Life Sciences

Customised biological protection solutions

for contamination hazards in the laboratory

WHO ARE WE?

Who are we?

In operation since 2006, Noroit stakes its reputation on the expertise of its founders who boast a strong background in the field of laminar flow. Noroit is expanding its range of standard and bespoke products in compliance with current standards. It has developed a very similar business philosophy to Erlab: innovation and expertise. Erlab and Noroit have thus found that they can complement each other very well.

The Nantes-based company has emerged as a specialist in protective materials for biological contamination hazards in the laboratory. Noroit is constantly innovating as a company, and its biology expertise is an invaluable asset, so Erlab had to seize the opportunity to reach out.

From that meeting, in 2021, a complementary partnership was born.

This is now becoming a synergy. **Noroit is becoming ERLAB Life Sciences** to combine its biological safety expertise with the high-performance knowledge Erlab possesses in the field of chemistry.

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

The Nantes company has confirmed its expertise in the manufacture of equipment to protect against biological contamination.

Filtering toxic gases and hazardous particles is a global issue, so Erlab has been an international company from day one.

Europe: Erlab S.A.S. (France) Val de Reuil and Nantes

North America: Erlab, Inc. (USA)

Asia: Erlab Ltd (China)

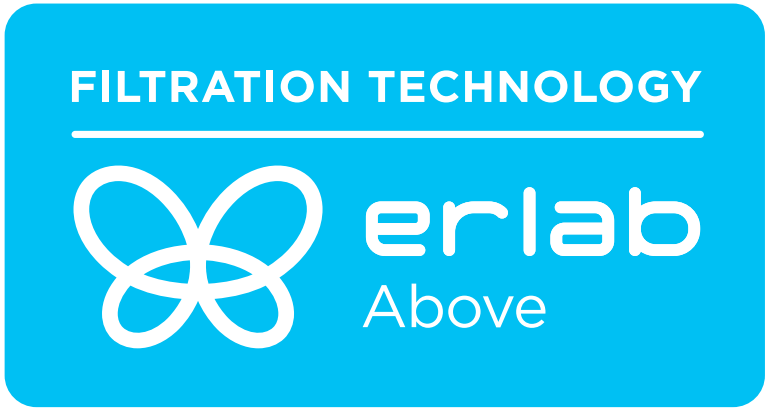
ERLAB ABOVE Filtration Technology

The result of over 50 years of researchand innovation, **ERLAB ABOVE filtration technology** is a mark of quality and a safety guarantee in the field of filtration technology **which is used to protect laboratory personnel.**

We use our technological developments and *expertise* to drive solutions, transforming the impossible into the possible.

ERLAB ABOVEis the invisible difference. It brings together technology that filters, detects and communicates, making the laboratory air you breathe cleaner and safer, both inside and out.

Accept nothing less than **ERLAB ABOVE filtration technology.** A proven mark of quality since 1972.



CONTENTS

FILTRATION TECHNOLOGY

erlab Above

ERLAB LIFE SCIENCES PRODUCT BENEFITS

Safety

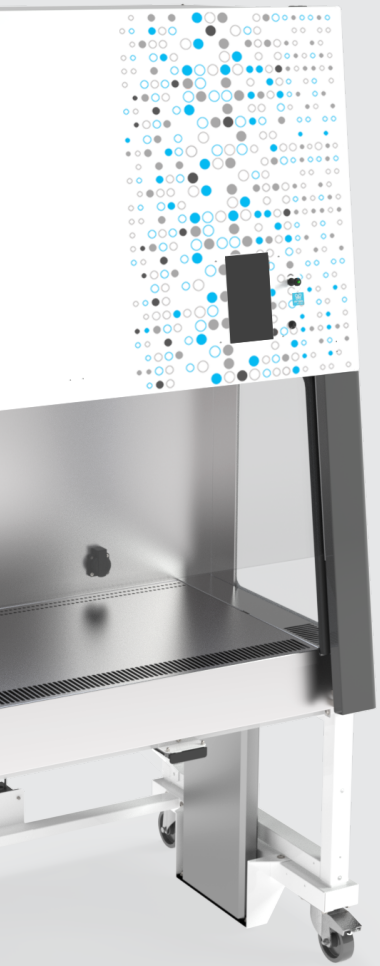
At Erlab, safety is paramount to ensuring optimal working conditions. That's why all our devices are fitted with specialised features and technology – tailored to each type of equipment – to ensure the safety of users, products and the environment. We are committed to providing reliable and secure solutions to support our customers' operations and help maintain a safe and healthy work environment.

Reduced environmental impact

To minimise its environmental impact, the Erlab Life Sciences division is a member of Clickeco, specialised in the management of specific and dangerous waste. A large proportion of our chemical and electrical waste is collected and recycled through this scheme. It also prioritises the use of local subcontractors.

Reduced energy costs

Since its creation, Erlab has been committed to designing and producing its products sustainably. Our highly energy efficient devices, such as safety cabinets, are fitted with a simple, silent fan and low-energy LEDs.



Controlled production

We are proud to promote a controlled production process from design to assembly. Our high-quality equipment is the result of our masterful expertise.

Unique technical expertise

Whatever your industry, Erlab meets all your protection needs (handling, handler, both, and more), even for the most complex situations, such as isolator technology.

Customised solutions

Erlab Life Sciences also offers customised solutions for all industry applications in addition to the standard range. Our technical expertise allows us to meet all protection needs, even for the most complex situations, such as isolator technology. Our highly skilled team allows us to offer our customers a range of innovative, reliable products, in line with laboratory needs and market expectations.

DESIGN QUALITY OF ERLAB LIFE SCIENCES PRODUCTS

Our products are customised to meet your specific needs.
Your safety is our primary concern.

01 Research and development

- Innovation
- Understanding your needs
- Developing new technologies

03 Production

- Implementation
- Standardisation

04 Guarantees

- Optimal product definition
- Optimised safety
- Constant monitoring
- Preventative measures and maintenance

Research and Development

The in-depth knowledge of our engineers and specialists on a wide range of environments and applications allows us to develop equipment that meets user needs as closely as possible. Our commitment to meeting current standards allows us to place innovation at the heart of our activity by acting within a controlled framework.

Production

At Erlab Life Sciences, we place great importance on the quality of our devices. This is reflected throughout the production process; checks are carried out upon receipt of components, and both during and following production. We have rigorous procedures in place for certification, on-site installation, equipment programming and technical inspections.

From the very start, device installation follows clearly defined quality procedures. We are proud to carry out all quality controls in-house using a team of professionals who are highly qualified and experienced in the production of biomedical equipment, which allows us to have traceability and ensure the conformity of each product.

As safety is our number one priority, we carry out additional checks according to the type of device. These checks include impermeability tests, sound assessments and brightness measurements, among other specific criteria. We can thereby guarantee that every device meets the specific needs for your application.

We also routinely carry out rigorous electrical checks on our products to provide the highest level of safety. This ensures that our devices are compliant with standards, thereby providing additional peace of mind to our customers.

Guarantees

Erlab-Noroit guarantees that its devices are free from material defects or labour-related faults at the time of shipment from the factory and that it will replace or repair this device if it is found to be defective in normal use or service for one year from the date of delivery.

Our obligation under this warranty is limited to repairing the defective device or any part thereof when returned, with freight prepaid, to an authorised service facility or to our Nantes facility.

This guarantee shall be deemed void if the device has been tampered with, improperly maintained or neglected, misused or accidentally damaged. There are no other explicit guarantees apart from those stated above. After-sales service (parts and labour) will be provided in the event of malfunction or breakage of the device.

The guarantee varies between 12 and 24 months according to the type of equipment.

THE ESP®

When Biology and Chemistry meet.

A package of three services is included with your purchase, designed to ensure your safety throughout the service life of your device.

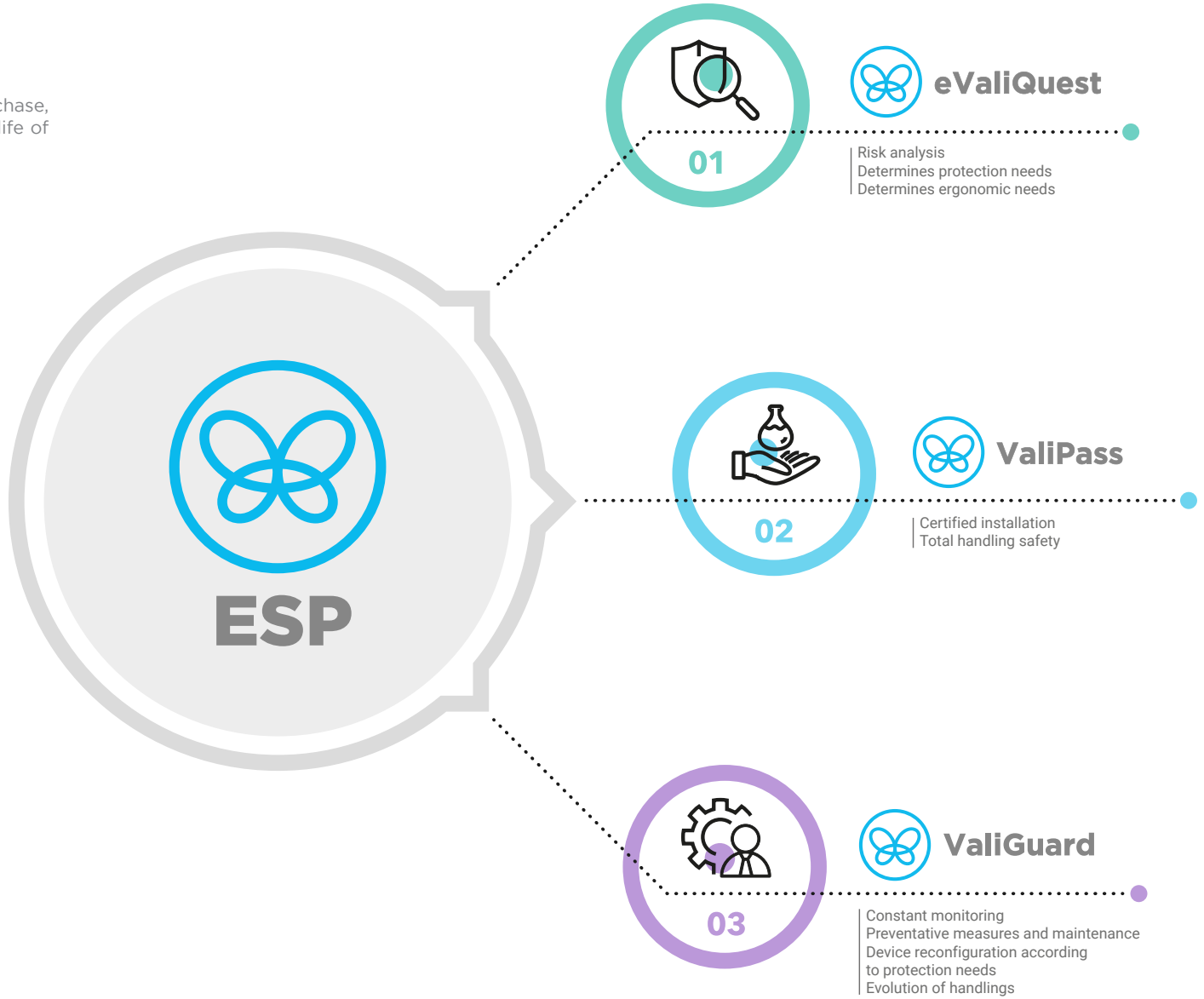
WHAT IS THE ERLAB SAFETY PROGRAM?

Erlab's long-term commitment to ensuring your safety.

Erlab's R&D laboratory analyses the interactions between molecules and particles in order to approve the filtration technology for your handlings. Based on this scientific analysis, our laboratory will recommend the type of device, filtration column configuration and enclosure size that will ensure your protection.

Contact your **ESP** specialist today to set up your Erlab protection solution**.**

Website: www.erlab.com



THE ESP®

eValiQuest®

An ESP agent will help you fill out the initial questionnaire where you will specify the handlings that you wish to carry out. Within 48 hours, our laboratory specialists will suggest which type of device and filtration technology will be suitable for your use. We are committed to ensuring your protection by certifying the feasibility of your handlings.

ValiPass®

When your equipment is installed, a usage certificate will indicate the specific chemicals used, the type of filter and the estimated service life for which your device has been validated. This certificate acts as a permanent reminder for the user or the person responsible for data safety for the use of the device.

ValiGuard®

An ESP® agent will contact you periodically to ensure that your handlings have not changed and that the filter is still effective. They will guide you through each step for checking the performance of the filter as well as for replacing it. If a change to handlings is noted, the ESP® agent will ask you to complete a new questionnaire (see step 1). After the assessment, a new usage certificate specifying the authorised chemical products will be sent to you, in order to carry out handlings in optimal safety conditions.

STANDARDS

STANDARDS

The EN 12469:2000 standard

The EN 12469:2000 standard establishes the requirements relating to safety, hygiene, minimum performance criteria and testing procedures for microbiological safety cabinets (MSCs).

It aims to guarantee the protection of the operator, the environment and the product handled within the ventilated enclosure and to prevent cross-contamination between the products handled.

This standard is vital for ensuring the quality and reliability of operations carried out in the laboratory.

This standard sets out performance requirements related to:

- **Airtightness of the enclosure**
- **Retention at the front opening**
- **Protection of the product**
- **Control of cross-contamination**
- **Impermeability to spilled liquids**
- **Cleaning capability**
- **Sterilisation capability**

The classes set out by the standard are:

Class I MSC: ventilated enclosure that guarantees protection of the operator and the environment

Class II MSC: ventilated enclosure that guarantees protection of the operator, the environment and the product, and guards against cross-contamination

Class III MSC: completely closed ventilated enclosure; the user is separated from the handling by a physical barrier that guarantees protection of the operator, the environment and the product.

The EN 14644:2015 standard

The EN 14644:2015 international standard specifies the requirements for clean rooms and controlled environments in terms of the concentration of particles present in the air.

It classifies the cleanliness of the air according to the number of particles present per unit volume of air and the standardised method of testing using sampling points.

These air cleanliness classes range from ISO 1 (the cleanest) to ISO 9 (the least clean). These cleanliness requirements are specified in various industrial sectors where air contamination can have a critical impact on the quality of the final product.

The EN 1822-1:2019 standard

The EN 1822-1:2019 applies to high efficiency and ultra-low penetration air filters (EPA, HEPA and ULPA).

A large proportion of our devices use high efficiency filtration.

The performance of this type of filter is distinguished by its ability to eliminate contaminants present in the air flow. A test is therefore carried out at the factory to confirm that the filter achieves the required level of efficiency. This is evaluated according to the MPPS (Most Penetrating Particle Size), which guarantees the filtration of the smallest contaminants, ranging from 0.1 to 0.2 microns.

Therefore, when a HEPA filter is classified as H14, this mean that it is 99.995% effective against MPPS particles.

The ISO 10648-2:1994 standard

The ISO 10648-2:1994 standard catalogues containment enclosures according to their impermeability.

Within these devices, handling can be carried out on the following:

- Sensitive products requiring a controlled atmosphere
- Radioactive or even toxic products, which must be handled within an enclosure to protect the operators and the environment

The standard also specifies the testing methods to be used during the following checks:

- Factory manufacturing
- Receipt in the laboratory
- Installation
- Periodic checks during use

FILTRATION TECHNOLOGY

Particulate filters.

Particulate filtration technology: HEPA/ULPA

The names HEPA, for “High Efficiency Particulate Air” and ULPA “Ultra Low Penetration Air” refer to air filtration technologies.

Particulate filters have four different operating modes according to the size of the particles to be filtered: interception, impact, diffusion, electrostatic effect.

HEPA/ULPA filters are the world’s most effective way of filtering air contaminated with pollen, bacteria or any other airborne particles.

There are different classes of HEPA filters for assessing their effectiveness:

- **H11:** 95% effective.
- **H12:** the filter blocks 99.5% of particles.
- **H13:** at least 99.95% of microparticles are captured.
- **H14:** nearly all particles are absorbed with 99.995% efficiency.

The efficiency of HEPA H14/ULPA U16 filters is between: 99.995% and 99.9994% of particles (HEPA) and between 99.9995% and 99.99975% of particles (ULPA). Their use in recirculation in Class II MSCs allows ISO 5 class handling, according to the EN 12469 standard.

These filters provide protection for:

- The handling: the H14 filter eliminates particles in the ambient air before it flows into the handling chamber: 99.995% MPPS in accordance with EN 1822-1.

The laminar airflow protects the samples being handled against cross-contamination. The laminar airflow velocity is 0.35 m/s ± 20% at any point on the work surface.

- **The operator:** the H14 filter eliminates particles before extraction into the laboratory, namely 99.995% MPPS in accordance with EN 1822-1.

These filters have become more efficient over the years, thus meeting the growing demand for improved air quality, particularly for technological industries, such as aerospace, pharmaceuticals, electronics, hospitals and even research laboratories.

FILTRATION TECHNOLOGY

Molecular filters.

We provide filtration technology that offers a high level of protection for laboratory personnel from inhaling chemical substances.

Our unique solutions molecular allow pollution to be captured at source and in the filters before it is are released into the clean air of the work environment. These filter cartridges are available as part of a unique activated carbon range, which is designed to protect personnel from inhalation.

This is possible thanks to the filtration technology that our Research and Development department has been continuously improving for over 50 years.

A very strict product specification based on compliance with standardised international protocols allows us to select raw materials and develop technologies with tailored porosity which have the capacity, under normal usage conditions, to adsorb a very broad spectrum of molecules without risk of desorption, just like in military-style gas masks.

Molecular filtration technology: super-activated carbon

For over a century, activated carbon has been used for its exceptional adsorption properties. There are many varieties of activated carbon that are currently used in different applications, such as water treatment, VOC, solvent recovery, chemical catalysis, etc.

