erlab
You can breathe.

Captair 321-391-481 Smart

Ductless filtering fume hoods

Instructions & User's Manual

Contents

General

By choosing Captair Smart ductless filtration fume hoods, you have chosen an efficient and responsible way to ensure safety.

Erlab's 50 years of expertise in the field of laboratory fume hoods provide unparalleled filtration quality to ensure your users are properly protected when handling chemicals in the laboratory. The new Captair Smart range uses an innovative and straightforward mode of communication called Smart technology. This powerful interface uses light to intuitively and effortlessly communicate with users and leave them free to focus all their attention on the main task: **handling the chemicals.**

Your ductless Captair Smart filtration fume hood guarantees that you are protected when working with chemicals that pose an inhalation risk. The Erlab filtration technology it employs traps hazardous particles and molecules and returns clean air back into the laboratory.

The system's connectivity allows for real-time safety alerts and individual device usage reports to be sent via the eGuard.

Safety notices

The effectiveness of your device is directly dependent upon it being used correctly and monitored by its users. Your laboratory may also benefit from ergonomic, economic and ecological advantages provided by the Captair Smart fume hood throughout its life cycle.

The E.S.P. program (Erlab Safety Program) was set up to guarantee your safety. We would remind you that it is important to have the safety parameters validated before using the device for the first time and whenever it is used for a different application.

The handling of substances that are carcinogenic, mutagenic or toxic for reproduction (CMRs) underneath a fume hood is covered by the French Labour Code. The code notably specifies that an in-depth risk analysis must be carried out prior to any CMRs being handled under a recirculating fume hood.

The equipment provided is not intended to be used in an explosive atmosphere.

The filters delivered with this device must be removed from their packaging and positioned correctly; they must also be suitable for the type of chemicals being handled in order to guarantee user safety.

Erlab recommends that filter breakthrough tests are regularly carried out.

Erlab recommends that the electronic anemometer is calibrated at least once a year.

The quantities of the chemicals handled in the enclosure should not be greater than those listed in the guide to approved chemicals (the Chemical Listing).

AFNOR standard NF X 15-211: 2009 only applies to chemicals subject to an OEL.

Pursuant to the NF X 15-211 standard, only operations that can immediately be stopped are allowed to be carried out in a Class 2 enclosure. Moreover, the fume hood's filter must be replaced if any chemicals are detected downstream of the filter.

New filters must be stored in their packaging, kept in a dry location and laid flat. (see recommendations for storing and using the filters).

Erlab recommends keeping a logbook which is specific to the device and shows the chemical agents handled, how often they are used and the maintenance operations carried out on it.

Warranty

Product registration

Take full advantage of the device's connectivity to enhance your safety

Get up to 10 years warranty on your connected Erlab unit

Register your product online: the registration of the product will automatically give you one extra year of warranty (in addition to the warranty mentioned in the Erlab' general terms and conditions of sale).
https://www.erlab.com/form/90/1266/register-your-product.html

Register your product online: the registration of the product will automatically give you one extra year of warranty (in addition to the warranty mentioned in the Erlab' general terms and conditions of sale).

Connect your unit: Once the device is connected to the Internet and configured to exchange usage data, the warranty is extended for up to 10 years. Warranty will be successively renewed at each filters replacement and for the life time indicated on the Vali-pass® and/or or at the end of filter usage time.

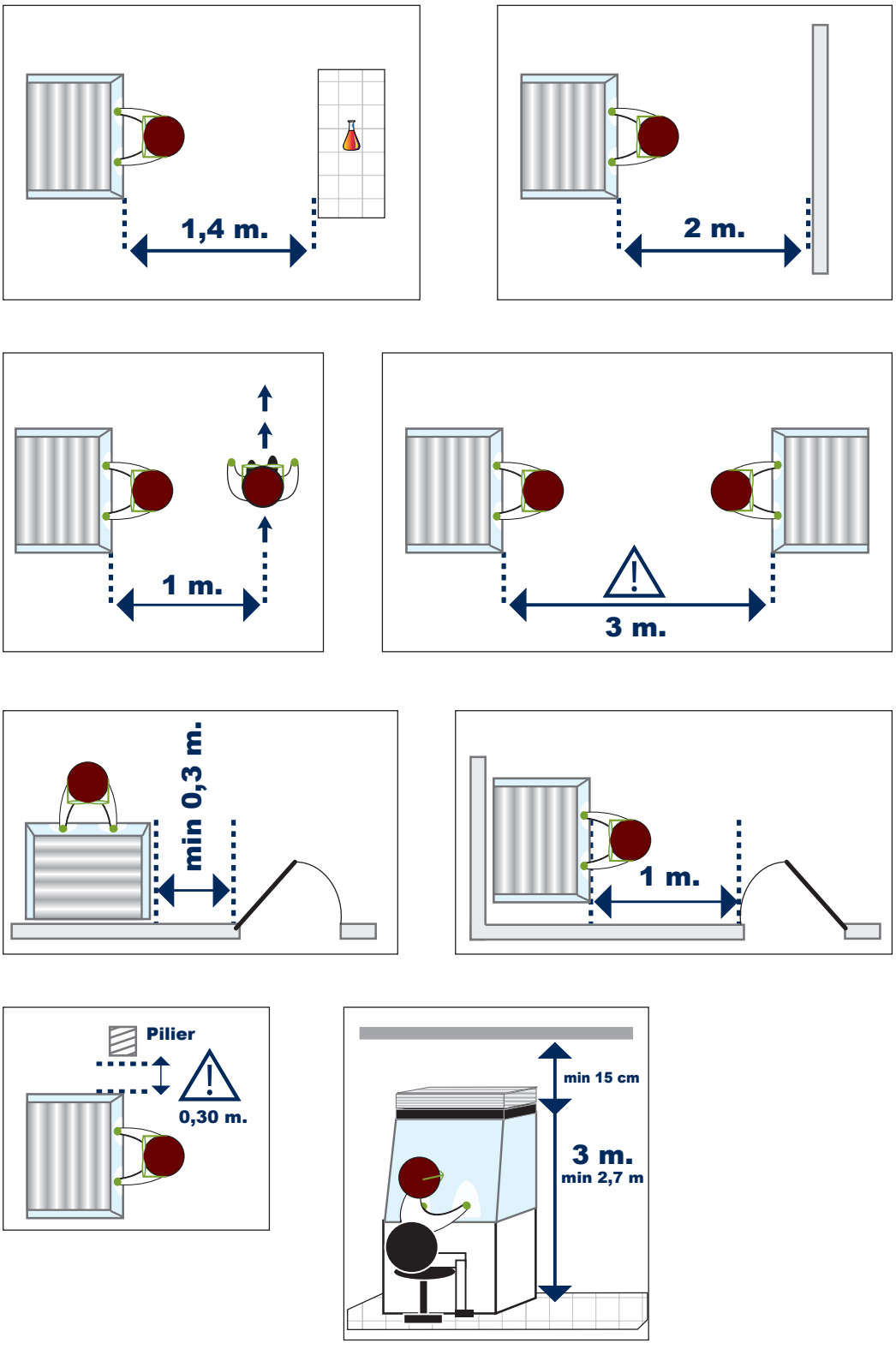
In order to benefit from Erlab extension of warranty offer, the following conditions shall be respected:

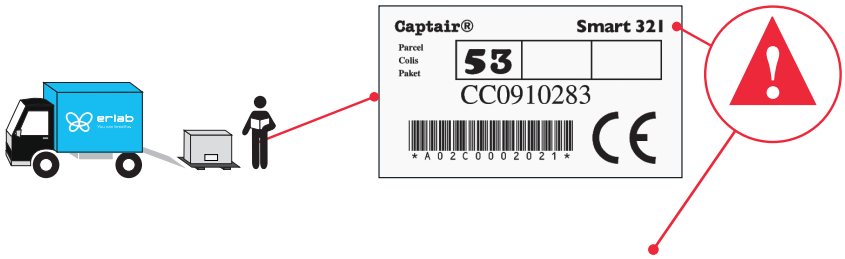
- The registration and/or the connection of the product shall be performed within the twelve months from the purchase date ;
- Filters replacement must be performed following eValiQuest® service recommendations or at the end of filter usage time ; The filter's serial number, used as an identification key, validates this condition, regardless of your device's supplier (and/or the replacement filter's supplier for the following years);
- The device's replacement filters must be manufactured by Erlab, as must all other spare parts.

Consumables such as filters and filter failure sensors are not covered by the warranty.

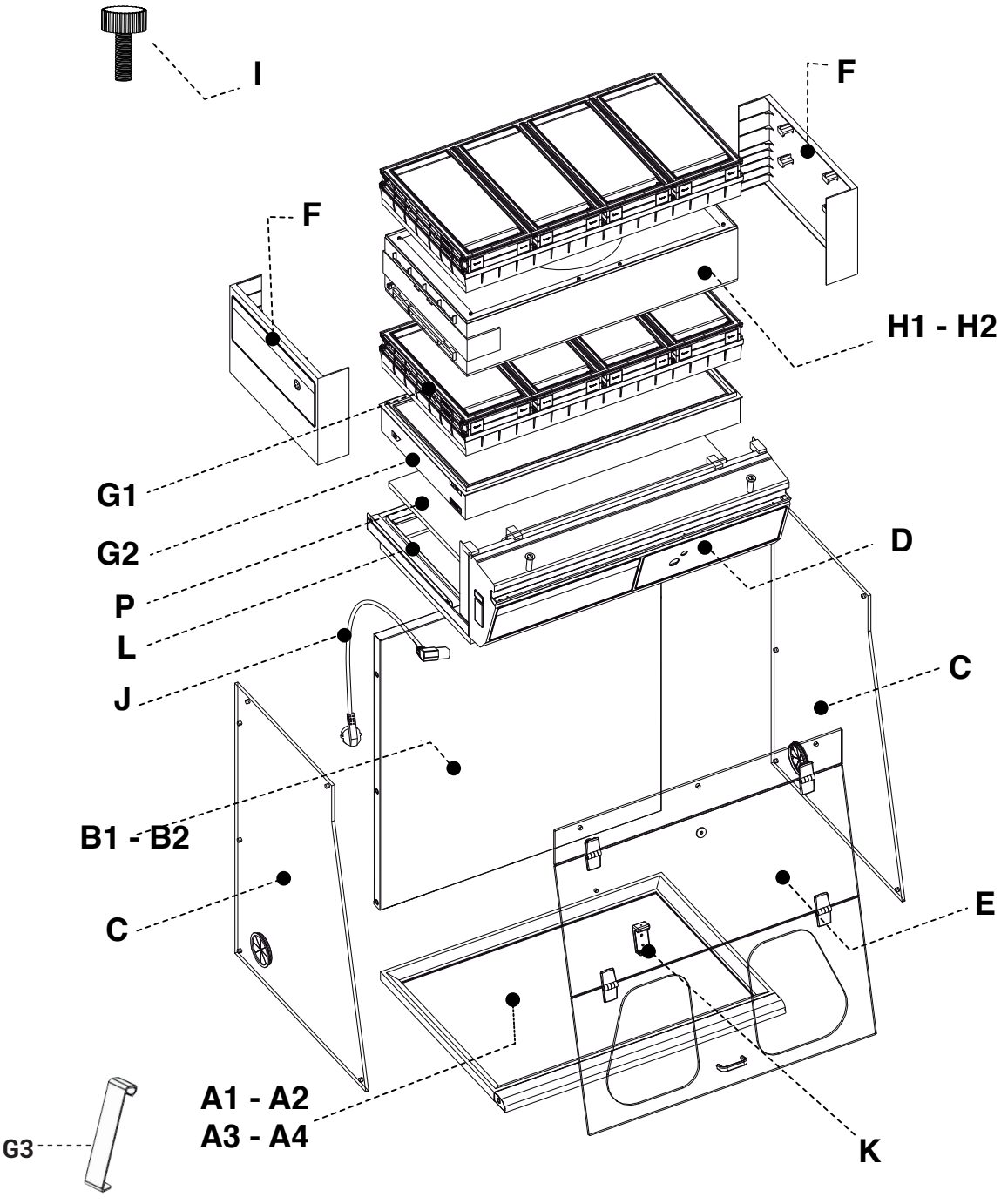
Recommendation for implementation/positioning

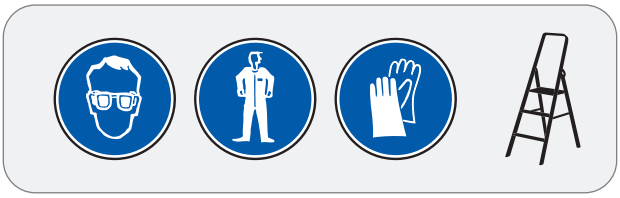
Necessary space and dimensions - according to the EN 14175-5 standard

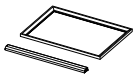
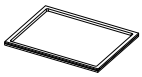
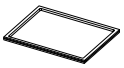
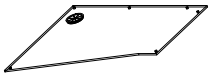
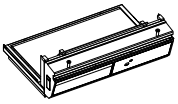
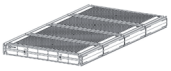
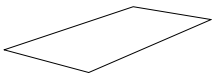




Example : Smart 321 - 1P2C - Options A2





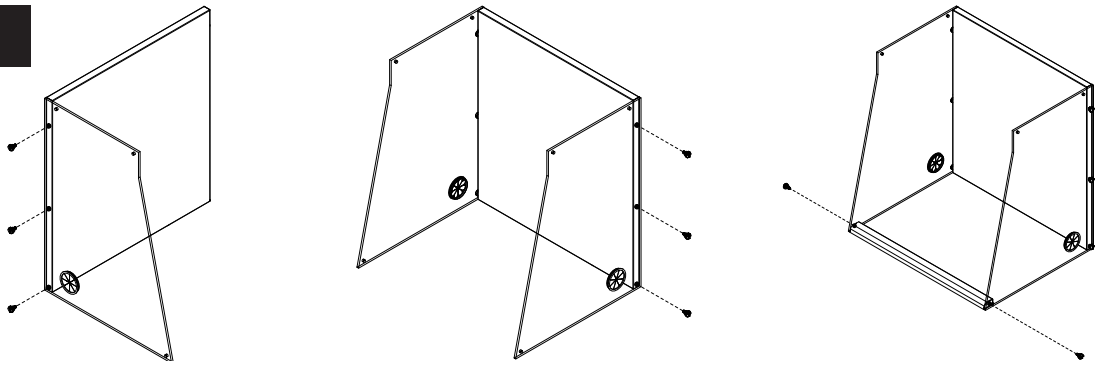
A1	Spacing Bar		x1	321= PIDREA603016 391= PIDREA613012 481= PIDREA623012
A2	Work surface with sealed tempered glass retention tray		x1	321= IO115020002 391= IO116020002 481= IO121020002
A3	Work surface in stainless steel 304 L		x1	321= IO115050002 391= IO116050002 481= IO121050002
A4	Resin work surface TRESPA® TOPLAB®PLUS		x1	321= IO115030002 391= IO116030002 481= IO121030002
B1	Back panel		x1	321= PIDREA603006 391= PIDREA613006 481= PIDREA623006
B2	Transparent back panel		x1	321= IO315100002 391= IO316100002 481= IO321100002
C	Side panel		x2	PIDVI03002
D	Filter housing (1) and control panel (2)		x1	(1): 321= Z3CEILINGSMART321 391= Z3CEILINGSMART391 481= Z3CEILINGSMART481 (2) = Z3MCSMART1 (1+2): 321= K60XXX 391= K61XXX 481= K62XXX
E	Acrylic front panel		x1	321= PIDVISMART321 391= PIDVISMART391 481= PIDVISMART481
F	Side cover		x2	PIDM58552
G1	Carbon filter		*	H11074101 (AS) H11074201 (BE+) H11074401 (F) H11074301 (K)
G2	HEPA H14 - ULPA U17 Filter		*	H11074031 (HEPA H14) H11074061 (ULPA U16)
G3	Hook HEPA-ULPA Filter		x4	2P. WREQT0019 1C1P. WREQT0019 2C1P : WREQT0018 1P1C1P : WREQT0019
H1	Fan box		x1	Z3FM004
H2	Fan box + grid			Z3FM004 + PIDMS8522
I	Nylon screws		x15	PIDB08547
J	Power cable + 2 clamps		x2	EU = PIDEL076 USA = PIDEL080 GB = PIDEL090 CH = PIDEL106
L	HEPA filter seal frame		x1	PIDMS8532
P	Pre-filter		x1	I1015000001
Q	RJ45 cable		x1	WEL8603

