erlab
You can breathe.

CaptairStore 822

Ductless filtering chemical storage cabinets

Instructions & User's Manual

Contents

General

By choosing CaptairStore ductless filtration chemical storage cabinets you have chosen an efficient and responsible way to ensure safety.

Your cabinet and CaptairStore is the ideal way to accommodate respiratory protection of users and environmental protection with a unique filtered air recycling system in the laboratory. This is made possible by the use of very highly-effective molecular and HEPA H13 filters which trap molecules and toxic particles. This filtering process makes it possible to move purified air out of the filter, free from chemical pollution. The Erlab exclusive filtration technology can be adapted according to the stored chemicals.

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 chemical storage cabinet throughout its life cycle.

The Erlab Safety Program (ESP)* 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.
* erlab.evaliquest.com

- 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.
- 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.

Organization of your storage

Prior to handling or storing a chemical product, it is mandatory to consult your label; this label provides information on the dangerousness of chemical substances as well as on the basic principles of protection during handling and storage.

This information includes pictograms, some special instructions are reproduced below:

EXPLOSIVE

Contact with an energy source (flame) or an incompatible product may cause an explosion.
Example: Ammonium Nitrate (responsible for the nitrogen fertilizer explosion in Toulouse in 2001)

COMBUSTIVE

Substance which will cause a fire on contact with a combustible product
Example: Hydrogen Peroxide

CORROSIVE

Product which may attacck tissues or certain materials (glass, metal, etc.)
Example: Acids (Hydrochloric Acid)) or Concentrated Bases (Soda)

SENSITIZING

Substance dangerous for health
Example: Formaldehyde, Benzène

DANGEROUS FOR THE ENVIRONMENT

Substance which when it is dispersed into the environment may cause damage to the fauna or flora.
Example: Hydrocarbons

TOXIC / IRRITANT

Substance wich may cause a health risk.
Example: Citric Acid

GAS BOTTLE UNDER PRESSURE

Product which can cause an explosion or burns
Example: Hydrogen

TOXIC

Substance presenting serious health risks (Carcinogenic, Mutagenic or Toxic for reproduction)
Example: HCN Hydrogen cyanide

FLAMMABLE

Contact with an energy source (flame) or an incompatible product (combustive) may cause a fire.
Example: Methanol

Before inserting any new product into the cabinet, the user must check its chemical compatibility with the products it already contains. For example, in the category of corrosive products, it is necessary to distinguish between Acids and Bases. In every case, Acids and Bases must be separated: the reaction of a strong acid with a strong base is highly exothermic (releases heat), which may cause serious accidents (projection).

We give a non-exhaustive list below of some examples of known chemical incompatibilities:

- Do not store acids and bases together.
- Do not store oxidants and reductants together.
- Do not store combustive products and flammable products together.
- Do not store corrosive products and flammable products together.

In a cabinet, glass bottles containing liquids should be stored as low as possible so as to limit the height of a spill if they are accidentally turned over

The storage cabinets are intended to contain small quantities of products necessary for daily work.

Inventories must be stored in stock rooms provided for this purpose outside of the laboratory.

IMPORTANT :

CaptairStore cabinets are not capable of resisting consequences of a fire in the laboratory.

Therefore, any storage of flammable products in this type of cabinet is under the sole responsibility of the user.

The Captair Smart cabinet must be used indoors, at a vertical position on its carrying feet.

Use or storage temperature: 15 to 30° C

Maximum rate of humidity: 75 %

Storage: noxious and odorous chemical products.

The Erlab Guarantee

Erlab Warranty Information:

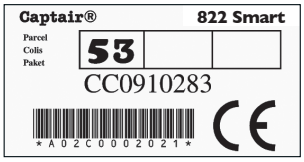
Erlab will offer a free Lifetime Warranty for all products sold. The Lifetime Warranty is valid on all Captair products with regards to mechanical parts as long as genuine Erlab parts and filters are used in compliance with the Captair Brand specifications, and replacement of the filters and sensors occur as recommended through the ValiQuest completion for each product sold.

Consumable items (including filters) and Captair Pyramid remain under warranty only until the first use. Erlab Inc. is the Sole US Distributor of Captair products and is not responsible for damage that occurs as a result of failure to follow instructions that are included with the original product.

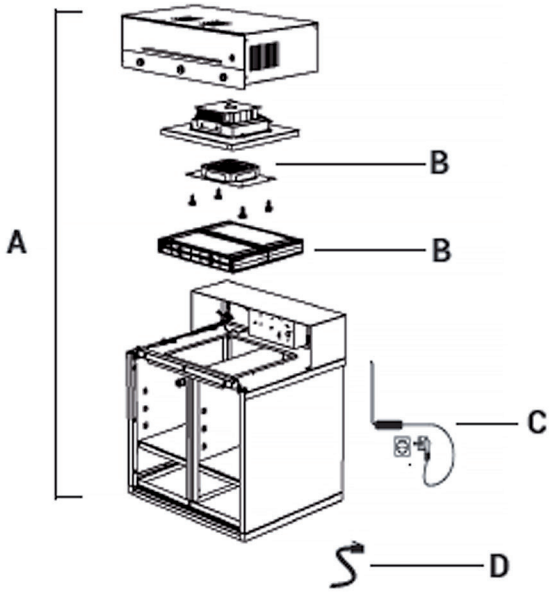
This Limited Lifetime Warranty does not apply from the result of an accident, misuse, abuse, contamination, modification, normal wear and tear or other external causes. This section constitutes Clients sole and exclusive remedy and Erlab Inc.'s sole and exclusive responsibility with respect to any alleged breach of this limited warranty. A one-year warranty is offered on the enclosure of the unit.

388 Newburyport Turnpike
Rowley, MA 01969
800-964-4434

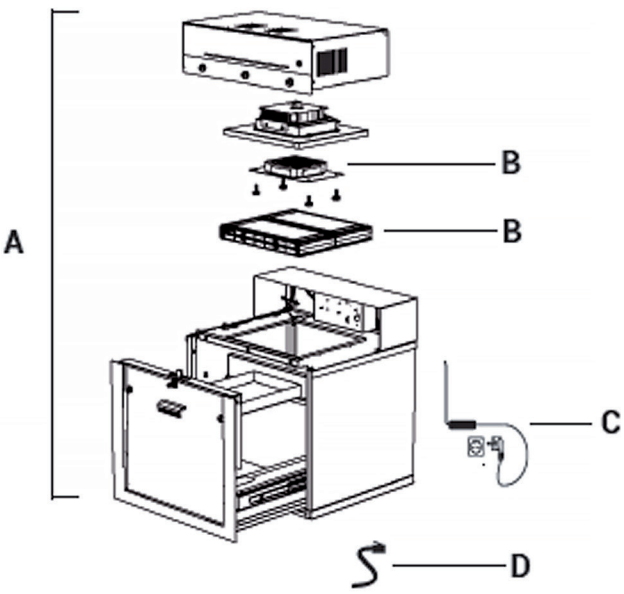
822



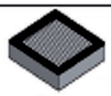
V1 Underbench storage cabinet sliding doors



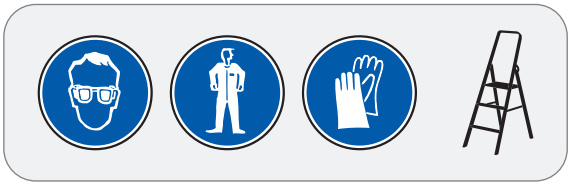
V2 Underbench storage cabinet extractible draw



Parts list

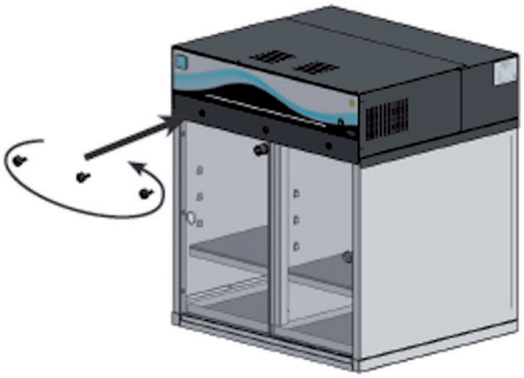
A	Underbench storage cabinet		x1	AB081 (Smart) AB082 (Midcap)
B	Molecular filter		x1	H11012101 (AS) H11012201 (BE) H11012301 (F) H11012401 (K)
	Particulate filter*		x1	H11012031 (HEPA H13)
C	External power supply		x1	EU = PIDEL076 + PIDEL8651 USA = PIDEL080 + PIDEL8651 GB = PIDEL090 + PIDEL8651 CH = PIDEL106 + PIDEL8651
D	RJ45 cable* *Smart version only		x1	WEL8603