Each of these uses requires an activated carbon with unique and adapted physical and chemical properties.

Our experience is based on more than 50 years of testing and is expressed in our Chemical Listing guide, which attests to our excellent mastery of filtration.
We also integrate an environmental dimension when we develop our filtration technology; in particular, refusing to use environmentally toxic substances, which we have avoided for many years.
In terms of safety, all of our filters are delivered with a quality certificate that tracks its entire manufacturing cycle.

Which molecular filter for which handling?

Different filter types	
AS	For organic vapours
BE / BE +	Multipurpose for acid vapours + organic vapours
F	For formaldehyde vapours
K	For ammonia vapours

ERLAB PRODUCTS AND THEIR APPLICATIONS

erlab
You can breathe.

erlab
You can breathe.

Customised biological protection solutions

HANDLING PROTECTION

Olis HORIZONTAL LAMINAR FLOW HOODS

Olis horizontal laminar flow hoods provide optimum handling protection. They are ideal for laboratory applications where protection of biological samples or other particle-sensitive products is required.

Olis biological enclosures are fitted with a HEPA H14 filter and provide an ISO 5 class working environment, in accordance with the EN ISO 14644-1:2015 standard.

The highly intuitive touch screen interface keeps operators constantly informed of the correct operation of their hood. In the event of a fault, a visual and audible alarm warns the user.

Pre-filter

Prefiltration is provided by a G4 pre-filter (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

DOP outlet

For the filter integrity test.
Device for measuring the particle retention efficiency of the HEPA air flow filter.

HEPA H14 filtration

Air flow filtration

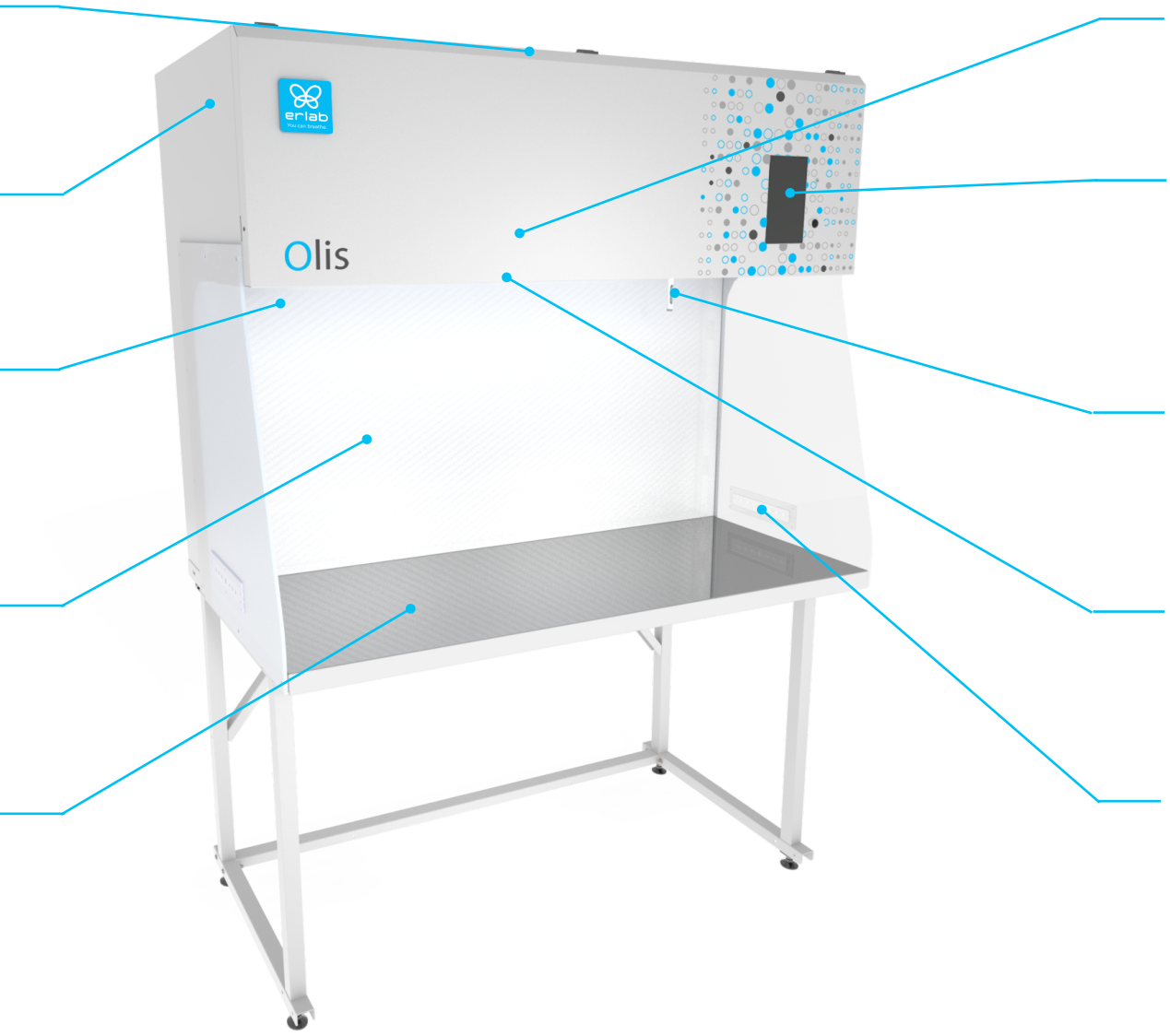
HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination.

Distribution grille

The grille covers the entire air discharge surface to protect the absolute filter and ensure excellent flow laminarity.

Work surface

In 304L stainless steel, highly resistant to corrosion.



Electrical outlets

3 electrical outlets are provided to power small devices used in the workspace, such as pipette chargers, agitators, etc.
The right-hand outlet is connected to a timer and is programmable via the touch screen.

Touch screen

The home screen displays the flow speed and alarms.
Available applications: calculator; timer; traceability tool displaying the hood's installation date, next service date and HEPA filter clogging status.

Electronic anemometer

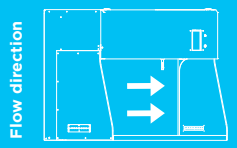
This system ensures reliable and precise measurement of the flow velocity in the workspace, which must be between 0.25 and 0.50 m/sec according to the ISO 14644 standard.

Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Cable ports

2 cable ports on each side of the hood.
The assembly consists of 2 parts to allow easy installation of cables equipped with a connector.
7 inputs available: ø8 mm x 6, ø12 mm x 1.



900

Number of filters	1
Number of pre-filters	1
Number of fans	2
Air flow rate – supply	960 m³/h
Flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption	450 W
Frame	Painted steel – Transparent PMMA side panels
Work surface	304L stainless steel
Number of electrical outlets	3
Number of cable ports	2

Tests and labelling CE

Dimensions (mm):
Internal W 985 x D 550 x H 625
External W 1030 x D 795 x H 1075

Fields of activity

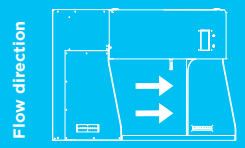
Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry



1200

Number of filters	1
Number of pre-filters	1
Number of fans	2
Air flow rate – supply	1250 m³/h
Flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption	500 W
Frame	Painted steel – Transparent PMMA side panels
Work surface	304L stainless steel
Number of electrical outlets	3
Number of cable ports	2

Tests and labelling CE

Dimensions (mm):
Internal W 1290 x D 550 x H 625
External W 1335 x D 795 x H 1075

Fields of activity

Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry

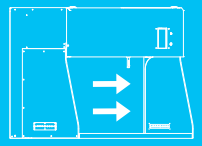
Number of filters	1
Number of pre-filters	2
Number of fans	2
Air flow rate – supply	1540 m^3/h
Flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption	650 W
Frame	Painted steel – Transparent PMMA side panels
Work surface	304L stainless steel
Number of electrical outlets	3
Number of cable ports	2

Tests and labelling CE

Dimensions (mm):
Internal W 1530 x D 550 x H 625
External W 1595 x D 795 x H 1075

Fields of activity

- Search
- Cosmetics
- Agri-food
- Aerospace, Nuclear
- Electronics industry



1800

Number of filters
1

Number of pre-filters
2

Number of fans
3

Air flow rate – supply
1665 m³/h

Flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
700 W

Frame
Painted steel – Transparent PMMA side panels

Work surface
304L stainless steel

Number of electrical outlets
3

Number of cable ports
2

Tests and labelling CE

Dimensions (mm):
Internal W 1900 x D 550 x H 625
External W 1945 x D 795 x H 1075

Fields of activity

Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry

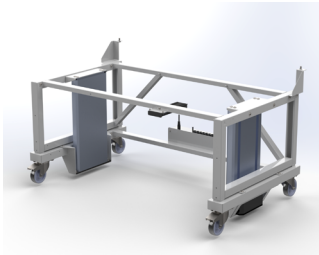
OPTIONS

for Olis horizontal laminar flow hoods

Bases

Adjustable base

Painted steel base, adjustable during installation. Base height ranging from 650 to 950 mm.
Optional fitted wheels (front wheels with brakes), making the height between 740 and 1040 mm.



Electric base

Painted steel base, electronically adjustable via a control panel. Height ranging from 584 to 884 mm.
Ability to store 3 working positions.
The electric base is fitted with wheels (front wheels with brakes).

Electrical outlets

Additional electrical outlet

Possibility to add 1 electrical outlet in the workspace in addition to the 3 electrical outlets already integrated in the hood.

Gas tap

Gas tap

Fitted to the right or left of the workspace.

Vacuum tap

Vacuum tap

Fitted to the right or left of the workspace.

CUSTOMISED SOLUTIONS

for Olis horizontal laminar flow hoods

Erlab offers customised solutions, tailored to meet the specific needs of each individual laboratory.

EXAMPLES OF SPECIFIC PROJECTS

- **Olis 1500:**

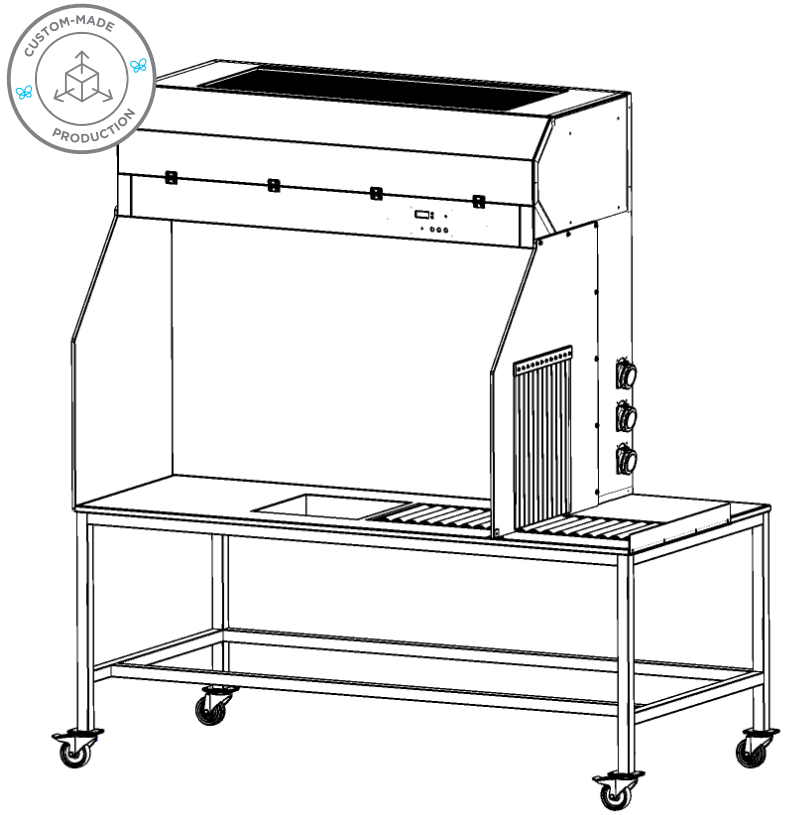
Custom-made hood designed for the preparation and filling of large containers for the cosmetics industry.

Workspace dimensions: W 1550 x D 700 x H 885 (mm).
Weighing bowl and roller conveyor integrated into the work surface.
Custom-made base, 2150 mm in length.
Cut-out on the right-hand side allows easy removal of a heavy container from the hood. Integrated transparent PVC curtains to avoid disruption of flow.

- **Olis 1200 with DPTE port:**

Animal testing laboratory.

Cut-out on the right-hand side of the hood with integrated DPTE port enabling the secure connection of a transfer container, thereby avoiding any containment breaches between the housing and handling areas.



HANDLING PROTECTION

Loïs VERTICAL LAMINAR FLOW HOODS

Loïs vertical laminar flow hoods provide optimum handling protection. They have a high-efficiency particulate filtration system (HEPA H14) that provides a particle-free workstation, eliminating all pollution around the handling.

Loïs hoods provide an ISO 5 class working environment, in accordance with the EN ISO 14644-1:2015 standard.

An optional UV lamp can be used to decontaminate the workspace and avoids cross-contamination between two handlings.

The highly intuitive touch screen interface keeps operators constantly informed of the correct operation of their hood. In the event of a fault, a visual and audible alarm warns the user.

Pre-filter

Prefiltration is provided by a G4 pre-filter (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

DOP outlet

For the filter integrity test.
Device for measuring the particle retention efficiency of the HEPA air flow filter.

HEPA H14 filtration

Air flow filtration

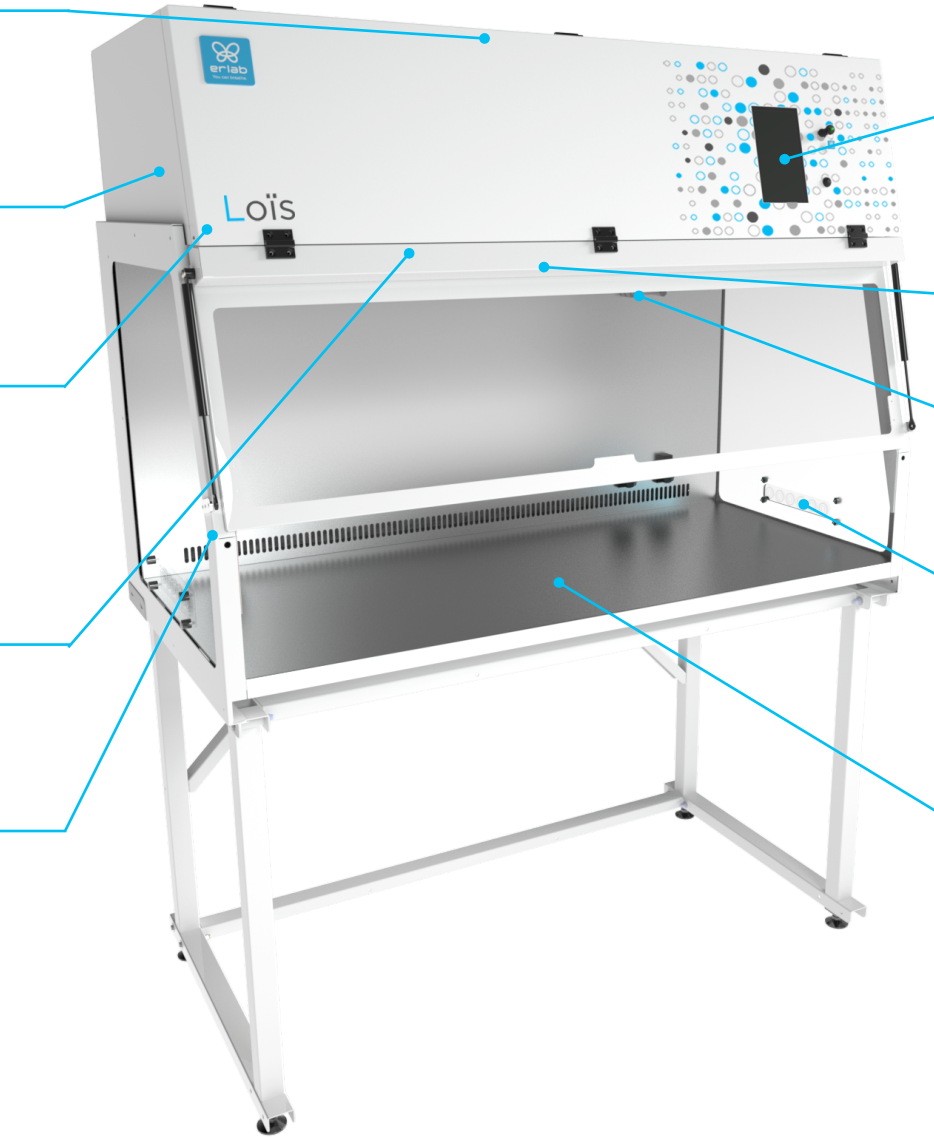
HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination.

Distribution grille

The distribution grille covers the entire air discharge surface to protect the absolute filter and ensure excellent flow laminarity.

Electrical outlets

3 electrical outlets are provided to power small devices used in the workspace, such as pipette chargers, agitators, etc.
The right-hand outlet is connected to a timer and is programmable via the touch screen.



Touch screen

The touch screen fitted to the Loïs allows easy control of the hood. The home screen displays the flow speed and alarms.
Available applications: calculator; timer; traceability tool displaying the hood's installation date, next service date and HEPA filter clogging status.

Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Electronic anemometer

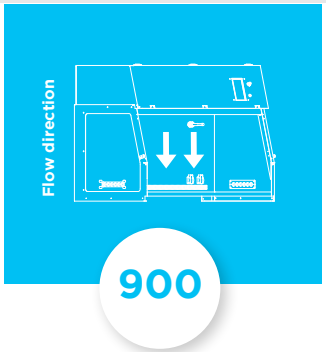
This system ensures reliable and precise measurement of the flow velocity in the workspace, which must be 0.35 m/s.