Standard
Options

1

A1	x1
B1 B2	x1
C	x2
I	x8

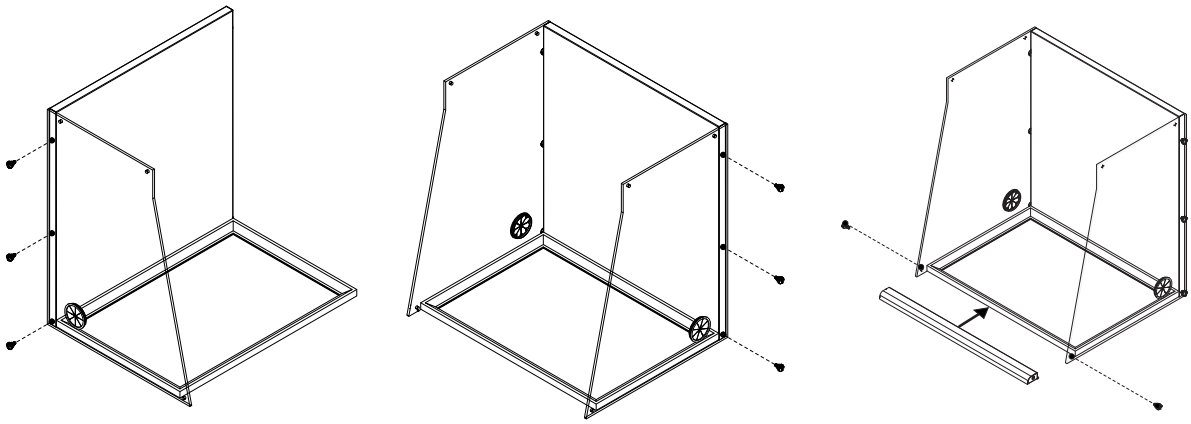
A1



A2	x1
B1 B2	x1
C	x2
I	x8

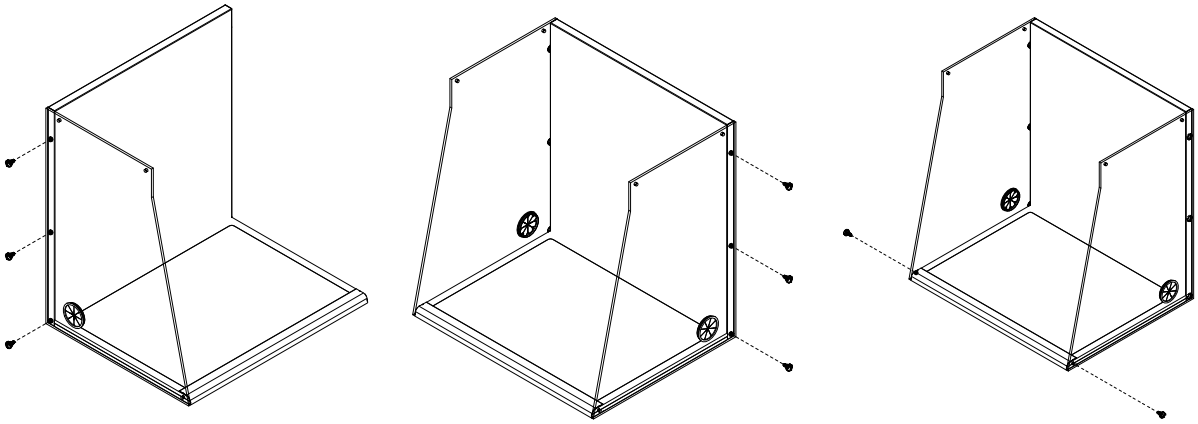
A2

If the worktop needs to be removed:
Remove the filter columns and the ceiling of the hoods before removing the worktop.



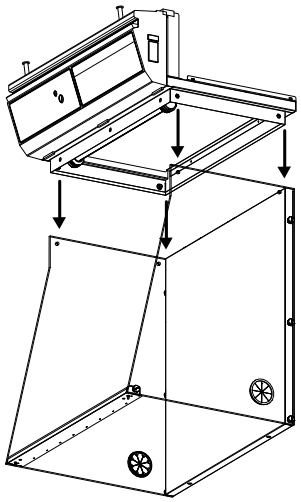
A3	x1
A4	x1
B1 B2	x1
C	x2
I	x8

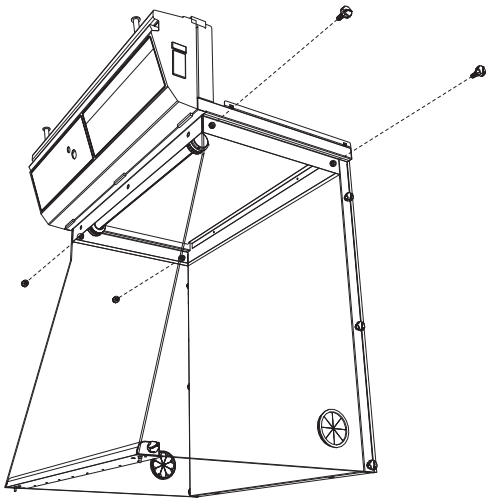
A3 - A4



2

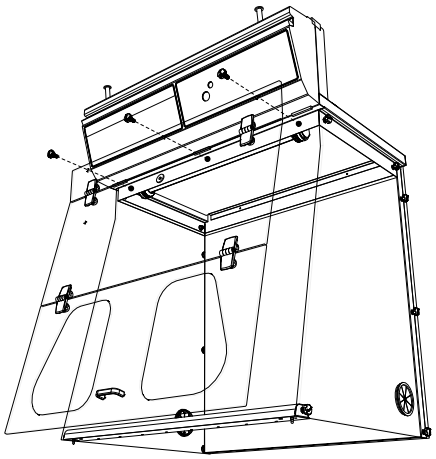
D	x1
I	x4

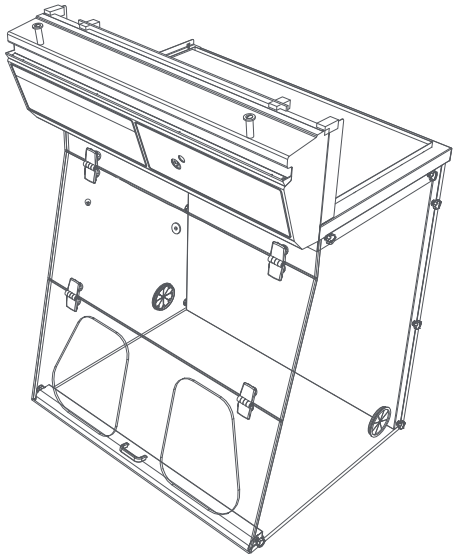




3

E	x1
I	x3





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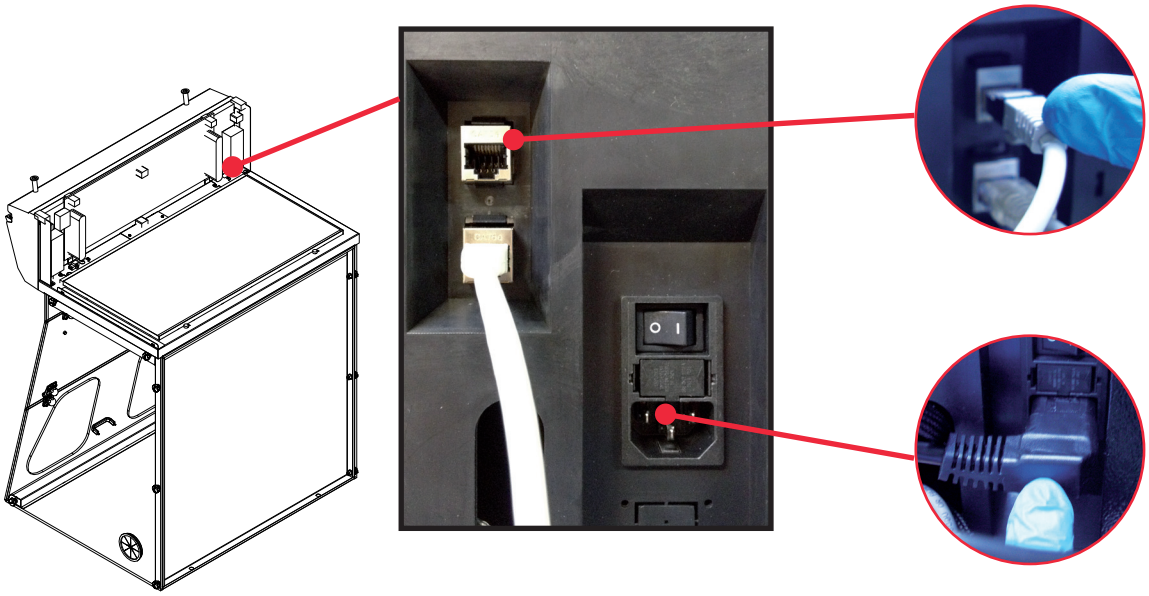
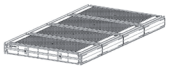
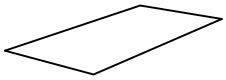
J	x1
Q	x1



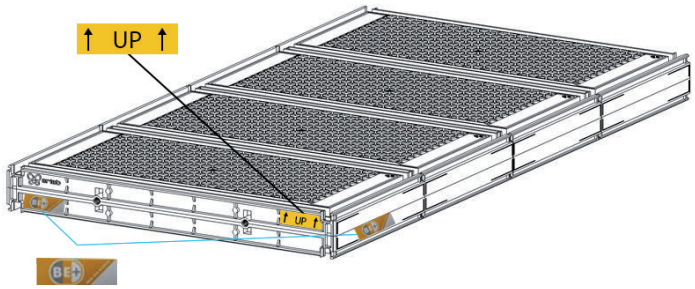
5

	G1 Molecular filter	G2 HEPA H14/ULPA	P Pre-filter
Filter column configuration			
1C	x1		x1
2C	x2		x1
1 P		x1	x1
2 P		x2	x1
1P 1C	x1	x1	x1
1P 2C	x2	x1	x1
1C 1P	x1	x1	x1
2C 1P	x2	x1	x1
1P 1C 1P	x1	x2	x1