** Option*



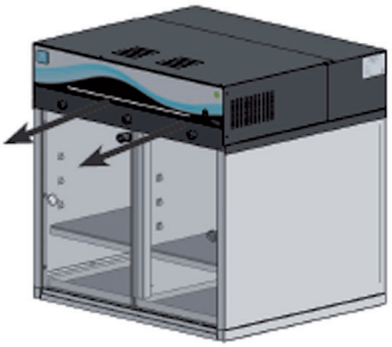
Installing the Filter

1



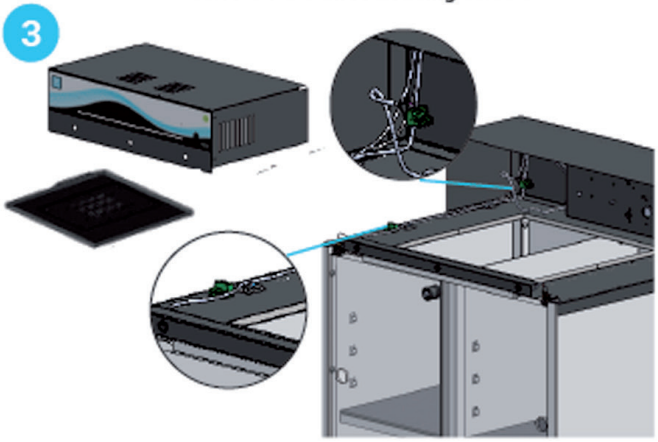
Unscrew the three housing screws

2



Pull the protective cover towards you

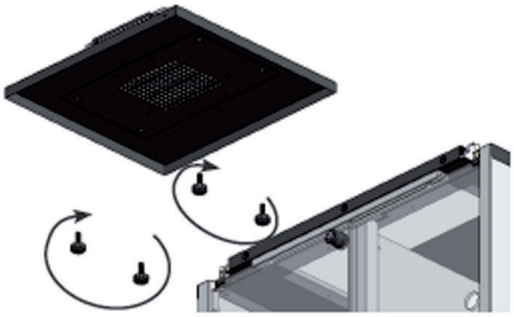
3



Disconnect both connectors

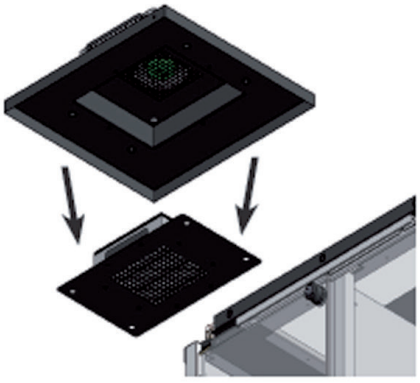
4 *

* *Steps for HEPA filter only*



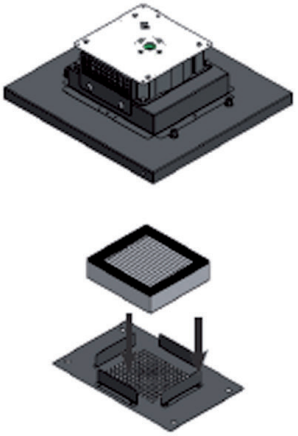
Unscrew the four screws of the HEPA filter support hatch

5 *



Pull out the support hatch

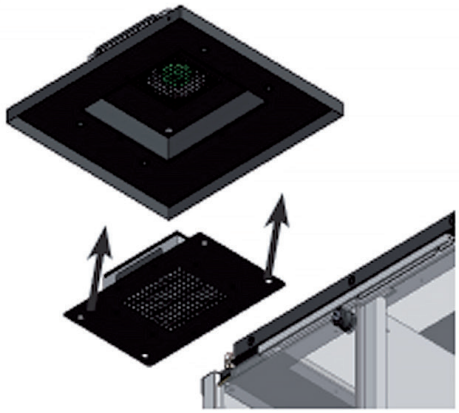
6 *



Install the HEPA filter in the support hatch

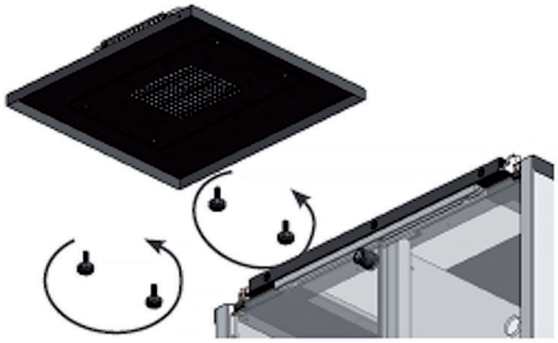
* Steps for HEPA filter only

7 *



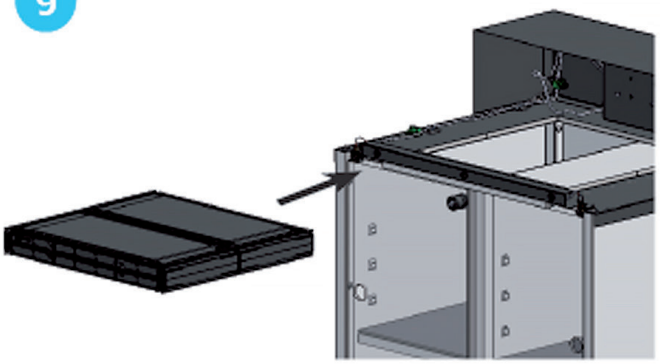
Insert the HEPA filter support hatch

8 *



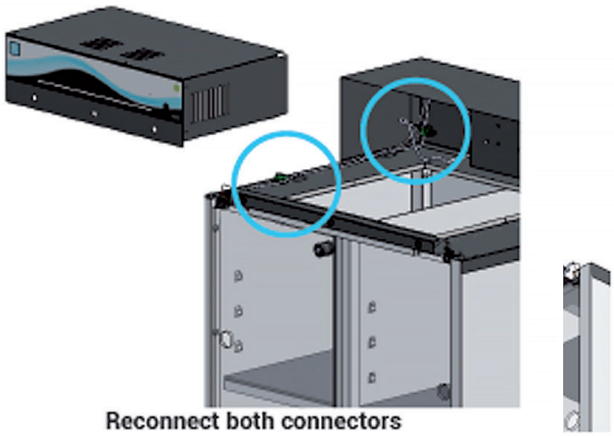
Tighten the four screws of the HEPA filter support hatch.

9



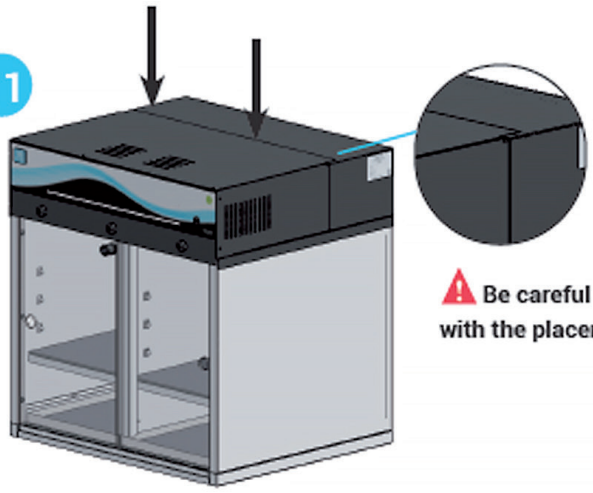
Install the HEPA filter on the fixed blade

10



Reconnect both connectors

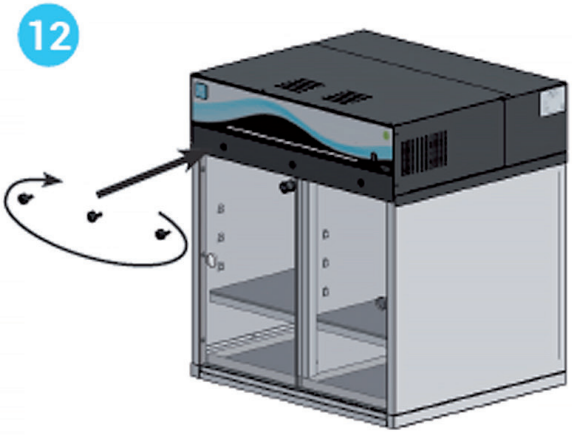
11



Be careful with the placement

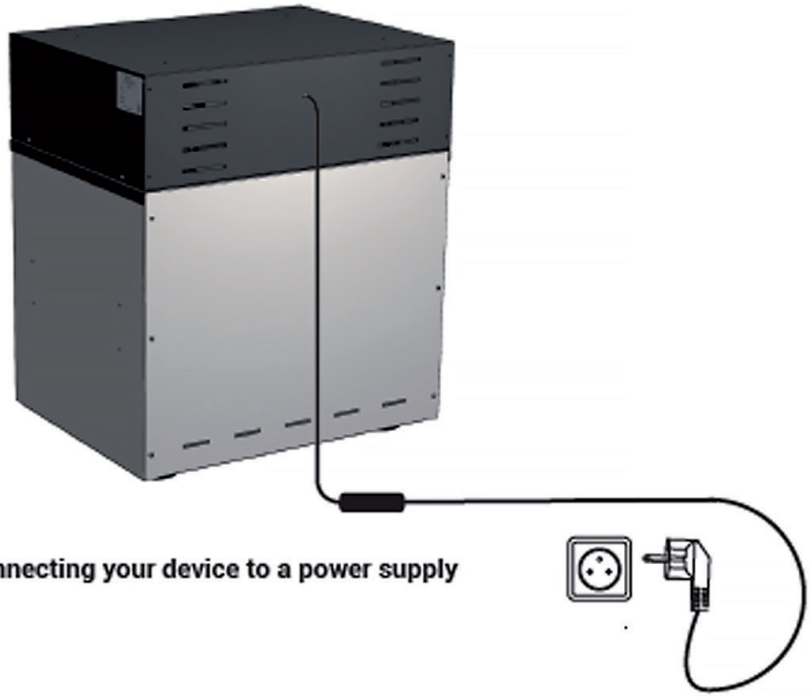
Close the protective cover

12



Screw the three housing screws

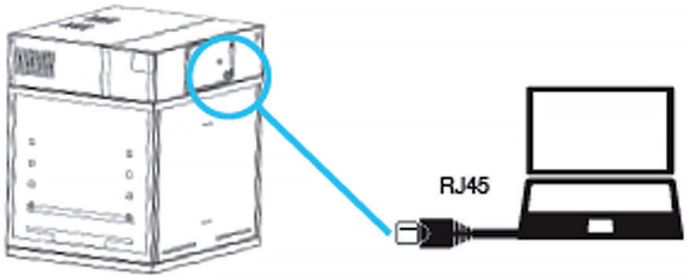
12



Connecting your device to a power supply

822 integration with Smart only

Parameters Settings



Embedded service access (Default IP adress)

Default IP address

IP : 192.168.0.200

For 822 integration with smart only

Start-up

Having carefully followed the steps described in the installation guide, your CaptairStore chemical storage cabinets is now ready to use.

