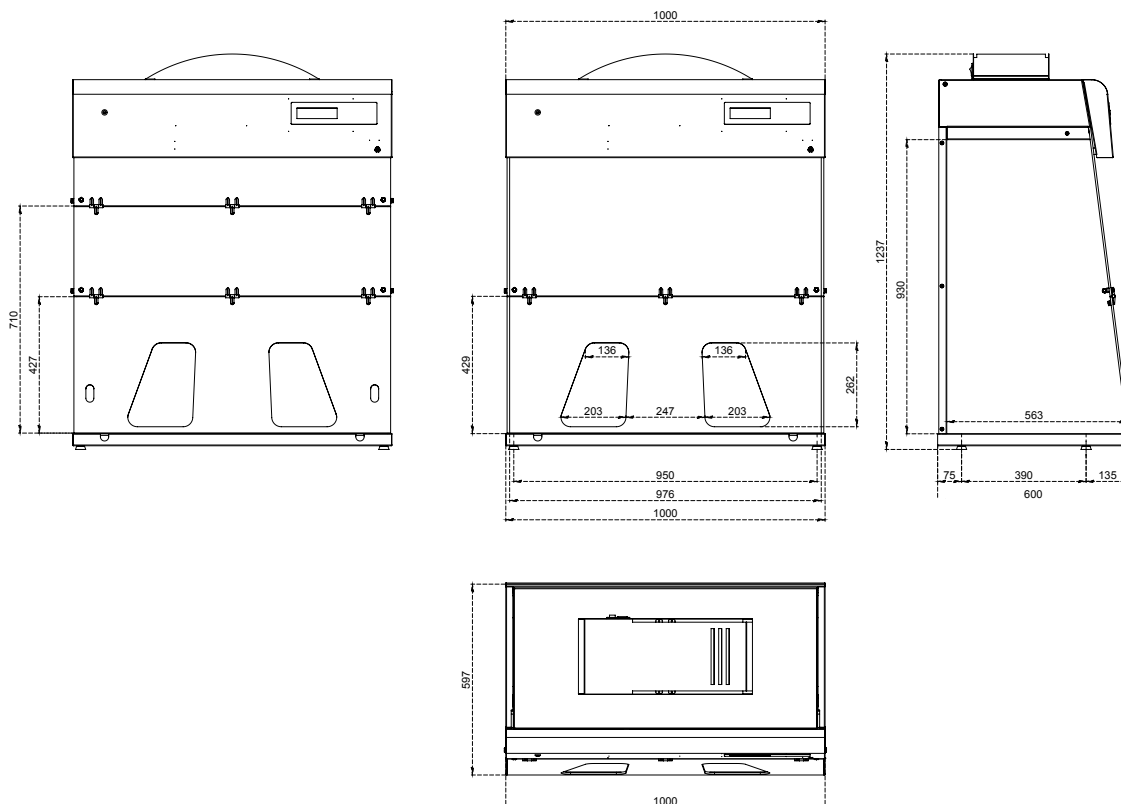


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## DIMENSIONES (mm)



### SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 15W / 825 lux
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

### OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in stainless steel
Transparent rear back pannel	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)



### MAIN STRUCTURE

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

**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>2</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 KI 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: 2010) for filtering dust and smoke particles.

**MODULAR FILTRATION COLUMN FOR GASES AND PARTICLES** (according to NFX 15-211:2009)**CLASE 2**

<b>Type G</b> Handling of liquid compounds/products		<b>Type GS</b> Handling of liquid and particles compounds/products	
--	---	---	---

**FILTRATION COLUMN FOR POWDERS**

**Type D**  
Handling of powder compounds



Fan

Molecular Filter  
HEPA-H14 Filter**ACCORDING TO STANDARDS**

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 UNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*

Information storage and interaction  
with the alarm system.



We recognise our responsibility  
and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement

# CRUMA1200

Cruma ductless fume hood with the **largest working surface**. Perfect to remove gaseous polluting agents and/or solid particles/aerosols from the working space in a simple, efficient and cost effective way, protecting both the user and the environment. CRUMA 1200 ductless fume hood uses the CRUMA filtration system, without any exterior connection.

