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General

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

Erlab’s 45 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 e-Guard App.

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.
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).

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 Valipass® 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:

Warranty applicability is subject to the respect of the Erlab’ general terms and conditions of sale and following requirements:

• 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 Valiquest® 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 saturation sensors are not covered under warranty.
Calibrating the electronic anemometer

1- Press simultaneously the main switch while switching on the main switch on the back of the control panel (off: O, ON: I)

2- Release immediately the mute button. A beep will prove 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- Turn on fan of the unit on the control panel.

5- Green light and LEDs lights are lighting.

Good practices:
- If you are using prefilters, please be sure they are correctly located
- If you are using Reverso sash (Captair Smart 392 or 483 or 633 or 714 ductless fume hoods), please do the calibration as indicated.
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 has 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.
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

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.

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.

<table>
<thead>
<tr>
<th>Alarm type</th>
<th>Light signal</th>
<th>Events</th>
<th>Details</th>
<th>Silence the alarm</th>
<th>Reset the alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Air speed</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Captair Smart

<table>
<thead>
<tr>
<th>Alarm type</th>
<th>Light signal</th>
<th>Events</th>
<th>Details</th>
<th>Silence the alarm</th>
<th>Reset the alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Filtration</strong></td>
<td></td>
<td>3 beeps 5 seconds apart</td>
<td>Pulses</td>
<td>Filter breakthrough (Molecule S/A/F option)</td>
<td>Note: filter has to be replaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The Molecule detection value is &gt; the sensitivity setting for a period of 40s.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Press Mute key</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Replace filter</td>
<td>Please get in touch with Erlab or your usual maintenance contact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The filter(s) has/ have reached the end of their service life/lives.</td>
<td></td>
</tr>
<tr>
<td><strong>Fan</strong></td>
<td></td>
<td>4 beeps 5 seconds apart</td>
<td>Pulses</td>
<td>Fan fault</td>
<td>Press Mute key</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The rotation speed (RPM) is +/- 10% of the fan setpoint.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fan Unservicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The rotation speed (RPM) is &lt; 700 RPM</td>
<td></td>
</tr>
<tr>
<td><strong>Filter breakthrough sensor replacement (Molecule)</strong></td>
<td></td>
<td>5 beeps 5 seconds apart</td>
<td>Pulses</td>
<td>Filter breakthrough sensor replacement (Molecule S/A/F option)</td>
<td>Please get in touch with Erlab or your usual maintenance contact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The sensor has reached the end of its service life.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reset network settings</strong></td>
<td></td>
<td></td>
<td></td>
<td>Forgot network settings?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Please check the general switch of the unit is turned ON,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Switch OFF the key 1,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Press the Mute key for 10 seconds,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- After 3 beeps, network settings are reset,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Reboot the unit: turn OFF/ON the general switch of the unit on the back of the control panel,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- The network default IP adress is : 192.168.0.200</td>
<td></td>
</tr>
</tbody>
</table>
Welcome to a safer connected world

The connectivity of Captair Smart fume hoods allows you to monitor all your safety settings remotely. After registering your product online, download eGuard App and:

- Stay in touch wherever you are
- Receive safety alerts
- Access your statistics usage
- Make the most of an exclusive warranty program

Connectivity principle

Ecosystem designed for simpler use and safer protection
### Captair Smart

#### 3 Versions

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<th>Web connection (via 3G/4G)</th>
<th>Web and/or local connection</th>
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<td>1 PC + 1 cable</td>
<td>1 Apple or Android Smartphone</td>
<td>1 PC connected to Internet or local network</td>
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<td>Parameters</td>
<td>Monitoring + Controlling</td>
<td>Monitoring</td>
<td>Monitoring + Controlling</td>
</tr>
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<td>One unit</td>
<td>Multiple units</td>
<td>Multiple units</td>
</tr>
<tr>
<td>Historical data access</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Historical data download</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Alerts</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Multiple units monitoring</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Multiple user accounts</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatized status report</td>
<td></td>
<td>(except if local connection)</td>
<td></td>
</tr>
<tr>
<td>Download</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Download available on [www.erlab.com](http://www.erlab.com).
Options of connection

Embedded service

Mobile or computer app

Accessing the Administrator interface

To monitor the parameters and modify the settings of the unit

In order to connect:

- Use a computer equipped with an 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.

Direct connection on computer

- Take RJ45 cable (black) already connected on the unit and rolled at the back of the control panel.
- Check that main switch (at the back of the control panel on fume hoods and storage cabinets) of the device is ON
2. Open your web browser, type the following IP address 192.168.0.200 into the address bar and validate.

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 16.