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

LED light system should come on.

A filtered storage cabinet works 24/7. We only recommend to swich off the unit for maintenance

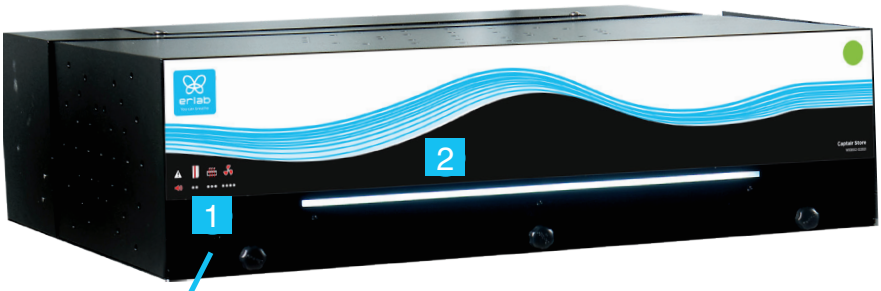
We also recommend verifying the operating parameters before each new use.

For 822 integration with smart only
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 change the settings of your device, access the onboard service.

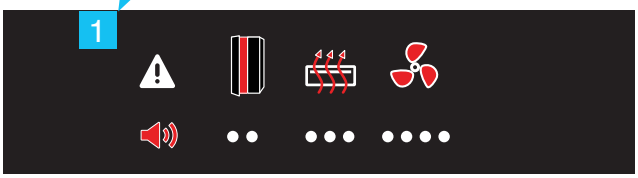
1. Description of the control module



1 - Keycode to indicate which alarm is active

2 - Smart-Light that pulses when in alarm

For 822 integration with smart only



The fixed light bar shows the optimal level of protection the operator is afforded.

The hood communicates its operational state in real time through a series of sound and light pulses.

⚠ 822 integration with Smart only

2.Alarms description

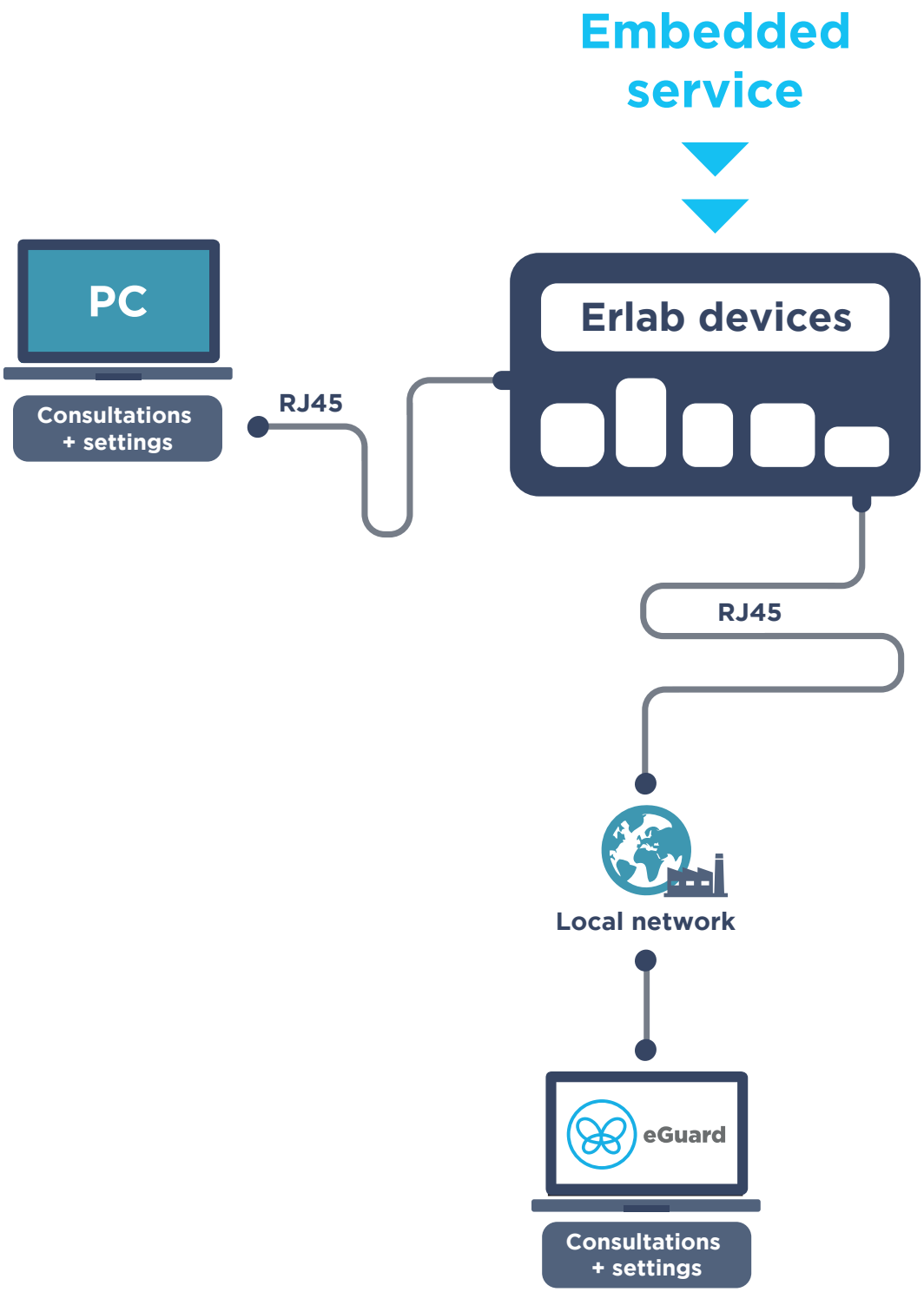
Note:
When using the Mute key to silence the alarm, please note the alarm can be triggered again if the event condition has not been fixed.

Alarm type		Light signal	Events	Details	Silence the alarm	Reset the alarm
Doors openning						
	2 beeps + 5 seconds apart	Pulses	Doors ajar	Doors opened	Close the door	
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.		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.		Please get in touch with Erlab or your usual maintenance contact.
			Fan Unserviceable	The rotation speed (RPM) is < 700 RPM		
Filter breakthrough sensor replacement (Molecode)						
	5 beeps + 5 seconds apart	Pulses	Filter breakthrough sensor replacement (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.

⚠ **For 822 integration with smart only.**

The connectivity principle

An ecosystem designed for simpler use and safer protection



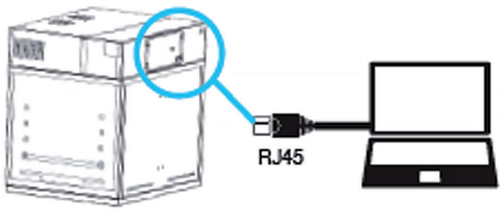
For 822 integration with smart only

2 ways to connect your device	Embedded service	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)

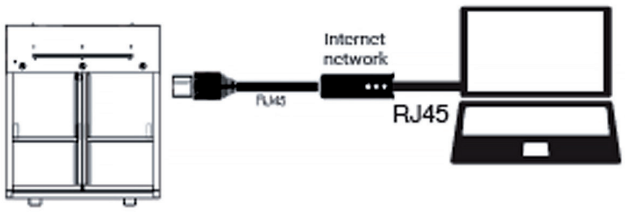
⚠ **For 822 integration with smart only**

3. How to connect?

Embedded service



eGuard PC



Embedded service

View the settings and access your device settings via the embedded service.

Beforehand:

- Have a computer with an Ethernet port (for RJ45 cable connection)
- The WIFI of this computer must be **disabled**
- Check that this computer is equipped with a WEB browser (Internet Explorer, Edge, Chrome, Mozilla Firefox, Safari...)

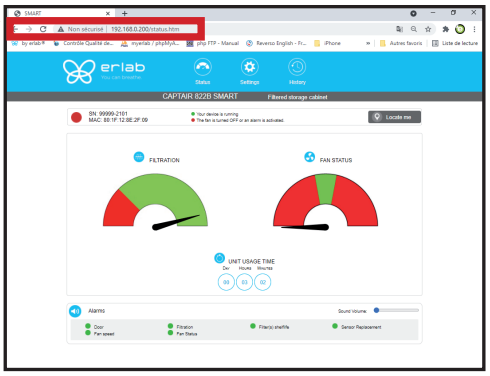
N.B.: the RJ45 cable that allows direct connection to the computer is supplied with the device.

1 Connecting the device to the PC

- Take the RJ45 cable already connected to your device available on the ceiling side.