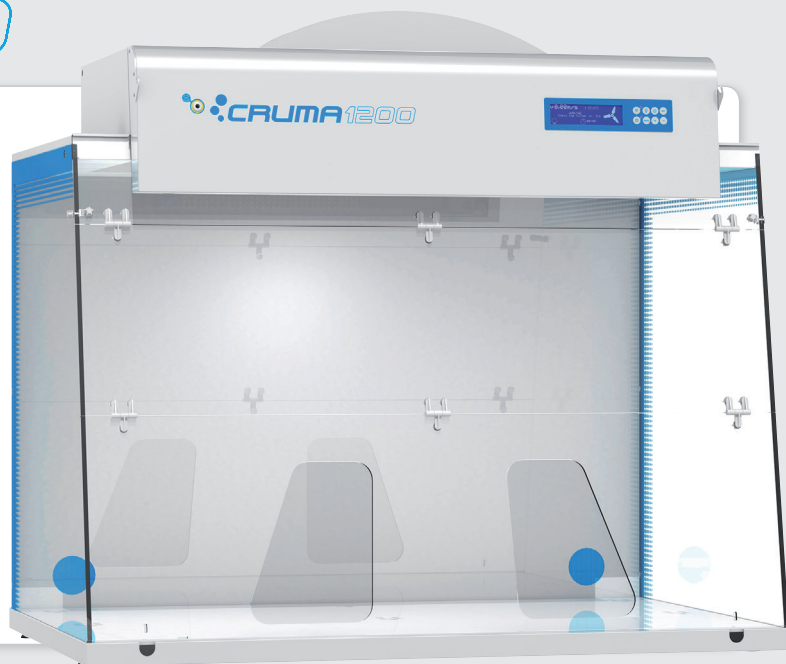
**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** –The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** –No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** –It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

**ENERGY SAVINGS** –The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

**CERTIFIED** –Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## NEW FEATURES

### More information on the new LCD display



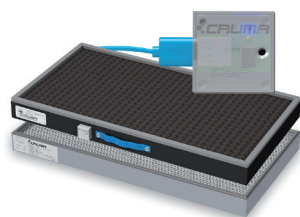
- ✓ New size 127x34mm display
- ✓ Air speed continuously monitored
- ✓ Type of filter installed, working hours, expiration date and next revision date
- ✓ Open door warning through electronic photocell
- ✓ Countdown timer
- ✓ Clock and calendar

### 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

### 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)
- ✓ 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 2	
Number of IP44 fans	1	
Average volume of treated air	160 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,632 m³	
Renewals inside the cabinet / min	4,2	
Total electrical power consumption	58± 3 W	
Voltage-Frequency	110-230 V - 50-60 Hz	
LED light intensity	15W / 800 lux	
Noise level	57± 3 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volume	0,65 m³
	Weight	118 Kg

## SIZES (mm)

External			Internal		
Width	Depth	Height	Width	Depth	Height
1200	800	1097	1175	760	780

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

Because we are convinced of the quality of our products.



\*More information  
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Well done, well shipped.  
**Our responsible packaging**

Wood box 100% recyclable with international phytosanitary certificate.