Page is not accessible

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

Apply the following procedure:

1. Modify computer network parameters.

   Left click
   - Open Network and Sharing Center

   Right click
   - Network parameters
2 Access to the Network and sharing center

Left click

3 Access to the network connection

Right click

N.B : This confirms your WIFI is disconnected!
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!

Enter the following parameters:

- **IP address**: 192.168.0.100
- **Subnet mask**: 255.255.255.0
- **Default gateway**: 

**Validate** settings upon exit

---

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 the saturation level of 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
## Settings page details

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Device time and date settings</td>
</tr>
</tbody>
</table>
| 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  
   Hostname 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 server, the unit will automatically switch to its default 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 saturation filter (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) |
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

<table>
<thead>
<tr>
<th>Unit / Type of filtration column</th>
<th>1P</th>
<th>1C</th>
<th>1C1P</th>
<th>1P1C</th>
<th>1P1C1P</th>
<th>1P2C</th>
<th>2C1P</th>
<th>2C</th>
</tr>
</thead>
<tbody>
<tr>
<td>321</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>391</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>481</td>
<td>1800</td>
<td>2200</td>
<td>2500</td>
<td>2550</td>
<td>2800</td>
<td>2800</td>
<td>2800</td>
<td>2600</td>
</tr>
<tr>
<td>392</td>
<td></td>
<td></td>
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<td></td>
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<td>483</td>
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<td>633</td>
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<td>714</td>
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</table>
Procedure for automatic detection for the saturation of a molecular filter using acetone

Acetone evaporates easily and quickly at room temperature and can be used as a tracer to check molecular filters saturation. Following procedure provides three methods to determine activated carbon filters saturation, evaporating a small amount of acetone within the Captair Smart fume hood and using either a colorimetric tube for acetone, Molecode S saturation sensor or a PID device. The result of the test will indicate whether it is necessary to replace filter or not.

**Saturation detection using colorimetric tubes**

Required material:

- 5 mL of acetone (not provided)
- Absorbing cloth (not provided)
- Cup or crucible (not provided)
- Hose (provided)
- Sampling pump (not provided)
- Colorimetric tube (not provided)

Not provided materials can be sourced from various manufacturers, such as Gastec, Draeger, RAE System or authorised distributors.

**Always use gas sampling pump together with detector tube from the same brand**

Ref. Gastec tube: 151 L (pump 2 times)
Ref. Draeger tube: 81 03 381 (pump 1 time)
Ref. RAE tube: 10-111-40 (sample 100cc)
Turn on the unit and start ventilation.
Pour 5 mL of acetone on an absorbing cloth placed within the fume hood.

Remove sample port cork and connect hose to the fan box.

⚠️ Connect to the appropriate fan box depending on your unit model:

- European fan connection:

- North American fan connection:

- Carbon filter
- Fan Box
- Hose connection

Break tip off a fresh detector tube. Sampling pumps are usually equipped with tube tip breaker.

Insert the tube into the pump inlet, in the correct direction. Tubes are usually marked to indicate direction.
Proceed with air sampling following manufacturer’s recommendation
If test result is positive to acetone, change filter(s)

Saturation detection using PID Device:

Required material:

- 5 mL of acetone (not provided)
- Absorbing cloth (not provided)
- Cup or crucible (not provided)
- Hose (provided)
- PID device (not provided)

Materials not provided can be sourced from various RAE System manufacturer or authorised distributors.

Remove protection covers

Turn on the unit and start air flow
Pour 5 mL of acetone on an absorbing cloth placed within the fume hood

Remove sample port cork and connect hose to the fan box

Connect to the appropriate fan box depending on your unit model:

- European fan connection:

- North American fan connection:

Connect hose to the PID sampling probe
Select ‘acetone’ to be detected in PID menu (see user manual if necessary).
If acetone concentration is more than to 5 ppm, change filter(s)
Saturation detection using Molecode S sensor

Required material:

- 5 mL of acetone (not provided)
- Absorbing cloth (not provided)
- Cup or crucible (not provided)

Remove protection cover

Turn on the unit and start air flow

Pour 5 mL of acetone on an absorbing cloth placed within the fume hood

Connect to unit embedded service

Default IP: 192.168.0.200
Set Molecule sensitivity on ‘high’

Open ‘Status’ page
Check filtration efficiency
If needle is in red area, change filter(s)
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