For 822 integration with smart only

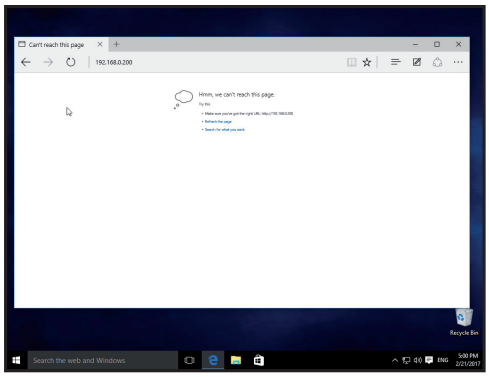
2 Open your web browser, type the following IP address 192.168.0.200 into the address bar and validate



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 21



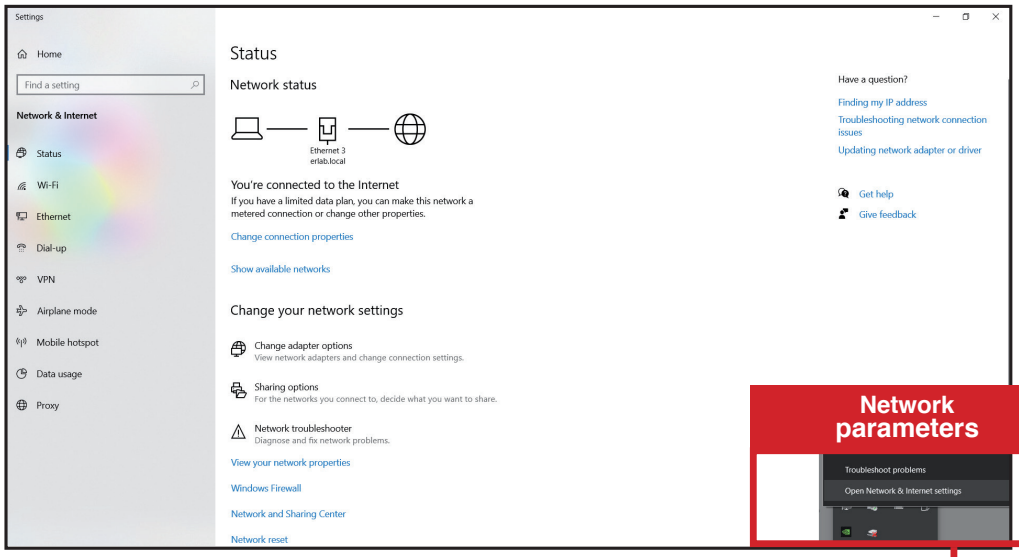
Page is not accessible

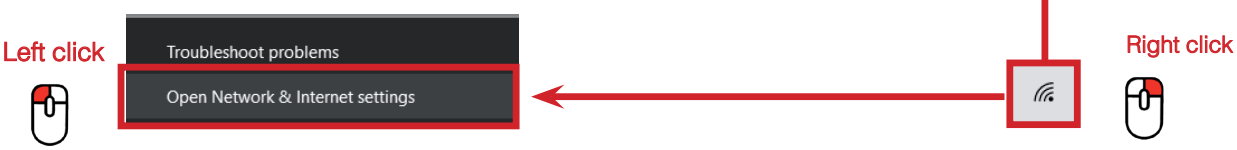
Computer network parameters are not allowing the access to the embedded software.

Apply the following procedure

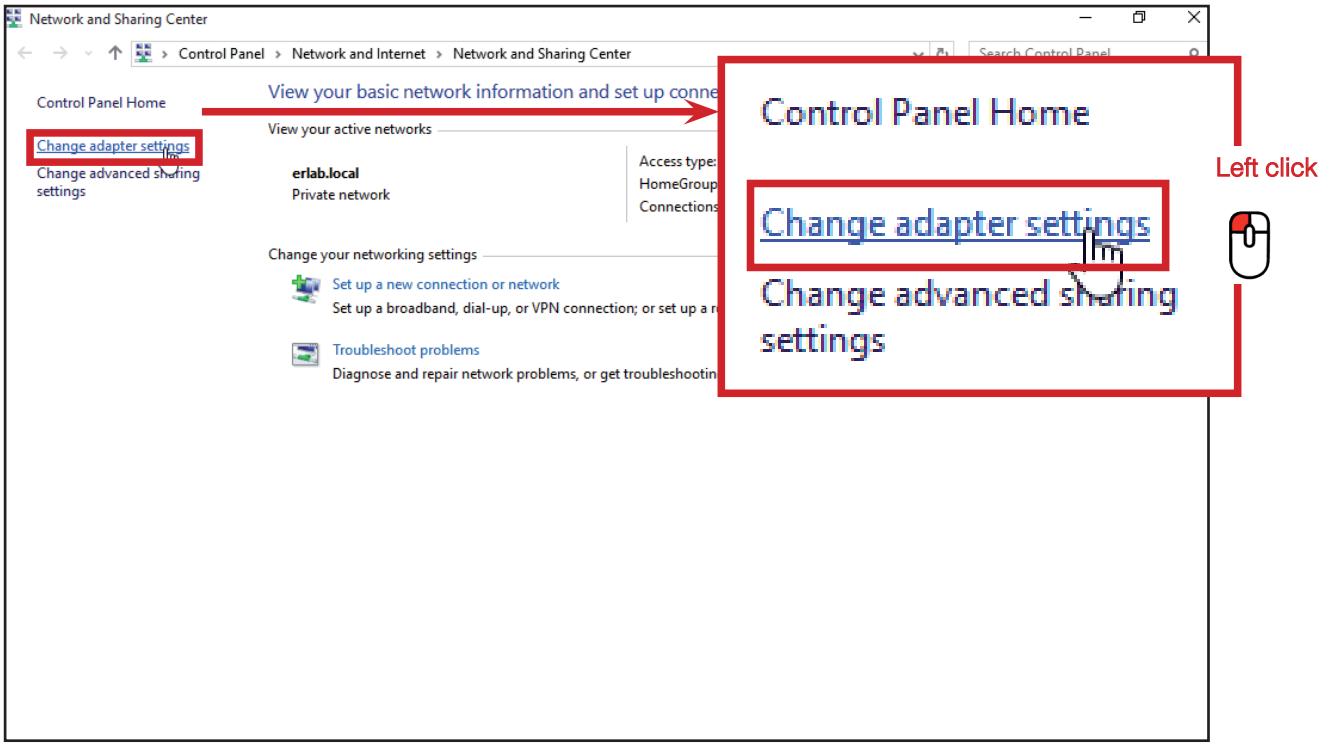
Page is not accessible:

1 Modify computer network parameters (windows 10)

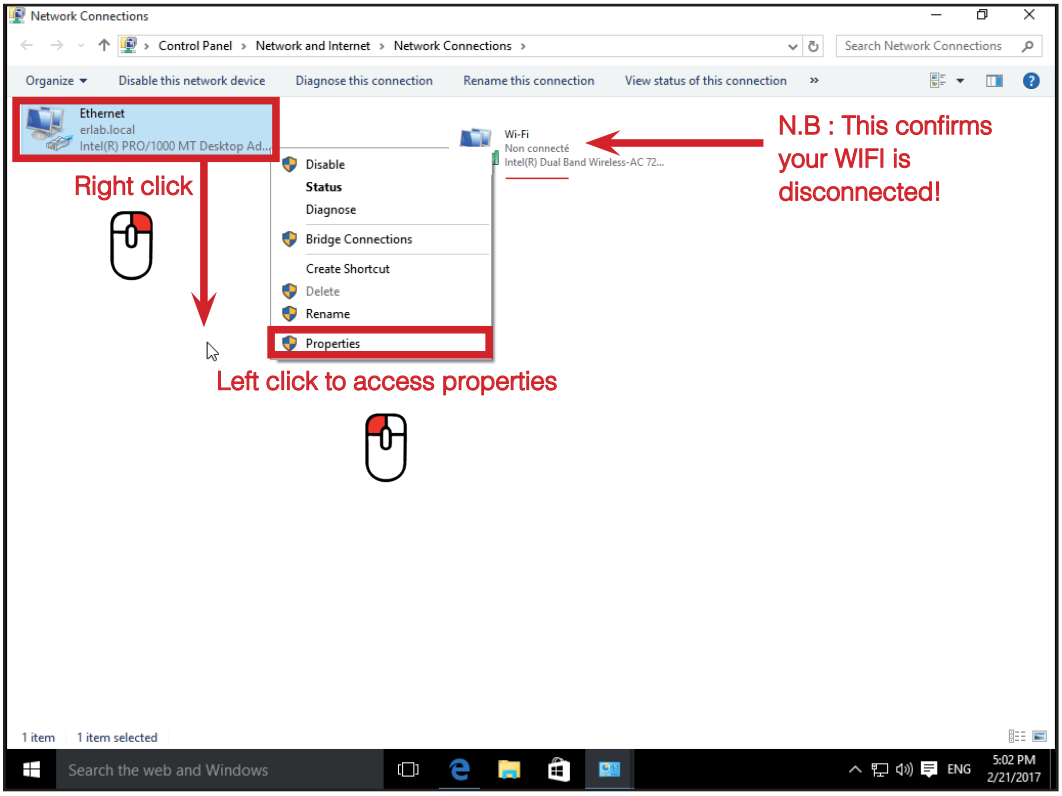




2 Access to the Network and sharing center (windows 10)



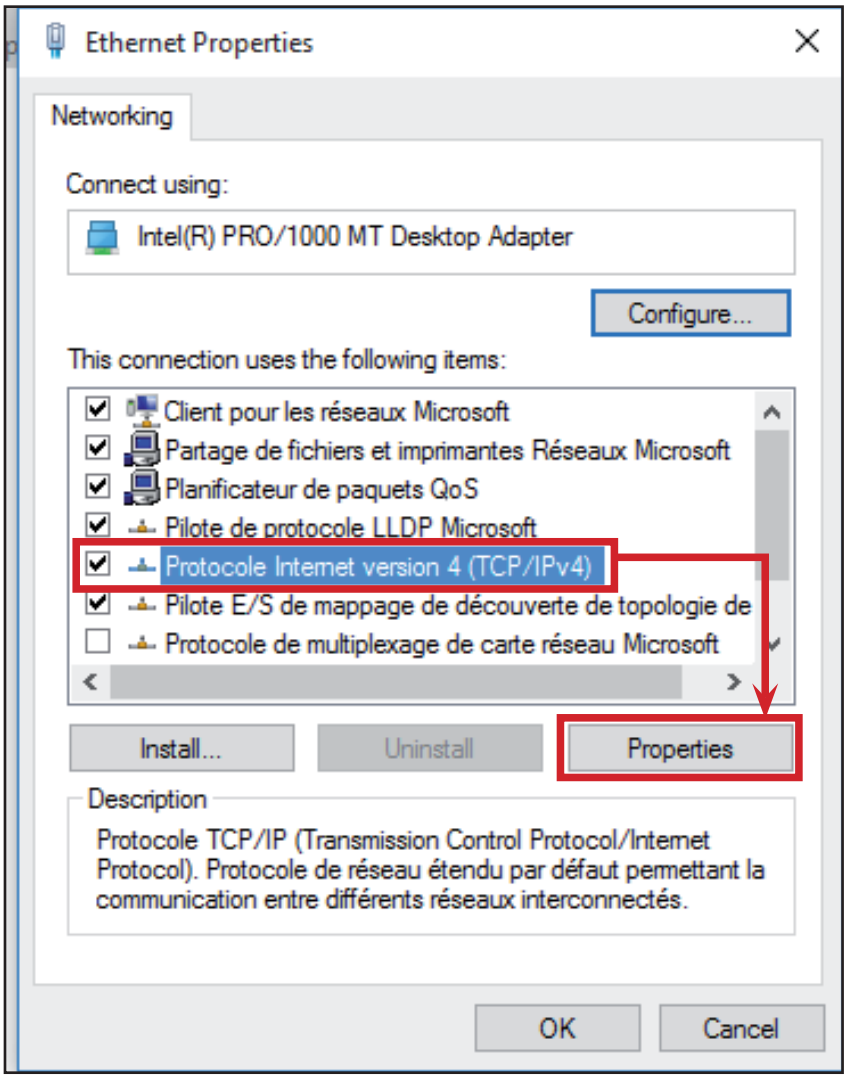
3 Access to the network connection (windows 10)