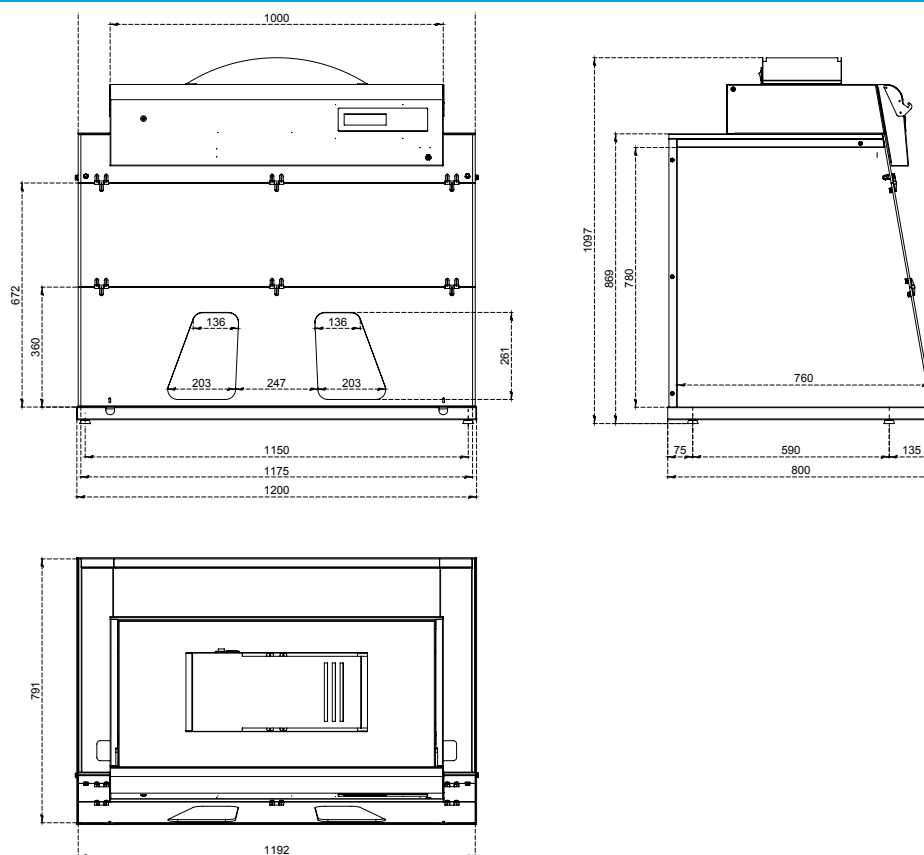


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**technical assistance?**

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## SIZES (mm)



## SERIAL EQUIPMENT

Electronic circuit with large format LCD screen	Security levels: level 1 for users and level 2 for maintenance users
Electronic anemometer device	Electronic sensor monitoring continuously air face velocity
Photocell sensor device for open door detection	Electric device with open door alarm
Electronic control device for filters replacement	The filters incorporate a chip with USB connection that identifies the type of filter installed and the expiry date
Illumination	LED Tube high light intensity and low power consumption - 15W / 800 lux
Sampling system to analyze the filtered air at the exhaust	To detect the level of filter saturation
60 hours alarm	Countdown timer according to French NF X 15-211:2009
Electronic cronometre with audible alarm	To program the work inside the fume hood
Clock and calendar	Display of date and time
Working surface 1	Spill retention tray (2-10 liters) with working surface in white tempered glass
G4 Prefilter	G4 class pre-filtering blanket of synthetic biofibres (according to EN-779) for the retention of atmospheric dust
Cable entry holes (2)	Access to the rear wall for cables and / or services entry
Chemical Listing	Guide of retained products by type of filter
Warranty	7 years

## OPTIONAL EQUIPMENT

Movilair	Stand with wheels and internal tray in Epoxy coated steel
Tubular steel stand	Support stand in Epoxy coated steel
Working surface 2	Spill retention tray (2-10 liters) with working surface in stainless steel
Transparent rear back pannel	Transparent polymethylmethacrylate rear pannel 8 mm thick (light transmission of 93%). Ideal for teaching sessions
Voltage / Frequency	125 V / 50 Hz
Filter test kit	Dräger pump with reactive colorimetric tubes (pack 10u)

## MAIN STRUCTURE



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



**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>2</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 KI 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: 2010) for filtering dust and smoke particles.

**MODULAR FILTRATION COLUMN FOR GASES AND PARTICLES** (according to NFX 15-211:2009)**CLASE 2**

<b>Type G</b> Handling of liquid compounds/products		<b>Type GS</b> Handling of liquid and particles compounds/products	
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**FILTRATION COLUMN FOR POWDERS**

**Type D**  
Handling of powder compounds



Fan

Molecular Filter  
HEPA-H14 Filter**ACCORDING TO STANDARDS**

<b>Cabinets / Fume Hoods</b>	AFNOR NF X 15-211:2009 (France) BS EN 14175:2012 BS 7989: 2001 (UK)
<b>Filters</b>	UNE EN ISO 16890:2017 UNE EN 14387:2004 A1:2008 EN-1822:2010 (HEPA & ULPA Filters)
<b>Quality</b>	UNE EN ISO 9001:2015

Filters with microchip and USB connection,  
*intelligent filtering*

Information storage and interaction  
with the alarm system.



We recognise our responsibility  
and dependence towards a healthy environment and,  
therefore, we destinate more than 7% of our annual budget in  
innovating and developing new products for the lab operator

our **7%** engagement



# CRUMAECO<sup>2</sup>

ECO<sup>2</sup> is the new fumehood that Cruma has developed on demand of our clients. Our R&D department has created this new model following two main premises: **Economy** and **Ecology**. Therefore its name. ECO<sup>2</sup>, meeting the needs of a market in evolution and constantly demanding new products, respects both the environment and the lab user with the same performance, functionality and quality of all Cruma products.

