

# Ductless filtering fume hoods and vented storage cabinets Ductless fume hoods - Weighing stations - Vented storage cabinets - Stand alone filtration system for safety cabinets - PCR workstations - HEPA filtered enclosures - Portable Glove box



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### The Erlab® Group, a worldwide leader-

Recognized leader in filtration technology for the protection of laboratory personnel since 1968.

Since the very beginning, we have focused all of our efforts on researching, designing, developing, and manufacturing sustainable safety solutions.

Our main objective is to offer our users the highest performance solutions in terms of protection against chemical inhalation risks in the laboratory.

Our worldwide presence, our customers capabilities, and our strong research & development activities allow us to offer advanced filtration technology solutions to laboratories in chemical, pharmaceutical, cosmetic, agrofood, hospital, and academic markets.



For Erlab, compliance with standards is fundamental. Based on scientific criteria, the AFNOR NF X 15-211: 2009 standard attests to the high performance of our products, which ensure your day-to-day safety at work.

Our experts in the field of filtered air recirculation systems allow laboratories to make safety a top priority. Furthermore, all our solutions have been designed to limit the laboratory's impact on the environment and to support one of the most important objectives of today's world: energy savings.



Europe: Erlab S.A.S. (France)



America: Erlab, Inc. (USA)



Asia: Erlab Ltd (China)



A state-of-the art R&D laboratory

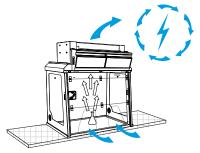
### Strong points

Captair® solutions are designed to protect laboratory personnel when working with chemicals. Based on filtration principles, Erlab products offer a high degree of protection against inhalation risks coming from harmful molecules and particles emitted at the workstation.

The containment and filtration efficiency of these products, as demonstrated by their compliance with the AFNOR NF X 15-211: 2009 standard, make our Captair® ductless fume enclosure a reliable, flexible, economical, and environmentally-friendly solution.

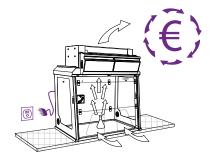
#### Save on energy costs

The air balance necessary to run traditional ducted systems results in high energy consumption. A Captair® solution eliminates the energy costs related to systems extracting and supplying conditioned air. It is able to keep operating costs low, even when the cost related to filter replacement is taken into account.



#### Eliminate installation costs

Implementing a Captair® solution is simple and quick. It does not involve the installation of a ventilation system for air supply and extraction as required by ducted systems. A single electrical outlet is all you need to run a Captair® Flex® fume hood. It can be installed at any time, without any complex preparation.



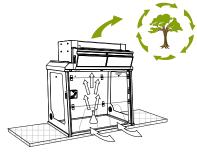
#### Easily relocatable and instantly ready to use

Captair® solutions may be moved from one location to another within the same laboratory according to your protection needs. They can be easily relocated without affecting the hood's air balance.



#### Protect the environment

Free of any ducted airflow system, Captair® solutions eliminate direct emissions of pollutants into the atmosphere and help protect the environment. They also avoid pollution generated by the energy needed to run the airflow systems of traditional ducted fume hoods.



## Quality design

With over 90,000 Captair® units in operation worldwide, our internationally-recognized experience allows our developers to design solutions that optimize your chemical handling while using our filtered workstations. This experience enables us to offer product lines that provide safety, functionality, and comfort in terms of use and maintenance.

#### **Enclosure dimensions**

- Enclosure width: from 32" to 71"
- Large instruments can easily be placed inside
- Easy to integrate with current laboratory fixtures

#### **Visibility**

- The optical-quality synthetic glass panel provides optimal visibility of all activities performed within the enclosure
- Built in bright lighting, contributes to a better working experience

#### Front openings shield

- Ample room for movement within the enclosure
- Ergonomically slanted front with a central protective shield to prevent any risk of chemical projections

#### Installation - Maintenance

- Ready to install, quick assembly
- Very few tools required
- Simple maintenance operations

#### Working posture

- Activities can be performed either seated or standing, without fatigue
- Rounded-edge work surfaces:
  provide an armrest for the forearms
- Slanted front acrylic shield for a comfortable working posture

#### Quiet operation

### Safety, environmental protection, and energy savings within your laboratory

The filtration technology used in the design of Captair® ductless fume hoods makes it possible to protect laboratory personnel when in compliance with the AFNOR NF X 15-211: 2009 safety standard criteria. This also allows the decrease of the laboratory's environmental and energy footprint, while reducing installation and operating costs.

In fact, an independent study\* has shown that traditional extraction fume hoods represent a significant part of a laboratory's energy consumption. Every extraction fume hood contributes to the large amount of energy used by laboratories and consume on average 3.5 times more energy than an average-sized house. All the advantages offered by Captair® ductless fume hoods contribute to reducing your environmental impact and your energy running costs.

Calculate and compare the actual operating cost of a Captair® ductless fume hood Vs. a traditional ducted fume hood.

	For I Captair® fume hood
Structural work required	\$ 0
Makeup air & air conditioning	\$ 0
Annual energy cost*	between \$ 6,5 and \$ 40
Annual filter replacement cost	between \$ 330 and \$ 1315
Annual maintenance cost	between \$ 200 and \$ 290
Total average annual operating cost	between \$ 530 and \$ 1640

<sup>\*</sup> Estimate based on: the average cost of electricity for industrial use in the USA: 0.0711 dollars/kW - 8h/day for 218 days per year.

\*Mills E., Sartor D. (2005), Energy use and savings potential for laboratory fume hoods. "Lawrence Berkeley National Laboratory". Elsevier, Energy 30 1859-1864.  $The \ ESP^{\circledR} \ program --- \ \text{A set of three high quality services designed to ensure your safety included at the time of purchase}$ 

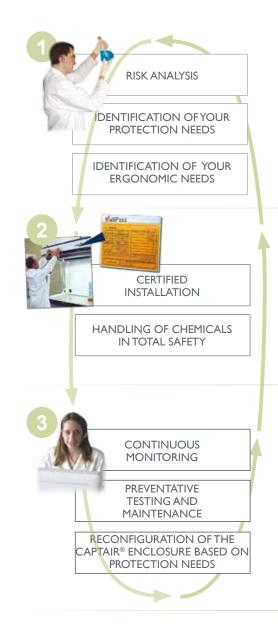


# Erlab's commitment to your safety

Our laboratory analyzes interactions between molecules and validates the right filtration technology for your applications.