⚠ **For 822 integration with smart only**

4 Enter compatible network parameters as indicated below (windows 10)

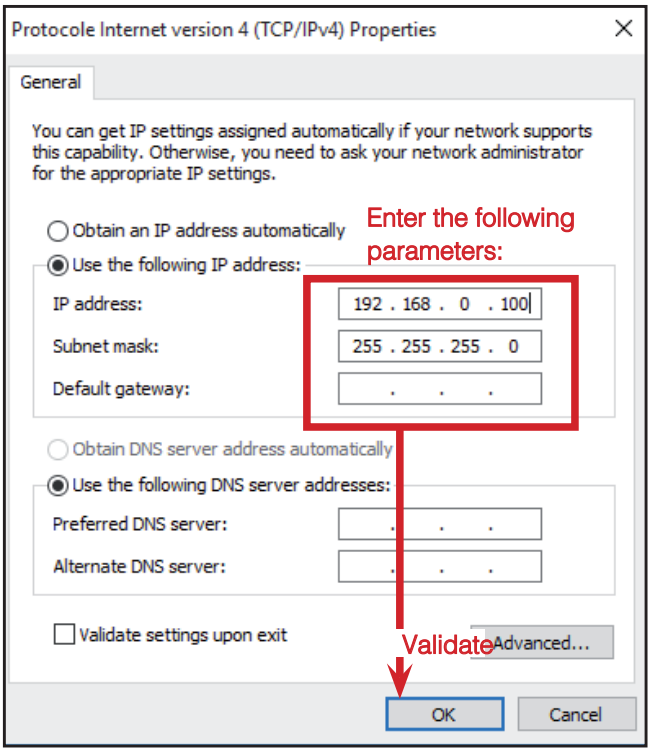
Left click



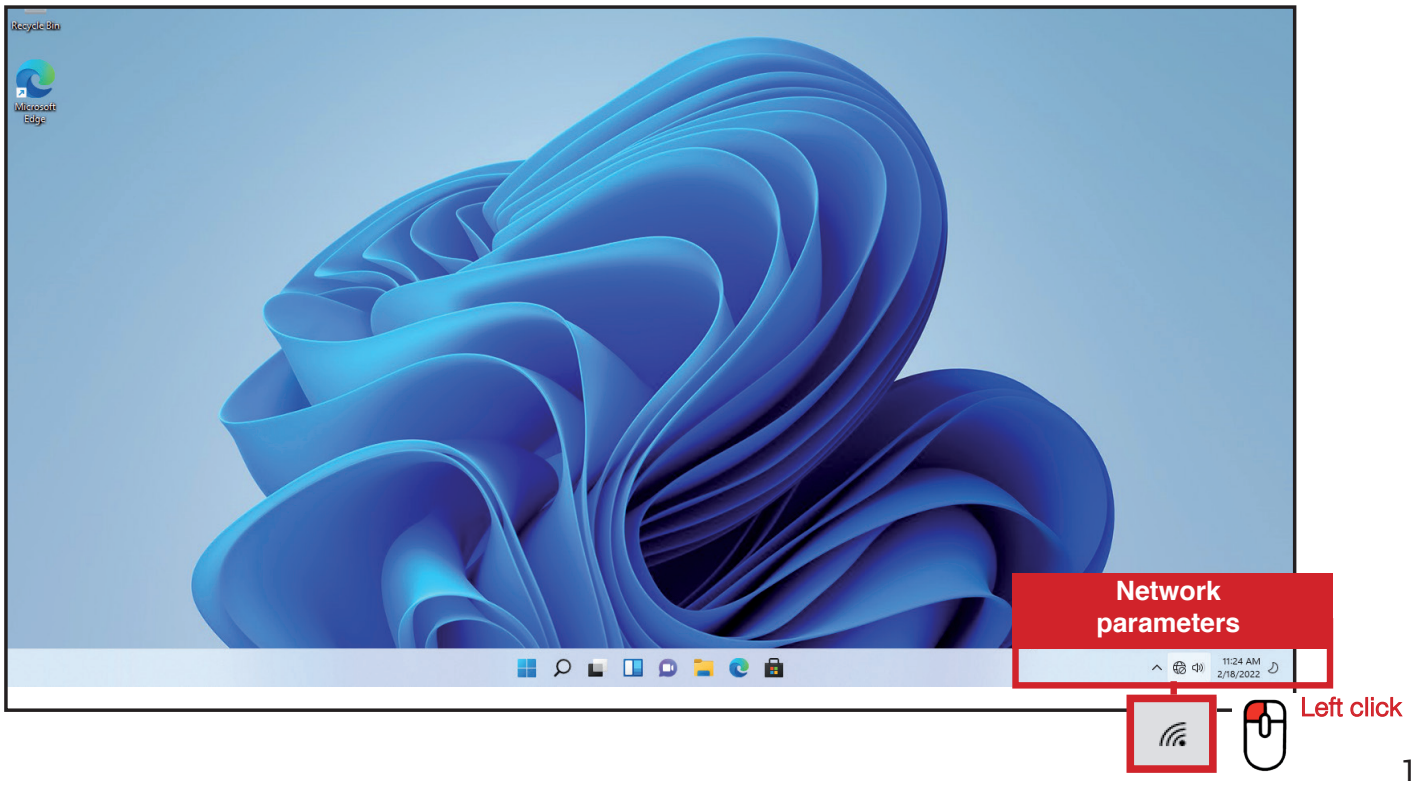
Left click

For 822 integration with smart only

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

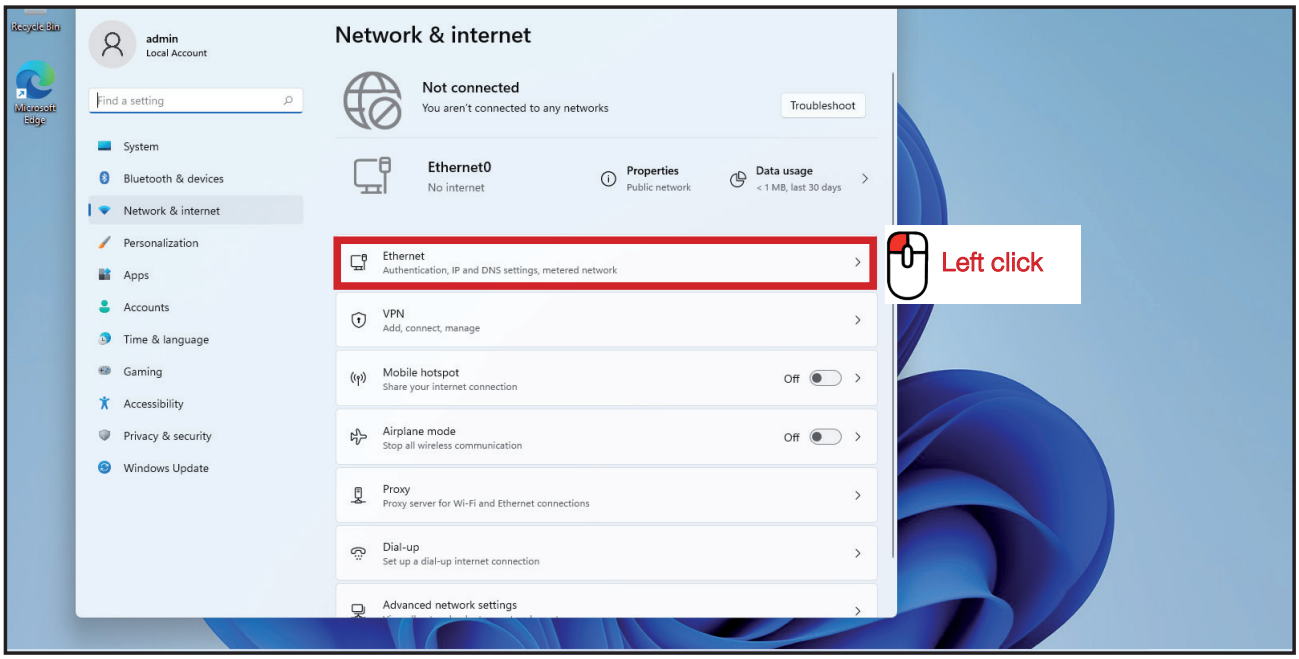


1 Modify computer network parameters (windows 11)

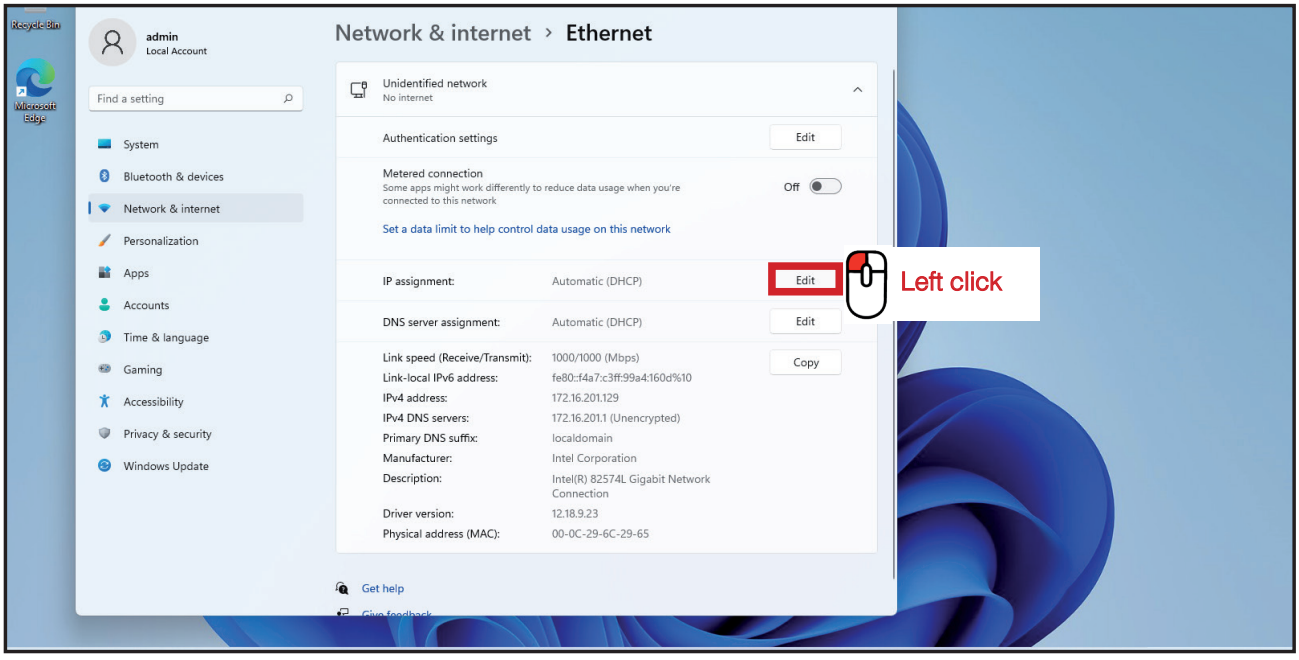


For 822 integration with smart only

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

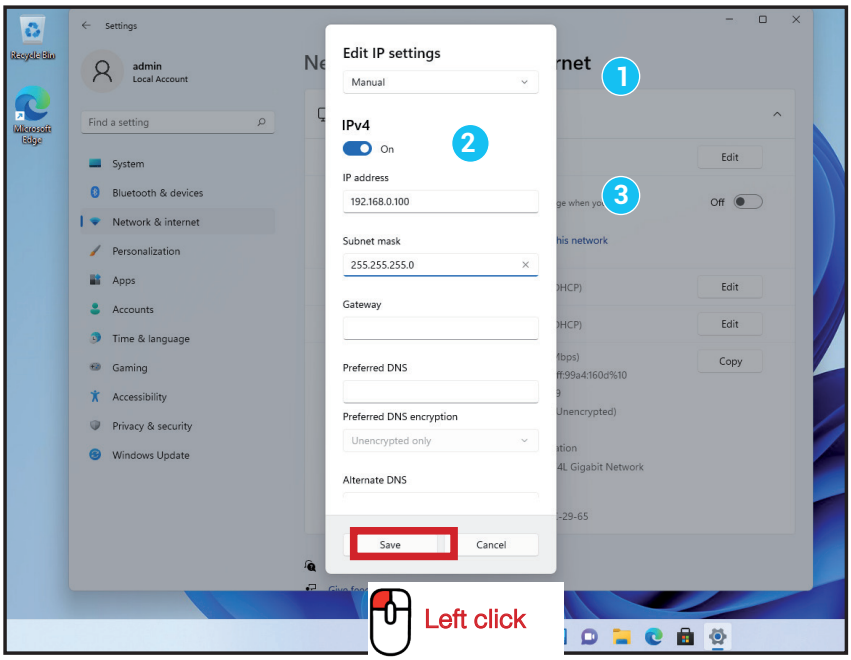


3 Access to the network connection (windows 11)



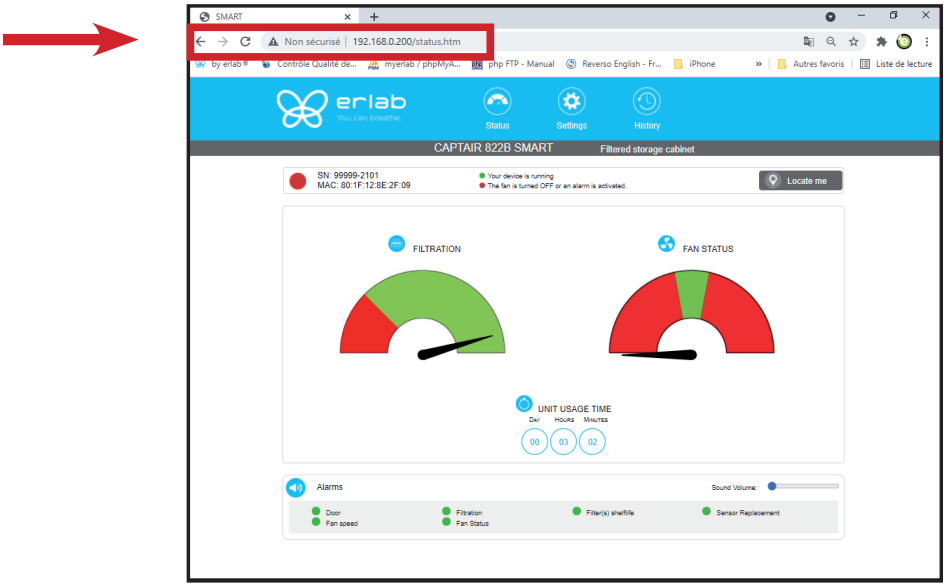
For 822 integration with smart only

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**

For 822 integration with smart only

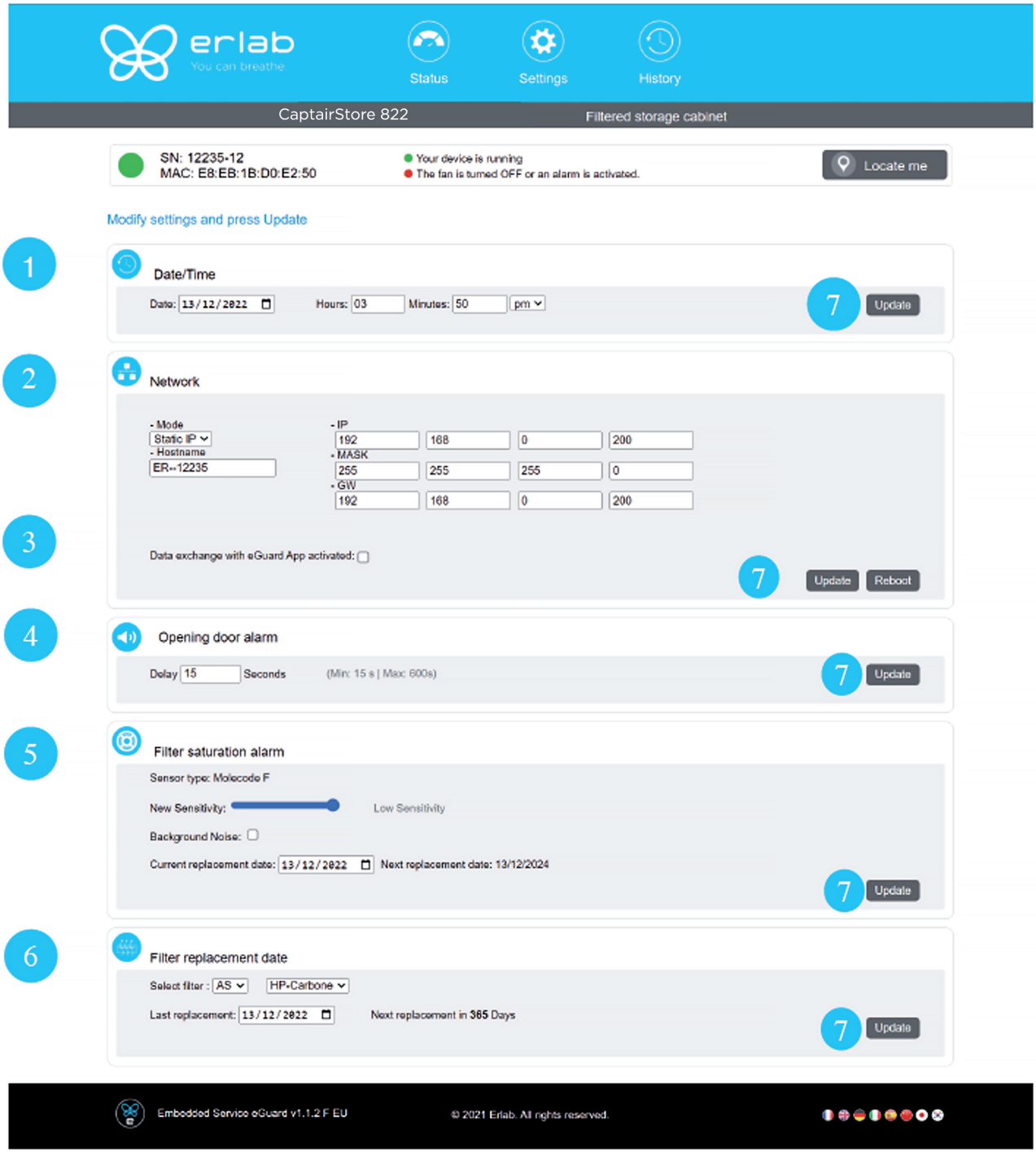
Administrator Interface

Status page details	
1	Choose active interface page
2	Device ID: Model
3	Device ID: serial number, MAC address, device status
4	Locate me : digit the button, the light will blink 3 times
5	Option Molecode gauge: indicates a fault in the main carbon filter(s)
6	Fan Gauge: indicates the fan status
7	Device use time since fan was last started
8	Device alarm statuses (see alarm triggering conditions)
9	Volume setting
10	Embedded service version
11	Choose language

For 822 integration with smart only

Access to the settings is protected by the following credentials:

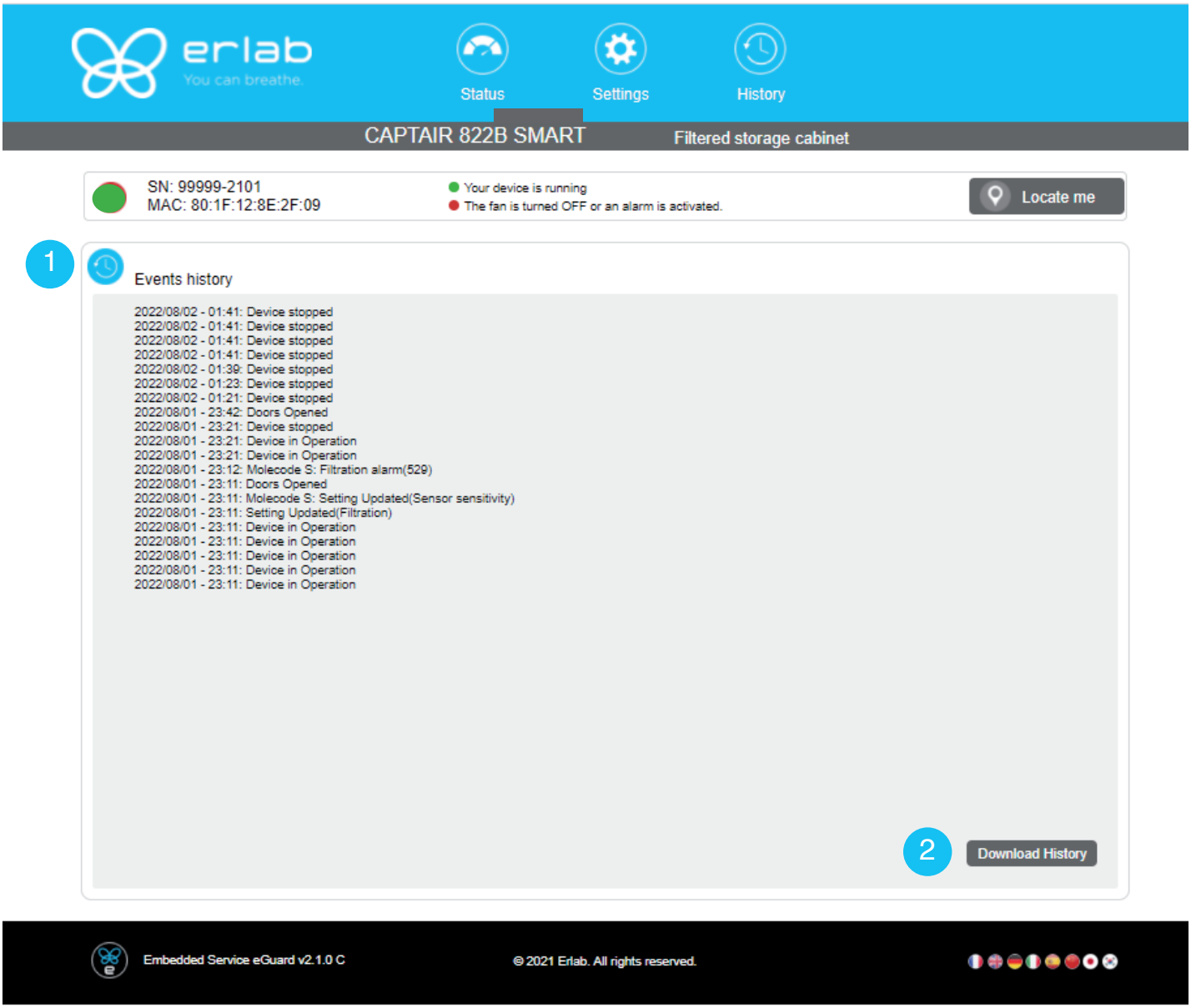
User name: erlab
Password: smart



For 822 integration with smart only

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 822 Smart, S/N: 25698 Hosname will be: ER-822-25698 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	Active/Unactive the exchange of datas Allow to send out datas from the device to the eGuard servor for: - remote monitoring via eGuard App (mobile & PC) - usage reports reception
4	Door Alarm
5	Air quality sensor 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