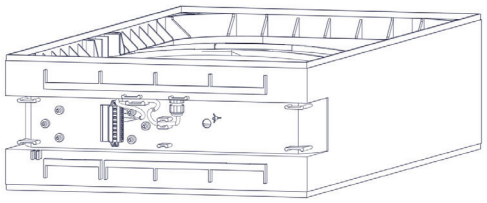
Standard

Options

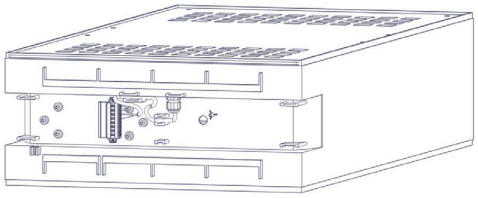
G1

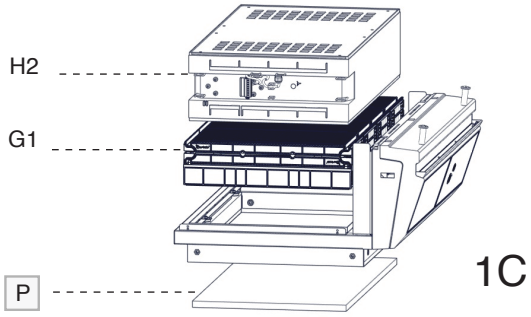


H1

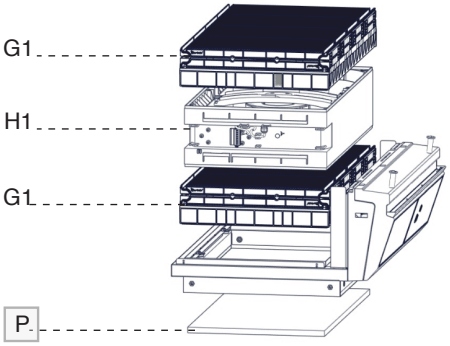


H2

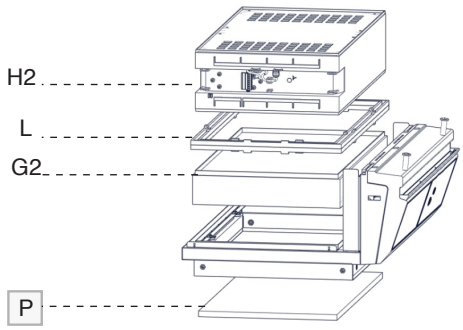




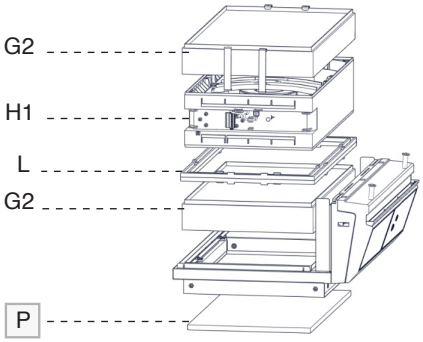
1C



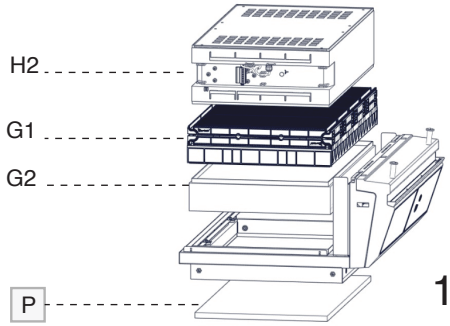
2C



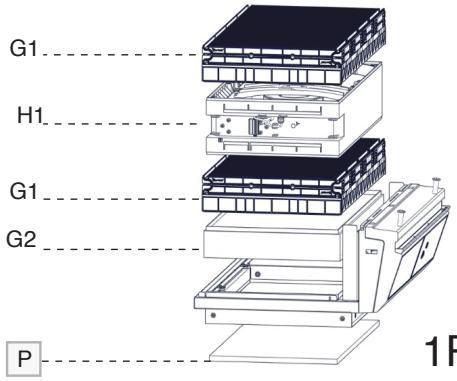
1P



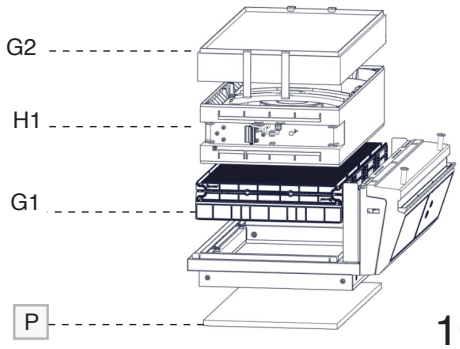
2P*



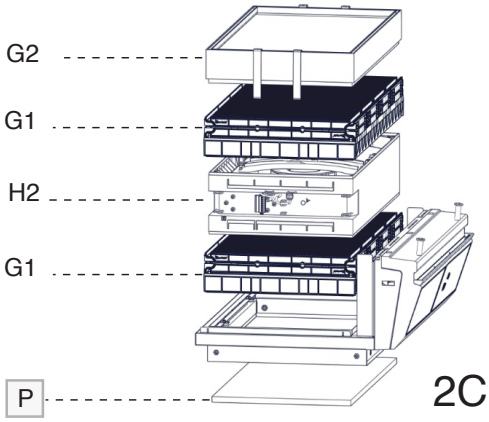
1P1C



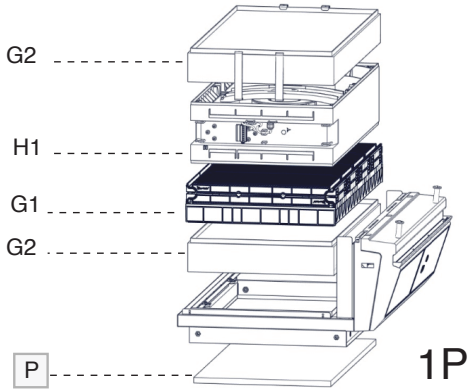
1P2C



1C1P*



2C1P*

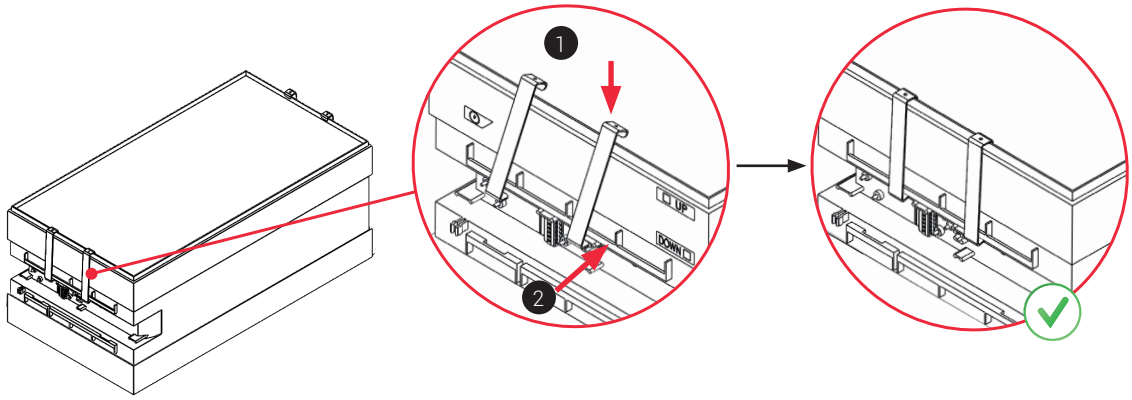


1P1C1P*

*** Hook Installation**

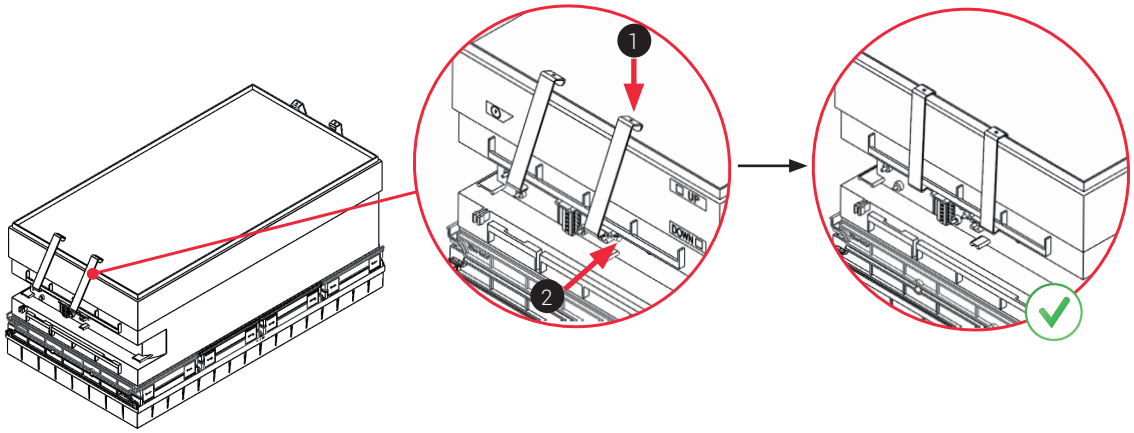
2P *

G3	x4



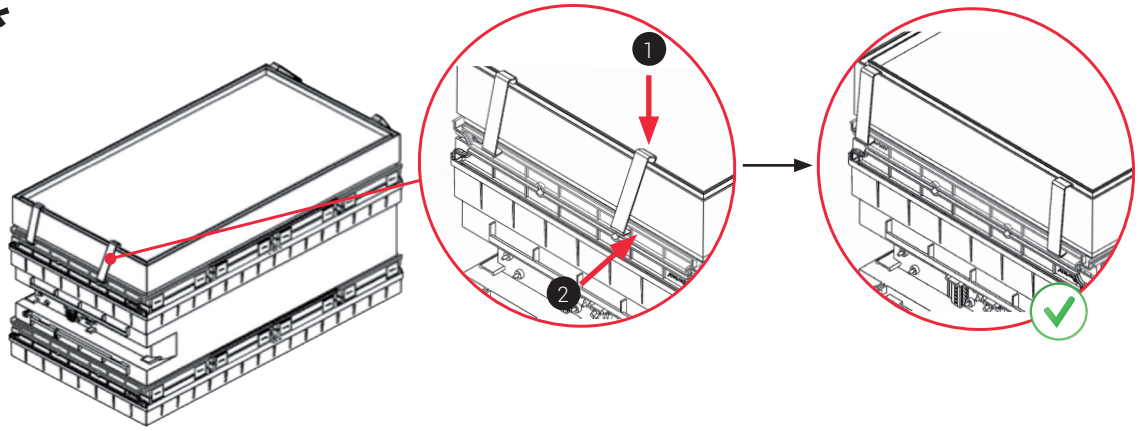
1C1P *

G3	x4



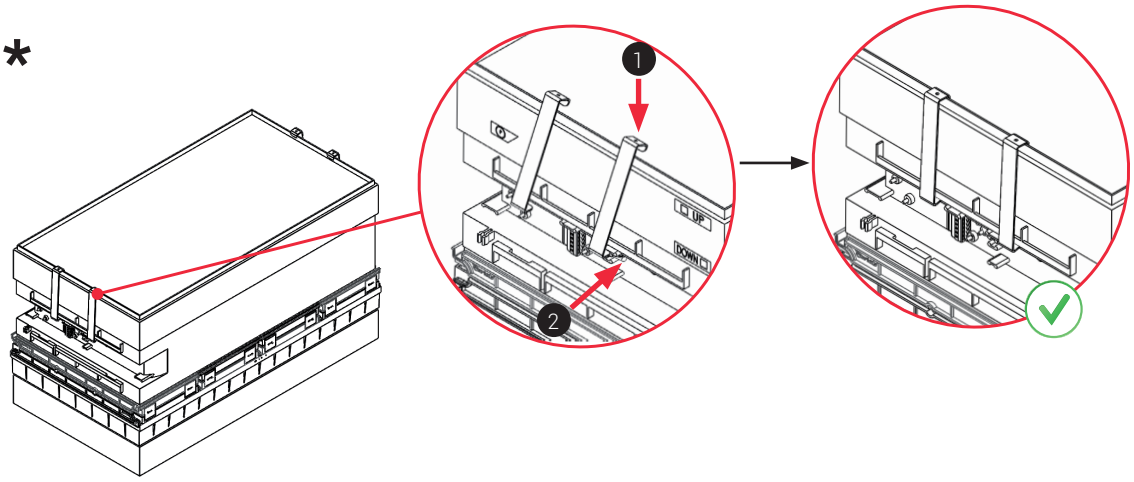
2C1P *

G3	x4

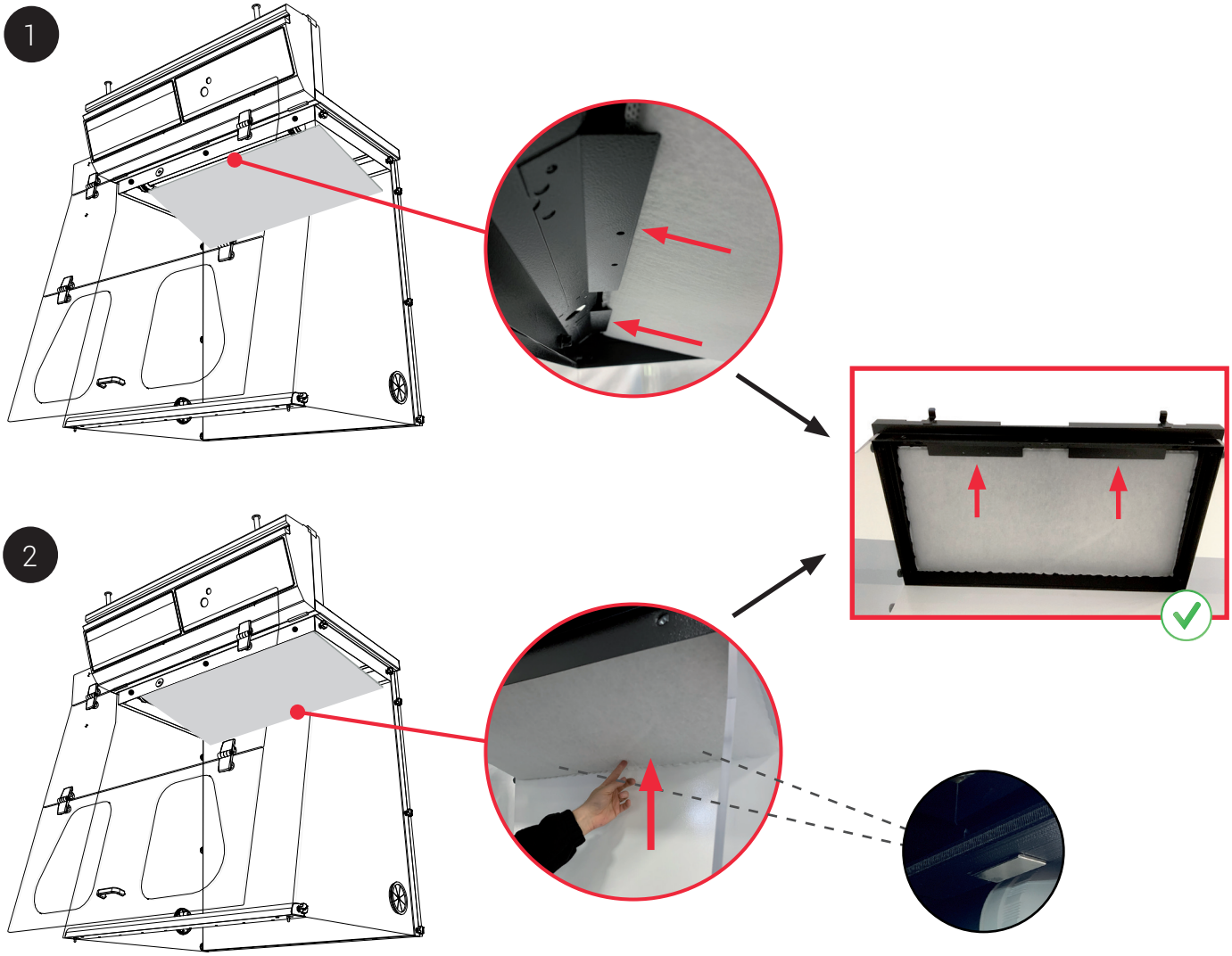


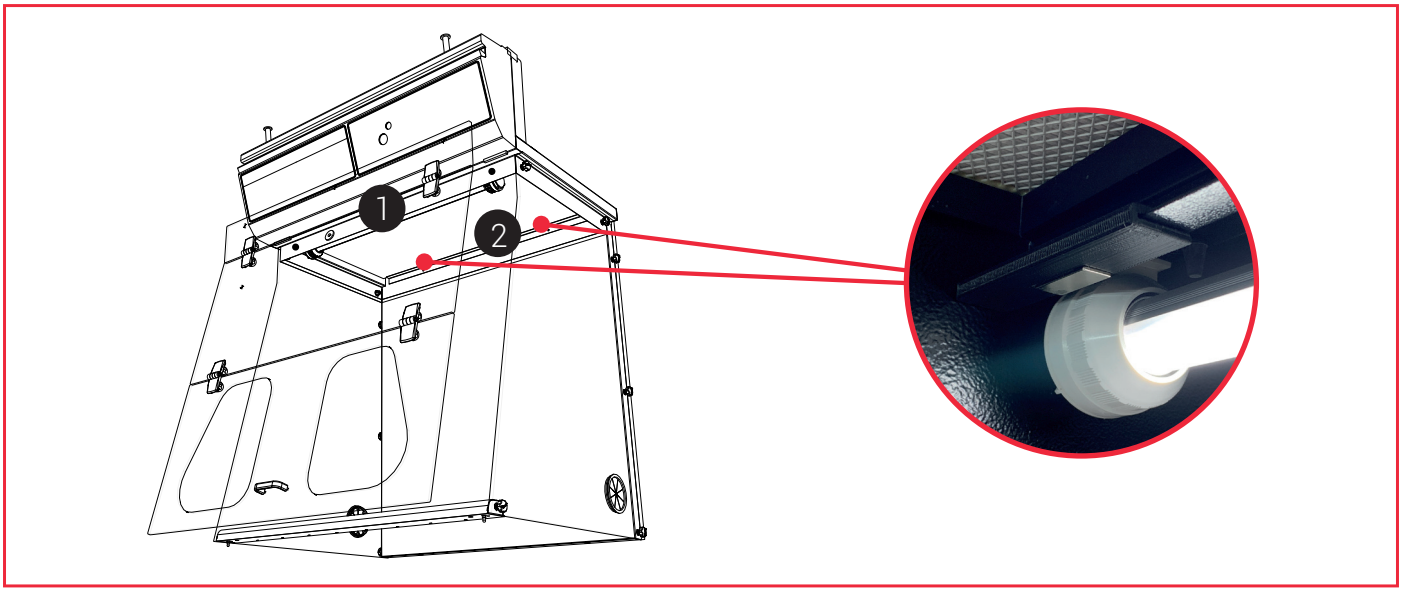
1P1C1P *

G3	x4



Pre-filter Installation





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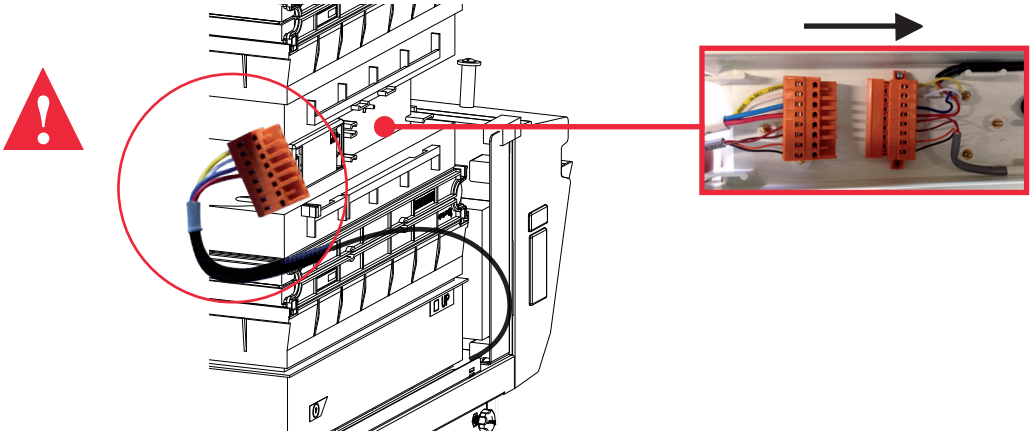
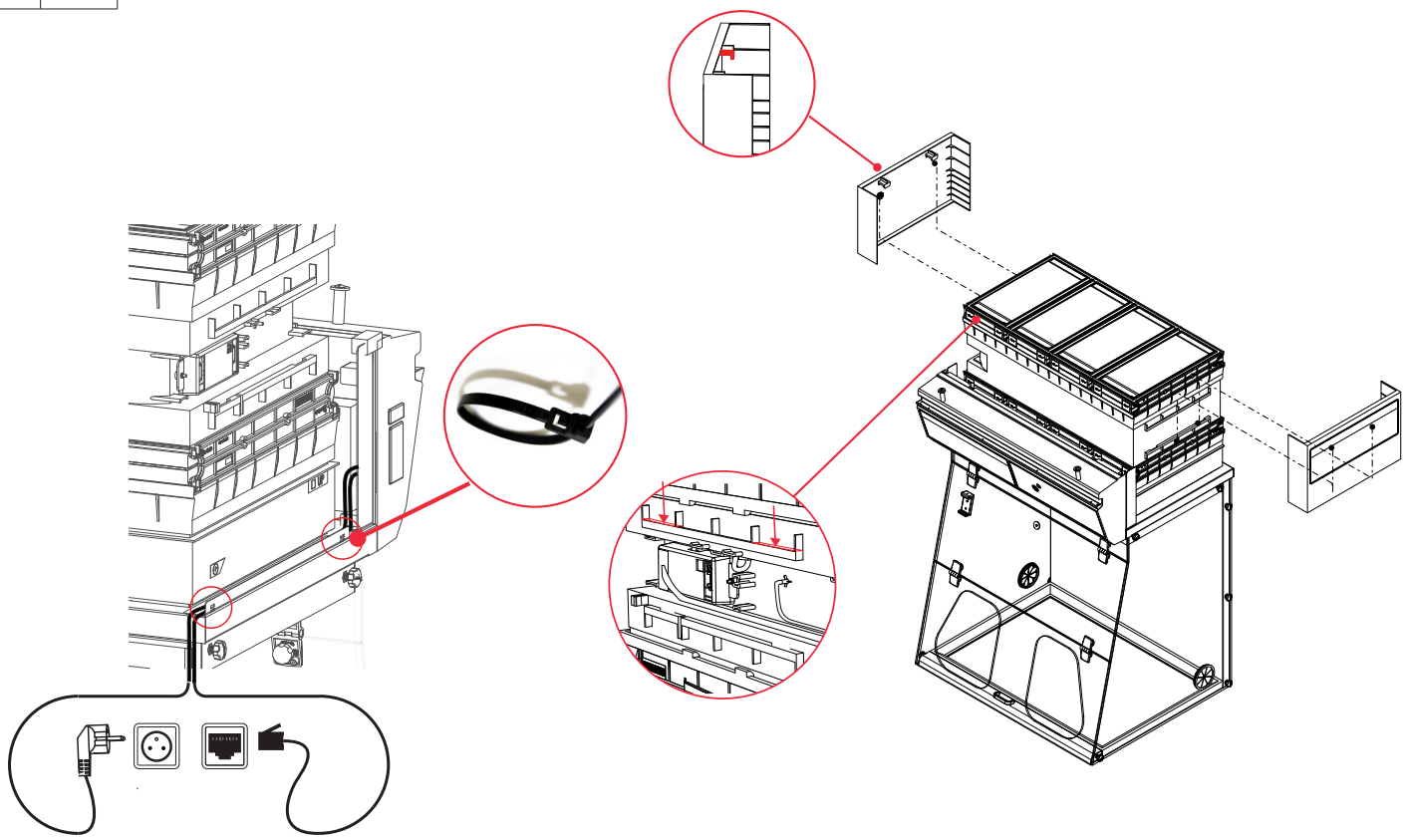


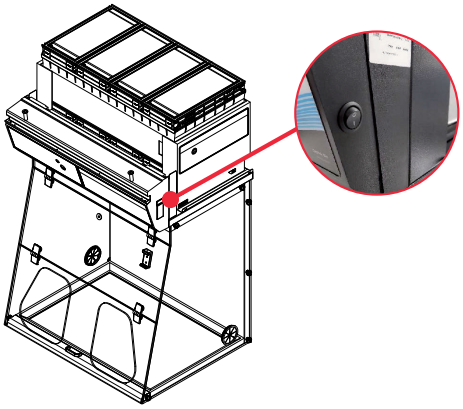
7

F	x2

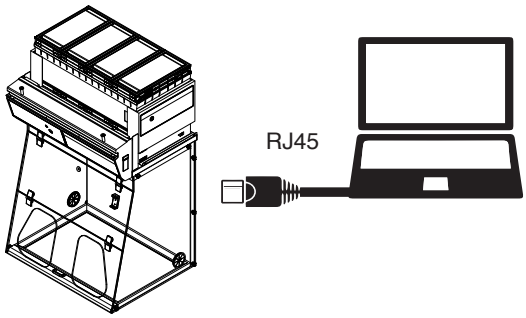


8

9 Option light button



10 Settings



Embedded service access (Default IP adress)

Default IP : 192.168.0.200

Settings:
Please refer to the user manual before the first unit use.