Based on this scientific analysis, our laboratory will recommend the right filtration configuration, and the type of enclosure needed to ensure your safety.

After a captair enclosure has been installed, your ESP® specialist will provide at no extra cost long-term monitoring and reconfiguration services for your Captair® system based on the applications carried out within the hood.



# The **ValiQUESt**® service: validates the ductless fume hood best suited to your application

With the assistance of an ESP® agent, you will fill out an informational questionnaire in order to provide a detailed description of the chemical applications that you plan to carry out. Laboratory specialists will determine the right type of fume hood and filtration technology corresponding to your manipulations within 48 hours. We are committed to ensure your safety by certifying the feasibility of your applications.

# The ValiPass service: certifies and confirms the appropriate use of the fume hood at installation

When the fume hood is installed, a certificate of use will be provided, indicating which specific chemicals may be used, the type of filter, as well as the estimated filter life time. Your fume hood has been validated with these criteria in mind. This certificate serves to constantly remind the user and/or health and safety manager with regards to the proper scope of use of his/her hood.

# The **ValiGuard**® service: continuous monitoring of your ductless fume hood

Periodically (every 6 to 12 months), an ESP® agent will contact you to ensure that your applications have not changed and that the filter is still working effectively. The agent will guide you step by step through the filter saturation test and if needed will help you through the filter replacement procedure. If your applications have changed, the E.S.P® agent will ask you to fill out a new questionnaire (see step I). After review, you will be sent a new Valipass certificate stating that these new chemicals can safely be handled under optimal safety conditions.

### Filtration technologies

Carbon filter anti-decompression system US patent number 7,563,301

Chemicals, either in the form of gas and/or particles, present an inhalation risk that could affect the health of laboratory personnel. Health authorities have established concentration limits that may not be exceeded under any circumstances. These limits are defined by Occupational Exposure Limits (WEL/TLV), expressed in parts per million (PPM).

#### The airborne pollutants in your laboratory

These dangerous, ever-present pollutants, generated by day-to-day handling of chemicals, require all laboratories to adopt preventative and protective measures in accordance with regulations in effect.

Drawing on over 40 years of filtration technology experience, Erlab has developed Flex® technology,

which, through the combination of molecular and HEPA particle filtration technology, provides a comprehensive protection solution for most common applications found in various laboratory disciplines, environments and industries.

#### Molecular filtration technology: super-activated carbon

Activated carbon has been used for over a century because of its exceptional adsorption properties. Today, different varieties of activated carbon are used in various applications, such as water treatment, VOC treatment, solvent collection, chemical catalysis, etc.

Each of these applications requires a different type of activated carbon having specific, customized physico-chemical properties.

For over 40 years, our very active R&D division has been developing activated carbon-based filtration technologies that make it possible to adsorb airborne chemical pollutants in a stable, irreversible manner.

We offer a unique line of activated carbon solutions, sold as filtration cartridges, designed to protect laboratory personnel from inhalation risks.

A very strict set of specifications, developed by Erlab and based on compliance with international standards, allows us to select raw materials and to create technologies with the right porosity. Inspired by military-type gas masks, these technologies are able to adsorb a very wide range of molecules with no risk of desorption under normal operating conditions.

Our experience, based on over 30 years of testing, laid out in our Chemical Listing, is a testament to our in-depth filtration expertise.

The development of our filtration technologies also involves an environmental dimension. For instance, we decided many years ago to avoid using impregnation agents that are harmful to the environment.

Our filters are subject to strict testing, as set forth in the AFNOR NF X 15-211:2009 standard, the reference standard in the field of ductless fume hoods. The effectiveness of these solutions, as demonstrated by the results obtained, serves to guarantee users safety.

Regarding quality, each of our filters is delivered with a quality certificate that traces its entire production cycle.

# Particle filtration technology: HEPA H14

This filtration technology traps particles larger than 0.1  $\mu m$  with 99.995% efficiency, according to the MPPS method set forth in the EN 1822-1 standard.





	Types of carbon filters					
AS	For organic vapors					
BE +	Polyvalent for acid + organic vapors					
F	For formaldehyde vapors					
К	For ammonia vapors					

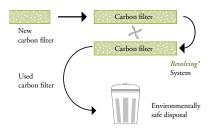
## Flex® technology

US patent number 7,766,732 B

# Modular filtration column

The fusion of molecular and particle filtration technologies makes it possible to configure a single device to meet all laboratory protection needs. This flexibility was made possible through the creation of stackable, one-size-fits-all, filtration cartridges—an innovation that is key to the new Captair® Flex® line. The modular filtration column adapts itself to the protection needs and specifications of the laboratory. The different models in the new line of Captair® Flex® ductless fume hoods can thus be equipped with I to 4 filtration columns, offering very high retention capacities. This innovation, developed by Erlab's R&D laboratory, offers unprecedent flexibility, adaptability, and savings. A single device can be quickly reconfigured and easily used for other applications.

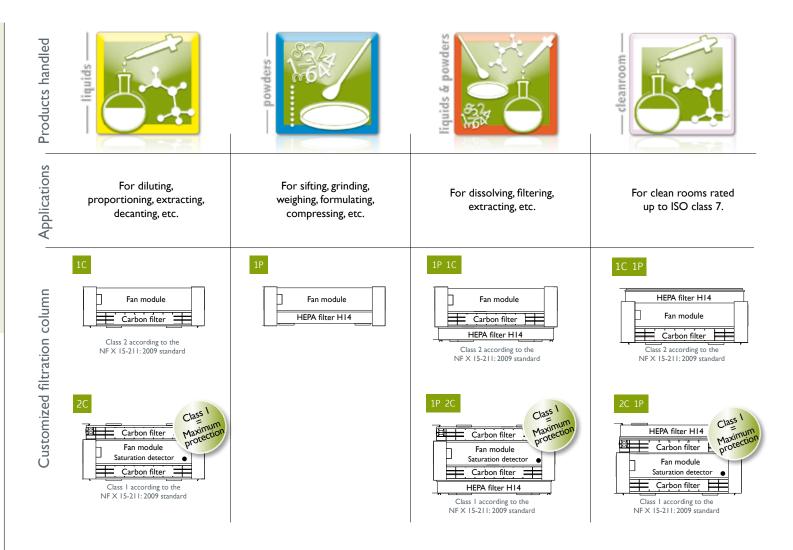
# The patented Revolving Filter system



When the main filter is saturated, the molecules are automatically directed to a 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.