Cable ports

2 cable ports on each side of the hood.
The assembly consists of 2 parts to allow easy installation of cables equipped with a connector.
7 inputs available: ø8 mm x 6, ø12 mm x 1.

Work surface

In 304L stainless steel, highly resistant to corrosion.



Number of filters
1

Number of pre-filters
1

Number of fans
1

Air flow rate – supply
960 m³/h

Flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
450 W

Frame
Painted steel – Transparent PMMA side
side panels

Workspace and work surface
304L stainless steel

Number of electrical outlets
3

Number of cable ports
2

Tests and labelling CE

Dimensions (mm):
Internal W 985 x D 593 x H 570
External W 1025 x D 710 x H 995

Fields of activity

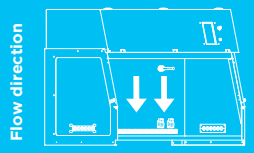
Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry



1200

Number of filters
1

Number of pre-filters
1

Number of fans
1

Air flow rate – supply
1250 m³/h

Flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
500 W

Frame
Painted steel – Transparent PMMA side
side panels

Workspace and work surface
304L stainless steel

Number of electrical outlets
3

Number of cable ports
2

Tests and labelling CE

Dimensions (mm):
Internal W 1290 x D 593 x H 570
External W 1330 x D 710 x H 995

Fields of activity

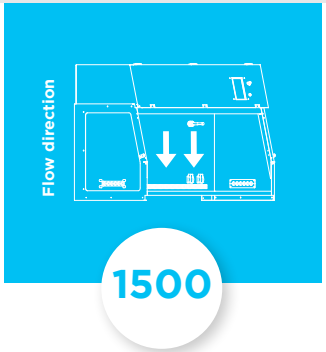
Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry



Number of filters
1

Number of pre-filters
2

Number of fans
2

Air flow rate – supply
1540 m³/h

Flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
650 W

Frame
Painted steel – Transparent PMMA side
side panels

Workspace and work surface
304L stainless steel

Number of electrical outlets
3

Number of cable ports
2

Tests and labelling CE

Dimensions (mm):
Internal W 1595 x D 593 x H 570
External W 1635 x D 710 x H 995

Fields of activity

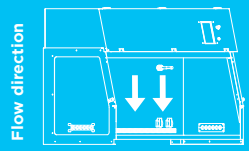
Search

Cosmetics

Agri-food

Aerospace, Nuclear

Electronics industry



1800

Number of filters
1

Number of pre-filters
1

Number of fans
2

Air flow rate – supply
1665 m³/h

Flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
700 W

Frame
Painted steel – Transparent PMMA side
side panels

Workspace and work surface
304L stainless steel

Number of electrical outlets
3

Number of cable ports
2

Tests and labelling CE

Dimensions (mm):
Internal W 1900 x D 593 x H 570
External W 1940 x D 710 x H 995

Fields of activity

- Search
- Cosmetics
- Agri-food
- Aerospace, Nuclear
- Electronics industry

OPTIONS

for Loïs vertical laminar flow hoods

Bases

Adjustable base

Painted steel base, adjustable during installation.
Base height ranging from 650 to 950 mm.
Optional fitted wheels (front wheels with brakes), making the height between 740 and 1040 mm.

Electric base

Painted steel base, electronically adjustable via a control panel. Height ranging from 584 to 884 mm.
Ability to store 3 working positions.
The electric base is fitted with wheels (front wheels with brakes).

UV decontamination

UV decontamination

For decontamination of the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the total UV decontamination time for the replacement of used tubes.

To be supplemented with a closing panel.
Option not available on the 1800 model.

Closing panel

Closing panel for UV decontamination

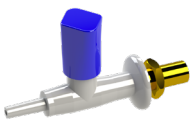
Closing panel for the hood during UV decontamination.
Opening the panel during decontamination automatically cuts off the UV to ensure maximum safety.
Device for storing the closing panel under the hood.

Gas tap

Gas tap

Fitted to the right or left of the workspace.

Vacuum tap



Vacuum tap

Fitted to the right or left of the workspace.

Electrical outlets

Additional electrical outlet

Possibility to add 1 electrical outlet in the workspace in addition to the 3 electrical outlets already integrated in the hood.

CUSTOMISED SOLUTIONS

for Loïs vertical laminar flow hoods

Erlab offers customised solutions, tailored to meet the specific needs of each laboratory.

EXAMPLES OF SPECIFIC PROJECTS

- **Loïs 1500:**

Custom-made hood used for plant breeding.

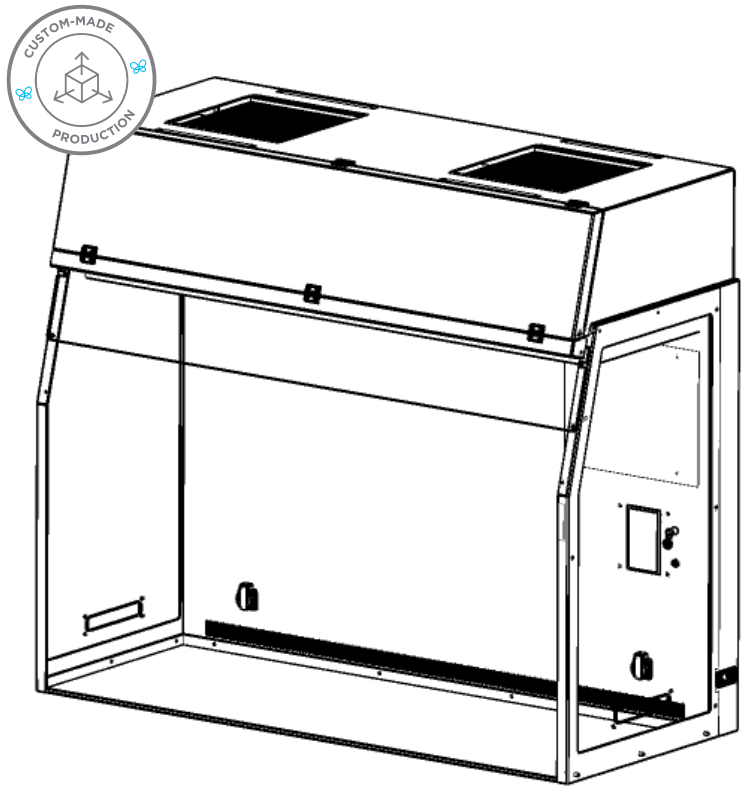
Workspace height of 1100 mm to facilitate the introduction and removal of plants.

Integrated touch screen inside the workspace.

- **Loïs 1200 with shelf:**

Custom-made hood for a virology, immunology and parasitology research laboratory.

Integrated 304L stainless steel storage shelf in the workspace to avoid congestion of the work surface and provide increased comfort.



HANDLING PROTECTION

Lys PCR WORKSTATIONS

Lys hoods are specially designed for PCR (Polymerase Chain Reaction) applications.
Available in ventilated or non-ventilated versions, they offer an optimal solution for ultraviolet decontamination. UV light exposure breaks down DNA/RNA strands that could contaminate your handling and avoids cross-contamination between two operations.

Lys ventilated hoods have a high-efficiency particulate filtration system (HEPA H14) that provides a particle-free workstation around the handling.

Pre-filtration

Ventilated Lys hood

Prefiltration is provided by a G4 pre-filter (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

DOP outlet

Ventilated Lys hood

For the filter integrity test.
Device for measuring the particle retention efficiency of the HEPA air flow filter.

HEPA H14 filtration

Ventilated Lys hood – Air flow filtration

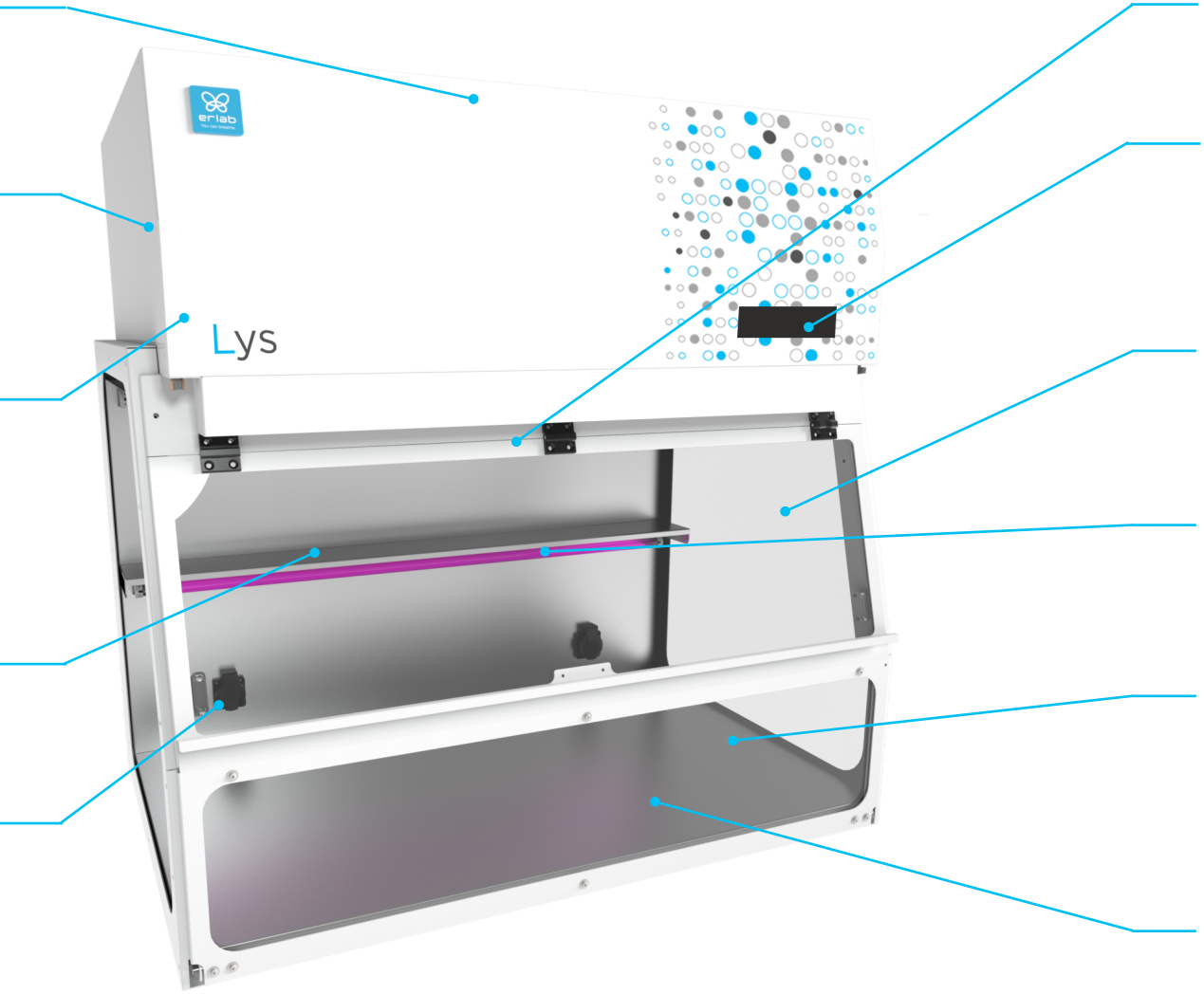
HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination.

Shelf

1 storage shelf, in 304L stainless steel.

Electrical outlets

2 electrical outlets are provided to power small devices used in the workspace, such as pipette chargers, agitators, etc.



Lighting

Neon tube, easily replaceable by the user. Uniform lighting across the entire work surface.

Control system

Very easy to use: a lighting button, a UV cycle activation button, a button for setting the UV cycle duration, an hour meter, and a ventilation activation button (ventilated Lys model).

Side and front panels

Side and front panels in laminated glass, highly resistant to UV radiation. The front panel is tilted by 25°, providing a comfortable working position.

UV decontamination

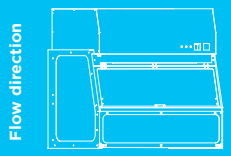
Germicidal lamp.

Closing panel

Front panel for closing the hood during UV decontamination. Device for storing the closing panel under the work surface.

Work surface and workspace

In 304L stainless steel, highly resistant to corrosion.



700

Model
Non-ventilated version

Voltage/frequency
230 V / 50 Hz

Power consumption
100 W

Frame
Painted steel – Transparent PMMA side front panels, highly resistant to UV radiation

Workspace and work surface
304L stainless steel

Number of shelves
1

UV decontamination
2 germicidal tubes

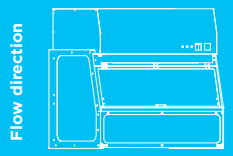
Number of electrical outlets
2

Tests and labelling CE

Dimensions (mm):
Internal W 750 x D 600 x H 580
External W 770 x D 685 x H 800

Possible uses

UV decontamination



900

Model
Non-ventilated version

Voltage/frequency
230 V / 50 Hz

Power consumption
130 W

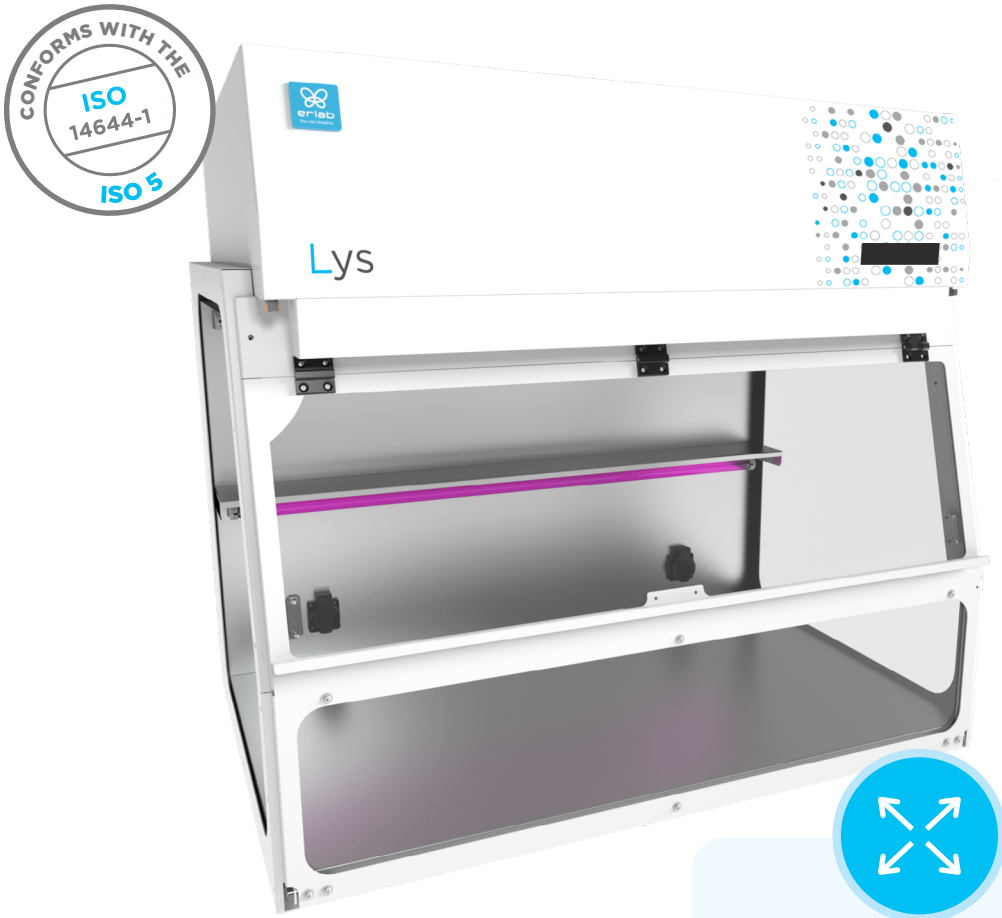
Frame
Painted steel – Transparent PMMA side front panels, highly resistant to UV radiation

Workspace and work surface
304L stainless steel

Number of shelves
1

UV decontamination
2 germicidal tubes

Number of electrical outlets
2

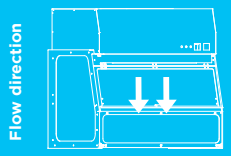


Tests and labelling CE

Dimensions (mm):
Internal W 950 x D 600 x H 580
External W 975 x D 695 x H 800

Possible uses

UV decontamination



700

Model
Ventilated version

Number of filters
1

Number of pre-filters
1

Air flow rate – supply
450 m³/h

Flow velocity
0.35 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
300 W

Frame
Painted steel – Transparent PMMA side panels, highly resistant to UV radiation

Workspace and work surface
304L stainless steel

Number of shelves
1

UV decontamination
2 germicidal tubes

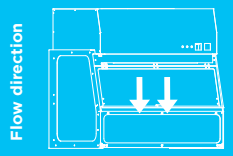
Number of electrical outlets
2

Tests and labelling CE

Dimensions (mm):
Internal W 750 x D 600 x H 580
External W 770 x D 685 x H 960

Possible uses

UV decontamination



900

Model
Ventilated version

Number of filters
1

Number of pre-filters
1

Air flow rate – supply
590 m³/h

Flow velocity
0.35 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption
330 W

Frame
Painted steel – Transparent PMMA side panels, highly resistant to UV radiation

Workspace and work surface
304L stainless steel

Number of shelves
1

UV decontamination
2 germicidal tubes

Number of electrical outlets
2

Tests and labelling CE

Dimensions (mm):
Internal W 950 x D 600 x H 580
External W 975 x D 695 x H 960

Possible uses

UV decontamination

OPTIONS

for Lys PCR workstations

Base

Adjustable base

Painted steel base, adjustable during installation. Base height ranging from 650 to 950 mm.
Optional fitted wheels (front wheels with brakes), making the height between 740 and 1040 mm.