<table>
<thead>
<tr>
<th>Captair 321 - 391 - 481 Smart models</th>
<th>Molecular filter</th>
<th>HEPA filter H14 / ULPA</th>
<th>Pre-filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column Configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1C</td>
<td>x1</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>2C</td>
<td>x2</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>1 P</td>
<td>x1</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>2 P</td>
<td>x2</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>1P 1C</td>
<td>x1</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>1P 2C</td>
<td>x2</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>1C 1P</td>
<td>x1</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>2C 1P</td>
<td>x2</td>
<td></td>
<td>x1</td>
</tr>
<tr>
<td>1P 1C 1P</td>
<td>x1</td>
<td></td>
<td>x1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Captair 392 - 483 - 633 - 714 Smart models</th>
<th>Molecular filter</th>
<th>HEPA filter H14 / ULPA</th>
<th>Pre-filtre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column Configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1C</td>
<td>x2</td>
<td>x3</td>
<td>x3</td>
</tr>
<tr>
<td>2C</td>
<td>x4</td>
<td>x6</td>
<td>x6</td>
</tr>
<tr>
<td>1 P</td>
<td>x4</td>
<td>x6</td>
<td>x6</td>
</tr>
<tr>
<td>1P 1C</td>
<td>x2</td>
<td>x3</td>
<td>x3</td>
</tr>
<tr>
<td>1P 2C</td>
<td>x4</td>
<td>x6</td>
<td>x6</td>
</tr>
<tr>
<td>1C 1P</td>
<td>x2</td>
<td>x3</td>
<td>x3</td>
</tr>
<tr>
<td>2C 1P</td>
<td>x4</td>
<td>x6</td>
<td>x6</td>
</tr>
<tr>
<td>1P 1C 1P</td>
<td>x2</td>
<td>x3</td>
<td>x3</td>
</tr>
</tbody>
</table>

| Standard | Optional |

[Diagram of filter column configurations]
The table below summarises the different types of carbon filters that Erlab® offers along with their fields of application.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type AS</td>
<td>For organic vapors</td>
</tr>
<tr>
<td>Type BE +</td>
<td>Multi-application for acid and organic vapors</td>
</tr>
<tr>
<td>Type K</td>
<td>For ammonia vapors</td>
</tr>
<tr>
<td>Type F</td>
<td>For formaldehyde vapors</td>
</tr>
<tr>
<td>HEPA H14</td>
<td>For powders</td>
</tr>
<tr>
<td>ULPA</td>
<td>For powders</td>
</tr>
</tbody>
</table>

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.

Strict chronological order to follow:

1- Switch on the device fan
2- Carefully spray the bottom surface of the HEPA/ULPA filter (paint with NON FLAMMABLE propellant), 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, switch the device back on and check the air speed using the anemometer calibration procedure via the administrator interface
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 since they are automatically absorbed by the back-up filter. The back-up filter replaces the main filter when the main filter has reached its maximum saturation point. A new filter is then installed in place of the back-up filter. This cycle may 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%.

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
Switch off the fume hood

Example: 321 Smart
Remove the protective shields on either side of the hood

- **European fan connection:**

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)

- **North American fan connection:**

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

1. Identify which column configuration below applies to your hood. (See your Valipass label)

2. Unstack the filtration column(s) above the fume hood.

3. After carefully removing the filters from their packaging, assemble the column per the configuration below.

4. If your column configuration changed, apply the correct fan setpoint for the filtration column configuration (see fan setpoints)
- **European fan connection:**

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

- **North American fan connection:**

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 Molecule)
Models Captair 392 - 483 - 633 - 714 Smart

1. Identify which column configuration below applies to your hood. (See your Valipass label)

2. Unstack the filtration column(s) above the fume hood.

3. After carefully removing the filters from their packaging, assemble the column per the configuration below.

4. If your column configuration changed, apply the correct fan setpoint for the filtration column configuration (see fan setpoints)
- European fan connection:

Units equipped with molecule optional filter saturation sensor (A & F type)
- North American fan connection:

Units equipped with molecule optional filter saturation sensor (A & F type)
Recommendations for storing and using the filters

**New filter shelf life and storage conditions:**
New activated carbon molecular filters must be stored flat in their original packaging at a temperature of between +10°C / 50°F and +50°C / 120°F and a humidity level < 85% RH.

If these conditions are adhered to, the maximum time a filter can be stored before use depends on the type of carbon used:

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Shelf Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS type carbon molecular filter</td>
<td>2 years from date</td>
</tr>
<tr>
<td>BE+ type carbon molecular filter</td>
<td>2 years from date</td>
</tr>
<tr>
<td>BE type carbon molecular filter</td>
<td>1 year from date</td>
</tr>
<tr>
<td>F type carbon molecular filter</td>
<td>1 year from date</td>
</tr>
<tr>
<td>K type carbon molecular filter</td>
<td>1 year from date</td>
</tr>
</tbody>
</table>

If the maximum shelf life is reached, we recommend to not install filters.

- HEPA H14 and/or ULPA filters must be stored upright and kept dry; there is no limit to the time they can be stored.