#### The revolving system advantages:

- Significant optimization of the main filter life time;
- Substantial savings in terms of renewal costs.



Class I ductless fume hood = Maximum protection guaranteed by the AFNOR NF X 15-211: 2009 standard!

A filtration column configured in class I (I main filtration level + I back-up filtration level) prevents chemicals from being released if the main filter reaches its saturation point.





# Ductless mobile fume hoods with modular filtration column

Designed to protect users during applications emitting vapors and/or chemical particles, the Captair® Flex® line offers a level of performance that ensures your safety while offering an environmentally-friendly alternative to traditional ducted systems.

Based on the Flex® technology -a flexible, adaptable modular filtration column- this line of chemical protection enclosures offers a wide range of possibilities and allows you to carry out a variety of applications in your laboratory.

The high containment and filtration performance of this technology offer users a high degree of protection, in accordance with the AFNOR NF X 15-211: 2009 standard, class 1 and class 2.

This technology is suited for many different industries, such as: chemistry, pharmaceuticals, cosmetics, biochemistry, academics, petrochemistry, forensics, manufacturing, agro-food, hospitals, etc.



Modular filtration technology customized for your applications

Air face velocity monitoring system

Electrical and fluid lines can be run into the enclosure

Vibration-absorbent work surface, high chemical and mechanical resistance

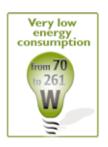


Automatic filter saturation detection

Bright, energy-efficient lighting

Ergonomically designed slanted front shield

Ergonomic openings



# **Example 19** Captair $\mathbb{G}$ $\mathbb{G}$ $\mathbb{G}$ $\mathbb{G}$ $\mathbb{G}$ $\mathbb{G}$ $\mathbb{G}$ Optimize your protection - take advantage of our ESP® Program, free of charge!

The Captair®Flex® S & M fume hoods are designed for applications and laboratories that have limited space available and do not require the extra depth and filtration capacity of the larger XLS series (page 12). A single filtration column is configured according to the protection needs of the hood's specific application. The support structure is composed of an anti-corrosion metallic alloy that is protected with a thermohardened, anti-acid, polymer coating. The optical viewing panels are composed of ¼ to 1/3 inch thick acrylic and the filtration module is formed from rigid polypropylene. All Captair®Flex® hoods are CE tested and marked.

#### Flex® Technology











Commissioning, training, and maintenance offered by our Asura department and its network of licensed technicians.







M 321







Dimensions	S 321				M 3	21
(inches)	L	D	H min/max	L	D	H min/max
Interior	30 1/8"	19"	26 ½"	30 1/8"	21 ½"	34"
Exterior	31 ½"	22"	39 3/4" / 47"	31 ½"	24 3"	45 3/4" / 53"

Technical specifications	S 321	M 321		
Number of filtration columns	I			
Number of fans (IP44)	1			
Processed air flow	135 cfm			
Air velocity at openings (in on-position)	79 fpm to 118 fpm			
Voltage/frequency	90 - 264V	/ 50 - 60 Hz		

		S 321	M 321	
Including power used for ligh	70 Watts			
Type of opening		Obl	ong	
Structure	Anti-corrosion steel	el coated with 100% polyester		
Panels	1/3 inch synthetic glass			
Filtration module	Polypropylene			

# **weaptair** flex M — Optimize your protection - take advantage of our ESP® Program, free of charge!

(page 5)





Dimensions	M 391			M 481			M 632		
(inches)	L	D	H min/max	L	D	H min/max	L	D	H min/max
Interior	38"	21 ½"	34"	48 %"	21 ½"	34"	61 ¾"	21 ½"	34"
Exterior	39 %"	24 ¾"	45 ¾"/ 53"	50 1/4"	24 ¾"	45 ¾"/ 53"	63"	24 ¾"	45 3/4"/ 53"

	M 391 M 4	81 M 632			
Number of filtration columns	I	2			
Number of fans (IP44)	I	2			
Processed air flow	135 cfm	270 cfm			
Air velocity at openings (in on-position)	79 fpm to 118 fpm				
Voltage/frequency	90 - 264 V / 50 - 60 Hz				
Including electricity for the lights	70 Watts	121 Watts			
Type of opening	Oblong				

Structure	Anti-corrosion steel coated with 100% polyester
Panels	1/4 inch synthetic glass
Filtration module	Polypropylene

# **Captair** Flex XLS — Optimize your protection - take advantage of our ESP® Program, free of charge!

(page 5)

The Captair®Flex® XLS series fume hoods are designed for applications and laboratories that require a larger hood area and filtration capacity. Up to 4 filtration columns can be configured according to the protection needs of the hood's specific application. The support structure is composed of an anti-corrosion metallic alloy that is protected with a thermo-hardened, anti-acid, polymer coating. The optical viewing panels are composed of 1/4 inch thick acrylic and the filtration modules are formed from rigid polypropylene. All Captair®Flex® hoods are CE tested and marked.

#### Flex® Technology





	Dimensions XLS 392 XLS 483				483	1		
(inches)	L	D	H min/max		L	D	H min/max	I
Interior	38"	26 1/4"	41"		48 %"	26 1/4"	41"	1
Exterior	39 ½"	31 ½"	51 3/4" / 59 7/8"		50 1/4"	31 ½"	51 3/4" / 59 7/8"	`

XLS 392	XLS 483	
2	3	
2	3	
270 cfm	405 cfm	
79 fpm to 118 fpm		
90 - 264 V / 50 - 60 Hz		
	2 2 270 cfm 79 fpm to	

		XLS 392	XLS 483	
Including power used for lighting		121 W	191 W	
Type of opening		Total		
Structure	Anti-corrosion steel coated with 100% polyeste			
Panels	1/4 inch synthetic glass			
Filtration module	Polypropylene			

# **Captair** $\mathbb{G} \otimes \mathbb{X} \times \mathbb{Z} = \mathbb{Z}$ Optimize your protection - take advantage of our ESP® Program, free of charge! -