CUSTOMISED SOLUTIONS

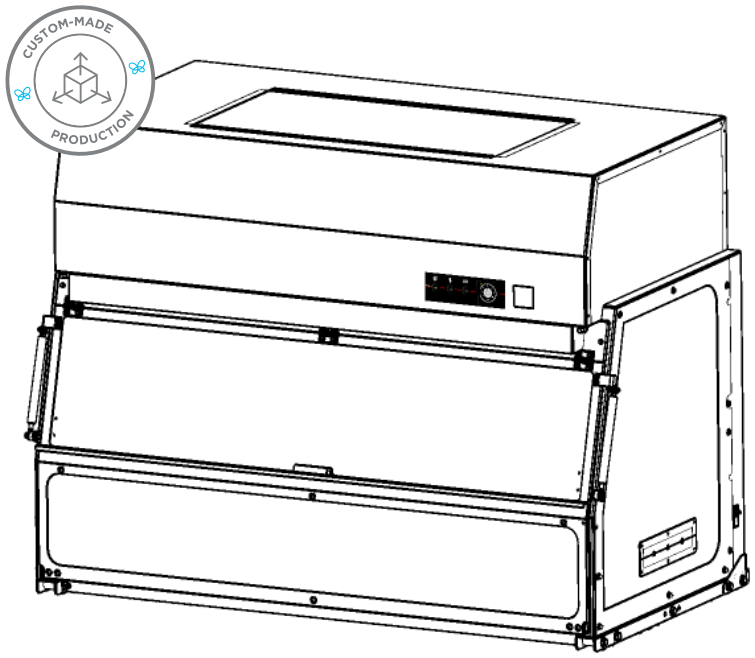
for Lys PCR workstations

Erlab offers customised solutions, tailored to meet the specific needs of each laboratory.

EXAMPLE OF A SPECIFIC PROJECT

- **Lys 1200:**

Custom-made workstation for a research laboratory.
Workspace width: 1200 mm, to ensure maximum comfort and allow storage of more small equipment and consumables on the work surface.



HANDLING PROTECTION

AIR FLOW ENCLOSURES
P.Box

P.Box air flow enclosures are ISO 5 or 7 class vertical laminar flow devices, in compliance with the ISO 14644:2015 standard. They are designed to create a clean environment within an enclosed area, protecting the product while it is being handled. They are an alternative solution to a cleanroom, simpler and much less expensive.

These devices are particularly useful in the industrial sector to protect storage areas, raw materials collection areas, and production and packaging lines.

The P.Box air flow enclosure's dimensions are tailored to suit the configuration of the environment to be protected.

DOP outlet

For the filter integrity test.
Device for measuring the particle retention efficiency of the HEPA air flow filter.

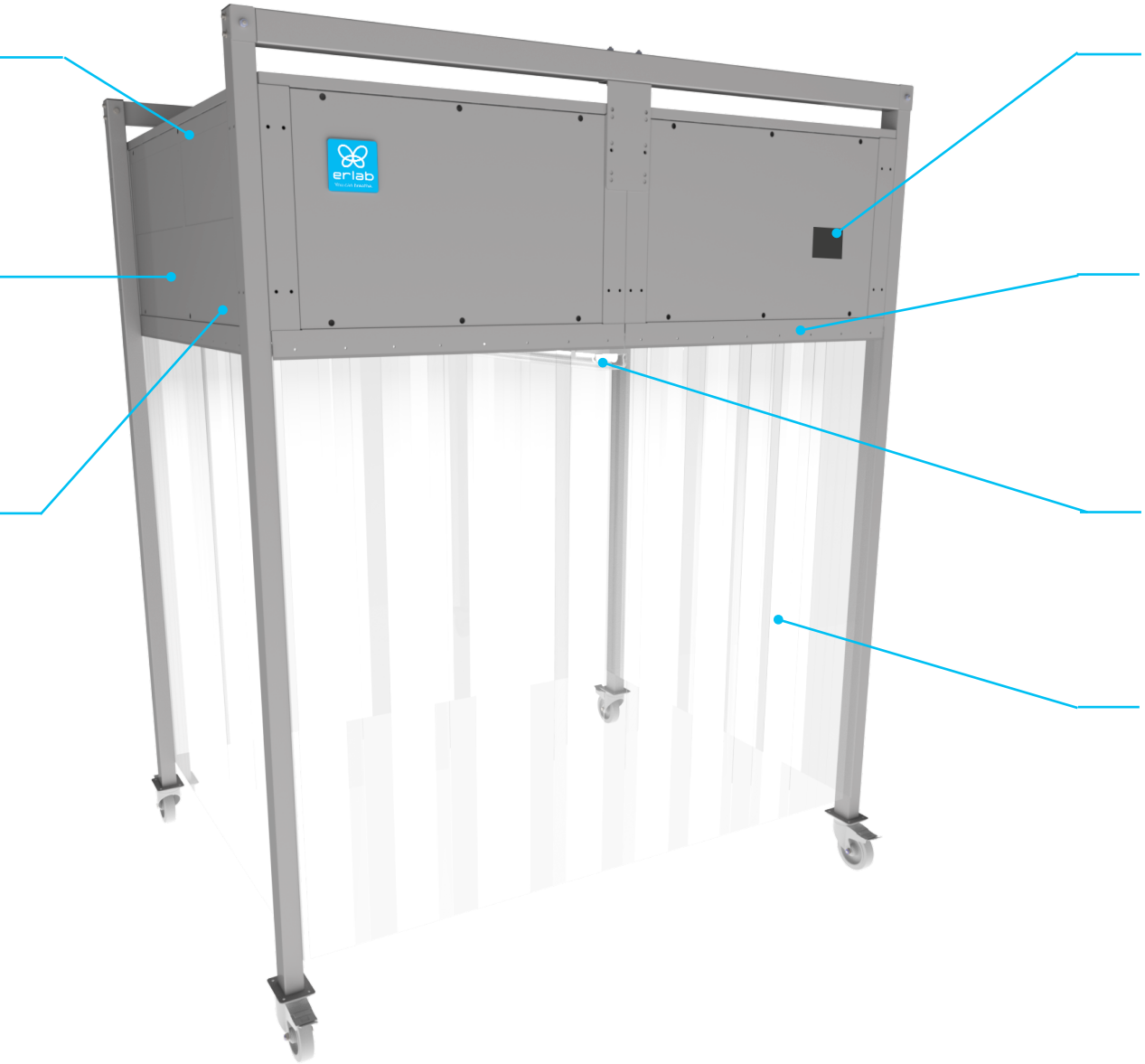
Pre-filter

Prefiltration is provided by G4 pre-filters (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

HEPA H14 filtration

Air flow filtration

HEPA, which stands for "High Efficiency Particulate Air", refers to an air filtration technology. The air flow filters remove particles from the ambient air before it flows into the enclosed area, protecting the handled products against the risk of cross-contamination.



Control system

Display and adjustment of flow velocity.
Standby button.
Lighting power button.

Distribution grille

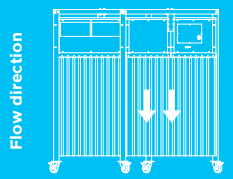
The steel distribution grille covers the entire air discharge surface to protect the absolute filter and ensure excellent flow laminarity.

Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface.

Sides

Strip curtains in flexible, transparent and anti-static PVC.



P.Box

Filtration
HEPA H14 filters

Pre-filter
G4 pre-filters

Possible configurations
ISO 5
or
ISO 7
according to the ISO 14644 standard

Frame
Painted steel
or
304L stainless steel

Sides fitted with PVC strip curtains

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Fields of activity

- Cosmetics
- Agri-food
- Aerospace, Nuclear
- Electronics industry
- Other industries

OPTIONS

for P.Box air flow enclosures

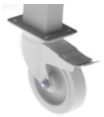
Electrical outlets

Electrical outlets

Possibility to install up to 8 electrical outlets on the legs of the air flow enclosure.

The total power consumption should not exceed 3500 W.

Wheels



Wheels

To easily move the air flow enclosure.
Wheels fitted with brakes.

Rigid PMMA panel

Rigid PMMA panel

Installed in place of the PVC curtains on one or more sides of the air flow enclosure. Possibility of integrating a PMMA door.

General flow control indicator light

Visual alarm indicator light

Placed on one side of the air flow enclosure to quickly view the flow status.

Low boxes

Low boxes

For buildings with low ceilings.

CUSTOMISED SOLUTIONS

for P.Box air flow enclosures

Erlab offers customised solutions, tailored to meet the specific needs of each industry.

EXAMPLES OF SPECIFIC PROJECTS

- **P.Box with weighing compartment**

Enclosure with integrated weighing table for the preparation of raw materials in the cosmetics industry.

Touch screen inside the workspace to control operation of the equipment in real time.

Fitted with an extraction wall to remove dust and provide the best protection to the handler.

- **Hanging P.Box**

Device without legs, hung from the ceiling of the premises, allowing the operator not to be disturbed while handling the pallet.

Ideal for rooms with a small surface area.

Why use laminar flow?

Many particles and microorganisms circulate in the atmosphere, and specifically, in work spaces. Many people think that manufacturing products or handling biological and chemical samples are tasks that require no protection. But it is quite the opposite, as they must never be exposed to airborne particles.

Therefore, to ensure an ultra-clean environment that protects your preparations, staff and the environment, there are several solutions, but the most effective solution is undoubtedly to use **laminar flow** equipment.

There are currently two main types of laminar flow: horizontal and vertical.

Unidirectional horizontal air flow: enclosures equipped with horizontal laminar flow allow, for example, particles to be effectively removed without the effects of turbulence. Air enters the enclosure via a horizontal filtration system and leaves through a perforated grille. The air flow thus prevents the accumulation of contaminants produced within the so-called “clean” area by drawing them towards the intake area as quickly as possible.

Unidirectional vertical air flow: vertical flow provides your desired air quality across the surface of your enclosure. In other words, it is distinguished by its effectiveness over the full width, height and depth of the space. It should be noted, however, that you will not be protected from turbulence with this model. Air is blown from a vertical filtration system and taken up through a vertical plenum fitted with perforated plates. Horizontal flow systems are very convenient and are the most cost effective.

In summary, you should make your choice based on the position and properties of your samples. For example, handling a low thickness product requires an enclosure with horizontal air flow. In the opposite case, it would be best to opt for an enclosure with vertical air flow to maximise the evacuation of particles from the point of use.

HANDLING PROTECTION

Pro.Box AIR FLOW ENCLOSURES FOR ROBOTIC APPLICATIONS

Pro.Box air flow enclosures are vertical laminar flow devices **that effectively protect robotised biomedical applications** to class 100/ ISO 5 standard, in accordance with the ISO 14644:2015 standard.

These devices have undergone very specific research, taking into account the constraints inherent to robots: weight, dimensions, cable outlets, robot maintenance.

Pro.Box devices are particularly useful for automation platforms, such as those used in sequencing and diagnostic laboratories, in proteomics laboratories or cytometry platforms.

DOP outlet

For the filter integrity test.
Device for measuring the particle retention efficiency of the HEPA air flow filter.

Pre-filter

Prefiltration is provided by G4 pre-filters (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

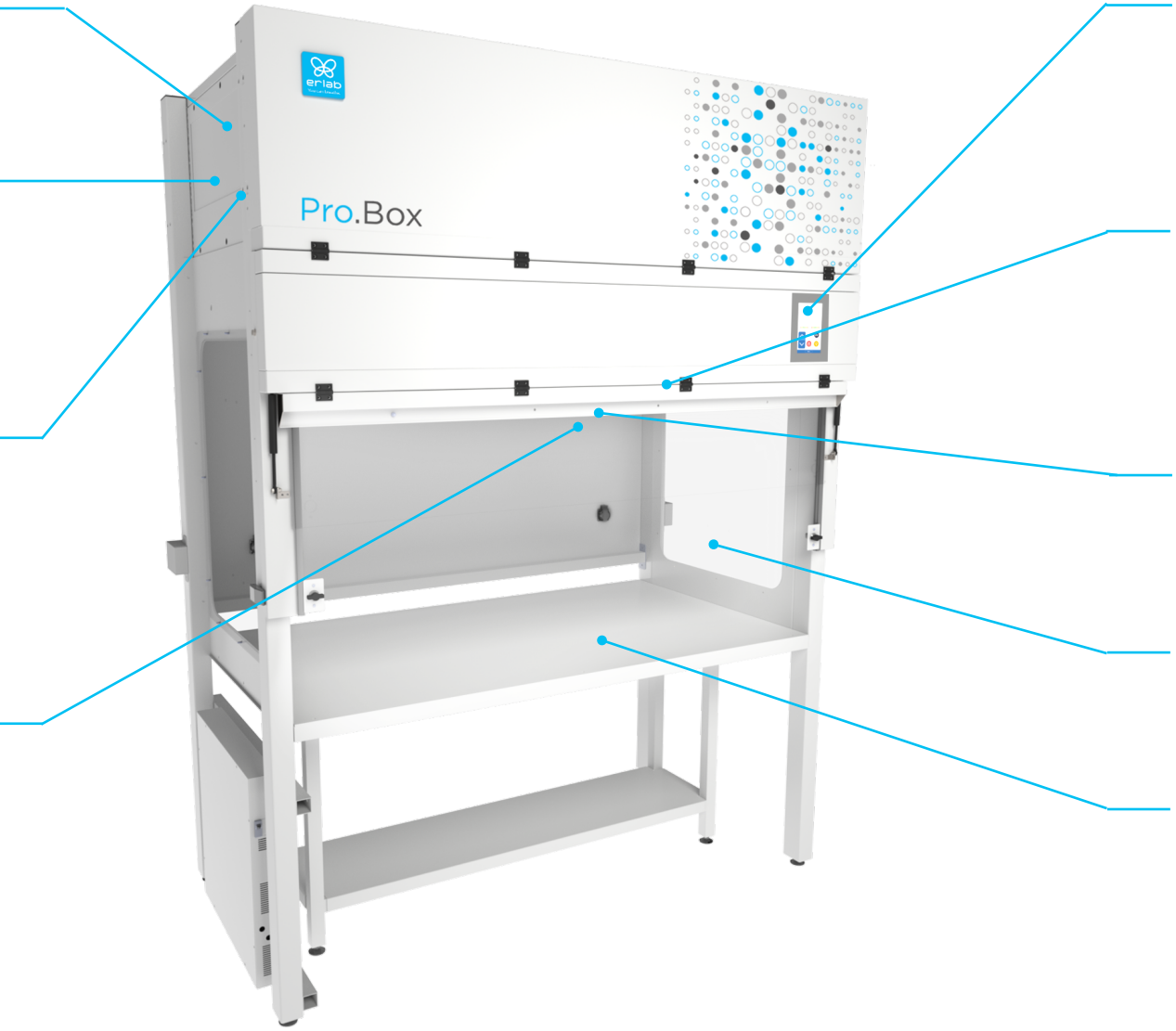
HEPA H14 filtration

Air flow filtration

HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filters remove particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination.

Anemometer

This system ensures reliable and precise measurement of the flow velocity in the workspace, which must be 0.35 m/s.



Touch screen

The touch screen fitted to the Pro.Box allows easy control of the enclosure. The home screen displays the flow speed and alarms.
Available applications: traceability tool displaying the hood's installation date, next service date and HEPA filter clogging status.

Distribution grille

The steel distribution grille covers the entire air discharge surface to protect the absolute filters and ensure excellent flow laminarity.

Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface.

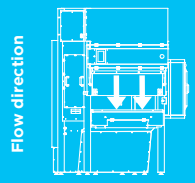
Front panel

Made of transparent PMMA, the actuator-assisted opening allows robot access during maintenance or adjustment operations.

Work surface

Made of painted steel, aluminium or stainless steel, the work surface is equipped with reinforcements to support the robot's weight.

erlab
You can breathe.



Pro.Box

Filtration
HEPA H14 filters

Pre-filtration
G4 pre-filters

Frame
Painted steel
PMMA side and front panels

Workspace and work surface
Painted steel

Voltage/frequency
230 V / 50 Hz

Flow velocity
>0.40 m/s

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Fields of activity

- Search
- Cosmetics
- Agri-food
- Aerospace, Nuclear
- Electronics industry

OPTIONS

Pro.Box air flow enclosures for robotic applications

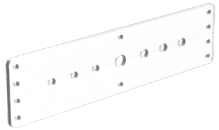
Electrical outlets

Electrical outlets

Possibility to install up to 8 electrical outlets.

The total power consumption should not exceed 3500 W.

Cable ports



Cable ports

A cable port can be fitted to the right and/or left side of the workspace. It is designed as 2 detachable parts to allow easy installation of cables with a large connector.
7 inputs are available: ø8 mm x 6, ø12 mm x 1.

Laptop bracket

Adjustable laptop bracket

Fixed to the right or left post of the enclosure.

Double front panel

Double front panel

For face-to-face handling.
Functional for applications on a robotic platform allowing access to all parts of the robot.

Work surface height

Specified work surface height

To best adapt to the size constraints of the robot.

HANDLER & HANDLING PROTECTION

CLASS II MICROBIOLOGICAL SAFETY CABINETS
Solis Essentiel & Solis Premium

Solis class II microbiological safety cabinets provide absolute biological protection for the handler, the handling and the environment against the risk of airborne contamination when handling class 2 and class 3 microorganisms and pathogens.

Fitted with HEPA H14 filters at supply and extraction, dual ventilation with EC motors and a powerful air barrier, the Solis MSC guarantees a protected workspace for safe handling.

The Solis MSC provides an extremely comfortable work environment and exceptional technical performance. Its patented front window tilting device guarantees perfect cleaning for greater safety and improved ergonomics.
The applications are available via a simple and intuitive touch screen, allowing users to focus all their attention on what is important: handling.
With so many advantages, the Solis is the essential laboratory safety cabinet.

DOP outlets

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

HEPA H14 filtration

Air flow and extraction filtration

HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Germicidal UV tubes

The MSC can be fitted with optional UV tubes on each side. For large MSC models, an additional tube is installed at the rear of the workspace.