Start up

Calibrating the electronic anemometer

1- Turn on the master switch at the back of the control module (initially to 0, switch to I), while holding the mute button.

Press it silmutaneously

Main general switch

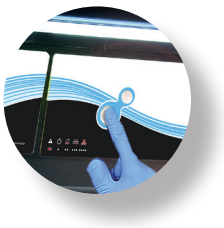
Mute button

2- Release immediately the mute button. A beep will proove the unit has started the calibration mode. LEDS lights will blink fastly without any sound during 5min. 30 sec. LEDs lights blinking is different when an alarm is triggered.

3- Light blinking stops. The anemometer is calibrated and the unit is operational.

4- Activate the ventilation of the appliance at the start button on the control panel.

5- Green light and LEDs lights are lighting.



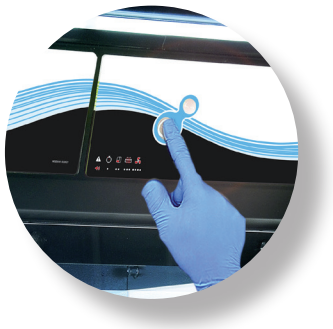
Good practices :

- If you are using pre-filters, check that they are correctly positioned (towards the front of the instrument)
- Avoid turbulence near the instrument during calibration
- The anemometer should be calibrated annually

Having carefully followed the steps described in the installation guide, your Captair Smart fume hood is now ready to use.

The power switch is located at the back of the control panel

Note: we recommend never turning off the main device power switch after the machine as been started for the first time.



The button on the control panel turns on the fan and the lights.

The green indicator light and LED light system should come on.

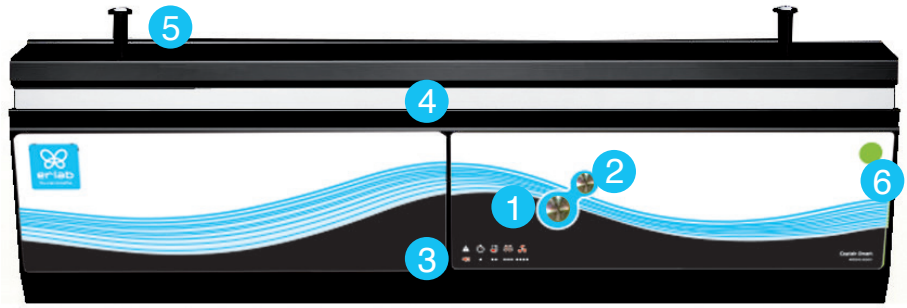
We also recommend verifying the operating parameters before each new use.

Filter breakthrough sensor (Molecode option) :
Default settings when the sensor has not been set in our factory:

- Solvents (S type): medium
- Acids (A type): medium
- Formaldehyde (F type): medium

To modify settings, please access the administrator interface.

1.Description of the control module



1 - Switch on fan and lights in hood

2 - Silence the alarm (Mute key)

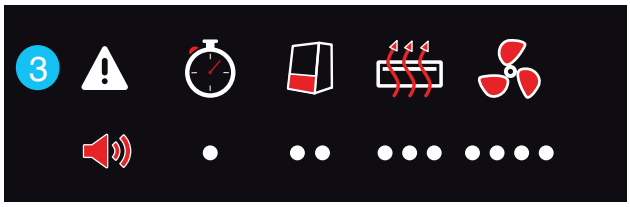
3 - Keycode to indicate which alarm is active

4 - Smart-Light that pulses when in alarm

5 - Pegs to hold the sash fully open

6 - Ceiling lighting

Optional ceiling light button



Smart Technology gives you an easily identifiable method of communication about the containment, performance, and filter efficiency of your product via a soft, LED band of light called Smart-Light - a light signature across the fascia which casts a stable LED glow ensuring proper operation. If normal operation is disrupted, the reassuring LED signature simply pulses, drawing the attention of the operator only when necessary.

2.Description of the alarms

Note:
When using the Mute key to silence the alarm, please note the alarm can be triggered again if the event condition has not been fixed.
Resetting alarms via the Mute key will consequently modify usage settings.
Please access the administrator interface to precisely check user settings.

Alarm type		Light signal	Events	Details	Silence the alarm	Reset the alarm
Timer *						
	1 beep 5 seconds apart	Pulses	Operating time elapsed timer (60 hours according to the NFX 15-211 standard)	The operating time specified in the timer settings has run out.	Press Mute key	Pressing the Mute key will reset the Timer. Note: the Timer can be set by accessing the administrator interface.
Air speed						
	2 beeps 5 seconds apart	Pulses	Low air speed	The air speed value is <0.4 m/s	Press Mute key	Anemometer settings: When the alarm is triggered: - please check the fan(s) is (are) turned ON and the front sash is correctly closed, - Press the Mute Key to silence the alarm, - See Calibrating electronic anemometer Note: the anemometer calibration can be also done by accessing the administrator interface.

Alarm type		Light signal	Events	Details	Silence the alarm	Reset the alarm
Filtration						
	3 beeps 5 seconds apart	Pulses	Filter breakthrough (Molecode S/A/F option)	The Molecode detection value is > the sensitivity setting for a period of 40s.	Press Mute key	Note: filter has to be replaced. Please get in touch with Erlab or your usual maintenance contact.
			Replace filter	The filter(s) has/ have reached the end of their service life/lives.		
Fan						
	4 beeps 5 seconds apart	Pulses	Fan fault	The rotation speed (RPM) is +/- 10% of the fan setpoint.	Press Mute key	
			Fan Unservi-ceable	The rotation speed (RPM) is < 700 RPM		
Filter breakthrough sensor replacement (Molecode)						
	5 beeps 5 seconds apart	Pulses	Filter breakthrough sensor replace-ment (Molecode S/A/F option)	The sensor has reached the end of its service life.		Please get in touch with Erlab or your usual maintenance contact.

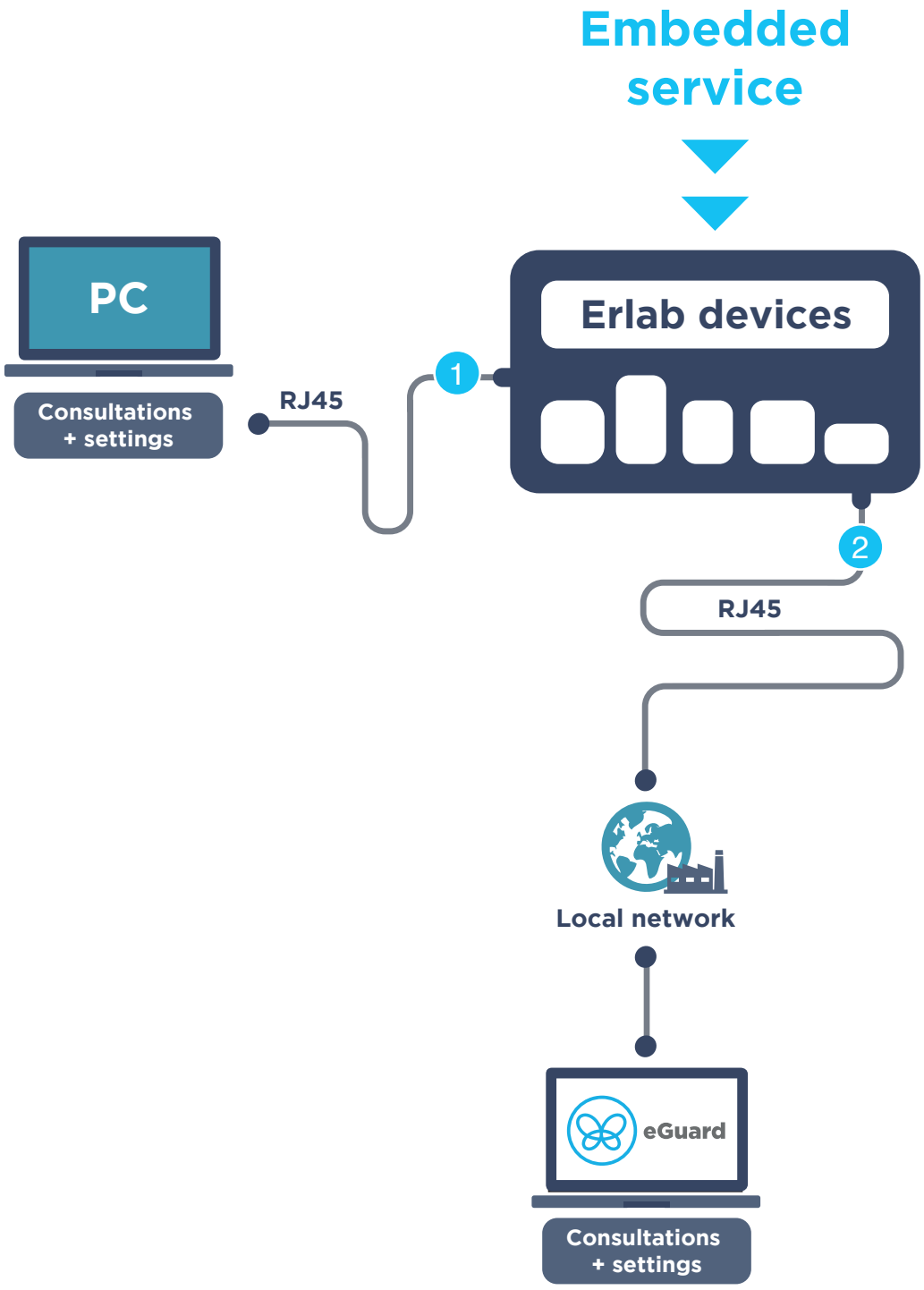
** **Note :** The Timer will time the hours of operation of your fume hood to remind the user that in the absence of a MOLECODE filter fault sensor, a regular filter compliance test is required. The default setting (made in the factory) is 60 hours (required by the NF X 15- 211:2009 standard). The user will therefore be warned by a 1 beep alarm that a filter capacity check is required.*

Reset network settings

Forgot network settings?
- Check that the device is switched on
- Turn off the unit with the power button 1
- Press the Mute button for 10 seconds 2
- After 3 beeps, the network settings are reset
- Switch off the unit using the switch on the back of the control panel and then switch it on again. then turn it back on.
- The default IP address of the unit is 192.168.0.200

The connectivity principle

An ecosystem designed for simpler use and safer protection



2 ways to connect your device	1 Embedded service	2 eGuard PC
Conditions of use	**Direct connection on PC with data cable (RJ45)**	**Connected to the local network**
Hardware requirements	1 PC + 1 cable	1 PC connected to the local network
Parameters	Monitoring + Controlling	Monitoring + Controlling
Data access	One unit	Multiple units
Historical data access	✓	✓
Historical data download	✓	
Alerts, Notifications		✓
Multiple units monitoring		✓
Multiple user accounts		✓
Automatized status report		✓
Download		Download for Windows (except if local connection)

eGuard

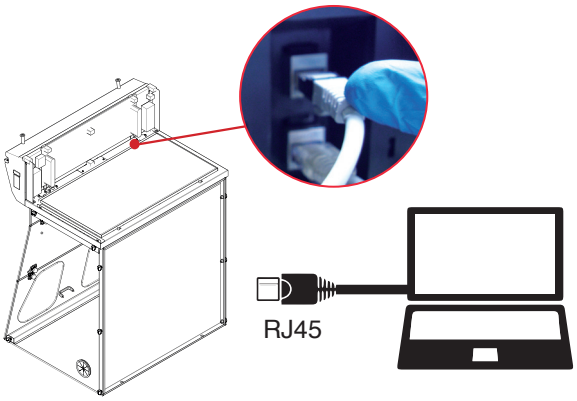
The connectivity of Erlab devices allows for the remote setting and monitoring of one or more devices.

After registering your product online, use eGuard :

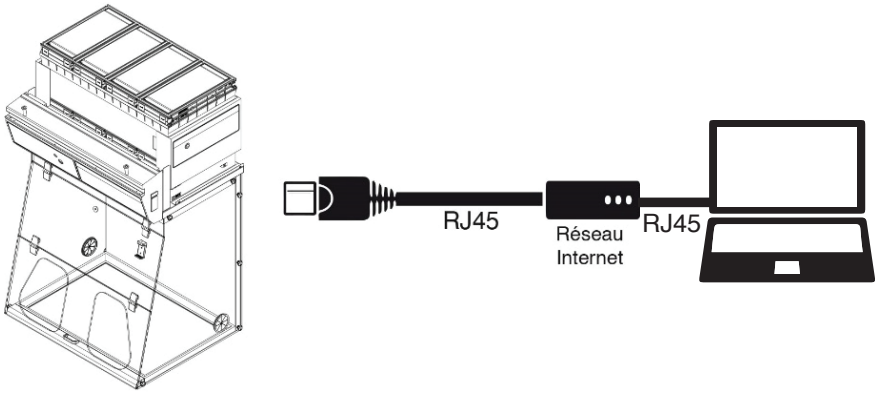
- Receive security alerts,
- View your usage statistics,
- Enhance your user experience
- Benefit from exclusive guarantees and services

3. How to connect

Embedded service



eGuard PC



Embedded service

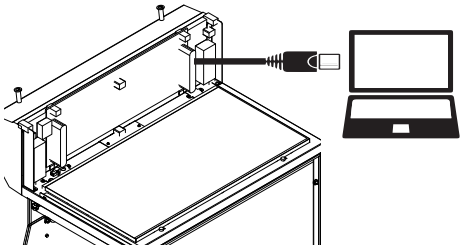
To monitor the parameters and modify the settings of the unit.

In order to connect:

- Use a computer equipped with a Ethernet port (to plug the RJ45 cable)
- WIFI of the computer must be **switched off**
- Web browser (Internet Explorer, Edge, Chrome, Mozilla Firefox, Safari, …) must be installed on the computer

N.B: RJ45 cable used to plug the unit to the computer is provided.

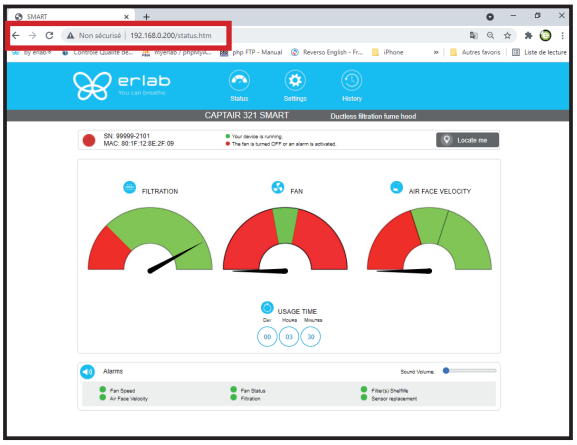
1 Direct connection on computer



- Take RJ45 cable (black) already connected on the unit and rolled at the back of the control panel.