(page 5)





Dimensions		XLS	633		XLS	714	
(inches)	L	D	H min/max	L	D	H min/max	
Interior	61 ¾"	26 1/4"	41"	69 ½"	26 ¼"	41"	
Exterior	63"	31 ½"	51 3/4" / 59 7/8"	71"	31 ½"	51 3/4" / 59 7/8"	

	Number of filtration columns	3	4	
	Number of fans (IP44)	3	4	
	Processed air flow	405 cfm	540 cfm	
_	Air velocity at openings (in on-position)	79 fpm to 118 fpm		
,"	Voltage/frequency	90 - 264 V / 50-60 Hz		

XLS 633 XLS 714

\_Technical specifications

Including power used for lighting		191 W	261 W
Type of opening		Trapezoid	Total
Structure	Anti-corrosion steel coated with 100% polyester		
Panels	1/4 inch synthetic g	lass	
Filtration module	Polypropylene		

XLS 633 XLS 714

#### Control panel

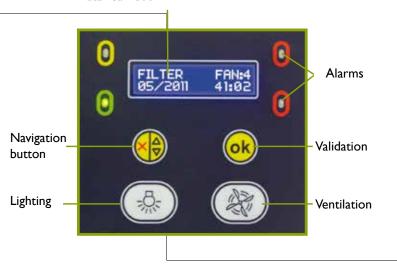
#### Flow monitor

This device allows for continuous monitoring of the ventilation flow rate and alerts the user via visible and audible alarm in the event of a ventilation system failure.

#### Adjustable timer

This timer records the number of hours that the device has been in operation and, every 60 hours, notifies the user the need to test the saturation level of the molecular filter. (In accordance with the requirements of the AFNOR NF X 15-211: 2009 standard).

#### Digital display for optimal data read-out



#### Sampling port



This port allows the user to sample the air within the detection chamber of the filtration module in order to evaluate the saturation level of the molecular filter, using color changing reagent tubes (not included).

(Equipment not included on devices set with the Molecode S automatic saturation detection sensor)

#### Energy-efficient lighting



Internal Lighting 18W - 500 lux - IP67. Compact fluorescent tube lights. One

to three tubes, depending on the model. Dust and vapor-tight. Even, bright lighting of the work surface.

#### Anemometer



This system continuously monitors the face velocity, which must fall between 0.4 and 0.6 m/s. (in accordance with the requirements of the AFNOR NF X 15-211: 2009 standard).

#### Side panel utility ports



Located on the enclosure sides, these ports allow electrical cables and/or fluid lines to enter the enclosure with ease.

#### Chemical Listing

#### A guide of Erlab-approved chemicals

This guide includes a comprehensive list of chemicals that Erlab certifies as tested and authorized for use within the hood, under the conditions set forth by the AFNOR NF X 15-211: 2009 standard.

The guide includes almost 700 chemicals and lists the following for each of these chemicals: name of the chemical, its formula, its CAS number, its boiling point, its molecular mass, its saturation vapor pressure, the filter designed to trap this chemical and the retention capacity of this filter, the type of filter saturation detection system, the maximum mass of the chemical that may be introduced within the enclosure, and the name of the testing laboratory that performed the test related to this chemical handling.



The product of 40 years of R&D!

#### Work surfaces

#### Glass work surface

- Tempered glass work surface with framing
- Ergonomic arm rest to work confortably.



#### Phenolic resin work surface

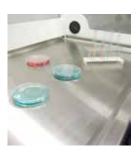
- Work surface with built-in spill tray, made of phenolic resin, with an ergonomic arm rest to work confortably.
- High chemical and mechanical resistance.
- Ideal for precision weighing operations.



#### Work surface in stainless steel 304 L

High chemical and mechanical resistance. Rounded corners to facilitate cleaning operations. Built in spill tray.

(Only available for the models: M 321, M 391, XLS 483, XLS 714)



#### Work benches and shelves

#### Mobicap™\*

- Metal rolling cart, equipped with 4 wheels (2 locking wheels).
- Allows the device to be moved safely.

\*Only available for the Captair® Flex® M 321 and Captair® Flex® M 391 models



#### Benchcap™

- Fixed metal work bench.
- Equipped with 4 height adjustment jacks.



Internal metal sliding shelf for Mobicap™ and Benchcap™.



#### Molecode™ S



#### Large-spectrum filter saturation alarm.

(Equipment required by class I of the AFNOR NF X 15-211: 2009 standard)

- 1 sensor is located in the detection chamber and automatically detects when the filter has become saturated by solvents.
- 1 sensor is in contact with the laboratory air and indicates an eventual pollution rise with solvents



- Made of synthetic glass.
- Offers 360° visibility of handlings performed into the enclosure
- Optimizes lighting conditions.



#### Rear access panel

- Made of steel.
- Located on the back side of the enclosure, this door provides easy access for large, heavy instruments.
- Ideal for maintenance operations. (Except on the Captair® Flex® M 321 model)



#### Particle pre-filter

Eliminates particles > 0.3 µm to optimize the performance of the HEPA H14 filter.







Ergonomically designed to ensure safety during precision weighing tasks. Using a protective airflow, Captair® Flex® secure weighing stations provide a stable base for precision balances while offering a high level of containment and filtration performance that guarantee optimal protection for users (devices comply with the AFNOR NF X 15-211: 2009 standard, class 1 and 2).

#### Precise results

Captair® Flex® weighing stations are designed to allow weights to be measured with a precision up to  $10^{-6}~\rm g.$ 



Modular filtration technology adapted to liquids and/or powders weighing

Bright, energy-efficient lighting

Vibration-absorbent work surface to ensure balance stability

Ergonomically designed slanted front shield

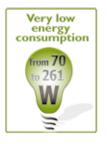
Workbench equipped with vibration-absorbent jacks



Automatic filter saturation detection

Ergonomically-customized for weighing activities

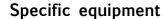
Double-bag waste port with protective housing







_	Dimensions		M 321			M 391			M 481			XLS 39	92
	(inches)	L	D	H min/max	L	D	H min/max	L	D	H min/max	L	D	H min/max
ı	Interior	30 1/8"	21 ½"	34"	38"	21 ½"	34"	48 %"	21 ½"	34"	38"	26 1/4"	41"
I	Exterior	31 ½"	24 3"	45 3/4" / 53"	39 %"	24 ¾"	45 ¾"/ 53"	50 1/4"	24 ¾"	45 ¾"/ 53"	39 ½"	31 ½"	51 3/4" / 59 7/8"







#### Energy efficient Internal lighting

18W - 500 lux - IP67.