Electrical outlets

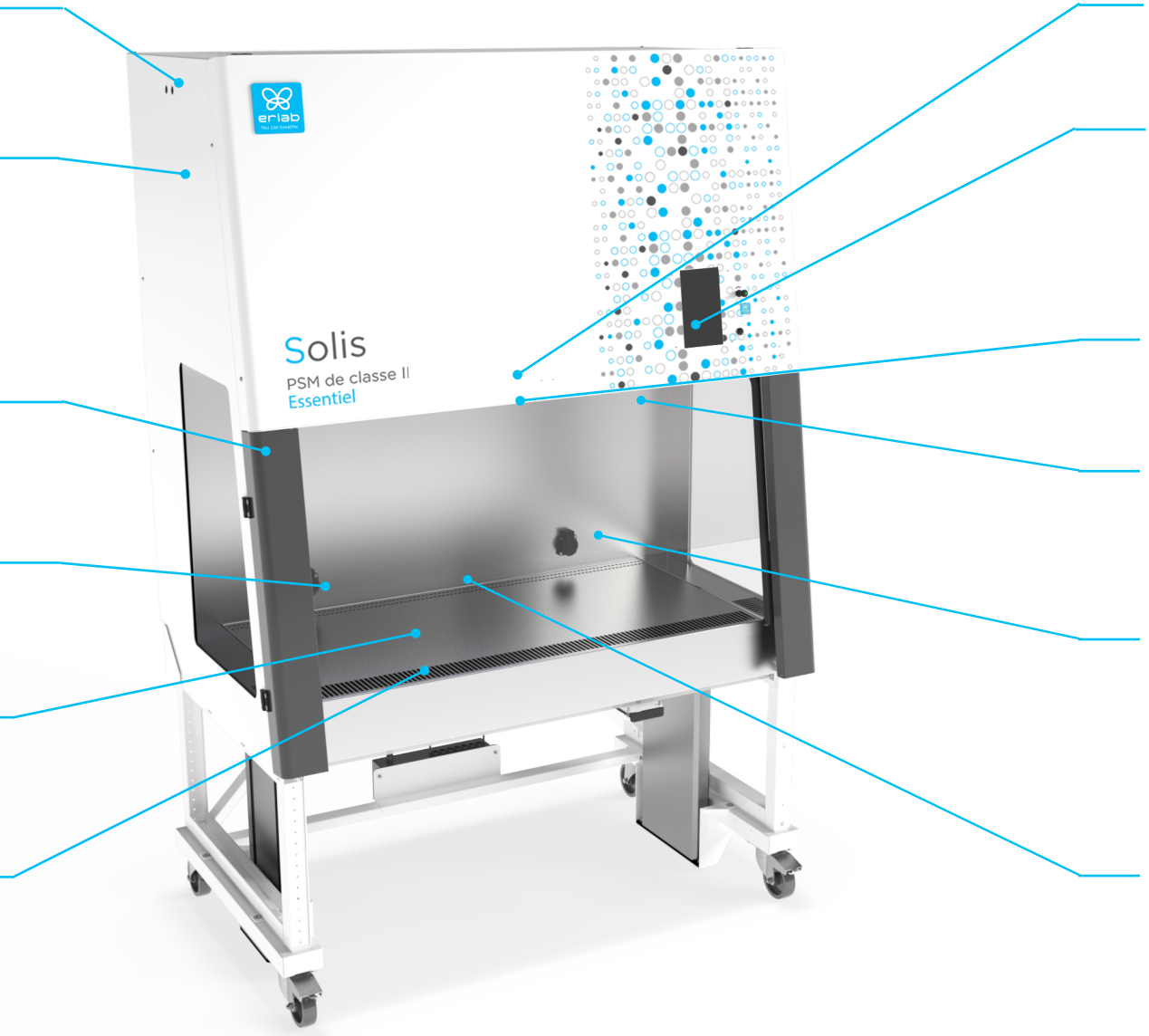
2 electrical outlets are provided to power small laboratory devices, such as pipette chargers, agitators, etc.
The right-hand outlet is connected to a timer and is programmable via the touch screen.

Work surface

Segmented (autoclavable) or monobloc, the work surface can be completely disassembled for access to the holding tank.
304L or 316L stainless steel coating, highly resistant to corrosion.

Air barrier

An air barrier is created between the handling and the operator, thus capturing any ingress/egress of potentially pathogenic particles for optimal safety.



Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Touch screen

The home screen displays the flow speed and alarms.
Available applications: calculator, timer, webcam, MP3 reader, etc.
MSC personalisation and operational monitoring: date of installation, date of next service, filter status display, etc.

Voice control

Controls the front window. Very useful when your hands are full!
Can also launch a UV cycle and control the camera.

Electronic anemometer

This system permanently controls the air velocity in the workspace to between 0.25 and 0.50 m/s, in accordance with the EN 12469 standard.

Front window

10° tilt
For optimum ergonomics of the workstation.

Electric
The working, standby and wide-open positions are set using the touch screen.

Suction protection grille

Placed under the work surface at the entrance of the extraction duct, to prevent the fan from extracting wipes, cloths or any lightweight material.

Solis Twist & Clean©
UNIQUE FRONT WINDOW CLEANING DEVICE

Failure to clean the interior window of a microbiological safety cabinet risks microbial or bacterial proliferation, which may contaminate the handling or skew test results.

The Solis microbiological safety cabinet is equipped with a patented window tilting device, so you can **easily clean** the inside of the front window: Solis Twist and Clean©.

This **innovative system** allows full cleaning of the front window and seal, while maintaining a comfortable posture.

How does the Solis Twist & Clean© device work?

1. Lower the window to the cleaning position using the touch screen.
2. Open the two grey panels.
3. Hold the two handles at the top of the window.
4. Tilt the window horizontally.
5. Clean the inside of the window and the seal.

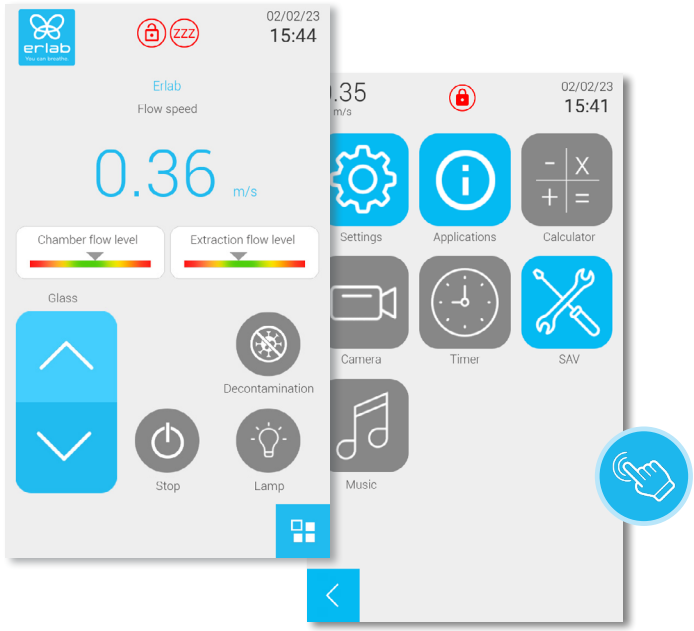
TOUCH SCREEN INTERFACE

Control your Solis MSC using a stylish and interactive touch screen.

Through its **simple and intuitive** operation, the truly innovative touch screen allows users to focus all their attention on what is important:
handling.

Using light and sound signals, the home screen indicates the level of user protection. It provides real-time information on the device's operational status.

Its interface offers a unique and customisable experience for each operator.



TOUCH SCREEN BENEFITS:

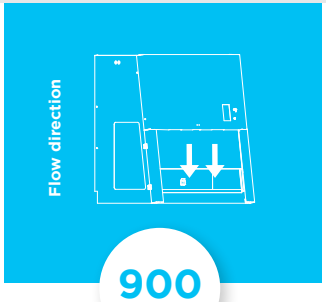
SIMPLICITY
Home screen and menu for greater ease of use.

SAFETY
Through visual and audible alarms, the interface keeps you informed of your protection status in real time.

APPLICATIONS
Various new applications to improve your day-to-day work.

PERSONALISATION
Personalise the settings of your Solis MSC.

erlab
You can breathe.



900

Number of filters	2
Number of fans	2
Air flow rate – supply	770 m³/h
Air flow rate – extraction	>240 m³/h
Incoming flow velocity	>0.40 m/s
Outgoing flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption Standby mode / Work mode	80 / 160 W
Window opening in work mode	200 mm
Frame	Painted steel – Laminated glass side and front panels
Work surface and workspace*	304L stainless steel

* Solis Premium model: 316L stainless steel

Superior quality

Solis Premium
model also available
Good Manufacturing Practices

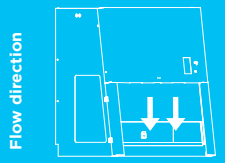
Tests and labelling CE

Dimensions (mm):
Internal W 980 x D 570 x H 650
External W 1215/1025* x D 780/820* x H 1421

* Width with panels open/closed

Fields of activity

- Search
- Electronics industry
- Hospitals
- Agri-food
- Microbiology



1200

Number of filters	2
Number of fans	2
Air flow rate – supply	1000 m³/h
Air flow rate – extraction	>320 m³/h
Incoming flow velocity	>0.40 m/s
Outgoing flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption Standby mode / Work mode	85 / 170 W
Window opening in work mode	200 mm
Frame	Painted steel – Laminated glass side and front panels
Work surface and workspace*	304L stainless steel

* Solis Premium model: 316L stainless steel

Superior quality

Solis Premium
model also available
Good Manufacturing Practices

Tests and labelling CE

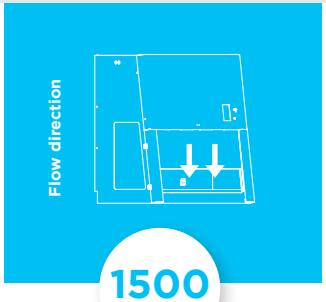
Dimensions (mm):
Internal W 1285 x D 570 x H 650
External W 1520/1330*** x D 780/820* x H 1421

* Width with panels open/closed

Fields of activity

- Search
- Electronics industry
- Hospitals
- Agri-food
- Microbiology

erlab
You can breathe.



1500

Number of filters	2
Number of fans	2
Air flow rate – supply	1240 m³/h
Air flow rate – extraction	>410 m³/h
Incoming flow velocity	>0.40 m/s
Outgoing flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption Standby mode / Work mode	105 / 300 W
Window opening in work mode	200 mm
Frame	Painted steel – Laminated glass side and front panels
Work surface and workspace*	304L stainless steel

* Solis Premium model: 316L stainless steel

CONFORMS WITH THE EN 12469 : 2000 FILTRATION STANDARD

Superior quality

Solis Premium
model also available
Good Manufacturing Practices

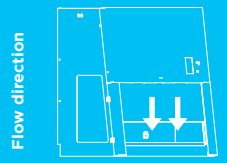
Tests and labelling CE

Dimensions (mm):
Internal W 1590 x D 570 x H 650
External W 1825/1635*** x D 780/820* x H 1421

* Width with panels open/closed

Fields of activity

- Search
- Electronics industry
- Hospitals
- Agri-food
- Microbiology



1800

Number of filters	2
Number of fans	2
Air flow rate – supply	1480 m³/h
Air flow rate – extraction	>500 m³/h
Incoming flow velocity	>0.40 m/s
Outgoing flow velocity	Between 0.25 and 0.50 m/s
Voltage/frequency	230 V / 50 Hz
Power consumption Standby mode / Work mode	110 / 310 W
Window opening in work mode	200 mm
Frame	Painted steel – Laminated glass side and front panels
Work surface and workspace*	304L stainless steel

* Solis Premium model: 316L stainless steel

Superior quality

Solis Premium
model also available
Good Manufacturing Practices

Tests and labelling CE

Dimensions (mm):
Internal W 1895 x D 570 x H 650
External W 2130/1940*** x D 780/820* x H 1421

* Width with panels open/closed

Fields of activity

- Search
- Electronics industry
- Hospitals
- Agri-food
- Microbiology

OPTIONS

for Solis microbiological safety cabinets

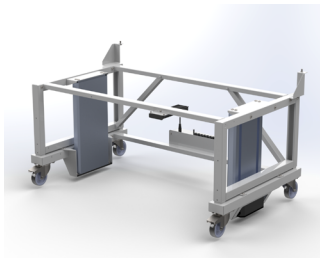
Bases

Fixed base

Painted steel base with a height of 746 mm.
Optional fitted wheels (front wheels with brakes), making the height 733 mm.

Adjustable base

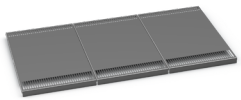
Painted steel base, adjustable during installation. Base height ranging from 650 to 950 mm.
Optional fitted wheels (front wheels with brakes), making the height between 740 and 1040 mm.



Electric base

Painted steel base, electronically adjustable via a control panel. Height ranging from 584 to 884 mm. Ability to store 3 working positions.
The electric base is fitted with wheels (front wheels with brakes).

Work surface



Segmented work surface

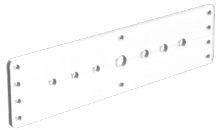
Autoclavable work surface, in 304L stainless steel for the Solis Essentiel and in 316L stainless steel for the Solis Premium.
Completely removable to access the retention trough and facilitate cleaning.

Electrical outlets

Additional electrical outlet

Possibility to add up to 2 electrical outlets in the workspace in addition to the 2 electrical outlets already integrated in the MSC.

Cable ports



Cable ports

A cable port can be fitted to the right and/or left side of the workspace. It is designed as 2 detachable parts to allow easy installation of cables with a large connector.
7 inputs are available: ø8 mm x 6, ø12 mm x 1.

Gas tap

Gas tap

Fitted to the right or left of the workspace.

Vacuum tap

Vacuum tap

Fitted to the right or left of the workspace.

Dual position of the front window

20 and 30 cm openings

A 20 cm opening of the front window for a working position under the MSC and an additional 30 cm opening to allow the introduction/removal of bulky equipment into/out of the MSC.

Arm rests

Arm rests

The 304L stainless steel arm rests provide forearm support and prevent MSDs (musculoskeletal disorders).
Can be easily clipped inside the air barrier, to the front of the MSC.

Foot rests

Adjustable footrest

Height and tilt adjustable for optimal comfort and to prevent MSDs (musculoskeletal disorders).
Stability: non-slip platform.

Front window control pedals

Control pedals

Enable the front window to be raised and lowered by pressing the pedals with your foot. Very useful when your hands are full!

Decontamination

UV decontamination

For decontamination of the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the status of the UV tubes to determine when they should be replaced.

Decontamination with H_2O_2

Installed to the right or left of the MSC, this system, with a remote reservoir, nebulises hydrogen peroxide in the workspace, thereby providing effective decontamination control.

Hanging bar

Hanging bar with hooks

In stainless steel, fixed to the rear of the workspace. For hanging equipment to prevent the work surface from becoming cluttered.

UPS (uninterrupted power supply)

UPS (uninterrupted power supply)

Maintains MSC operation for 10 minutes in case of power failure. This system ensures the safety of the handling and the operator before the device shuts down completely.

Increases the height of the MSC by 200 mm

Microscope port

Microscope port integrated into the front window

In flexible PVC, the microscope port allows safe handling under a microscope while ensuring a comfortable working position. Suitable for all microscope types.

Remember the port closure window

Port closure window

In the event of UV decontamination taking place, a closure window is integrated into the microscope port to provide optimal user protection.

OPTIONAL EXTRAS

for Solis microbiological safety cabinets

Additional extraction filtration

Activated carbon extraction filter for enhanced chemical protection

The Solis MSC can be fitted with an activated carbon filter behind the HEPA extraction filter.

This configuration is strongly recommended when handling small quantities of chemicals.

Care must be taken, as chemicals recirculating in the workspace could result in the handling in progress becoming contaminated. If this is the case, the MSC should be fitted with an activated carbon filter under the work surface rather than at the point of extraction.

Dual HEPA extraction filters

The Solis MSC can be fitted with dual HEPA H14 extraction filtration when handling mycobacterium tuberculosis. Option of connecting to the building's extraction system (direct or indirect connection).

Additional filtration under the work surface

Activated carbon filter for enhanced biological protection

The Solis MSC can be fitted with an activated carbon filter under the work surface for situations when you do not want to have air recirculating in the workspace, thereby avoiding the handling in progress becoming contaminated.

This configuration is recommended for handling CMR (carcinogenic, mutagenic and reprotoxic) chemicals.

HEPA filter under the work surface

The Solis MSC can be fitted with additional HEPA H14 filtration in the air intake to ensure optimal biological protection. Option of connecting to the building's extraction system (direct or indirect connection).

CUSTOMISED SOLUTIONS

for Solis microbiological safety cabinets

Erlab offers customised solutions, tailored to meet the specific needs of each laboratory.

EXAMPLES OF SPECIFIC PROJECTS

- **Connection of two Solis Essentiel 1200 via transfer chamber:**

MSC for surgical interventions on mice.

Handling carried out in two stages, by two operators, on two Solis MSCs in different laboratories. The two MSCs are connected by a transfer chamber to prevent any containment breaches between the two operations.