- Check that the main switch of your appliance is **ON (I)**

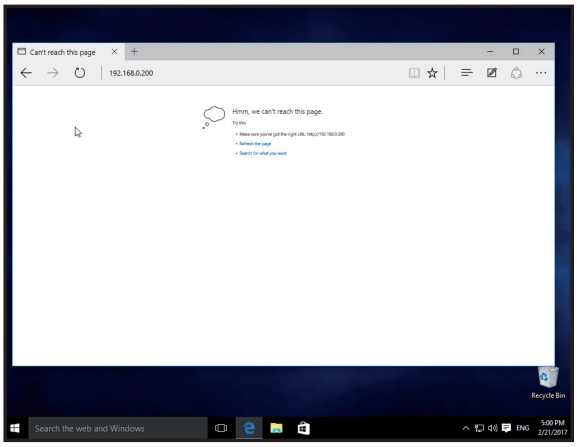
2 Open your web browser, type the following IP address 192.168.0.200 into the address bar and validate



OK

You are connected to the embedded software
You enter the « Status » page and you can have access to the « Settings » using the following credentials:
Login : **erlab** / Password : **smart**

Please go to page 28



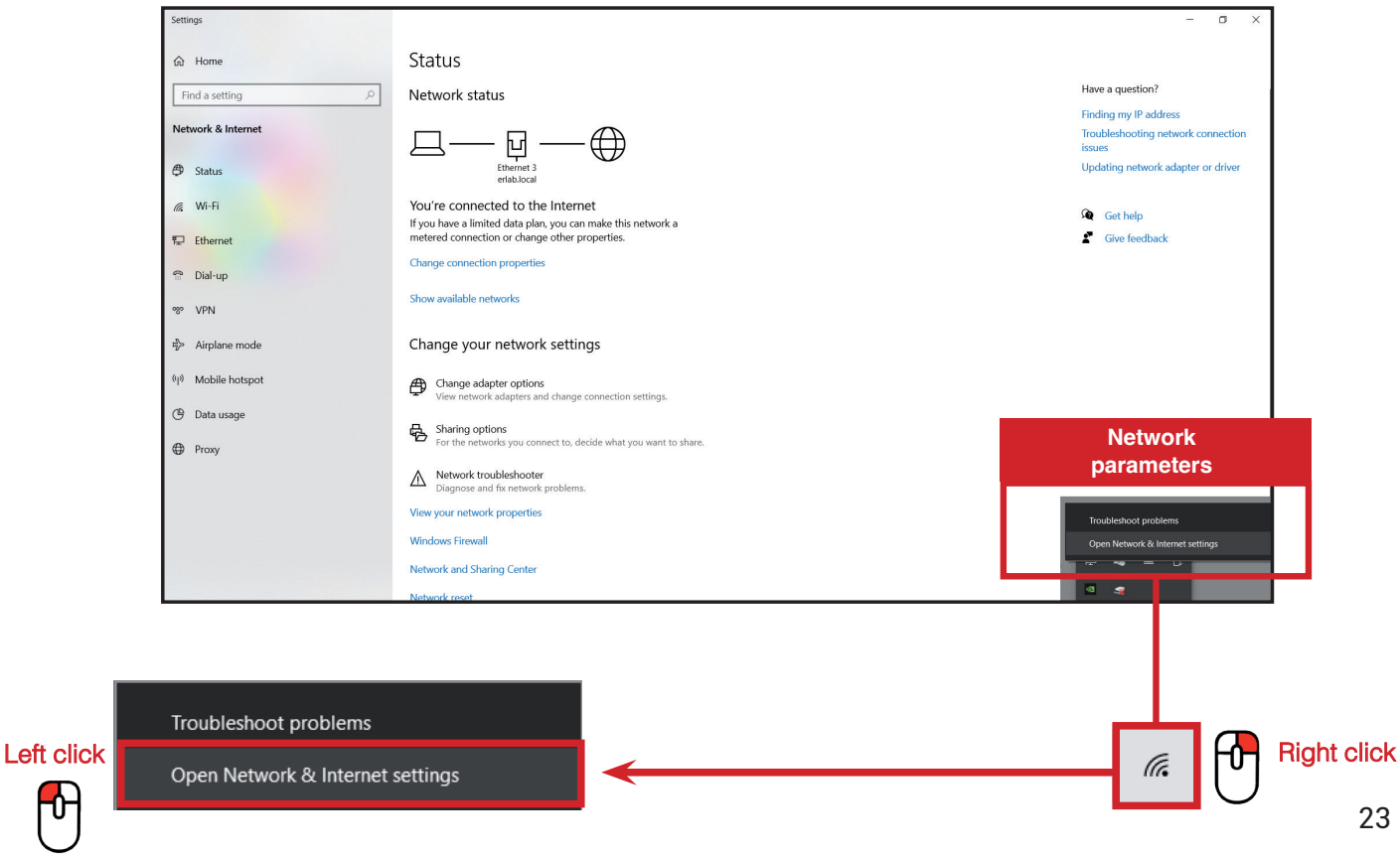
Page is not accessible

Computer network parameters are not allowing the access to the embedded software.

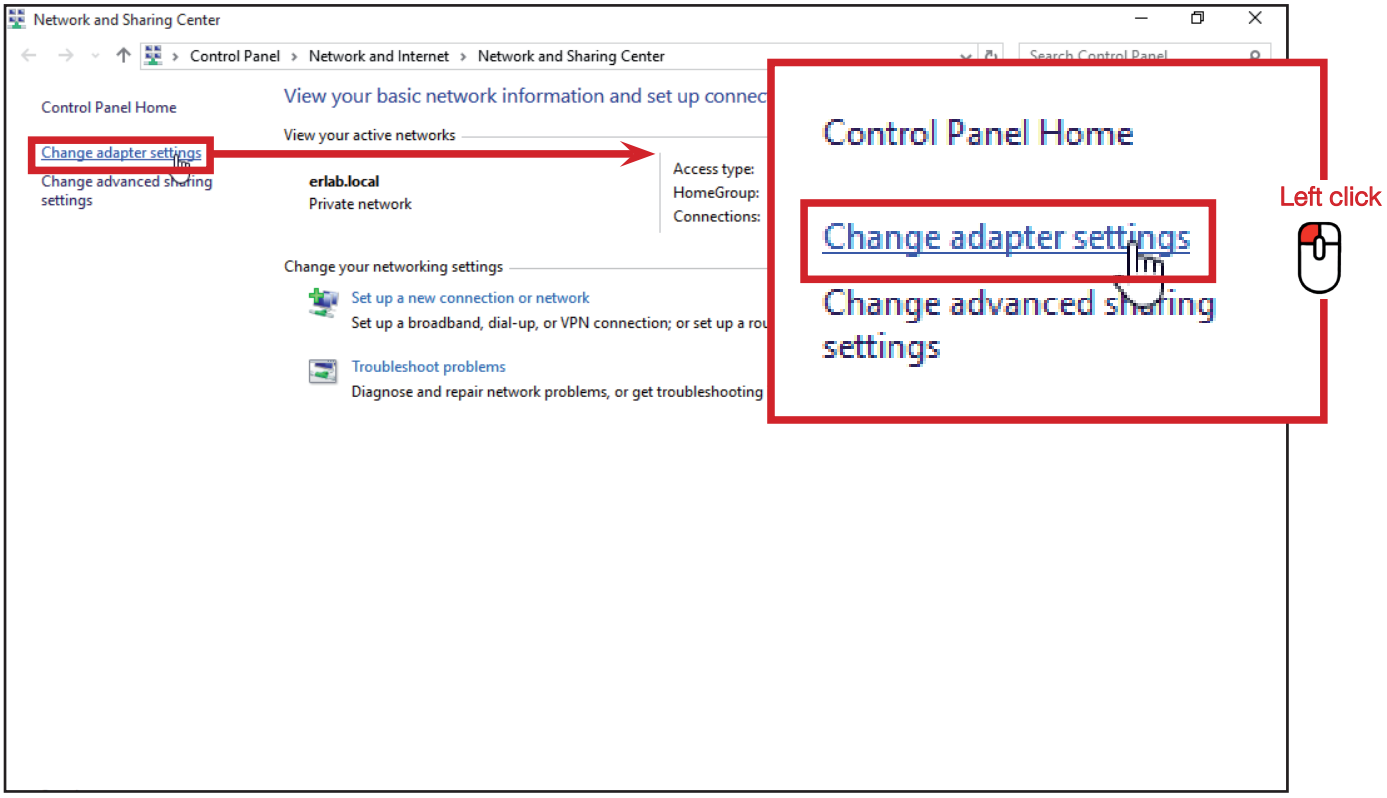
Apply the following procedure

Page is not accessible

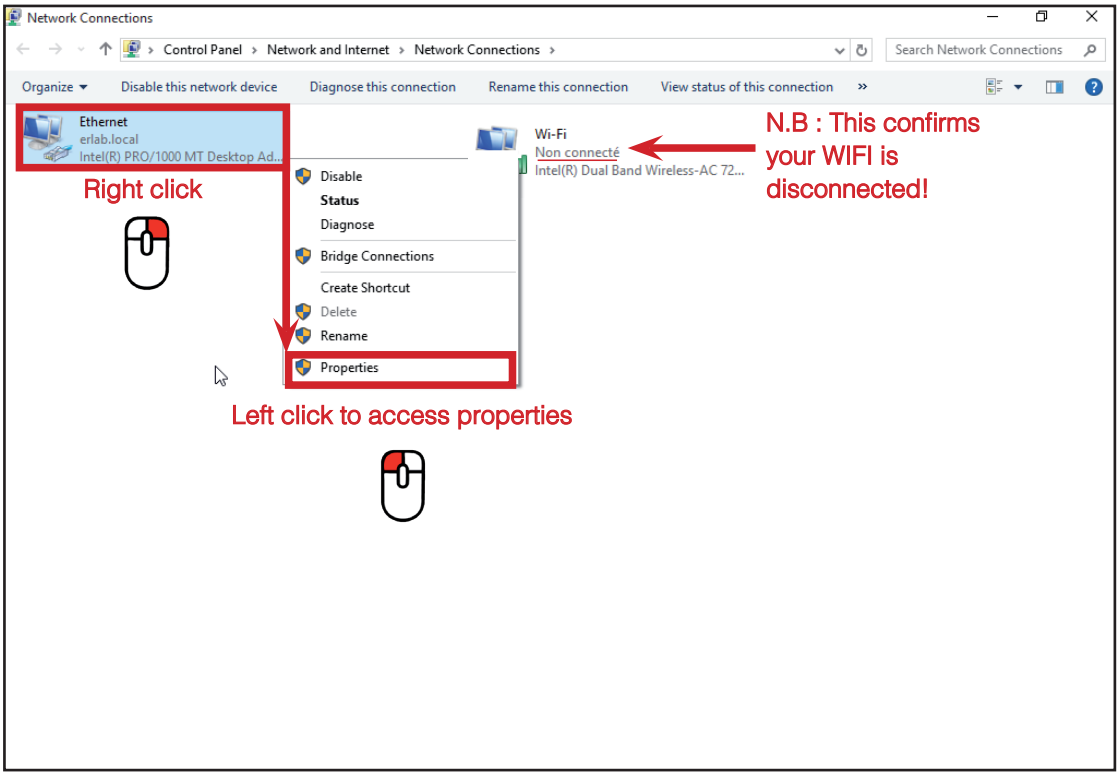
3 Modify computer network parameters (windows 10)



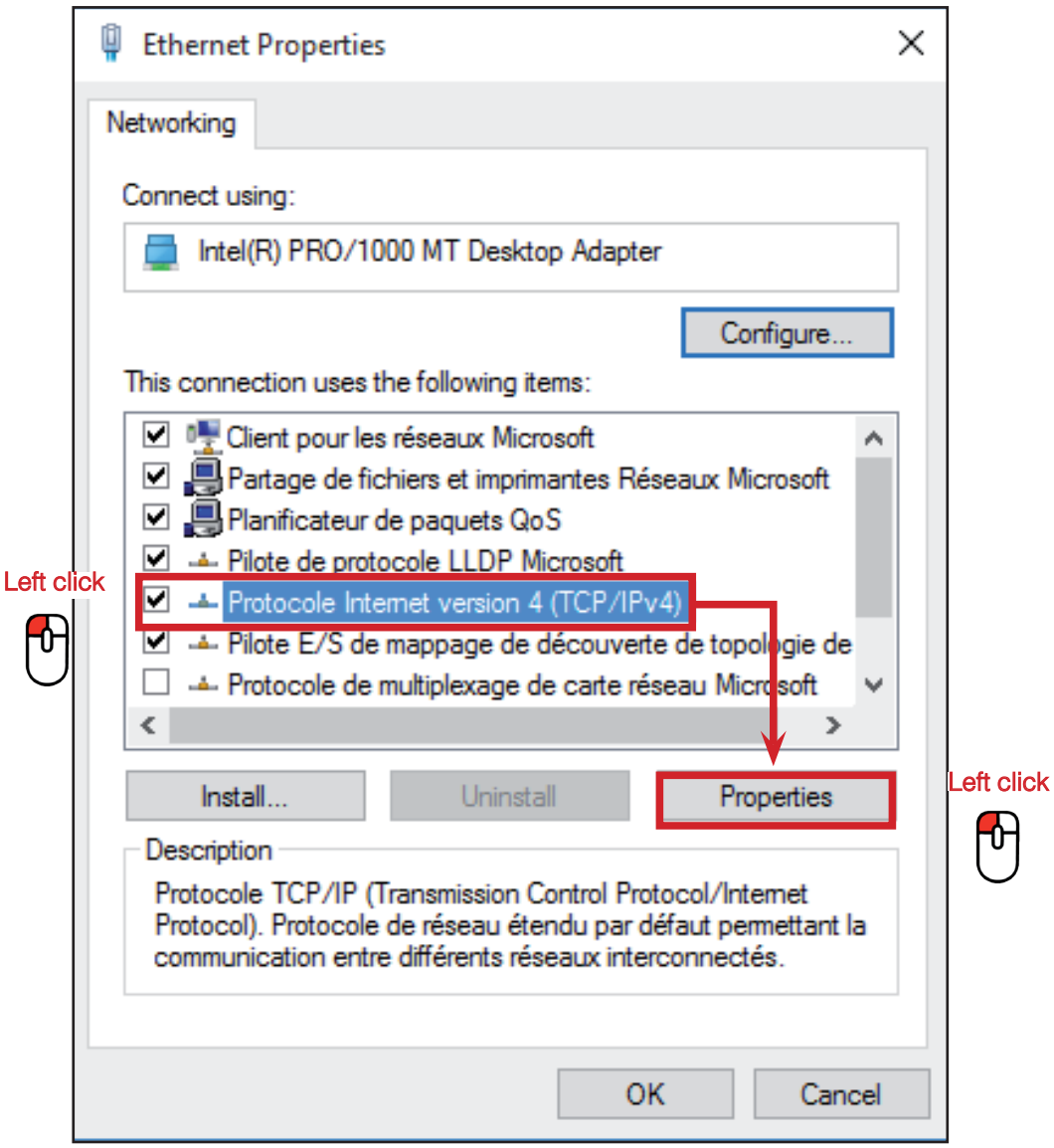
4 Access to the Network and sharing center (windows 10)



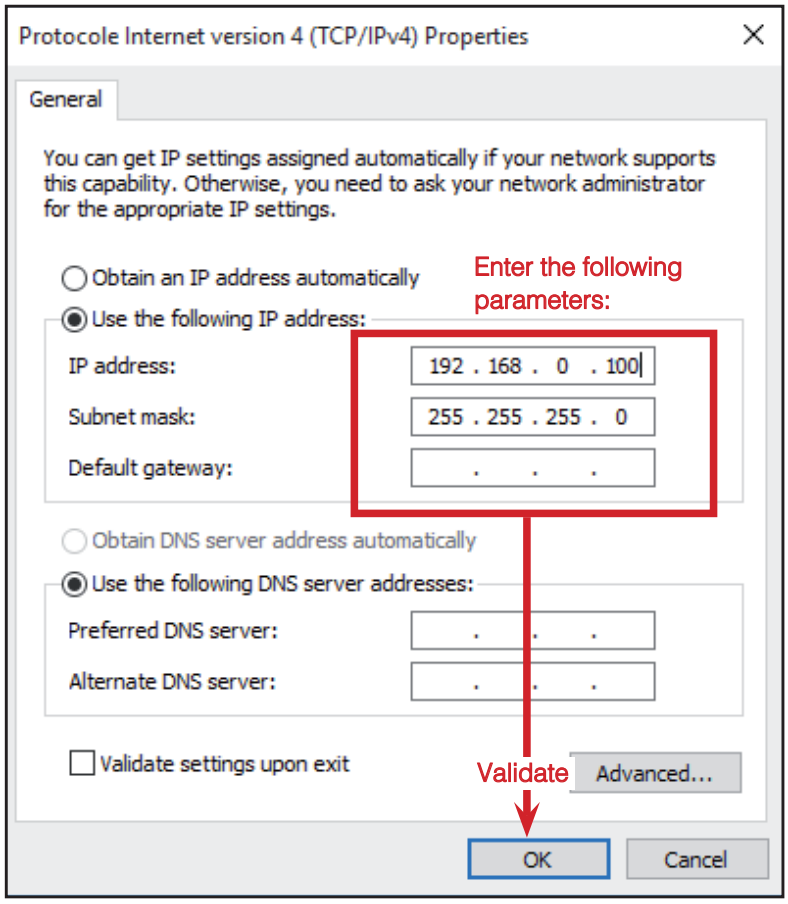
5 Access to the network connection (windows 10)



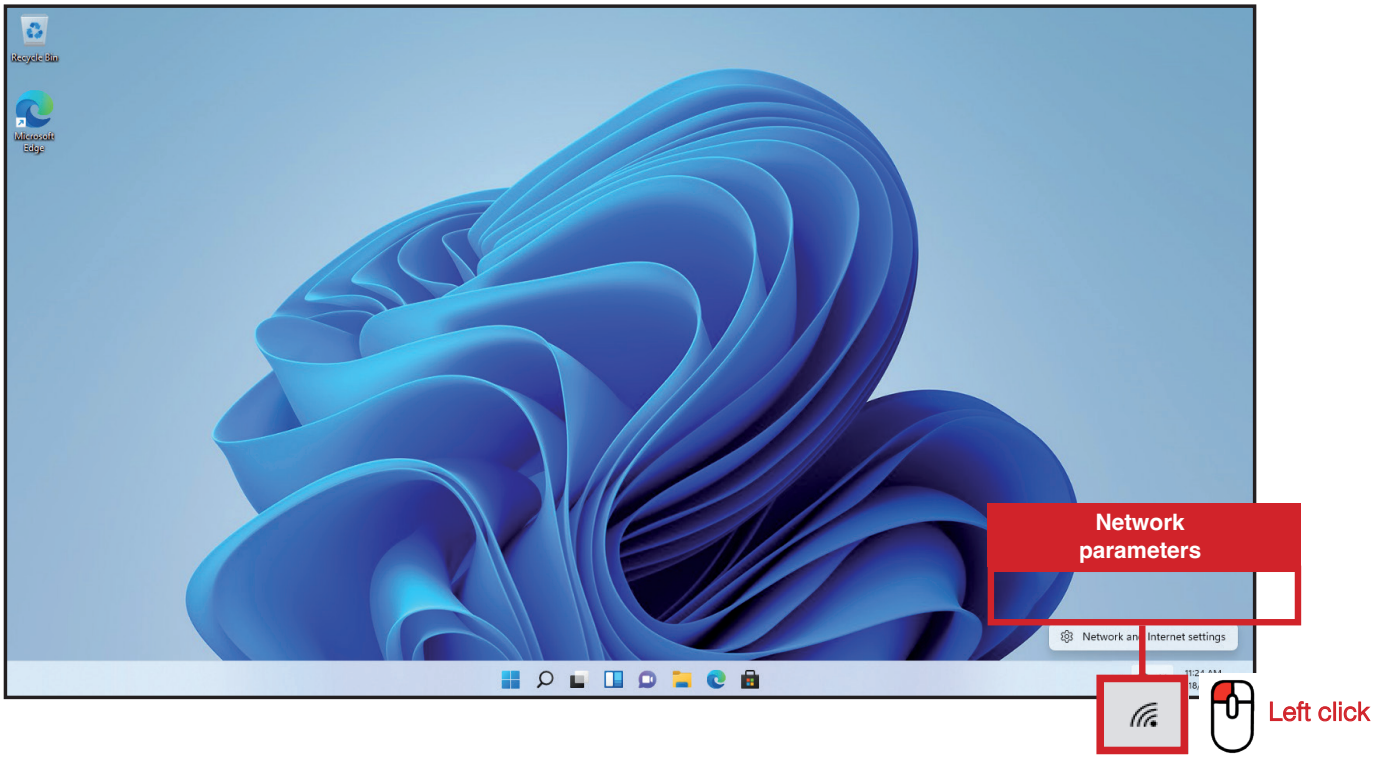
6 **Enter compatible network parameters as indicated below**