Compact fluorescent tube lights. One to three tubes, depending on the model. Dust and vapor-tight. Even, bright lighting of the work surface.



## Work surface made of solid phenolic resin

- Non-conductive material, very high mechanical and chemical resistance.
- Built-in spill tray.
- Guarantees precise, reproducible weight measures.
- Prevents static charges caused by items within the enclosure.
- Easy to clean.



#### Waste port (optional equipment)

- Internal and external access secured by a protective air flow.
- Double-bag mounting system that prevents any waste from being released outside the enclosure.
- External housing to prevent bags from pulling free or tearing.



#### Benchcap™

Workbench that transforms the weighing unit into a true independent work station.

- Equipped with 4 vibration-absorbent jacks used to level the weighing station.







#### Vented filtering storage cabinets

Designed to store a wide variety of reagents used in the laboratory, Captair® Store  $^{TM}$  vented filtering storage cabinets reduce the inhalation risks associated with the concentration of vapors into the lab environment.

Equipped with molecular filtration technology tested in accordance with the AFNOR NF X 15-211: 2009 standard, these cabinets retain the toxic, odorous vapors emitted by chemical flasks and bottles.

Since they are ductless, Captair® Store<sup>TM</sup> cabinets do not release any pollutants into the atmosphere and may be installed near the work station. The recirculation of filtered air also allow Captair® Store<sup>TM</sup> cabinets to purify the laboratory ambient air.

Designed for all storage requirements, all areas, and all different reagent types, Captair<sup>®</sup> Store™ cabinets are the right solution for any laboratory where many flasks and bottles pollute the lab environment and take too much space.



Modular filtration technology suitable for any storage configuration

Very quiet ventilation system

Elimination of harmful, odorous vapors

High corrosion-resistance

Lockable storage solution

Very simple and quick commissioning

- Flat shipped to ease the laboratory access

- Mouting without tools

Storage capacity from 10 to 240 liters



No ducted airflow system needed

Purification of the ambient air into the laboratory

Double door to ease the opening in limited spaces

Sliding Polypropilene shelves with built-in spill tray (Approx. 4 Liters). Very high corrosion resistance

Double compartments

For the storage of compatible and /or incompatible chemicals

Adjustment jacks for vented storage cabinet levelling



(page 5)

Commissioning, training, and maintenance offered by our Asura department and its network of licensed technicians.

#### Shelf 812 Storage capacity: 10 bottles (1 liter) containing compatible chemicals.





Ministore 822 small storage cabinet Storage capacity: 48 bottles (I liter) containing compatible and/or incompatible chemicals.









#### + Tests and markings ( )

Quiet ventilation fan

<b>Dimensions</b>	Shelf 812				
(inches)	L	D	Н		
Interior	30 ¾"	7 ½"	13 ¾"		
Exterior	32 ¼"	11 ¼"	28 ¼"		
Option 812B		10 ¾"	36 ½"		

To be placed on a work surface or

rear linear shelf

No.: 812 A



On legs, to be

surface

No.: 812 B

placed on a work



To be wall-mounted No.: 812 C

<b>Dimensions</b>	Ministore 822					
(inches)	L	D	Н			
Interior	29 ½"	12 ½"	20 ½"			
Exterior	32 1/4"	14"	28 ½"			
Option 822B		17 1/8"	35 %"			
Option 822C		14 3/3"	27 ½"			



To be placed on a work surface No.: 822 A



On legs, to be placed on a work surface No.: 822 B



To be wallmounted No.: 822 C



To be placed underbench No.: 822 D

Filter type	AS (organic vapors) BE (organic chemicals and acids)

**Technical specifications** 

Processed air flow	44 cfm
Voltage/frequency	230 V / 50 Hz
Electrical power	20 W

Retention tray volume	812:2 liters - 822:2x2 liters (with absorbent mat)
Structure	Anti-corrosion steel coated with 100% polyester
Number of shelves	Ministore 822 : 8 shelves adjustable in height and 2 fixed.

Fan



## **Captair** Stors — Optimize your protection - take advantage of our ESP® Program, free of charge!

(page 5)



Storage capacity: 120 bottles (I liter) containing compatible and/or incompatible chemicals.



Storage capacity: 120 bottles (I liter) containing compatible and/or incompatible chemicals.



Storage capacity: 240 bottles (I liter) containing compatible and/or incompatible chemicals.







#### The new Captair® Store™ range is:

A polyvalent BE+ filter with a very high retention capacity

> Polypropylene shelves with built in spill tray, very high corrosion resistance

A double compartment for the storage of compatible and / or incompatible chemicals



Dimensions (in)	L	D	Н
832	31 ½"	20"	80 3/3"
834	31 ½"	23 ¾"	85 <sup>2</sup> / <sub>3</sub> " mini 88 <sup>2</sup> / <sub>3</sub> " maxi
1634	63"	23 ¾"	87" mini 90" maxi

Technical specifications	832	834	1634
Filter type	AS BE F K	AS (organ BE+ (organic che F (For formal K (For amm HP (HE	nic vapors) emicals and acids) dehyde vapors) tonia vapors) PA H 14)
Number of fans	I	I	I
Processed air flow	44 cfm	> 44	f cfm
Voltage / Frequency	230 V / 50 Hz	90 - 264	V / 50 Hz

	832	834	1634		
Electrical power	20 W	21 -	34W		
Amperage absorbed	0,1 A	0,8 A	1,3 A		
Metallic parts	Anti-corrosi	Anti-corrosion steel coated with 100% polyester			
Door	Synthetic glass 1/4 inches				
Filtration module	X	Injected po	lypropylene		
Number of Shelves	10 10				