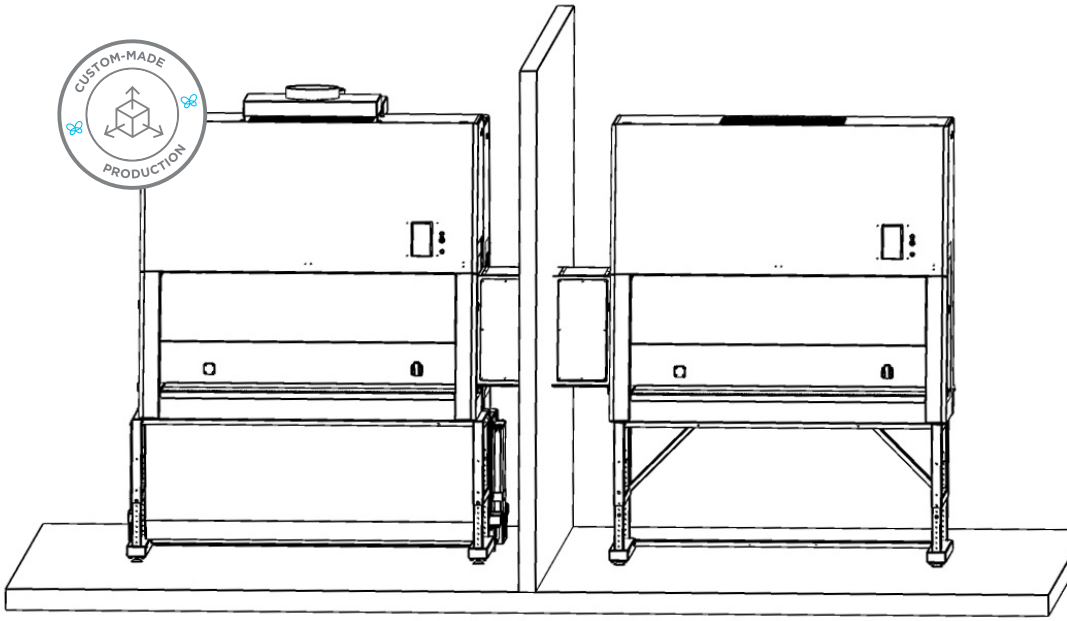
- **Solis Essentiel 1200 with special work surface:**

MSC for handling class 3 pathogenic samples.

Slightly concave (1 cm) work surface to prevent any samples rolling and falling out of the workspace, thereby providing additional user safety.

MSC for handling neutralised lye.

Work surface with integrated watertight liquid removal system for transferring neutralised lye and contaminated samples into a recycling bin under the MSC.



SOLIS MSC CONFIGURATIONS

● Standard
● Optional

Equipment

	Solis Essentiel MSC	Solis Premium MSC
Workspace and work surface – 304L stainless steel	●	
Workspace and work surface – 316L stainless steel		●
Suction protection grille – Aluminium	●	
Suction protection grille – 304L stainless steel		●
Monobloc work surface	●	●
Segmented work surface	●	●
Electrical outlets (x2)	●	●
Additional electrical outlet	●	●
Webcam	●	●
Voice control	●	●
Gas tap	●	●
Vacuum tap	●	●
Cable ports	●	●
Arm rest – 304L stainless steel	●	●
UV decontamination	●	●
Hydrogen peroxide decontamination	●	●

Standard
Optional

Equipment

	Solis Essentiel MSC	Solis Premium MSC
UPS (uninterrupted power supply)		
Front window control pedal		
USB port		
Dual window position (20/30 cm)		
Microscope port		
Microscope port closure window		
GMP		
Fixed base – with or without wheels		
Adjustable base – with or without wheels		
Electric base – with wheels		
Activated carbon extraction filter		
Activated carbon filter under the work surface		
Additional HEPA extraction filter		
Additional HEPA filter under the work surface		

HANDLER & HANDLING PROTECTION

H.Box CLASS II BIOLOGICAL HOODS FOR ROBOTIC OR CYTOMETRIC APPLICATIONS

H.Box safety enclosures are class II laminar flow hoods, the design of which is based on an MSC in compliance with the EN 12469 standard. They ensure the biological containment of large equipment and provide protection to the handler and the environment.

With a wide choice of models, H.Box biological hoods can accommodate all types of robots and all brands (pipetting robots, cell culture robots, sequencing robots, automation and flow cytometer platforms, 3D printers), ensuring that the handling is protected and carried out in complete safety.

H.Box hoods are designed to facilitate access to the equipment for adjustments and safe maintenance: vertically sliding side windows, front access hatch, sliding work surface.

Erlab is able to provide a customised solution for any specific project.

DOP outlets

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

Pre-filtration

Prefiltration is provided by G4 pre-filters (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

HEPA H14 filtration

Air flow and extraction filtration

HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Distribution grille

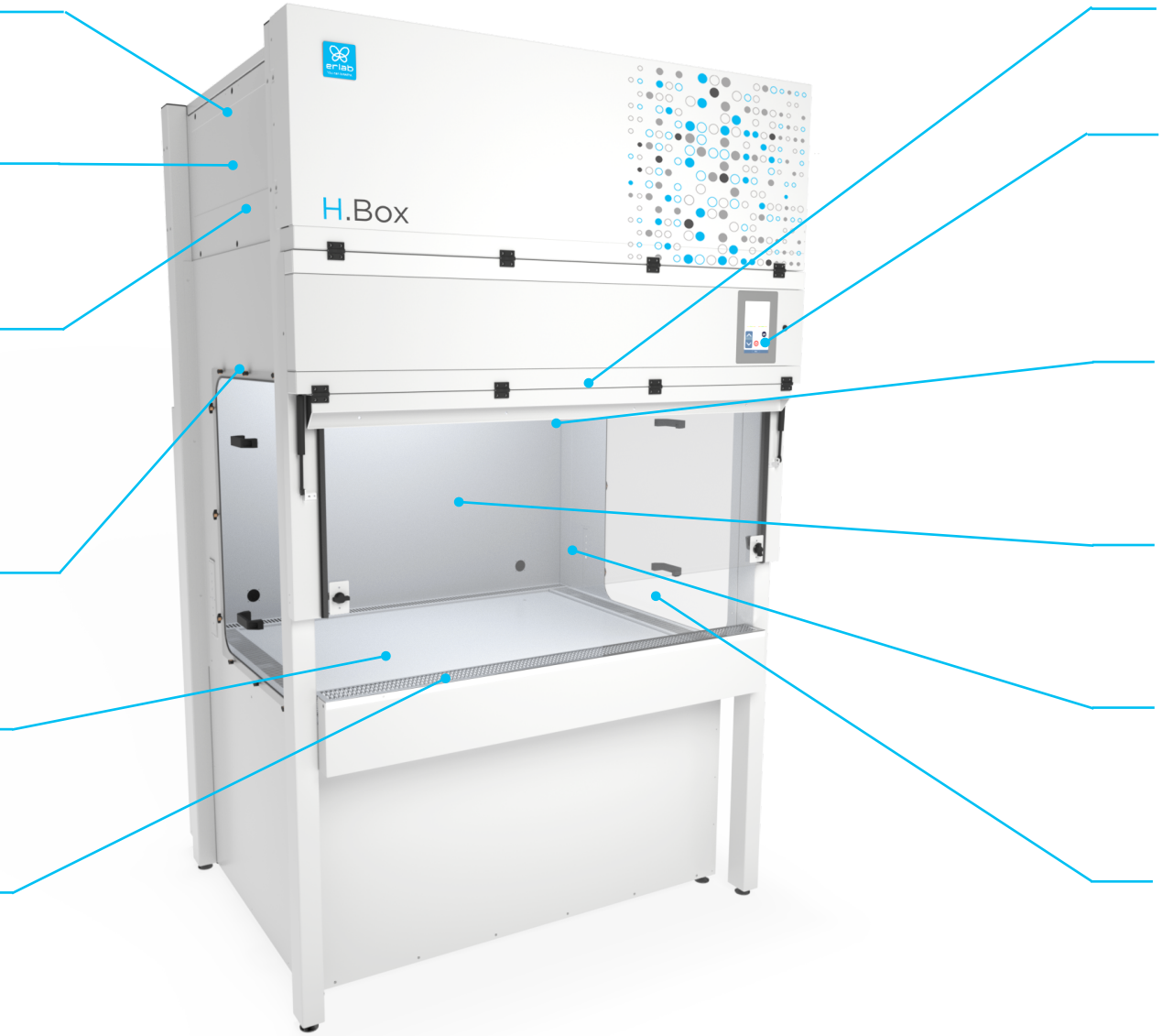
Covers the entire air discharge surface to protect the absolute filter and ensure excellent flow laminarity.

Work surface

The work surface is fitted with reinforcements to support a load of 750 kg.

Air barrier

An air barrier is created between the handling and the operator,
thus capturing any ingress/egress of potentially pathogenic particles for optimal safety.



Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Touch screen

The touch screen fitted to the H.box allows easy control of the hood. The home screen displays the flow speed and alarms.
Available applications: calculator, timer, etc.
Hood personalisation and monitoring: date of installation, date of next service, etc.

Electronic anemometer

The flow velocity and extraction output are directly measured by anemometers and continuously monitored by the electronic controls, which regulate the flow to automatically compensate for filter clogging.

Access hatch

For cytometer

For safety accessing the cytometer, allowing the cell flow rate to be adjusted.

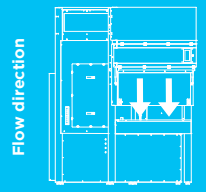
Front window

Fully opening, actuator-assisted front window, for full access to the equipment inside for maintenance operations.

Cable ports

Positioned on each side of the hood for secure connection to the liquid trolley. This device can be dismantled to allow easy installation of cables equipped with a large connector.

erlab
You can breathe.



robot

Air flow and
extraction ventilation
Full extraction for maximum operator safety

Flow velocity
0.40 m/s
-

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

LED lighting
>750 lx

Frame
Painted steel – Transparent PMMA side and front panels

Work surface
Aluminium

Number of electrical outlets
1

Number of cable ports
2

Window opening in work mode
200 mm

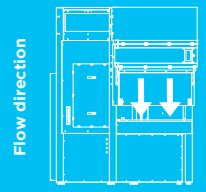
Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Possible uses

Pipetting robot

3D printers



cyto

Air flow and
extraction ventilation
Full extraction for maximum operator safety

Flow velocity
0.40 m/s
-
Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

LED lighting
>750 lx

Frame
Painted steel – Transparent PMMA side and front panels

Work surface
Aluminium

Number of electrical outlets
1

Number of cable ports
2

Window opening in work mode
200 mm

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Possible uses

Cytometry

OPTIONS

for H.Box class II hoods for robotic and cytometric applications

Electrical outlets

Additional electrical outlet

Possibility to add up to 3 electrical outlets in the workspace in addition to the electrical outlet already integrated in the hood.

Remote-operated electrical outlet

For switching on the robot from outside the hood.

Tip ejection

Tip ejection compartment

For safe retrieval of contaminated tips. Ventilated and filtered compartment to ensure the protection of the operator while replacing the biohazard waste bin. The exact placement under the work surface will depend on the type of robot inside the hood.

Non-material safety barrier

Infrared safety barrier

Installed at the front panel opening to ensure operator safety. Immediately stops the robot's arm from moving if it crosses the front opening.

Laptop bracket

Adjustable laptop bracket

Fixed to the right or left post of the hood.

UV decontamination

UV decontamination

For decontamination of the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the status of the UV tubes to determine when they should be replaced.
To be supplemented with a closing panel.

Rotating closing panel

Closing panel for UV decontamination

For completely closing the front panel of the hood during a UV cycle or periods of non-use.

Sliding side panel

Sliding window

To facilitate maintenance operations on the robot. The opening is fitted with an electronic sensor which sets off a warning light.
2 opening heights: 200 mm/400 mm.
Option incompatible with UV decontamination.

Activated carbon

Activated carbon filter

Installed in the air extraction circuit when handling small quantities of chemicals.

CUSTOMISED SOLUTIONS

for H.Box class II hoods for robotic and cytometric applications

Erlab offers customised solutions, tailored to meet the specific needs of each individual laboratory.

EXAMPLES OF SPECIFIC PROJECTS

- **H.Box 22-11 for robotic platform:**

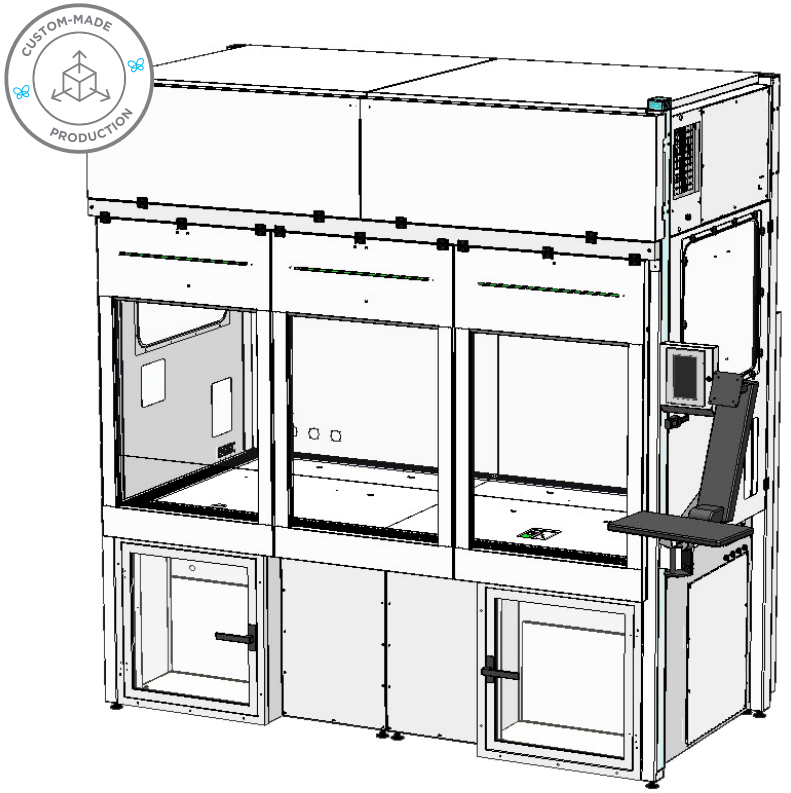
Custom-made biological enclosure for the healthcare industry.

Hood with multiple electric front panels that can be manipulated individually, thereby allowing access to the entire robotic platform.
Visual and audible alarm to protect the ongoing handling in the event that one of the front panels is opened.
Dual ejection compartments in the lower compartment for contaminated, ventilated and filtered tips.

- **H.Box 22-08 in stainless steel:**

Specialised enclosure for the pharmaceutical industry.

Hood designed entirely in corrosion-resistant 316L stainless steel for optimum quality.
Integrated lift in the lower compartment for raising/lowering heavy loads in the workspace.



HANDLER & HANDLING PROTECTION

Bin.Box CLASS II BIOLOGICAL HOODS FOR MICROSCOPIC APPLICATIONS

Bin.Box biological hoods are class II laminar flow hoods specially designed to integrate optical equipment, such as microscopes, binocular microscopes and stereo microscopes. They provide **total biological safety** to users, protecting them against the risk of airborne contamination when handling micro-organisms and pathogens.

Based on the design of an MSC and compliant with the EN 12469 standard, the front window of Bin.Box hoods is fitted with a connection port that perfectly fits the microscope's binocular eyepieces. This feature allows the user to work in a comfortable, natural position.

DOP outlets

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

Pre-filtration

Prefiltration is provided by G4 pre-filters (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

HEPA H14 filtration

Air flow and extraction filtration

HEPA, which stands for "High Efficiency Particulate Air", refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Distribution grille

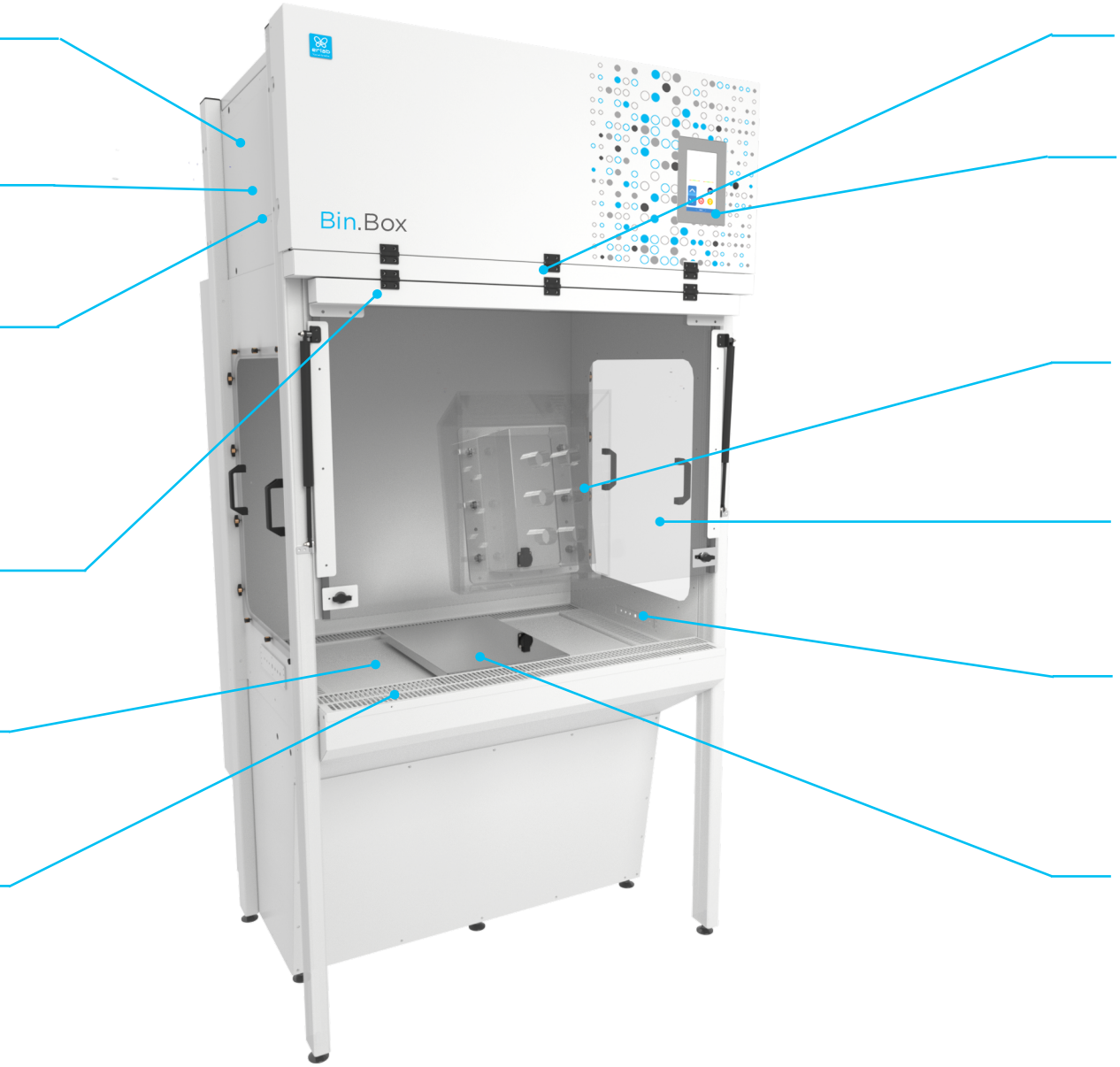
Covers the entire air discharge surface to protect the absolute filter and ensure excellent flow laminarity.