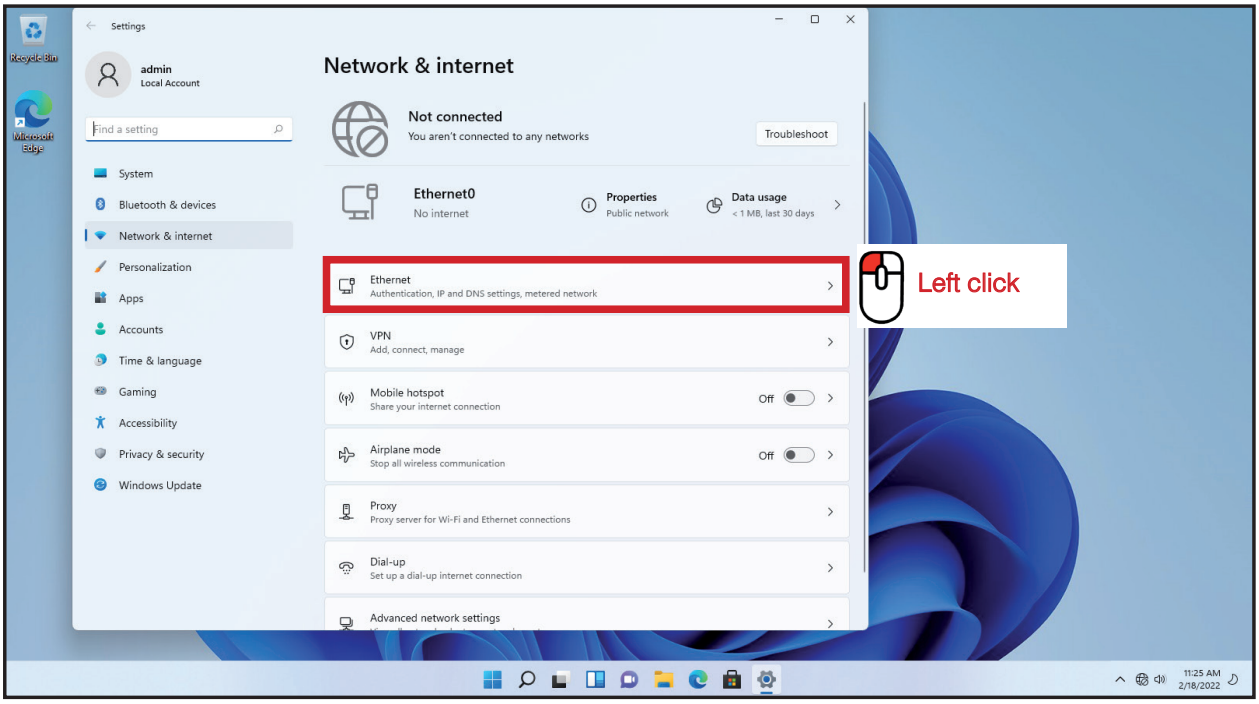
Write down your existing parameters **before** changing them in order to be able to set your initial parameters after the operation!



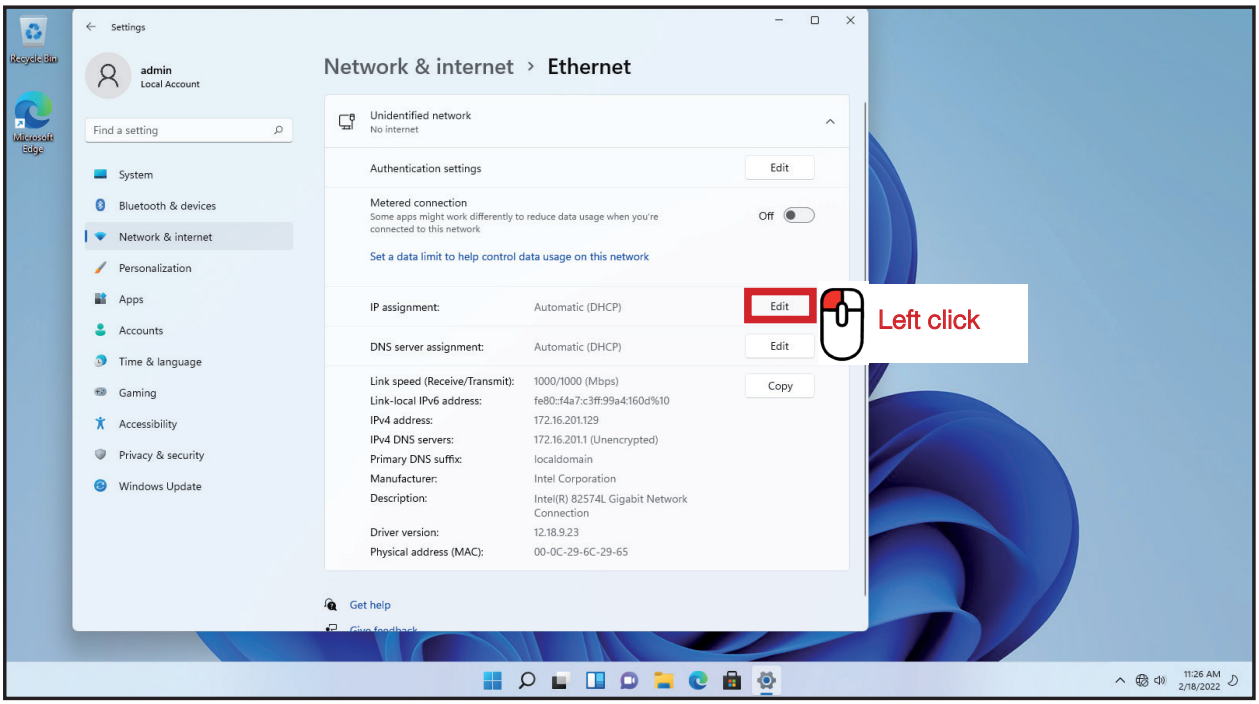
1 Modify computer network parameters (windows 11)



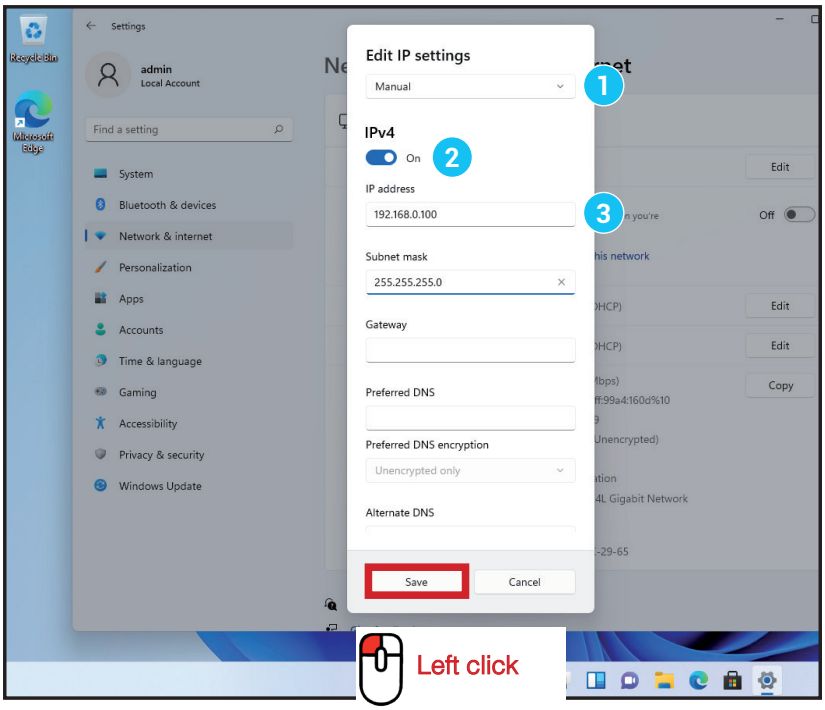
2 Access to the Network and sharing center (windows 11)



3 Access to the network connection (windows 11)

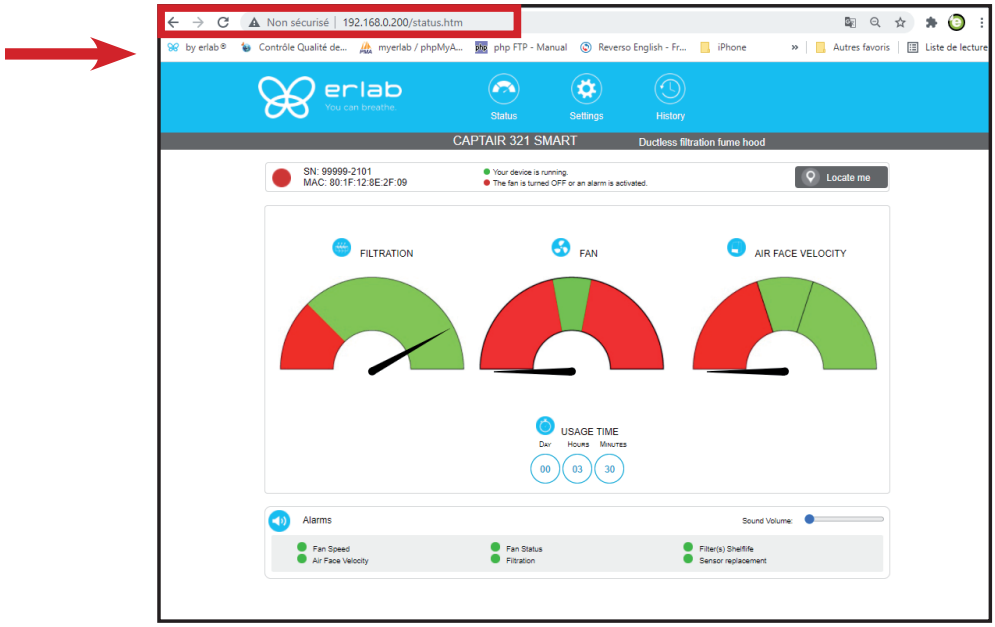


4 Enter compatible network parameters as indicated below (windows 11)



1. Select «manual»
2. Set «IPv4 to On»
3. Enter the IP address «192.168.0.100»

5 Open your web browser again, type again the following IP address 192.168.0.200 and validate



- **OK** : You are connected to the embedded software
  You enter the « Status » page and you can have access to the « Settings » using the following credentials:
  Login : **erlab** / Password : **smart**

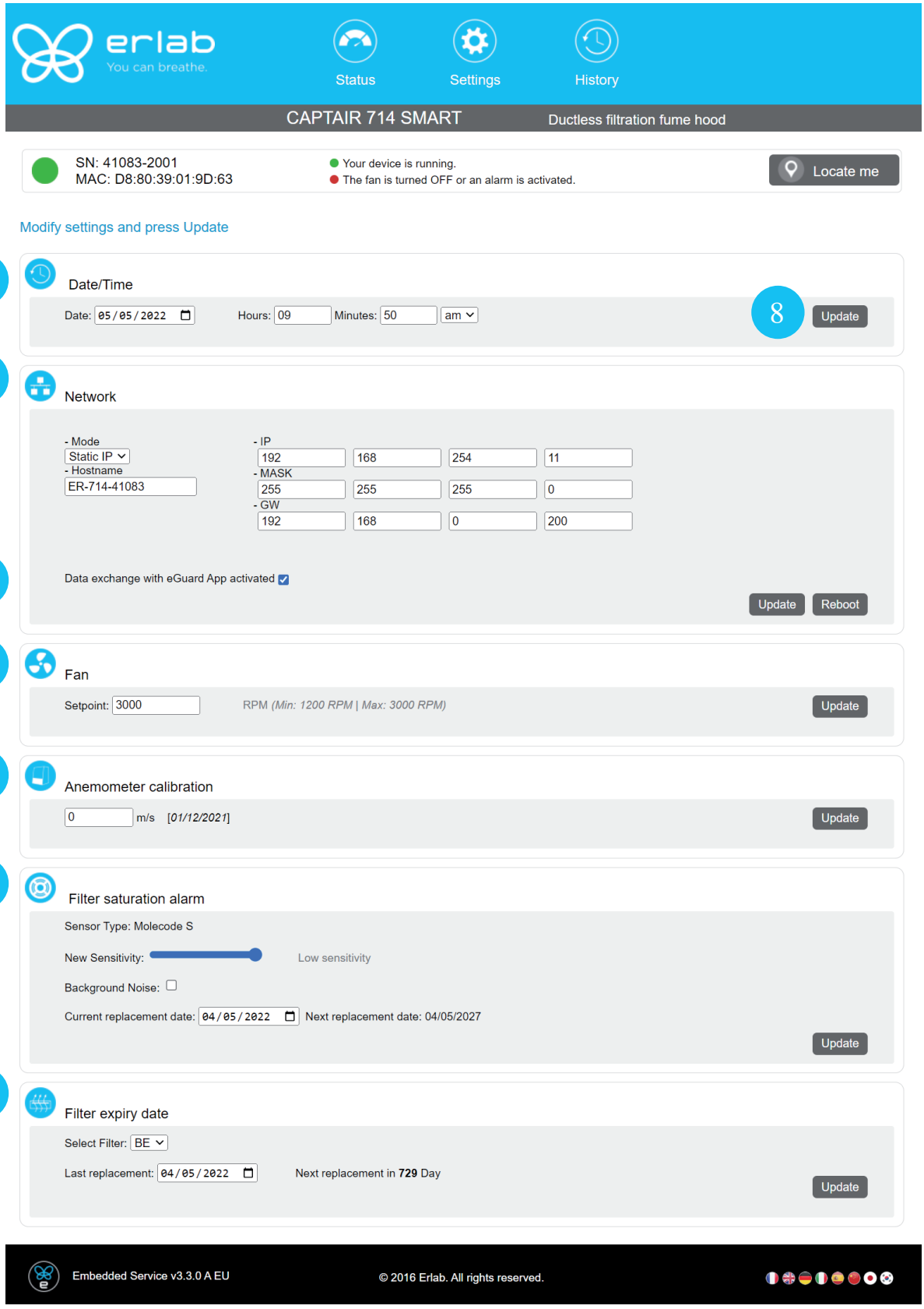
Administrator interface description

Status page details	
1	Choose active interface page
2	Device ID: Model
3	Device ID: serial number, MAC address, device status
4	Unit location
5	Molecode option gauge: indicates a fault in the main carbon filter(s).
6	Fan Gauge: indicates the fan status
7	Air Face Velocity: indicates the air face velocity
8	Device use time since fan was last started
9	Device alarm statuses (see alarm triggering conditions)
10	Volume setting
11	Embedded service version
12	Choose language

Access to the settings is protected by the following credentials:

User name: erlab
Password: smart

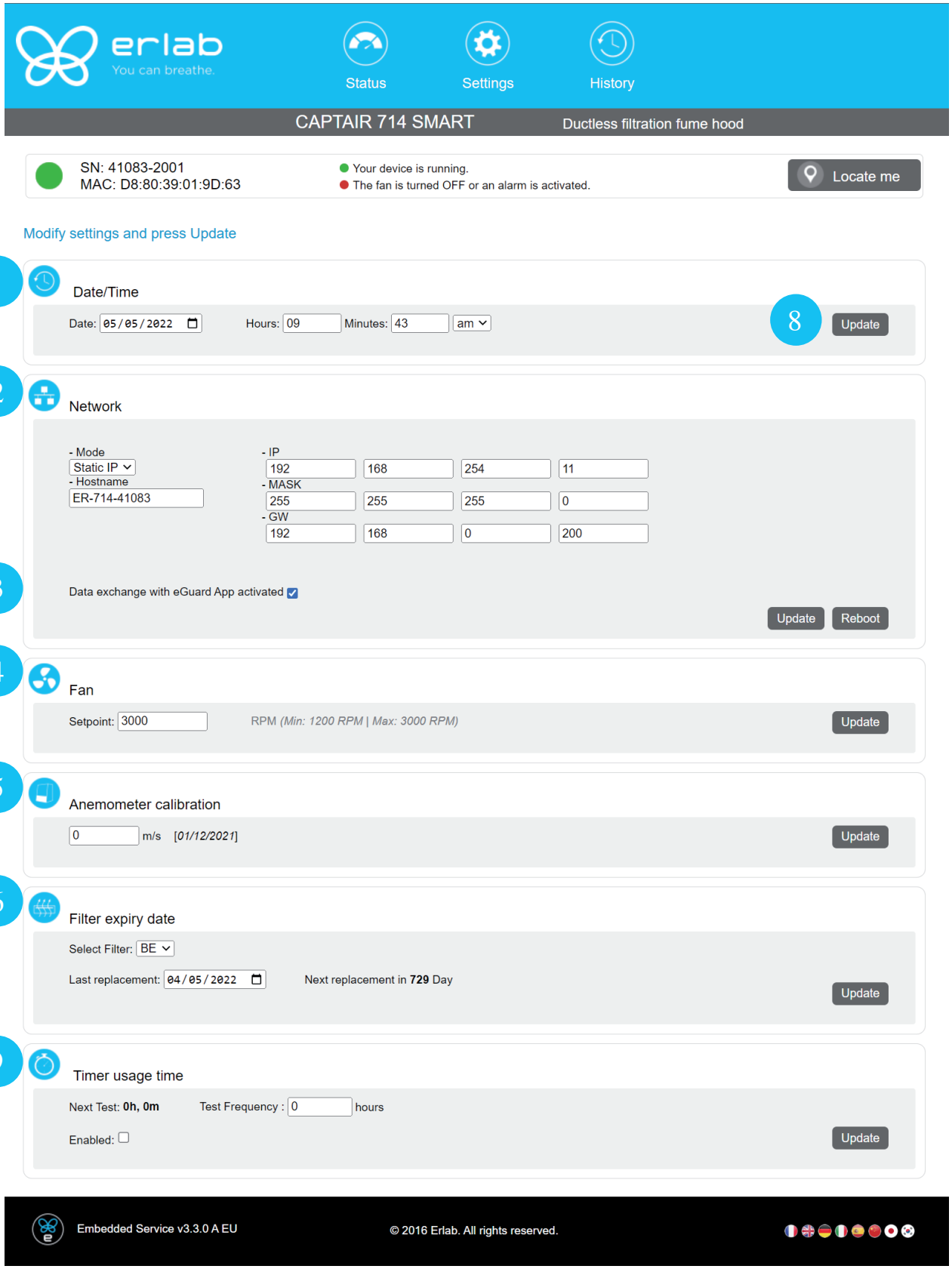
Setting with molecode



Access to the settings is protected by the following credentials:

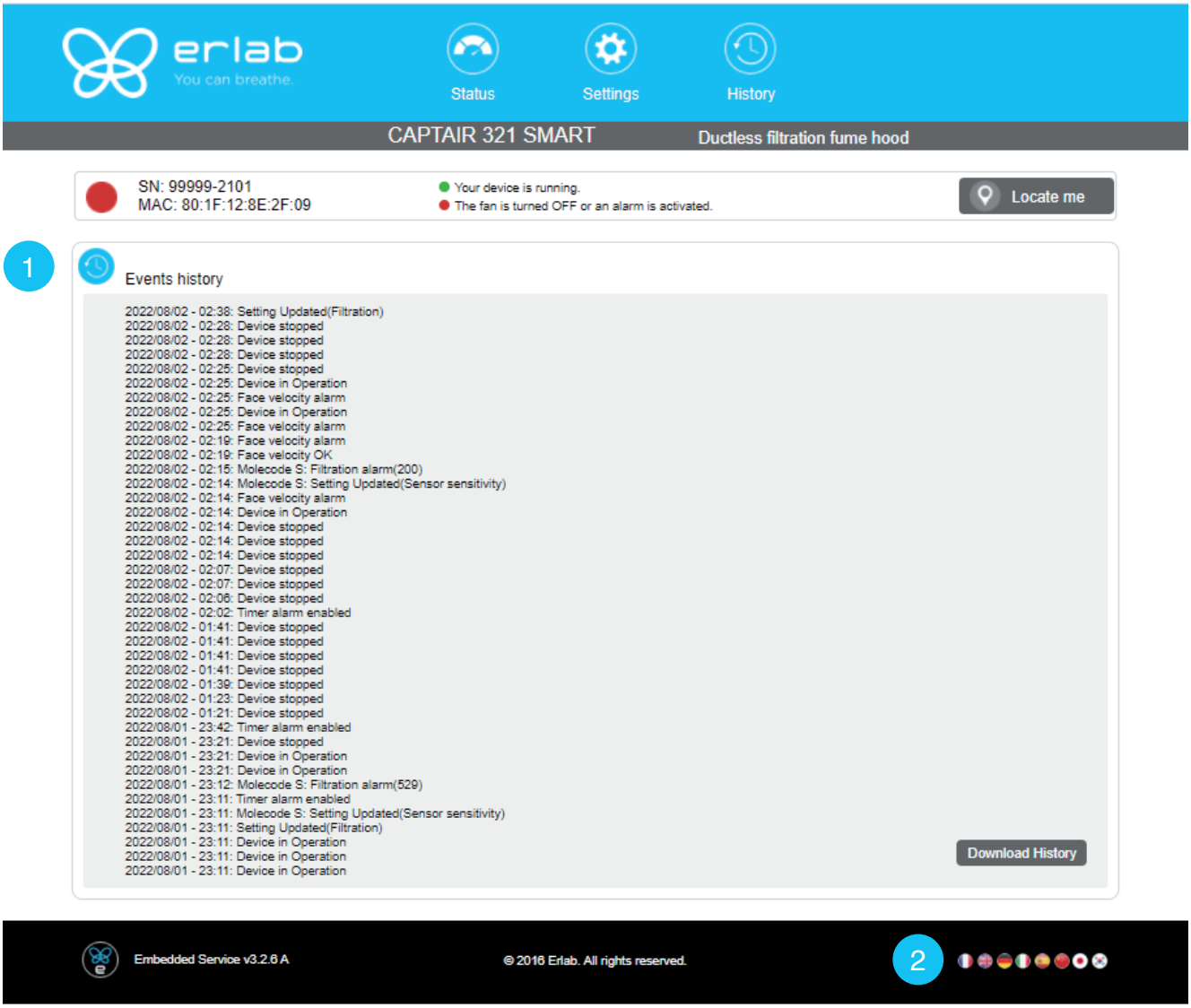
User name: erlab
Password: smart

Setting without a molecule



Settings page details	
1	Device time and date settings
2	Device network settings Mode: Selected IP protocol Hostname: Device name on network IP: IP address of the device MASK: network mask GW: Network gateway **Modify network settings :** Default mode : DHCP Each unit is identified with its hostname : ER-UNIT-S/N Hostname example for a Captair 321 Smart, S/N: 25698 Hosname will be: ER-321-25698 This hostname is displayed on the IP Adress label located on the back of the control panel If the unit is not connected to a DHCP servor, the unit will automatically switch to its defaut IP address: 192.168.0.200
3	Activate/Deactivate the exchange of information This allows the transmission of information from the device to the eGuard server for: - remote monitoring via eGuard App (mobile &PC) - receiving usage reports
4	Device fan setpoint settings
5	Anemometer settings : Please check the anemometer settings procedure
6	Alarm filtering default (Molecode option) Sensor type indication (VOCs: volatile organic compounds/ A: Acids / F: Formaldehyde) Sensor sensitivity settings: VOCs sensor (5 settings) : High sensitivity, Medium/High Sensitivity, Medium Sensitivity, Medium/Low Sensitivity, Low Sensitivity A and F sensors (3 settings) : High sensitivity, Medium Sensitivity, Low Sensitivity Sensor replacement Enter replacement sensor date, display the next sensor replacement date
7	Filter replacement date: Indicates the filter type (AS: organics vapors / BE+:Acids, inorganics, organics, and solvents vapors / K : Ammonia vapors / F : Formaldehyde vapors / HP: powders) For units equipped with carbon and HEPA filters, please use the carbon filter indication Last replacement: Counter showing the number of days the filter(s) can be used relative to its/their service life expiry date
8	Confirm settings key (please validate each setting)
9	Audible and visual alarm triggered by a clock at maximum every 60 hours of operation

History page



Log page details	
1	Displays the device's event log
2	Used for downloading the log in .csv format

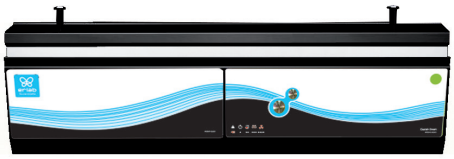
Fan setpoints per filtration column type

Unit / Type of filtration column	1P	1C	1C1P	1P1C	1P1C1P	1P2C	2C1P	2C	2P
321	1800 RPM	2200 RPM	2500 RPM	2550 RPM	2800 RPM	2800 RPM	2800 RPM	2600 RPM	2200 RPM
391									
481									

Procedure for calibrating the electronic anemometer

1- By using the control panel

(see start-up procedure)

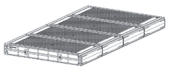
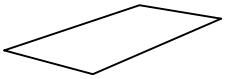


N.B: The anemometer must be recalibrated each time the filtration column is modified (type of filtration / change of filter) and once a year via the anemometer calibration procedure.

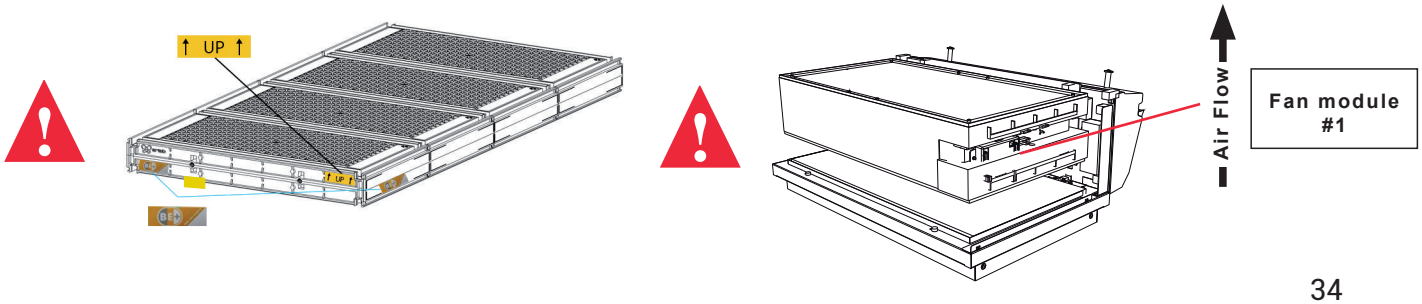
Replacing the filters

Your device is equipped with FLEX™ filter technology that was configured to the user's protection needs when the device was purchased. The configuration of the filter column is dependent on the applications carried out in the enclosure. These applications may change over time. Your FLEX™ filter technology can therefore be reconfigured if your fume hood is used for applications other than those anticipated when the device is first set up. If so, please contact us so that we can verify that the current configuration is safe or it needs to be configured.

The table below summarises all possible Flex™ filter technology configurations for your device

	Captair 321 - 391 - 481 Smart models		
	Molecular filter	**HEPA filter H14 / ULPA**	**Pre-filter**
Column Configuration			
1C	x1		x1
2C	x2		x1
1 P		x1	x1
2 P		x2	x1
1P 1C	x1	x1	x1
1P 2C	x2	x1	x1
1C 1P	x1	x1	x1
2C 1P	x2	x1	x1
1P 1C 1P	x1	x2	x1

Standard Optional



The table below summarises the different types of carbon filters that Erlab® offers along with their fields of application.

Type AS	For organic vapors
Type BE +	Multi-application for acid and organic vapors
Type K	For ammonia vapors
Type F	For formaldehyde vapors

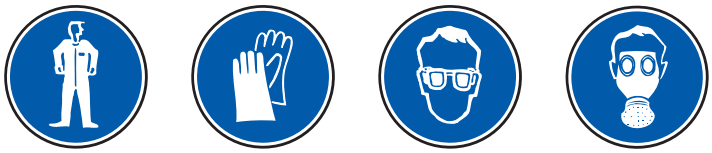
Replacing the HEPA H14 / ULPA filters

Pre-requisites

- The operative responsible for replacing the filter is kept up-to-date with the exhaustive list of products handled in the fume hood by the user so that the correct EPI can be used
- The laboratory is empty when the operation is carried out
- The laboratory is ventilated by mechanical or natural means while the operation is carried out

Minimum protective equipment

- One-piece overall + overshoes + bouffant cap
- Laboratory gloves (latex or nitrile)
- Protective glasses
- Breathing mask with particle filter (P3)



Notice: additional equipment could be required.

This procedure is applicable to HEPA/ULPA filters located at the bottom of the filtration columns and designed to trap powders handled inside the device enclosure.

<u>Strict chronological order to follow:</u>

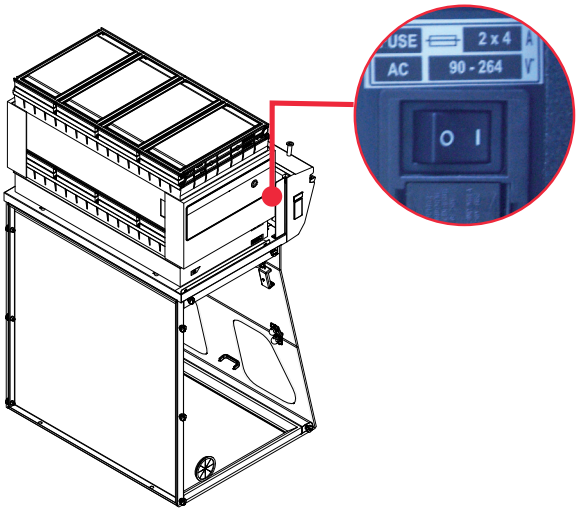
1- Switch on the device fan
2- Carefully spray the bottom surface of the HEPA/ULPA filter
(paint with NON FLAMMABLE propellent), to be done inside the enclosure
3- Allow at least 5 minutes with the fan running for the spray to dry
4- Shut down and unplug the device and disconnect the fan module power supply cable and the sampling tubes from the sampling area (if installed)
5- Carefully remove the molecular filter(s) (if present) and the fan module
6- Carefully unwrap the new HEPA/ULPA filter
Keep the plastic film and cardboard box so that you can use it later to pack up the used filter
Lay out the film on a flat surface in the immediate vicinity of the operation so that it is at the ready
7- Carefully remove the used HEPA/ULPA filter and immediately place it contaminated-side down onto the plastic film
8- Clean the filter housing and the enclosure (using water + surfactant)
9- Package up the used filter + contaminated equipment
Seal the plastic film tightly
10- Place the sealed package in the box the new carbon filter came in, then seal it using adhesive tape, clearly write «used filter» on the packaging.

Have the filter disposed of via a suitable disposal process in accordance with the applicable regulations.
To find out more, please contact your usual advisor.