6	Filter replacement: enter the code for filter replacement
7	Confirm settings key (please validate each setting)

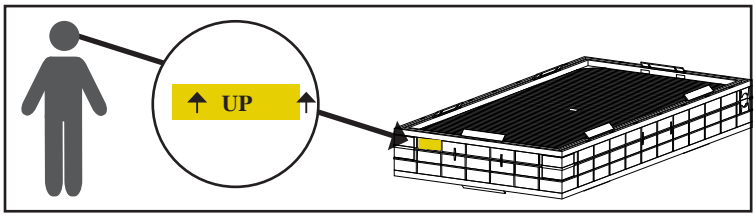
For 822 integration with smart only



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

Replacing the filters

Each molecular filter is labeled as follows



Please observe these markings.

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

Type AS	For organic vapors
Type BE	For acid vapors
Type K	For ammonia vapors
Type F	For formaldehyde vapors
HEPA H14	For powders

HEPA H13 filters*

Pre-requisites

- The operator in charge of the filter replacement must be informed by users about the complete list of stored chemicals to allow to select its PPE
- 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)

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

Strict chronological order to follow:

1- Switch on the device fan
2- Carefully remove the molecular filter
3- Carefully unpack the new HEPA filter
   Keep the plastic film and the cardboard box for later repackaging of the used filter
   This film must be prepared and spread out on a flat surface in the immediate vicinity of the work area
4- Carefully remove the used HEPA filter and immediately place it face down on the plastic film
5- Clean the filter area
6- Re-pack the used filter with the soiled material. Seal the plastic film tightly
7- Repackage the unit in the new filter box and seal it with adhesive

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.

8- Replace the new HEPA filter, the molecular filter
9- Reconnecting the unit electrically

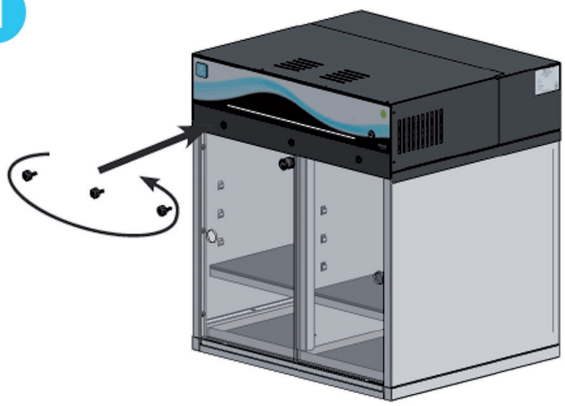
* Option

Filter Replacement Procedure

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

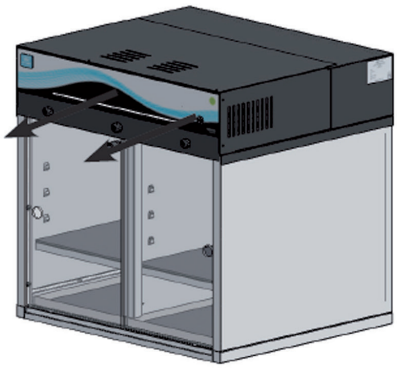
Be sure to unplug your device from the power source

1



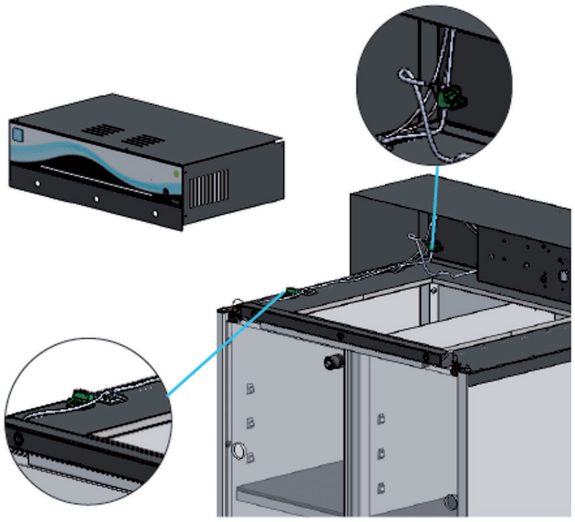
Unplug your appliance from the power supply and then unscrew the three screws on the casing