Work surface

The work surface is fitted with reinforcements to support a load of 750 kg.

Air barrier

An air barrier is created between the handling and the operator, thus capturing any ingress/egress of potentially pathogenic particles for optimal safety.



Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Touch screen

The touch screen fitted to the Bin.Box allows easy control of the hood. The home screen displays the flow speed and alarms.
Available applications: calculator, timer, etc.
Hood personalisation and monitoring: date of installation, date of next service, HEPA filter status, etc.

Connection port

In flexible PVC, a perfect fit for the microscope's binocular eyepieces. Natural, ergonomic working position.

Front window

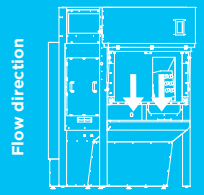
Fully opening, actuator-assisted front window, for full access to the devices inside for maintenance operations.

Cable ports

Positioned on each side of the hood. This device can be dismantled to allow easy installation of cables equipped with a large connector.

Weighing plate

Positioned on a silentbloc system, composed of several layers of stainless steel separated by silicone insulation to provide excellent stability and avoid any vibration.



Bin.Box

Air flow and
extraction ventilation
Full extraction for maximum operator safety

Flow velocity
0.40 m/s
-
Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

LED lighting
>750 lx

Frame
Painted steel – Transparent PMMA side and front panels

Work surface
Aluminium

Number of electrical outlets
1

Number of cable ports
2

Window opening in work mode
200 mm

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Possible uses

Microscopes and binocular microscopes

OPTIONS

for Bin.Box CLASS II BIOLOGICAL HOODS FOR MICROSCOPIC APPLICATIONS

Electrical outlets

Additional electrical outlet

Possibility to add up to 3 electrical outlets in the workspace in addition to the electrical outlet already integrated in the hood.

Remote-operated electrical outlet

For switching on an electrical device from outside the hood.

UV decontamination

UV decontamination

For decontamination of the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the total UV decontamination time for the replacement of used tubes.
To be supplemented with a closing panel.

Thermostatic hotplate

Hotplate

Dimensions: W 600 x D 400 mm.
With digital temperature controller.

Rotating closing panel

Closing panel for UV decontamination

For completely closing the front panel of the hood during a UV cycle or periods of non-use.

Laptop bracket

Adjustable laptop bracket

Fixed to the right or left post of the enclosure.

Activated carbon

Activated carbon

Installed in the air extraction circuit when handling small quantities of chemicals.

ABSOLUTE CONTAINMENT

I.Box + ISOLATORS FOR PHARMACEUTICAL AND MEDICAL RESEARCH APPLICATIONS

I.Box + isolators are designed to provide a very high level of containment in the pharmaceutical and medical research sectors, thereby ensuring complete protection for the user and the handling carried out in the enclosure.

Thanks to pure filtered air ventilation in class 100 - ISO5 and precise pressure measurement, I.Box + isolators provide a contained, controlled environment.

This high-tech equipment is customised and tailor-made according to the applications, substances handled and industry requirements.

DOP outlet

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

Filtration

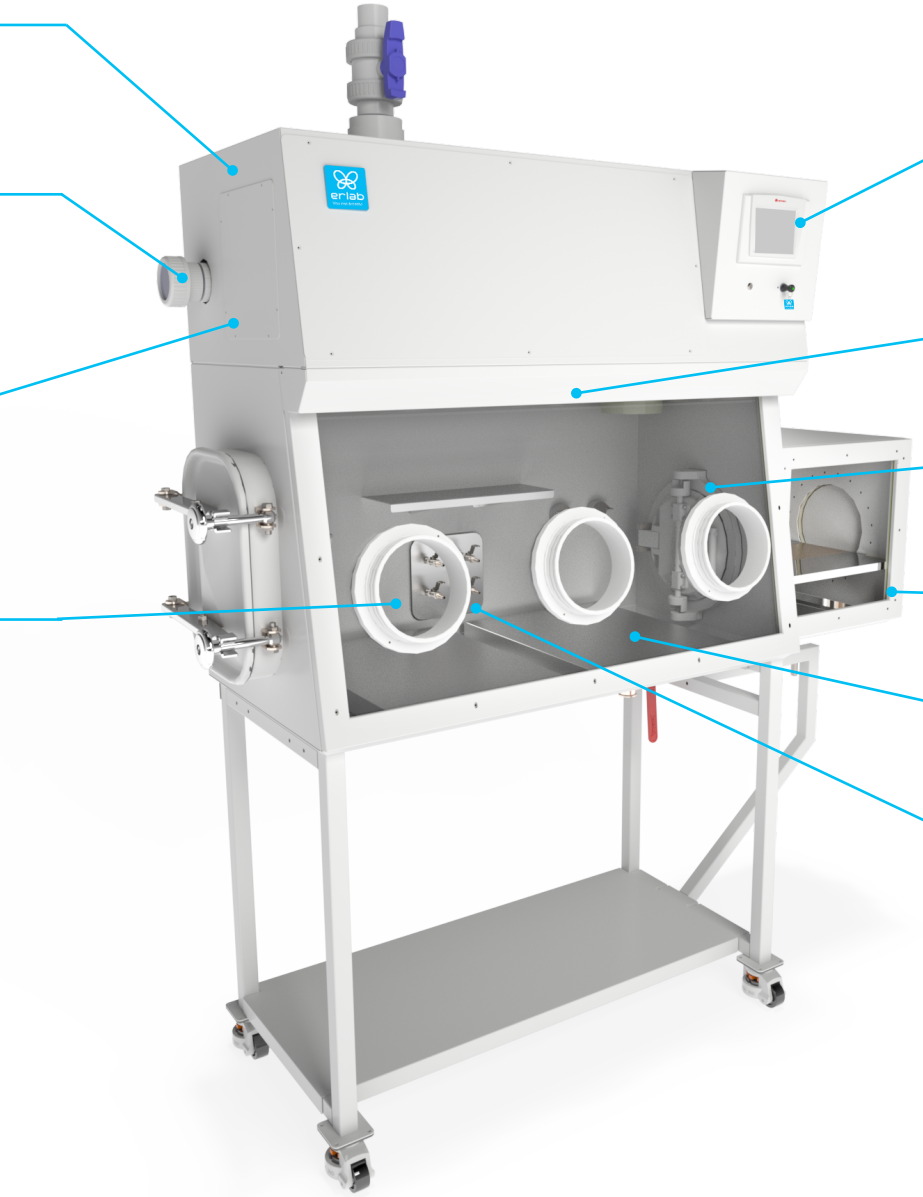
HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the handling chamber, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Pre-filtration

Prefiltration is provided by G4 pre-filters (>85% gravimetric efficiency), located upstream of the absolute filter and easily replaceable by the user.

Workspace

2, 3, 4 or 8 glove configuration.
Operational in overpressure or underpressure.
Easy-to-clean 316L stainless steel work surface, polished welds and 45° corners.



Control system

Touch screen fully operated by a programmable control unit.
Sets and displays the target pressure in the workspace.
Sets and displays the alarm thresholds.
Displays the status of the doors and deadlock.
Automatically tests at start-up to ensure pressure is maintained.
Emergency stop button.

Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface.

Sealed double transfer door (DPTE)

Safe introduction and removal of products to/from the handling area.

Entry/exit port

Fitted with a DPTE port.
Option of adding HEPA H13 or H14 filtration.
Operational in overpressure or underpressure.

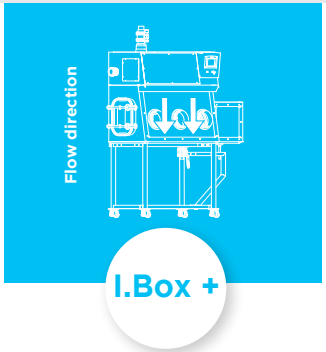
Work surface

Easy-to-clean 304L or 316L stainless steel, polished welds and 45° corners.

Fluid plate

Fluid plate with 3 waterproof electrical outlets and 3 cable ports for powering small devices inside the workspace.

erlab
You can breathe.



I.Box +

Frame
304L or 316L stainless steel

Work surface
304L or 316L stainless steel

Front panel
Safety glass
8° tilt

Configuration
Online or face-to-face

Number of gloves
2, 3, 4 or 8

Operational
in overpressure or underpressure

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Fields of activity

- Search
- Electronics industry
- Hospitals

OPTIONS

for I.Box plus pharmaceutical and medical research isolators

Entry/exit port

Entry and/or exit port
The ports can be fitted with a sliding shelf to facilitate transfers into the handling chamber.
Dimensions available on request.

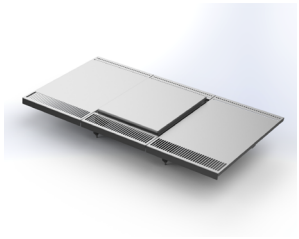
Fluid plate

Additional fluid plate

Waste removal

Waste removal
Work surface fitted with a female "safety" DPTE port, which cannot be opened if a BetaBag is not connected.

Weighing station



Anti-vibration weighing station
For precise weighing.
The weighing plate rests on 4 anti-vibration pads and a flexible PVC membrane to prevent vibration transmission.

Weighing station

BetaBag
BetaBag fitted with a male DPTE port for safe, fully watertight removal of solid or liquid waste.

Sterilisation

Integrated and automatic sterilisation of the chamber and waste port.

ANIMAL EQUIPMENT

A.Box ANIMAL CABINETS

A.Box ventilated animal cabinets provide efficient filtered air renewal, guaranteeing **optimal conditions for housing rodents.**
They are ideal for housing animals used for specific studies or tests in the fields of biomedical research or zootechnics.

To meet zootechnics' special needs, A.Box ventilated laminar flow cabinets are available with:

- **Positive pressure** to protect rodents from contamination
- **Negative pressure** to protect users when breeding pathogenic rodents

HEPA H14 filtration

Filtration is provided by a HEPA H14 filter (efficiency >99.995% MPPS, in accordance with EN 1822-1) located at the ventilation inlet or outlet, depending on the type of pressure selected.

Pre-filtration

Housing rodents generates a large number of fine particles (litter, food, hair, etc.). Prefiltration therefore prevents premature clogging of the HEPA H14 filter.

Shelves

Autoclavable 304L stainless steel.

Cabinet interior

In PVC to reduce noise when the cages are handled, thereby minimising stress for the animals.

Control system

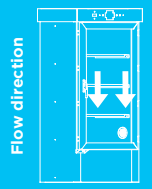
To easily control the animal cabinet. The control system displays the internal pressure.

Doors

In transparent PMMA, with a perimeter seal to ensure complete airtightness.

Power cable

2.5 metres in length.



80

Frame
Painted steel – PMMA door – PVC interior

Shelves
304L stainless steel

Number of shelves
4

Number of doors
1

Voltage/frequency
230 V / 50 Hz

Power consumption
300 W

Power consumption (with optional heating)
800 W

Capacity – Type 1 cage
(332 x 150 x 130 mm)
16

Capacity – Type 2 cage
(267 x 207 x 140 mm)
12

Capacity – Type 3 cage
(426 x 266 x 180 mm)
8

Capacity – Type 4 cage
(590 x 385 x 200 mm)
4

Tests and labelling CE

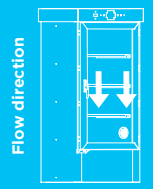
Dimensions (mm):
Internal W 690 x D 500 x H 1230
External W 900 x D 600 x H 1785/1915*

* Min/max height with or without wheels

Animals housed

Mice

Rats



120

Frame
Painted steel – PMMA door – PVC interior

Shelves
304L stainless steel

Number of shelves
8

Number of doors
2

Voltage/frequency
230 V / 50 Hz

Power consumption
300 W

Power consumption (with optional heating)
1300 W

Capacity – Type 1 cage
(332 x 150 x 130 mm)
24

Capacity – Type 2 cage
(267 x 207 x 140 mm)
16

Capacity – Type 3 cage
(426 x 266 x 180 mm)
8

Tests and labelling CE

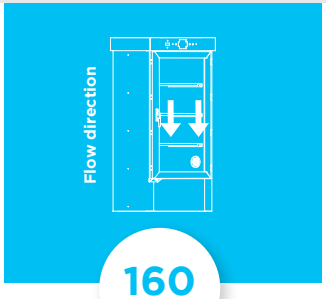
Dimensions (mm):
Internal W 1050 x D 500 x H 1230
External W 1270 x D 600 x H 1785/1915*

* Min/max height with or without wheels

Animals housed

Mice

Rats



160

Frame
Painted steel – PMMA door – PVC interior

Shelves
304L stainless steel

Number of shelves
8

Number of doors
2

Voltage/frequency
230 V / 50 Hz

Power consumption
300 W

Power consumption (with optional heating)
1300 W

Capacity – Type 1 cage
(332 x 150 x 130 mm)
32

Capacity – Type 2 cage
(267 x 207 x 140 mm)
24

Capacity – Type 3 cage
(426 x 266 x 180 mm)
16

Capacity – Type 4 cage
(590 x 385 x 200 mm)
8

Tests and labelling CE

Dimensions (mm):
Internal W 1380 x D 500 x H 1230
External W 1600 x D 600 x H 1785/1915*

* Min/max height with or without wheels

Animals housed

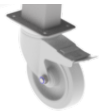
Mice

Rats

OPTIONS

for A.Box animal cabinets

Wheels



Wheels

4 wheels with soft rubber tyres for silent transport and to avoid stress for the animals.
The 2 front wheels are fitted with brakes.

Adjustable brightness

Adjustable brightness

For fine-tuning the brightness in the animal cabinet.

Heating

Programmable heating

It is easy to program the desired temperature inside the cabinet.
- Minimum temperature = room temperature
- Maximum temperature = 32°C

Alarm forwarding

Alarm forwarding: dry contact output

The cabinet is fitted with a dry contact output allowing the connection of an alarm system (not included) to alert you to any faults via your mobile phone.

Day/night cycle

Day/night cycle programming

Simple and intuitive programming via the interface.
The cabinet is fitted with horizontal LED strips on each shelf, providing soft, uniform lighting.
- Day cycle: white light
- Night cycle: red light

The cabinet's doors are fitted with a red one-way film. This allows you to observe the animals from the outside without them seeing you.

Activated carbon

Activated carbon filter

Placed at the ventilation outlet to effectively stop odorous molecules.
Easily replaceable by the user.

Humidity

Humidity display

Displays the humidity levels in the cabinet.

ANIMAL EQUIPMENT

Anilis MSCS/CHANGING STATIONS

Anilis class II MSCs/changing stations are designed to **protect rodents** during cage changing operations. They also **protect users** from inhaling particles created by litter or animal hair, and from any biological risk associated with handling contaminated animals.

Fitted with HEPA H14 filters at supply and extraction, dual ventilation with EC motors and a powerful air barrier, the Anilis MSC guarantees a protected workspace for safe handling.

With its original and innovative design, the Anilis MSC offers unparalleled working comfort when handling rodent cages, providing unrivalled biological safety. Its patented front window tilting device guarantees perfect cleaning for greater safety and improved ergonomics. The applications are available via a simple and intuitive touch screen, allowing users to focus all their attention on what is important: handling.

DOP outlets

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

HEPA H14 filtration

Air flow and extraction filtration

HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Electrical outlets

2 electrical outlets are provided to power small laboratory devices.
The right-hand outlet is connected to a timer and is programmable via the touch screen.