AS

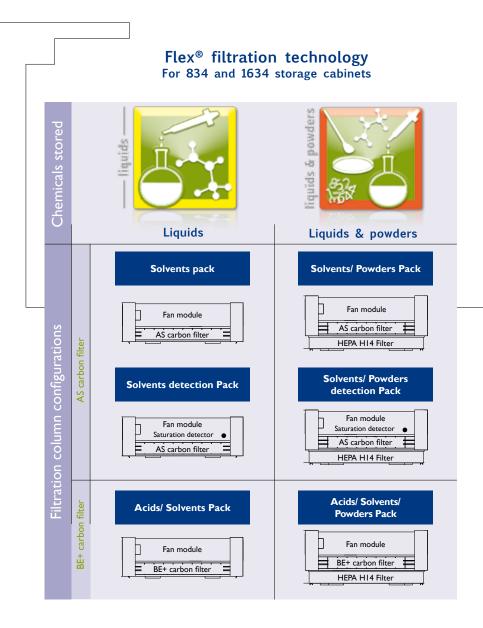
BE+

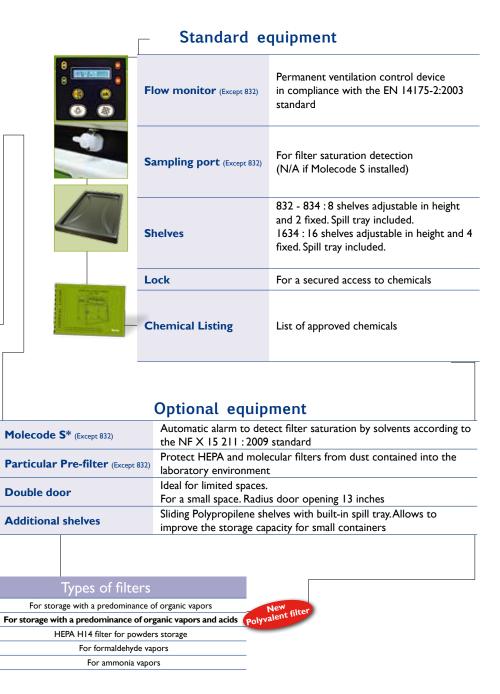
HP

F

K











#### Stand alone filtration system for safety cabinets\*

ChemTrap™ allows laboratories equipped with safety cabinets to also benefit from a protection against chemical inhalation risks.

#### ChemTrap ™ advantages:

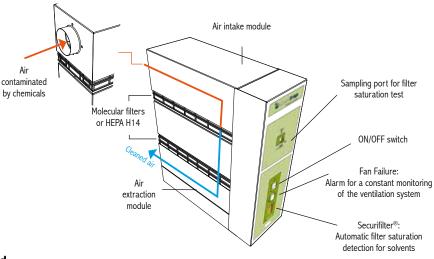
- End-users protection, chemical vapors eliminated by filtration.
- Adaptable to a wide range of under bench and vertical safety cabinets.
- Contributes to renew and purify the air into a laboratory.

#### 2 specific columns:









#### **Advantages:**

- Transform your safety cabinet into a standalone
- · Compatible with a majority of safety cabinets
- · Automatic detection of filter saturation

#### Versions of Chemtrap™ offered

Technical data

01	02	03	04
Sampling port	Sampling port	Sampling port + Fan	Sampling port
	+ Fan failure	failure + Sécurifilter	+ Sécurifilter

H 402

#### maintenance offered by our Asura department and its network of licensed technicians.

Commissioning,

training, and

				Types of filters
Dimensions (mm)	W	D	Н	Number of fans
H 402	15 1/3"	22 ½"	10 ½"	Processed air flow
V 201	8"	21"	23"	Voltage

	AS (For storage with	Electric power		
s of filters	BE (For storage with orga HP (HEPA H14 for	Absorbed intensity		
ber of fans	(	Flexible duct connection		
essed air flow	44 cfm > 29 cfm		Flexible connecting flan	
ıge	230 V	Metallic parts		

V 201

Working principle:

Electric power	19 W
Absorbed intensity	0,1 A
Flexible duct connection	39 inches (Ø 3" inches)
Flexible connecting flange	Ø 3 to 4 1/3"
Metallic parts	Anti-corrosion steel coated with 100% polyester

H 402

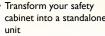
V 201

25 \*Safety cabinet not supplied

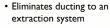








#### · Fast and easy installation







#### HEPA filtered enclosure

Captair®Flow fume hoods make it possible to perform operations in an ultra-clean, dust-free environment.

The modular filtration column, which is equipped with a HEPA H14 filter, guarantees 99.995% filtration efficiency for particles larger than 0.1  $\mu$ m (according to the MPPS method set forth in the EN 1822-1 standard).

The ultra-clean air entering the enclosure meets ISO class 5\* (EN ISO 14-644 standard) requirements, which corresponds to American class 100 (i.e., less than 100 particles per cubic foot > 0.5  $\mu m$ ) and to class A and B of the GMP guide published by the European Union for the pharmaceutical industry.

Items located into the enclosure are therefore protected from any external contaminants.

#### Applications:

- Non-pathogenic cell cultures
- In-vitro cultures
- Microbiology (Non-pathogenic)
- Homeopathic preparations in pharmacies,
- Electronics
- Optics, etc.

Laboratories specializing in biology, botany, aerospace, electronics, pharmaceutical, cosmetics, etc.



HEPA H14 filtration For handlings in ultra clean environment, without dust

Very high brightness internal lighting

Permanent ventilation monitoring system

- Slanted front shield for a comfortable working poisition - Very large door opening to ease the access into the enclosure

Air quality within the

Very low energy consumption

Ergonomical design

enclosure ISO 5



4 new models: With enclosures from 80 cm to 1,80 m

ambient air gaseous pollutants

Optional carbon filter for the filtration of

New stainless steel work surface - Built in spill tray

Spherical corners to ease the cleaning







#### Effective protection for products and/or samples



	ensions		321			391			483	3		71	4
(	(in)	L	D	H min/max	L	D	H min/max	L	D	H min/max	L	D	H min/max
Int	erior	30 1/8"	21 ½"	34"	38"	21 ½"	34"	48 %"	26 1/4"	41"	69 ½"	26 1/4"	41"
Ext	terior	31 ½"	24 3"	45 3/4" / 53"	39 %"	24 ¾"	45 ¾"/ 53"	50 1/4"	31 ½"	51 34" / 59 %"	71"	31 ½"	51 3/4" / 59 7/8"

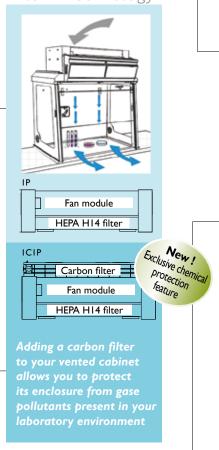
Caracteristics	321	391	483	714			
Number of fans (IP44)	I	l I		l l 3		4	
Filter type		HEPA H14					
Processed air flow	13!	5 cfm	405 cfm	540 cfm			
Voltage/frequency		90 - 264 V / 50-60 Hz					
Electrical power (max)	70 W 70 W		191 W	261 W			
Amperage absorbed	0,26 A 0,72 A 0			0,98 A			

<sup>\*</sup>When used in a cleanroom in compliance with ISO 9 / EN 14-644 standard.