As a matter of fact, ECO<sup>2</sup> has passed the same quality and security tests of all other Cruma hoods, satisfying the requirements of all clients.

**PROTECTION OF AND RESPECT FOR THE ENVIRONMENT** –The toxic chemical products are not released outside but retained within the filter.

**COST SAVINGS AND FAST SET UP** –No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

**FLEXIBLE** –It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

**ENERGY SAVINGS** –The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

**CERTIFIED** –Manufactured in Spain and certified by an external laboratory according to international standards and applying the criteria of ISO 9001.



## 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.

## STANDARD EQUIPMENT INSTALLED

Mechanical anemometer	Mechanical probe for continuous control of air velocity in facade
Filter control	Detection system of the filter saturation
Illumination	Integrated LED lighting
Warranty	2 years

## OPTIONAL EQUIPMENT

Base Pack ECO <sup>2</sup>	Spill retention tray (2-10 liters) with working surface in inox-304
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## MAIN STRUCTURE

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

## TECHNICAL FEATURES

Number of filtration columns	1	
Number of filters	1 a 2	
Number of IP44 fans	1	
Average volume of treated air	160 m³/h	
Average face velocity	0,50 m/s	
Internal volume of the cabinet	0,287 m³	
Renewals inside the cabinet / min	9,25	
Total electrical power consumption	60 W	
Voltage-Frequency	110-220 V - 50-60 Hz	
LED light	1100 lux	
Noise level	57 dB	
<b>Packaging:</b> 100% recycled wooden box with international phytosanitary certificate	Volumen	0,42 m³
	Peso	65 Kg

## SIZES (mm)

External			Internal		
Width	Depth	Height	Width	Depth	Height
798	600	1012	778	569	760

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)

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

Wood box 100% recyclable with international phytosanitary certificate.

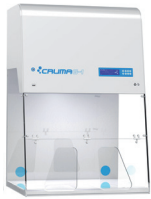


Do you need help or  
**technical assistance?**

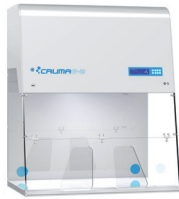
Contact your distributor or call us if you have any questions or need technical support, spare parts, maintenance service...

**+34 93 370 61 62**

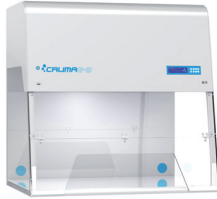
**CRUMA**  
PLUG&PLAY RANGE



G-1



G-2



G-3



G-4



G-5

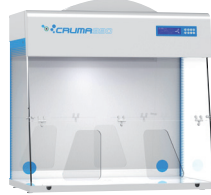
**CRUMA**  
CLASSIC RANGE



670



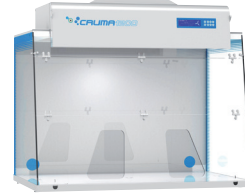
670



990



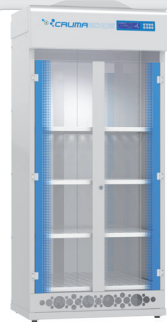
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1200



ECO



**CRUMA**  
VENTED STORAGE  
CUPBOARDS

2010

**CRUMA**  
POWDER CABINETS

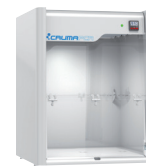


P-1



P-2

**CRUMA**  
PCR CABINET



PCR

**CRUMA**  
CO<sub>2</sub> INCUBATOR



INCUBATOR

**CRUMA**  
LAMINAR FLOW CABINETS



670FL



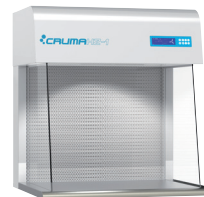
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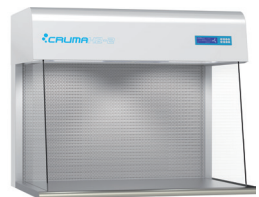
FL-1



FL-2



H2-1

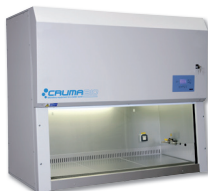


H2-2

**CRUMA**  
BIOSAFETY CABINETS



BIO-1



BIO-2



VIRUSFREE



CYTO-2&3

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