2



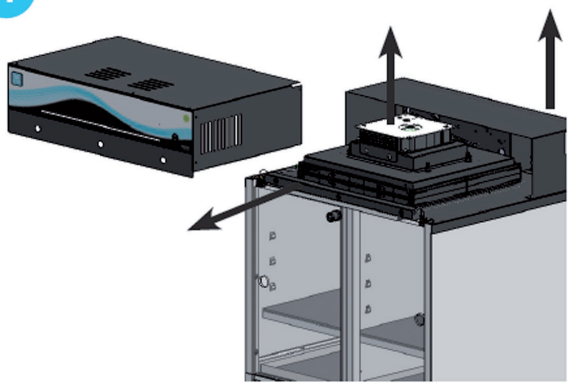
Lift the protective cover up

3



Disconnect both connectors

4

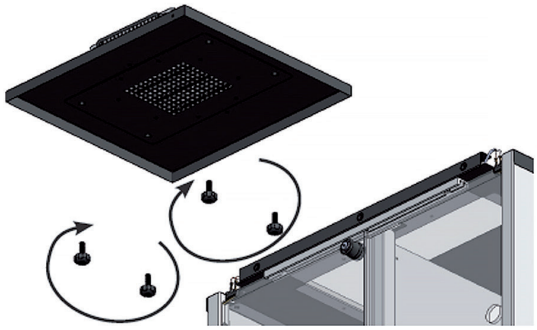


Remove the HEPA filter* and the carbon filter from the storage

* *Option*

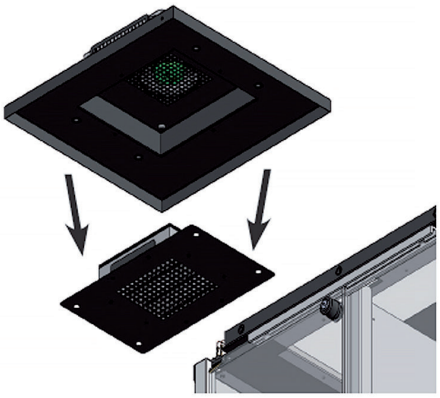
* *Steps for HEPA filter only*

5 *



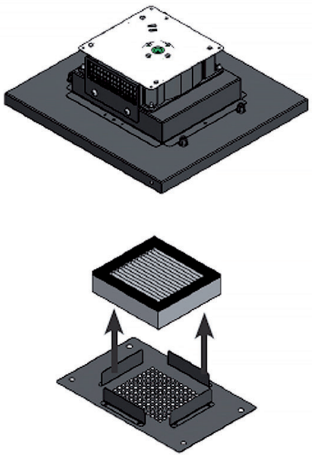
Unscrew the four screws of the HEPA filter support hatch

6 *



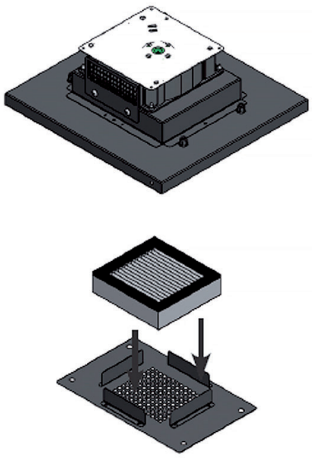
Pull out the support hatch

7 *



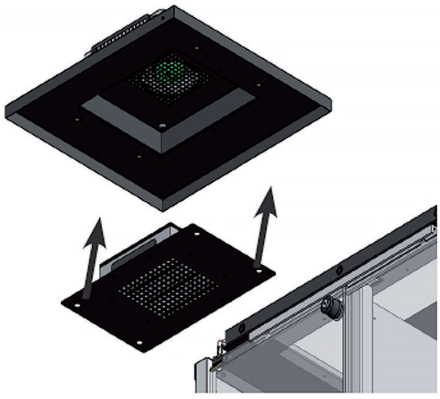
Remove the HEPA filter from the support hatch

8 *



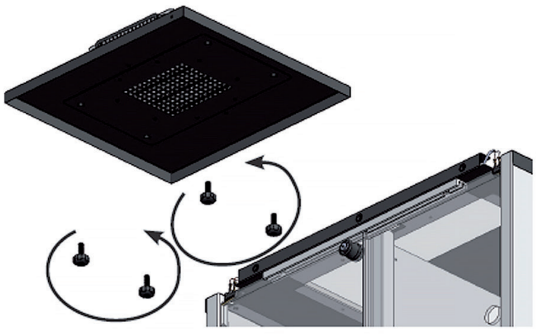
Then install the new HEPA filter

9 *



Insert the HEPA filter support hatch

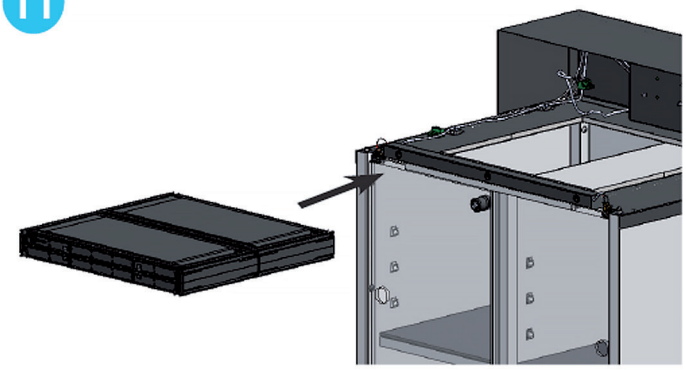
10 *



Tighten the four screws of the HEPA filter support hatch

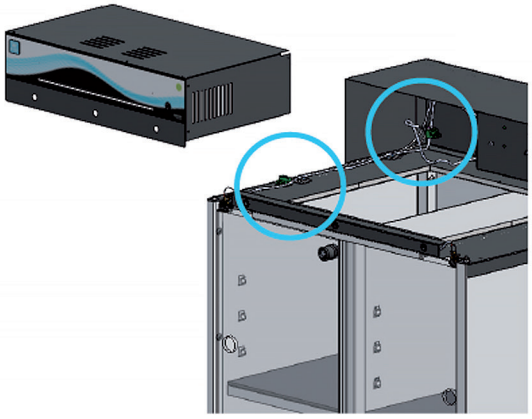
* *Steps for HEPA filter only*

11



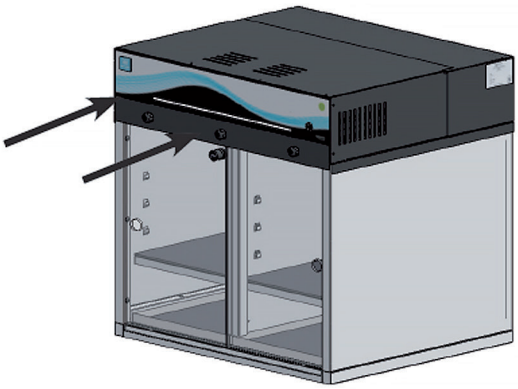
Place the carbon filter at the bottom of the storage and place it

12



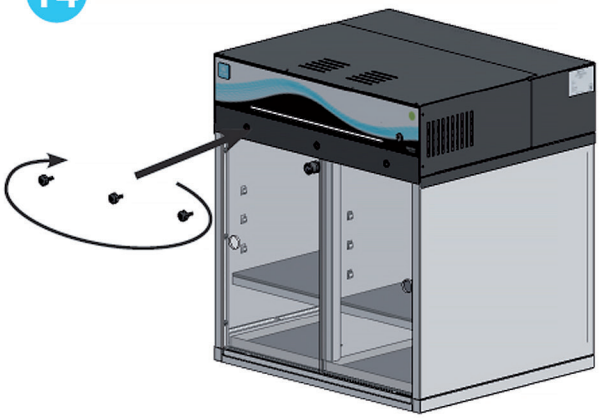
Reconnect both connectors

13



Close the protective cover

14



Screw the three housing screws and reconnect your appliance to a power supply

Recommendations for the use of filters

We recommend replacing the filter annually (if used 24/7).

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: :

- Organisation of storage
- Type(s) of filter(s) to use and filtration column configuration (if required)
- Predicted service life of the activated carbon molecular filters

How does the E.S.P service work ?

- The customer registers these chemicals by logging on to **www.evaliquest.erlab.com**
- 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 valiquest 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.

To ensure their safety, we invite users who have not had registered their products in the **eValiQuest** interface 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 and particulate* filters at least every 12 months and implementation of a regular filter fault monitoring protocol.

***** *Option*

Evaliquest questionnaire

Shelves : maximum permissible mass

Shelves	Extractable Shelves
15 kg	37.5 kg

Cleaning and maintenance

Mechanical item checks

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 appliance:

Cleaning the dividers is mandatory and must be done regularly. It may be done in several ways:

- With soapy water followed by rinsing with clear water and drying with a soft; nonabrasive;B32 absorbent paper towel.
- Or with a commercial PH neutral neutralizing product followed by drying with a soft; non-abrasive; absorbent paper towel.
- Or with a commercial glass cleaning product.

Coated Metallic Parts:

- They must be inspected and free from any traces of corrosion.
- Check that no liquid stagnates in the shelves with a retention tank.
- Clean retention tanks 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 program

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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