**Predicted service life of a filter once put into use:**
The service life of a molecular filter depends on the operations carried out in the ductless fume hood as well as the conditions of the environment in which it is used.

**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 Valiquest 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 Valiquest 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 valiquest is completed and is sent by email after revalidation.

The certificate contains the following: the list of products handled in the hood, the filter type required for these chemicals, serial number, filter life time, the traceability information used to track how the device is used and the molecular filter saturation detection methods.

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 VALIQUEST 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:

- That the molecular filters are replaced at least every 12 months and that a regular filter saturation checking protocol is put in place (please contact us for individual advice on this subject)
- That the HEPA or ULPA particulate filters are replaced at least every 36 months
Replacement frequency of filtration breakthrough sensor, Molecode option

Molecular filters saturation detection alarm – Molecode (S: solvents or A: acids or F: formaldehyde - fitted as an integrated option in your unit, work using semi-conductor or electrochemical sensor that must be changed every:

5 years for the Molecode S
2 years for Molecode A and F

After this period, Erlab cannot guarantee performances stability nor detection sensitivity.

Equipment replacement requires the intervention of a qualified engineer, able to replace internal components and perform system new configuration. The change requires less than one hour.

Erlab Maintenance department and accredited partners can provide this service. (service not available in all countries)

For further information, please get in touch with your contact person or Erlab dealer/distributor or visit our website

Admissible weighs on working surfaces

<table>
<thead>
<tr>
<th></th>
<th>Tempered glass work top</th>
<th>Stainless steel work top</th>
<th>Trespa® Top LabPLUS work top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50 kg/m²</td>
<td>1187 lb/ft²</td>
<td>110 kg/m²</td>
</tr>
<tr>
<td>Captair Smart 321</td>
<td>15 kg</td>
<td>33 lbs</td>
<td>35 kg</td>
</tr>
<tr>
<td>Captair Smart 391</td>
<td>20 kg</td>
<td>44 lbs</td>
<td>45 kg</td>
</tr>
<tr>
<td>Captair Smart 481</td>
<td>25 kg</td>
<td>55 lbs</td>
<td>65 kg</td>
</tr>
<tr>
<td>Captair Smart 392</td>
<td>20 kg</td>
<td>44 lbs</td>
<td>60 kg</td>
</tr>
<tr>
<td>Captair Smart 483</td>
<td>30 kg</td>
<td>66 lbs</td>
<td>80 kg</td>
</tr>
<tr>
<td>Captair Smart 633</td>
<td>40 kg</td>
<td>88 lbs</td>
<td>100 kg</td>
</tr>
<tr>
<td>Captair Smart 714</td>
<td>45 kg</td>
<td>99 lbs</td>
<td>115 kg</td>
</tr>
</tbody>
</table>
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.
Erlab’s state of the art Research & Development Laboratory relying exclusively on filtration

About Erlab

We provide safety, we protect your health
Erlab invented the ductless fume hood in 1968. With more than 45 years of experience in the field of chemical filtration and protection of laboratory personnel; we know the formula for safety. With Erlab, you will never have to wonder or worry if our products are safe. We build each one of the following 7 ingredients into our products, and without all of them, your health and safety will be compromised.

1. **Erlab R&D Laboratory**
   The engineers and chemists in our state-of-the-art R&D laboratory understand molecular filtration. We are committed to designing products that are safe and of the highest quality, strive to improve our products, and continuously develop new products that provide greater protection in the laboratory.

2. **Strict Safety Standards**
   We hold ourselves to the highest standard and adhere to the strict AFNOR NF X 15-211: 2009 filtration safety standard as endorsed by ANSI Z9.5-2012.

3. **A Published Chemical Listing**
   It all begins here. Without this listing, we are not compliant with AFNOR NFX 15-211. Our in-house laboratory tests, as well as independent testing to verify the retention capacity of over 700 chemicals for our filters.

4. **Independent Testing**
   Erlab filters have been independently tested multiple times at various concentrations guaranteeing that our safety solutions all adhere to the strict performance criteria of the AFNOR NF X 15-211:2009 standard assuring that the emission concentration at the filter exhaust will always be lower than 1% of the TLV.

5. **Application Questionnaire (Valiquest)**
   Our laboratory specialists will recommend the appropriate filtration fume hood, type of filter, and personalized advice.

6. **Certificate of Validation for the chemicals used in the hood**
   A certified PhD chemist issues a Certificate of Validation with a list of the chemicals approved for use in the hood.

7. **Our Safety Program**
   We back up our products 100%. This program includes your specialized chemical evaluation, validation of your hood upon installation, and a filtration safety specialist at your service to ensure that your hood is operating to its full potential.

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