#### Standard and optional equipment

### Flex® Technology



#### Standard equipment

#### Control panel

Flow monitor: Continuous monitoring of the ventilation flow rate and alerts the user via visible and audible alarm in the event of a ventilation system failure.



#### Side panel utility ports

To run electrical and fluid lines into the enclosure



#### Energy-efficient Internal lighting

18 W - 500 lux - IP67. Compact fluorescent tube lights. One to three tubes, depending on the model. Dust and vaportight. Even, bright lighting of the work surface.



#### **Optional equipment**

Work surface in stainless steel 304 L

High chemical and mechanical resistance. Rounded corners to facilitate cleaning operations. Built in spill tray



#### Phenolic resin work surface

Work surface with built-in spill tray, made of phenolic resin. Easy to clean.



Rolling cart
MOBICAP®
(Exclusively for 321 and 391 models)

Metal rolling cart, equipped with 4 wheels (2 locking wheels).

Work bench BENCHCAP® Fixed metal work bench. Equipped with 4 vibration-absorbent jacks used to level the unit

Shelves

Internal metal sliding shelf for Benchcap et Mobicap





#### **PCR** workstations

### Complete protection for gene amplification - Save time while saving your samples







#### Non pathogenic application protection



Against external contaminants

UV Decontamination

Against sample cross contamination



#### Commissioning, training, and maintenance offered by our Asura department and its network of licensed technicians.

321 S









#### **Applications**

- Samples preparation before thermocycling
- Post PCR DNA sequencing revelation / separation
- In Vitro fecondations
- Cellular cultures
- Vegetal Biology
- Sterile solutions preparations

#### Dimensions (mm)

	321 S	321	391	712	
External Enclosure width	32"1/4	32"1/4	40"1/2	69"3/4	
External Height (without optional carbon filter)	25" 1/2	34" 7/8	37" 1/4	37" 1/4	
External depth	24" 3/4				
Flow rate	na	183 cfm	183 cfm	232.4 cfm	
HEPA H14 filter	na	I	I	2	
Optinal carbon filter	na	I	I	2	

Caracteristics	321 S	321	391	712
Compact fluorescent lighting 18W - 500 Lux - IP67	ı	I	ı	2
UV light	I I 2			
Work surfaces	Stainless steel 304 L or Tempered glass			ered glass
Moveable cart Mobicap	Yes No			No
Fix cart Benchcap	Yes			



# Standard and optional equipment

#### The filtration column

- Handlings in an ultra clean environment
- Serial prefilter(optimizes the HEPA H14 filter lifetime)
- Particulate HEPA H14 filtration
- Optional carbon filtration = clean the air polluted by ambient air VOCs.

#### Very low energy consumption

From 75 to 150 Watts

#### HEPA H14 filter

Traps particles larger than 0.1 µm with 99.995% efficiency, according to the MPPS method set forth in standard EN 1822-1.



#### **UV** Decontamination

 Bactericidal UV Lamps: Wavelength: 254 nm



- Homogeneous UV radiance on the work surface, with even greater strength on larger units
- Internal reflectors : NO shadow areas
- Adjustable UV timer between I and 30 minutes
- Synthetic glass Thickness adapted for the user protection against rays (Bêta), 32P, Phosphorus: 10mm
- Automatic UV cut-off in case of front door opening

#### **Ergonomics**

- Enclosure widths: 32"1/4, 40"1/2 and 69"3/4
- Total openings = easy access into the enclosure
- Stainless steel worksurface = easy the cleaning



- Energy efficient compact fluorescent internal lighting = optimal vision of the work surface
- Mobicap rolling cart (321 and 391) = mobile workstation



#### Applications:

- Opening suspicious packages
- Working in an inert atmosphere (nitrogen, etc.)
- Collecting samples onlocation (crime scene evidence, etc.)
- Revealing fingerprints
- Splash protection (biopsies, etc.)
- Performing activities that need to be sheltered from dust or humidity



#### Mobile isolation enclosure



Optimal air-tightness of the enclosure (Factory tested: compressed air inflation at 2.5 mm Hg, a certificate of compliance is provided with each enclosure)



Flexible PVC protective package for easy transport.

Dimensions (inches)	L	D	Н
Exterior	33 %"	22"	28 ½"

#### **Technical specifications**

Enclosure and base	Flexible PVC, assembled using high-frequency welded seams					
Closure	Double sealing groove					
Medical gloves	Made of butyl rubber and PVC sleeves					
Valve	Enclosure can be filled with an inert gas (nitrogen).					

### The AFNOR NF X 15-211: 2009 standard

All Captair® Flex® ductless fume hoods comply with this standard.

Commissioned by the AFNOR, the French Mechanical Standardization Union (UNM), made up of a committee of experts (the French National Scientific Research Institute (INRS), government agencies, professional associations), established the AFNOR NF X 15-211: 2009 standard. This standard applies to filtering fume hoods (also known as ductless fume hoods or ETRAF) designed for research work, analysis, teaching, etc. for all laboratories in which chemicals subject to occupational exposure limits (WEL or TLV-TWA) are handled. This standard sets forth performance and information criteria related to:

- Filtration efficiency
- Containment efficiency
- Air face velocity
- The submission of a document listing the products that may be handled safely under the hood.