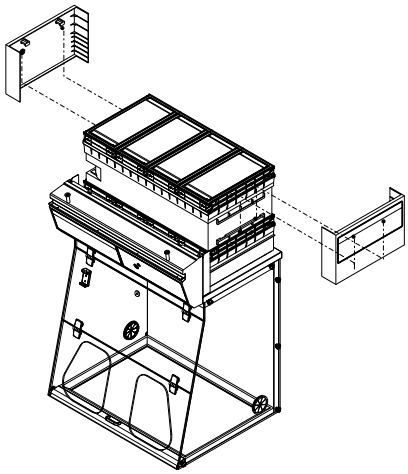
11- Fit the new HEPA/ULPA filter, main molecular filter (if present) and the fan module, followed by the backup molecular filter (if present). Make sure that all the column components
12- Reconnect the device's various cables and hoses, switc h the device back on and check the air speed using the anemometer calibration procedure via the administrator interface

Procedure (equipment fitted with a filtration column)

For these operations, we strongly recommended that the user or maintenance technician wear the necessary safety equipment, including: safety glasses, lab coat and gloves

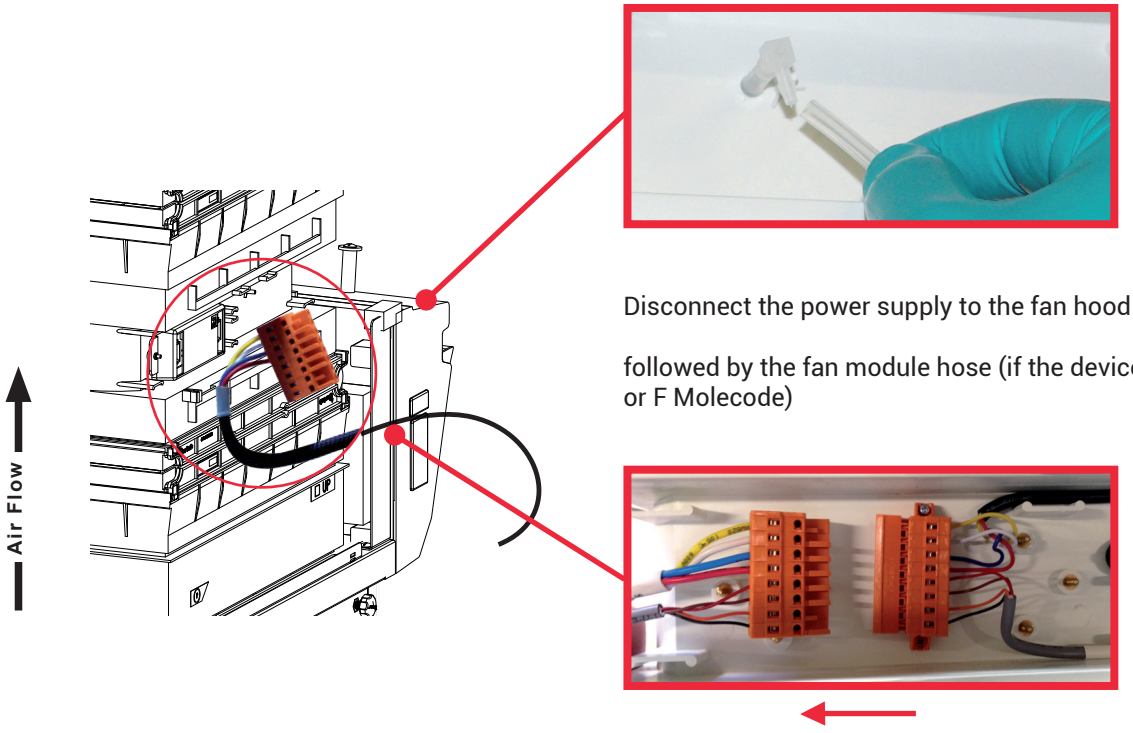


Switch off the fume hood



Example: 321 Smart

Remove the protective shields on either side of the hood



Disconnect the power supply to the fan hood

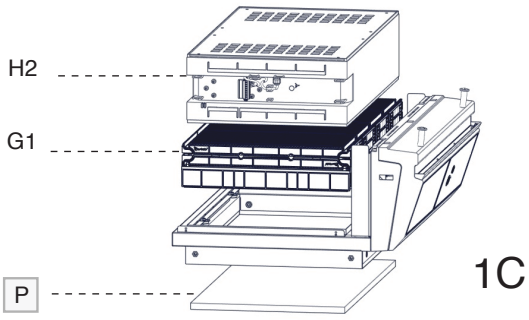
followed by the fan module hose (if the device is fitted with a type A or F Molecode)

Models Captair 321 - 391 - 481 Smart

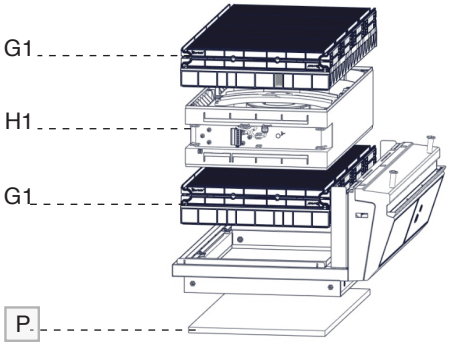
Remove all the elements that make up the filter column from the fume hood.

After carefully unpacking the filters from their packaging, you can proceed with the assembly of the column according to the configurations below.

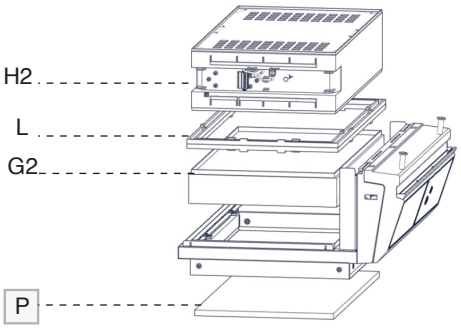
Apply the ventilation instructions for the type of filter column (see ventilation instructions)



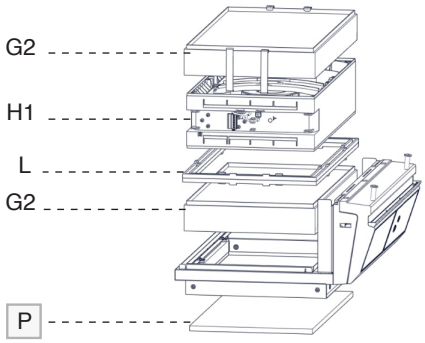
1C



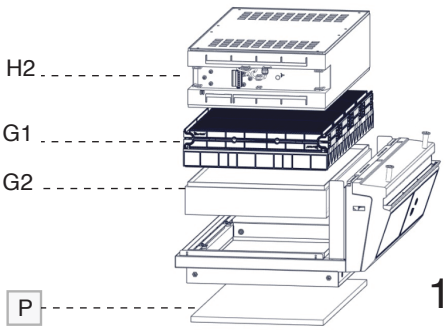
2C



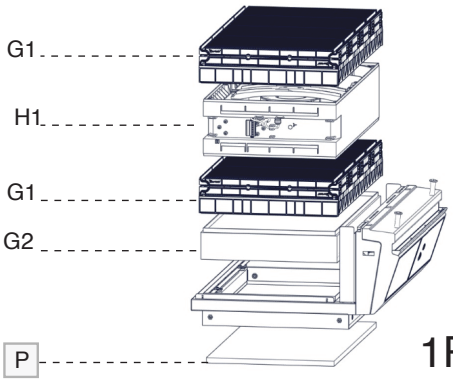
1P



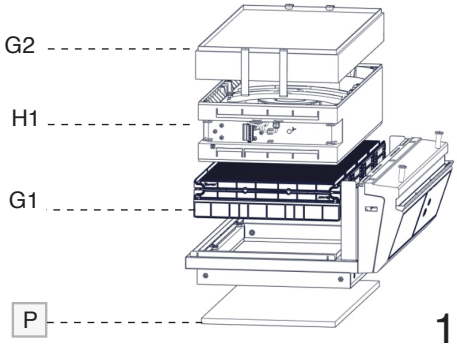
2P



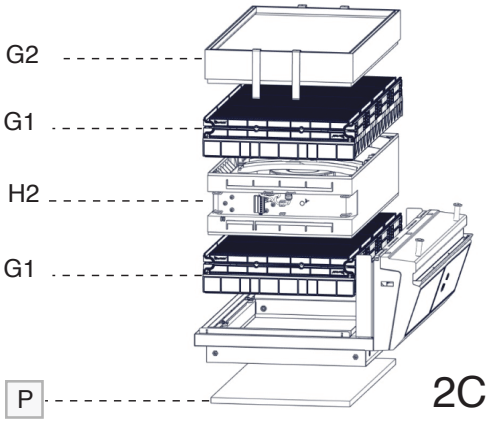
1P1C



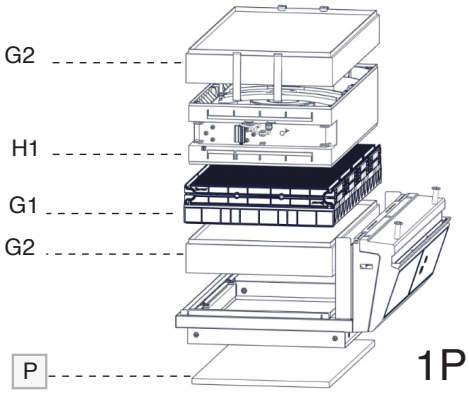
1P2C



1C1P

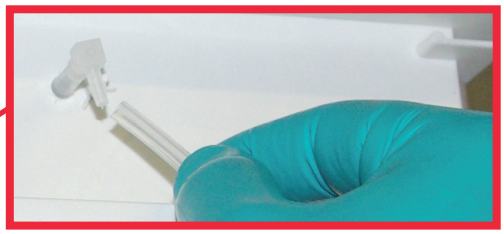


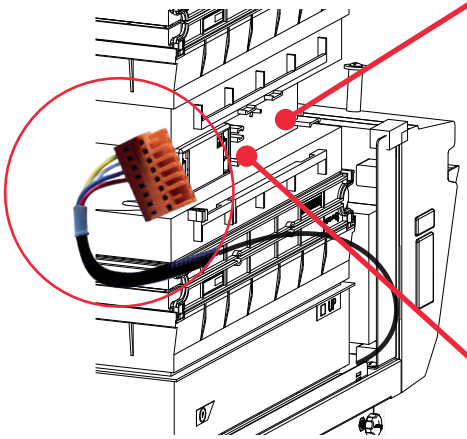
2C1P



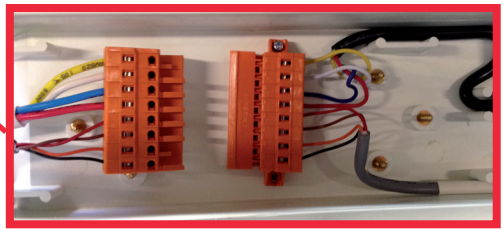
1P1C1P

When reassembling the filtration column, be sure that the fan module is positioned correctly to access your connection points.





Reconnect the power supply to the fan hood and the hose to the sampling port.
(If the device is fitted with a type A or F Molecode)

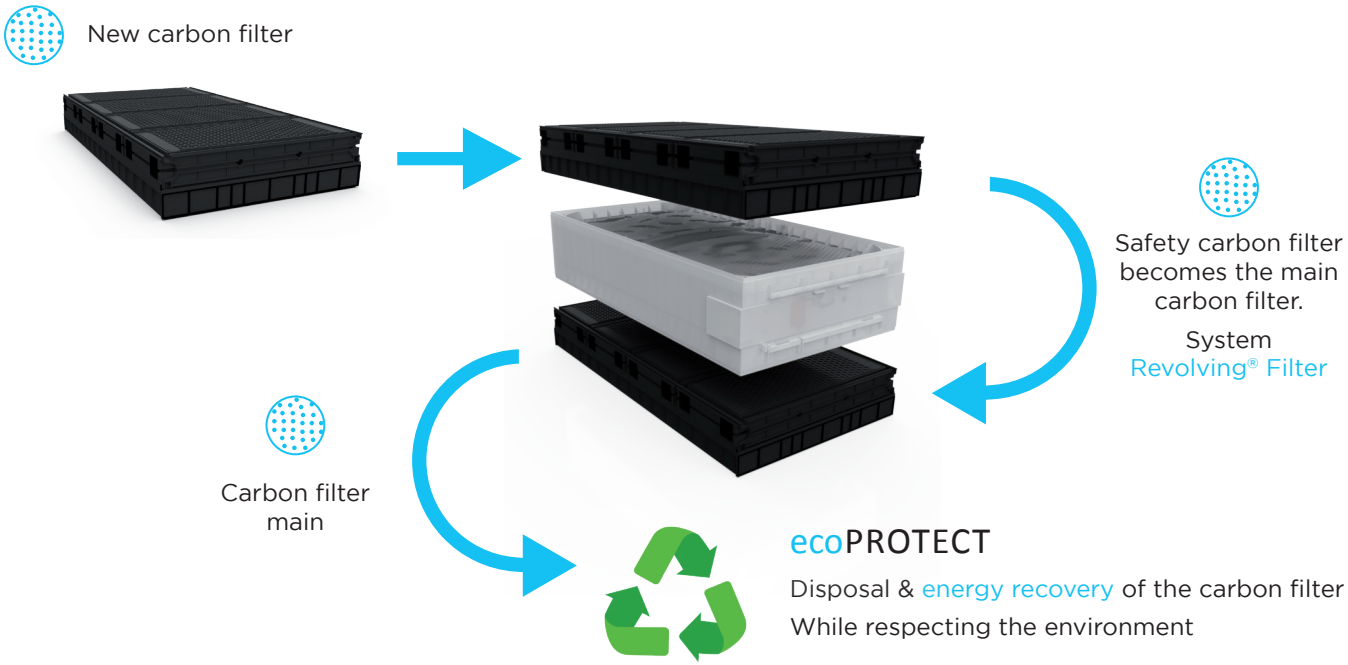


The «Revolving» System
Molecular filter replacement (The "revolving system" may be used with following Flex™ technology types 2C / 1P2C / 2C1P)

This simple concept involves placing one chamber equipped with a molecular detection system between two filters having the same capacity. When the main filter is saturated, the molecules are directed to an identical back-up filter that is placed just above the detection chamber.

This system prevents all molecules from being released into the environment as they are automatically absorbed by the secondary filter. The back-up filter replaces the main filter when the latter has reached its maximum filtration failure point. A new filter is then installed in place of the secondary filter. This cycle can be repeated indefinitely.

Compared to traditional filtration systems, the "revolving filter" concept increases the retention capacity of the filter by 25% and decreases replacement costs by 25%.



Your used filter is a special industrial waste. It must, as required by law, be collected and disposed of by a suitable channel, which must guarantee the traceability of the disposal process: from collection to destruction of the used filter.

Recommendations for the use of filters

ERLAB offers 3-point validation of your handling operations based on a scientific analysis carried out by its laboratory specialists via the global Erlab Safety Program (E.S.P) which includes the **eValiQuest** questionnaire:

- Feasibility of handling operations under a recirculating fume hood
- Type(s) of filter(s) to use and filtration column configuration
- Predicted service life of the activated carbon molecular filters

How does the E.S.P service work?

- The customer completes the eValiQuest questionnaire and sends it by email to Erlab
- The Erlab laboratory specialists analyze the questionnaire and issue a Valipass certificate

The Valipass certificate is affixed to the new devices at the factory. If the chemical processes in the hood change, a new eValiQuest is completed and is sent by email after revalidation.
The certificate contains the following: a list of the products handled in the fume hood, the type of filter required for these chemicals,
the serial number, the life of the filter, the traceability information used to track the use of the device and the methods of detecting filter failure of the molecular filter.

The activated carbon molecular filter(s) must be replaced when the period in months specified on the Valipass certificate expires

To ensure their safety, we invite users who have not had their application validated via the **eValiQuest** questionnaire or whose device is not covered by a Valipass usage certificate, to contact ERLAB or their usual distributor to arrange a new usage validation for the device in question.

Failing that and/or in the absence of information regarding device usage:
ERLAB is unable to provide any guidance as to the predicted service life of the filter(s).

In such cases, we strongly recommend:
- Replacement of molecular filters at least every 12 months and implementation of a regular filter fault monitoring protocol. (Please contact us for personal advice on this matter)
• That the HEPA or ULPA particulate filters are replaced at least every 36 months

Admissible weighs on working surfaces

	Tempered glass work top	Stainless steel work top	Trespa® Top Lab^{PLUS} work top
	50 kg/m²	110 kg/m²	110 kg/m²
Captair Smart 321	15 kg	35 kg	35 kg
Captair Smart 391	20 kg	45 kg	50 kg
Captair Smart 481	25 kg	65 kg	65 kg

Cleaning and maintenance

Mechanical item checks

Hinges:
Hinges must be properly attached and must allow any items on the front side of the hood to be instantly and easily lifted upward.

Acrylic Parts:
These parts must be clean; white streaks or spatters indicate rather heavy use of acid (hydrochloric acid) or products handled at a high temperature. Ensuring the transparency of the walls is a part of regular maintenance for the enclosure.

Cleaning the enclosure

The enclosure must be cleaned on a regular basis.

This may be accomplished in several ways:

- With soapy water followed by rinsing with clear water and drying with a soft, non-abrasive absorbent paper towel.
- Or with a commercial pH neutral neutralizing product followed by drying with a soft, non-abrasive, absorbent paper towel.

Coated Metal Parts:

- These must be inspected and free from any traces of corrosion.
- Check that there is no stagnant water in the spill tray.
- Clean the spill tray if necessary.

The Erlab Research and Development laboratory

About Erlab

Since 1968, **Erlab** has been a specialist, inventor and world leader in **ductless, zero-emission filtering fume hoods for laboratories** to provide total safety in chemical handling.

1 Erlab filtration

We provide technologies to protect laboratory staff from inhaling chemicals. This is made possible thanks to our **Research and Development (R&D) department,** which has continuously improved our filtration technology **for more than 50 years.** That's why, in 2009, we invented the **ERLAB ABOVE** label for tried and tested filtration technology.

2 The AFNOR NF X 15-211: 2009 standard

Erlab's filtration technology conforms to the **NF X 15-211: 2009 standard,** the industry's most demanding standard for molecular filtration, developed by a committee of independent scientists and specialized manufacturers.

This text imposes performance criteria linked to:

- Filtration efficiency
- Containment efficiency
- Air face velocity
- Documentation: chemical listing

3 The ESP programme

A set of three services included with the purchase of each device designed to ensure your safety.

eValiQuest Risk analysis – Determination of protection needs – Determination of ergonomic needs.

ValiPass Certified installation – Total safety for handling.

ValiGuard Ongoing monitoring – Preventative and maintenance inspections – Device reconfiguration based on protection needs – Development of handling.

4 Flex technology

The combination of molecular and particulate filtration technologies allows a single device to meet laboratories' protection needs. This innovation from Erlab's R&D department offers unprecedented **flexibility, versatility and value.** A single device can be reconfigured over time and easily reassigned to other applications.

5 Smart technology

Smart technology is a **simple and innovative** means of communication that improves safety. This technology uses a light and sound signal to indicate the user's level of protection. The advantages of the technology are:

1/ Light pulsation: Real-time communication via LED light pulses intuitively alerts the user to the device's operating status.

2/ Simplicity: One-touch activation.

3/ Detection system: The exclusive detection system continuously monitors filtration performance.

4/ Built-in monitoring: This service provides direct access to the **status, settings and history** of your device.

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