#### Classes established by the standard:

Class I	Class 2
Ductless fume hood with back-up filter	Ductless fume hood without back-up filter
A main level of filtration and a back-up level of filtration	A single level of filtration

#### Filtration-based classification:

i iid adon-based classificacion.		
	Designations according to the NF X 15 211: 2009 standard	Equivalent Erlab <sup>®</sup> product name
Particle filtration*	Туре Р	Type P
Vapor filtration**	Type V	Туре С
Particle and vapor filtration**	Type PV	Туре РС

<sup>\*</sup>A particle filter must be at least type H14 according to standard EN 1822-1.



#### Filtration efficiency

This refers to the filter's ability to trap noxious molecules handled in the enclosure and characterizes the quality of the recirculated air downstream of the filters.

	Class I	Class 2	
Normal operating phase	Detection phase during which the concentration downstream of the filters must be less than 1% of the VLEP		
Detection phase	Detection phase during which the concentration downstream of the filters must be less than 1% of the VLEP and during which the automatic saturation detector should alert the user.	Detection phase during which the concentration downstream of the filters must be less than 50% of the VLEP	
Safety phase	Safety phase during which the concentration downstream of the filters must be less than 50% of the VLEP and which must not last less than 1/12 the duration of the normal functioning phase.	Not applicable	

The retention capacities recorded during tests performed on our filters demonstrate the technological performance developed by Erlab.

These results guarantee users of our Captair® Flex® fume hoods a very high level of protection.

Sample test performed on a Captair® Flex® XLS 714 fume hood, equipped with class 1 BE+ filters.

Isopropyl alcohol	Cyclohexane	HCL (35%)
2250 gr	3204 gr	7862 gr

<sup>\*\*\*</sup>Molecular filters must undergo two successive tests using cyclohexane and isopropyl alcohol for filters designed to capture Volatile Organic Compounds (VOC). Another test designed for acid vapor is performed with hydrochloric acid.



#### Enclosure containment efficiency

This refers to the fume hood's ability to keep vapors or particles inside the enclosure so that they are not released into the laboratory environment.

To confirm this efficiency, a test is carried out in accordance with the protocol set forth by the standard.

Tracer gas SF6 (sulfur hexafluoride) is released within the enclosure. A grid made up of sensors is placed in front of the door openings. Air samples are taken at the grid location. Based on the concentrations of gas emitted and samples taken, which are used to define a user's average exposure to this tracer gas, it is possible to establish the efficiency of the ductless fume hood enclosure.

The containment limit set forth by the AFNOR NF X 15-211: 2009 standard requires that the concentration of SF6 gas must be  $\leq$  0.1 ppm at the grid detection points.



#### **Documentation**

Ductless fume hoods must be accompanied by a booklet that includes an exhaustive list of chemicals that the manufacturer has authorized for use within the fume hood in accordance with the conditions set forth by the AFNOR NF X 15-211: 2009 standard. For each of these chemicals, the booklet must list:

- The name of the chemical, its formula, its CAS number, its boiling point, its molecular mass, and its vapor pressure.
- The part number of the appropriate filter and its retention capacity during the normal operation phase.
- The type of saturation detection system corresponding to the filter(s) in question.
- The maximum mass of the chemical that may be introduced in the ductless fume hood.
- The name of the testing laboratory that carried out the type test.

Erlab has created a guide that lists authorized chemical agents and provides an analysis of approximately 700 chemicals, the «CHEMICAL LISTING». This guide is delivered with each device as required by the standard.



#### Air face velocity

This refers to the capacity of the fume hood to create a dynamic barrier between the user and the chemicals being handled.

For ductless fume hoods with a fixed front shield, air face velocity at all openings must be between 0.4 and 0.6 m/s. These fume hoods must also be equipped with a system to continuously monitor the ventilation system, which is itself an indicator of proper containment.

#### International standards

Erlab® products comply with the following standards, thereby guaranteeing your complete safety:

France: AFNOR NF X 15-211:2009

U.K.: BS 7989

USA: ANSI/AIHA Z9.5 ASHRAE 110:1995

## Installation and servicing performed by **\*asura**\*



### Asura®, Erlab's installation and servicing branch

Our team of specialists ensure installation, servicing and the follow up of your ductless fume hood, weighing station, vented storage cabinet, PCR work station, etc...

All safety enclosures vital features are therefore ready to use and tested by professionals thereby guarantying:

- · Installation and user safety
- Good laboratory practices

Asura technicians also control:

- · Air face velocity
- Containment
- · Filters saturation level and verify all protection features provided by your safety enclosure in relation to the handlings / filtration type, filter replacement schedule, cleaning, ...

Asura® control process is based on AFNOR NF X 15 211, EN 14775, BS7989 standards compliance.







#### Asura® is also a partners network

Asura® also offers its services through a partners network that benefits from ERLAB's expertise.

#### **Training**

Erlab's 43 years experience, has allowed our Asura® division to offer personalised training sessions to maintenance providers and companies integrating a maintenance department.

Asura® service is not available in all countries, please contact us for more information.



## **>asura**®, replacement filters

The filtration technology developed by the Erlab R&D laboratory allows us to offer a wide range of activated carbon filters under the brand Asura® filters

As a manufacturer making filtering enclosures compliant with AFNOR NFX 15 211 and BS 7989 standards, we apply the same level of quality to our Asura® filters design.

Offered at very competitive prices, their performances are suitable with a wide range of ductless fume cabinet brands: Astec, Bigneat, Cruma, Faster, Labcaire, Strola, Airclean, Air Science, Labcaire ... and much more.



### Buy your replacement filters on line!

For all brands of ductless fume hoods and vented storage cabinets

# **Vasura filters.com**Reduce your filter budget!



With over 1500 references of replacement filters for ductless fume hoods and chemical storage cabinets, our new website Asurafilters.com provides a simple, fast, competitive and secured solution to purchase your replacement filters online.

Asurafilters.com offers replacement filters compatible with a wide variety of ductless fume hood and chemical storage cabinet brands such as Captair, Bigneat, Faster, Gelair, Astec ...

### Visit us on the web

#### www.erlab.com

Get to know Erlab group, world leader in laboratory filtration technologies since 1968.





#### www.greenfumehood.com

Real time communicating fume hoods equipped with the new Neutrodine® filtration technology. For multi-disciplinary handlings



Ductless mobile fume hoods and vented chemical storage cabinets for the total filtration of toxic gases. For single, dedicated applications.



#### www.asurafilters.com

Buy your replacement filters on line! For all brands of ductless fume hoods and chemical storages cabinets



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