Work surface

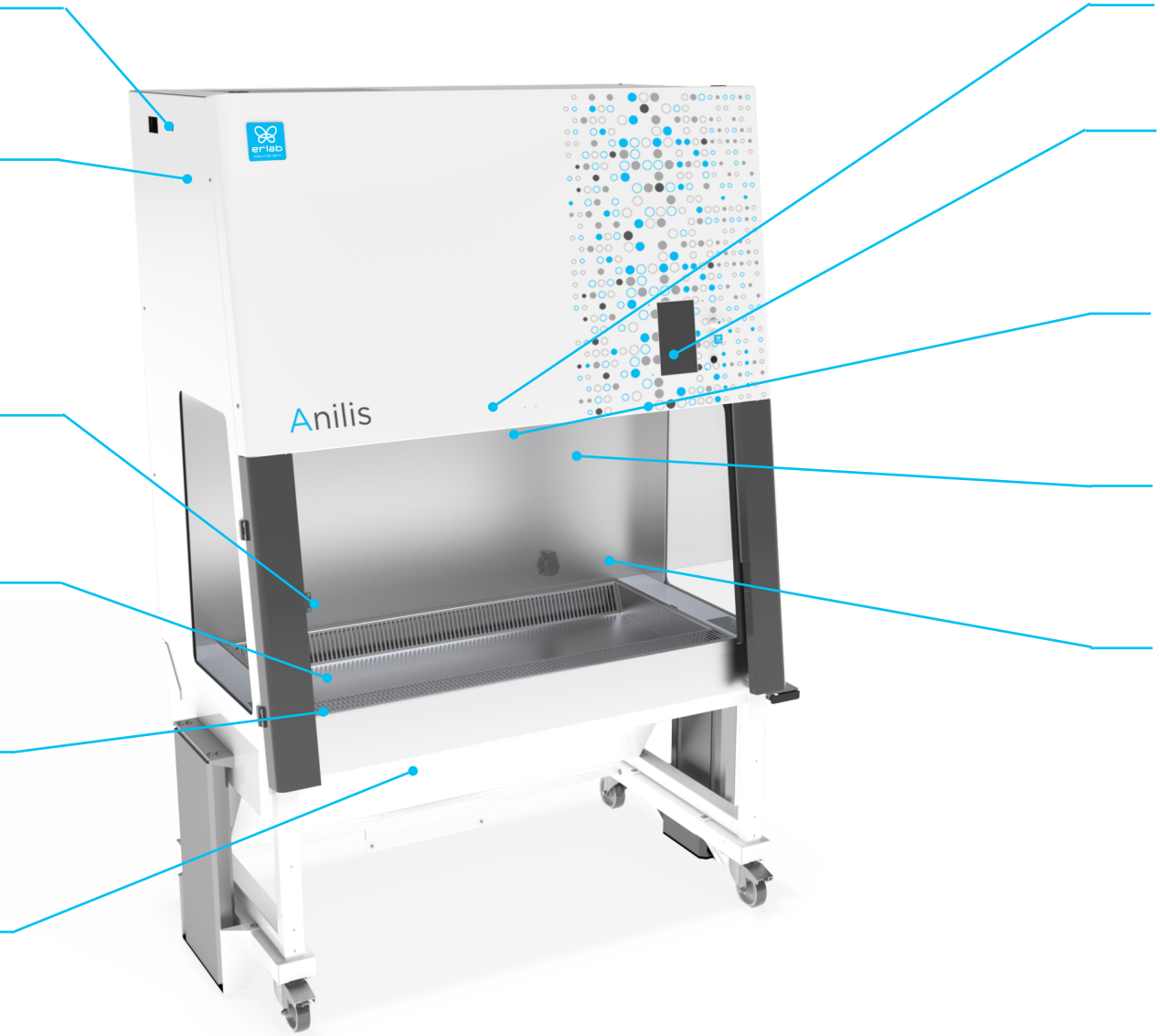
304L stainless steel coating.
The work surface can either be concave to facilitate changing operations or flat for a better working position when handling rodents.

Air barrier

An air barrier is created between the handling and the operator, thus capturing any ingress/egress of potentially pathogenic particles for optimal safety.

Pre-filters

Prefiltration located under the work surface to trap litter residue and hair, and to minimise clogging of the absolute filters.
Easily replaceable by the user.



Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Touch screen

The home screen displays the flow speed and alarms. Available applications: calculator, timer, webcam, MP3 reader, etc.
MSC personalisation and monitoring: date of installation, date of next service, etc.

Voice control

Controls the front window. Very useful when your hands are full!
Can also launch a UV cycle and control the camera.

Electronic anemometer

This system permanently controls the air velocity in the workspace to between 0.25 and 0.50 m/s, in accordance with the EN 12469 standard.

Front window

10° tilt
For optimum ergonomics of the workstation

Electric
The working, standby and wide-open positions are set using the touch screen. Two working positions: “PSM”, with an opening of 20 cm, and “cage introduction/removal”, with an opening of 30 cm.

Solis Twist & Clean©
UNIQUE FRONT WINDOW CLEANING DEVICE

Failure to clean the interior window of a microbiological safety cabinet risks microbial or bacterial proliferation, which may contaminate the handling or skew test results.

To **facilitate cleaning** of the inside of its front window, the Anilis microbiological safety cabinet/changing station is equipped with a patented window tilting device: Anilis Twist and Clean©.

This **innovative system** allows full cleaning of the front window and seal, while maintaining a comfortable posture.

How does the Anilis Twist & Clean© device work?

1. Lower the window to the cleaning position using the touch screen.
2. Open the two grey panels.
3. Hold the two handles at the top of the window.
4. Tilt the window horizontally.
5. Clean the inside of the window and the seal.

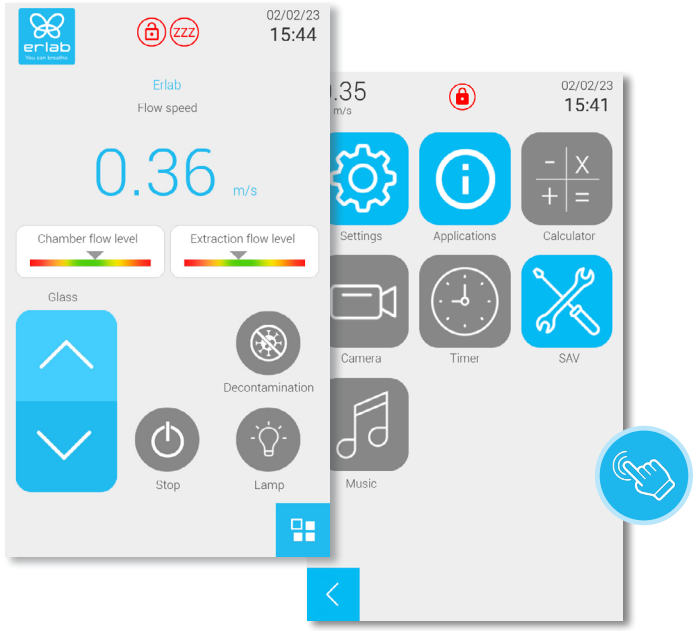
TOUCH SCREEN INTERFACE

Control your Anilis using a stylish and interactive touch screen.

Through its **simple and intuitive** operation, the truly innovative touch screen allows users to focus all their attention on what is important:
handling.

Using light and sound signals, the home screen indicates the level of user protection. It provides real-time information on the device's operational status.

Its interface offers a unique and customisable experience for each operator.



TOUCH SCREEN BENEFITS:

SIMPLICITY

Home screen and menu **for greater ease of use.**

SAFETY

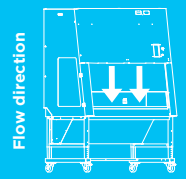
Through visual and audible alarms, the interface **keeps you informed of your protection status in real time.**

APPLICATIONS

Various new applications **to improve your day-to-day work.**

PERSONALISATION

Personalise the **settings of your Anilis MSC.**



900

Number of filters
2

Number of fans
2

Air flow rate – supply
770 m³/h

Air flow rate – extraction
>240 m³/h

Incoming flow velocity
>0.40 m/s

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption Standby mode / Work mode (without electrical outlets)
80 / 160 W

Window opening (2 working positions)
200 mm / 300 mm

Frame
Painted steel – Laminated glass side and front panels

Workspace and work surface
304L stainless steel – monobloc

Tests and labelling CE

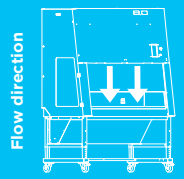
Dimensions (mm):
Internal W 980 x D 570 x H 730
External W 1215/1025* x D 780/820* x H 1421

* Dimensions with panels open/closed

Animals handled

Mice

Rats



1200

Number of filters
2

Number of fans
2

Air flow rate – supply
1000 m³/h

Air flow rate – extraction
>320 m³/h

Incoming flow velocity
>0.40 m/s

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption Standby mode / Work mode (without electrical outlets)
85 / 170 W

Window opening (2 working positions)
200 mm / 300 mm

Frame
Painted steel – Laminated glass side and front panels

Workspace and work surface
304L stainless steel – mon-obloc

CONFORMS WITH THE EN 12469 : 2000 FILTRATION STANDARD

Tests and labelling CE

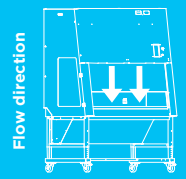
Dimensions (mm):
Internal W 1285 x D 570 x H 730*
External W 1520/1330*** x D 780/820* x H 1421

* Dimensions with panels open/closed

Animals handled

Mice

Rats



1500

Number of filters
2

Number of fans
2

Air flow rate – supply
1240 m³/h

Air flow rate – extraction
>410 m³/h

Incoming flow velocity
>0.40 m/s

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption Standby mode / Work mode (without electrical outlets)
105 / 300 W

Window opening (2 working positions)
200 mm / 300 mm

Frame
Painted steel – Laminated glass side and front panels

Workspace and work surface
304L stainless steel – monobloc

Tests and labelling CE

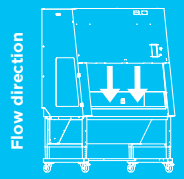
Dimensions (mm):
Internal W 1590 x D 570 x H 730*
External W 1825/1635*** x D 780/820* x H 1421

* Dimensions with panels open/closed

Animals handled

Mice

Rats



1800

Number of filters
2

Number of fans
2

Air flow rate – supply
1480 m³/h

Air flow rate – extraction
>500 m³/h

Incoming flow velocity
>0.40 m/s

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Voltage/frequency
230 V / 50 Hz

Power consumption Standby mode / Work mode (without electrical outlets)
110 / 310 W

Window opening (2 working positions)
200 mm / 300 mm

Frame
Painted steel – Laminated glass side and front panels

Workspace and work surface
304L stainless steel – monobloc

CONFORMS WITH THE EN 12469 : 2000 FILTRATION STANDARD

Tests and labelling CE

Dimensions (mm):
Internal W 1895 x D 570 x H 730*
External W 2130/1940* x D 780/820* x H 1421

* Dimensions with panels open/closed

Animals handled

Mice

Rats

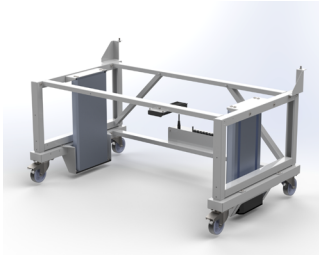
EQUIPMENT

for Anilis MSCs/changing stations

Bases

Adjustable base

Painted steel base, adjustable during installation. Base height ranging from 650 to 950 mm.
Optional fitted wheels (front wheels with brakes), making the height between 740 and 1040 mm.



Electric base

Painted steel base, electronically adjustable via a control panel. Height ranging from 584 to 884 mm. Ability to store 3 working positions.
The electric base is fitted with wheels (front wheels with brakes).

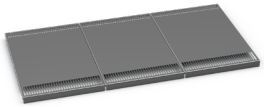
OPTIONS

for Anilis MSCs/changing stations

Work surface

Flat work surface – monobloc

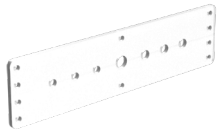
304L stainless steel work surface.
Completely removable to access the retention trough and facilitate cleaning.



Flat work surface – segmented

Autoclavable work surface in 304L stainless steel.
Separated into 3 blocks for the Anilis 900/1200/1500 models and 5 blocks for the Anilis 1800 model.
Completely removable to access the retention trough and facilitate cleaning.

Cable ports



Cable ports

A cable port can be fitted to the right and/or left side of the workspace. It is designed as 2 detachable parts to allow easy installation of cables with a large connector.
7 inputs are available: ø8 mm x 6, ø12 mm x 1.

Gas tap

Gas tap

Fitted to the right or left of the workspace.

Vacuum tap

Vacuum tap

Fitted to the right or left of the workspace.

Electrical outlets

Additional electrical outlet

Possibility to add up to 2 electrical outlets in the workspace in addition to the 2 electrical outlets already included.

OPTIONS

for Anilis MSCs/changing stations

Arm rests

Arm rests

The 304L stainless steel arm rests provide forearm support and prevent MSDs (musculoskeletal disorders).
Can be easily clipped inside the air barrier, to the front of the MSC.

Foot rests

Adjustable footrest

Height and tilt adjustable for optimal comfort and to prevent MSDs (musculoskeletal disorders).
Stability: non-slip platform.

DPTE port

Female DPTE port

270 mm wide, installed on the left or right-hand side of the MSC, allowing the connection of transfer or isolator cylinders fitted with a male DPTE port.

Decontamination

UV decontamination

For decontaminating the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the status of the UV tubes to determine when they should be replaced.

Hydrogen peroxide bio-decontamination

Installed to the right or left of the MSC, this system, with a remote reservoir, nebulises hydrogen peroxide in the workspace, thereby providing effective decontamination control.

Front window control pedals

Control pedals

Enable the front window to be raised and lowered by pressing the pedals with your foot. Very useful when your hands are full!

UPS (uninterrupted power supply)

UPS (uninterrupted power supply)

Maintains MSC operation for 10 minutes in case of power failure. This system ensures the safety of the handling and the operator before the device shuts down completely.

Increases the height of the MSC by 200 mm

Microscope port

Microscope port integrated into the front window

In flexible PVC, the microscope port allows safe handling under a microscope while ensuring a comfortable working position. Suitable for all microscope types.

Remember the port closure window

Port closure window

In the event of UV decontamination taking place, a closure window is integrated into the microscope port to provide optimal user protection.

OPTIONAL EXTRAS

for Anilis MSCs/changing stations

Additional extraction filtration

Activated carbon extraction filter for enhanced chemical protection

The Anilis MSC/changing station can be fitted with an activated carbon filter behind the HEPA extraction filter.

This configuration is strongly recommended when handling small quantities of chemicals.

Care must be taken, as chemicals recirculating in the workspace could result in the handling in progress becoming contaminated. In this case, the MSC should be fitted with an activated carbon filter under the work surface rather than at the point of extraction.

Additional extraction filtration

Dual HEPA extraction filters

The Anilis MSC/changing station can be fitted with dual HEPA H14 extraction filtration when handling mycobacterium tuberculosis. Option of connecting to the building's extraction system (direct or indirect connection).

CUSTOMISED SOLUTIONS

for Anilis MSCs/changing stations

Erlab offers customised solutions, tailored to meet the specific needs of each individual laboratory.

EXAMPLES OF SPECIFIC PROJECTS

- **Anilis 1200 connected to an isolator:**

MSC/changing station for housing and handling immunocompromised mice.

Anilis MSC/changing stationconnected to an I.Box zoo housing isolator via a connecting port.

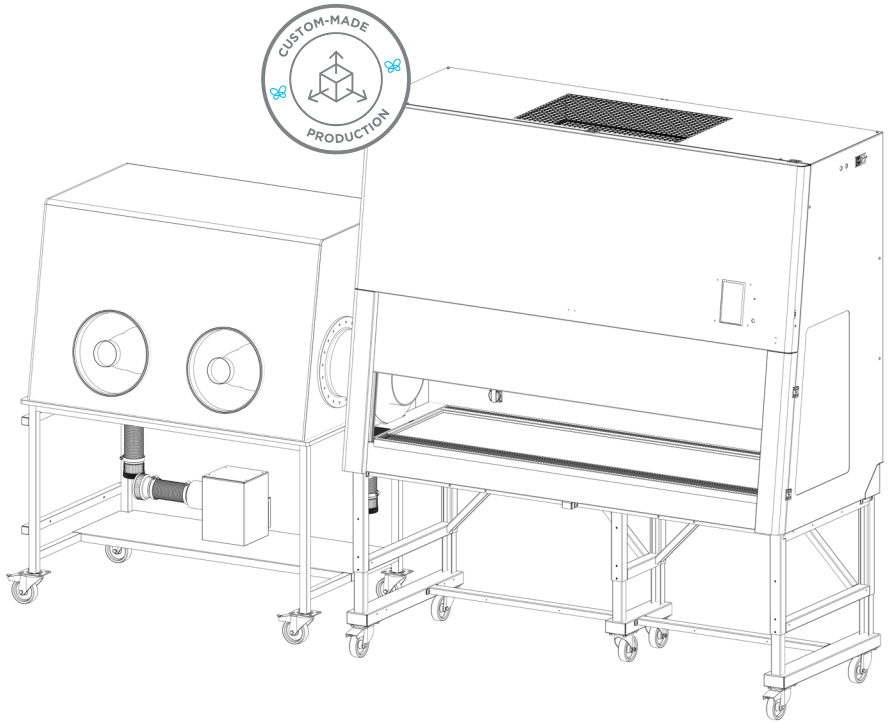
There is a DPTE port fitted to the side of the MSC for safe introduction/ removal of mice.

- **Anilis 1500 with Minerve® anaesthesia system:**

MSC for surgical interventions on rodents.

Integrated anaesthesia system inside the workspace with special cable port on the side of the MSC.

Omega clips fitted to the rear of the workspace to hold the cables in place and prevent the work surface from becoming cluttered.



ANIMAL EQUIPMENT

T.Box CLASS II BIOLOGICAL TRANSFER HOODS

T.Box transfer hoods are designed for the safe transfer of animals from uncontrolled environments to SPF (specific-pathogen-free) areas.

These transfer hoods are equipped with an airlock to provide the highest level of protection during caging operations, creating a clean, fully protected environment for rodents. Changing operations are carried out under the hood, where rodents are protected by an ISO 5 class laminar flow, in compliance with the ISO 14644 standard.

They provide an ideal, secure buffer zone between the animal facility and the outside world, while offering you comfort and quality of work.

DOP outlets

To conduct the filter integrity test.
This test measures the particle retention efficiency of the HEPA air flow and extraction filters.

HEPA H14 filtration

Air flow and extraction filtration

HEPA, which stands for “High Efficiency Particulate Air”, refers to an air filtration technology. The air flow filter removes particles from the ambient air before it flows into the workspace, protecting the samples handled against the risk of cross-contamination. The extraction filter removes particles before extraction into the laboratory.

Pre-filters

Prefiltration located under the work surface to trap litter residue and hair, and to minimise clogging of the absolute filters.
Easily replaceable by the user.

Electrical outlets

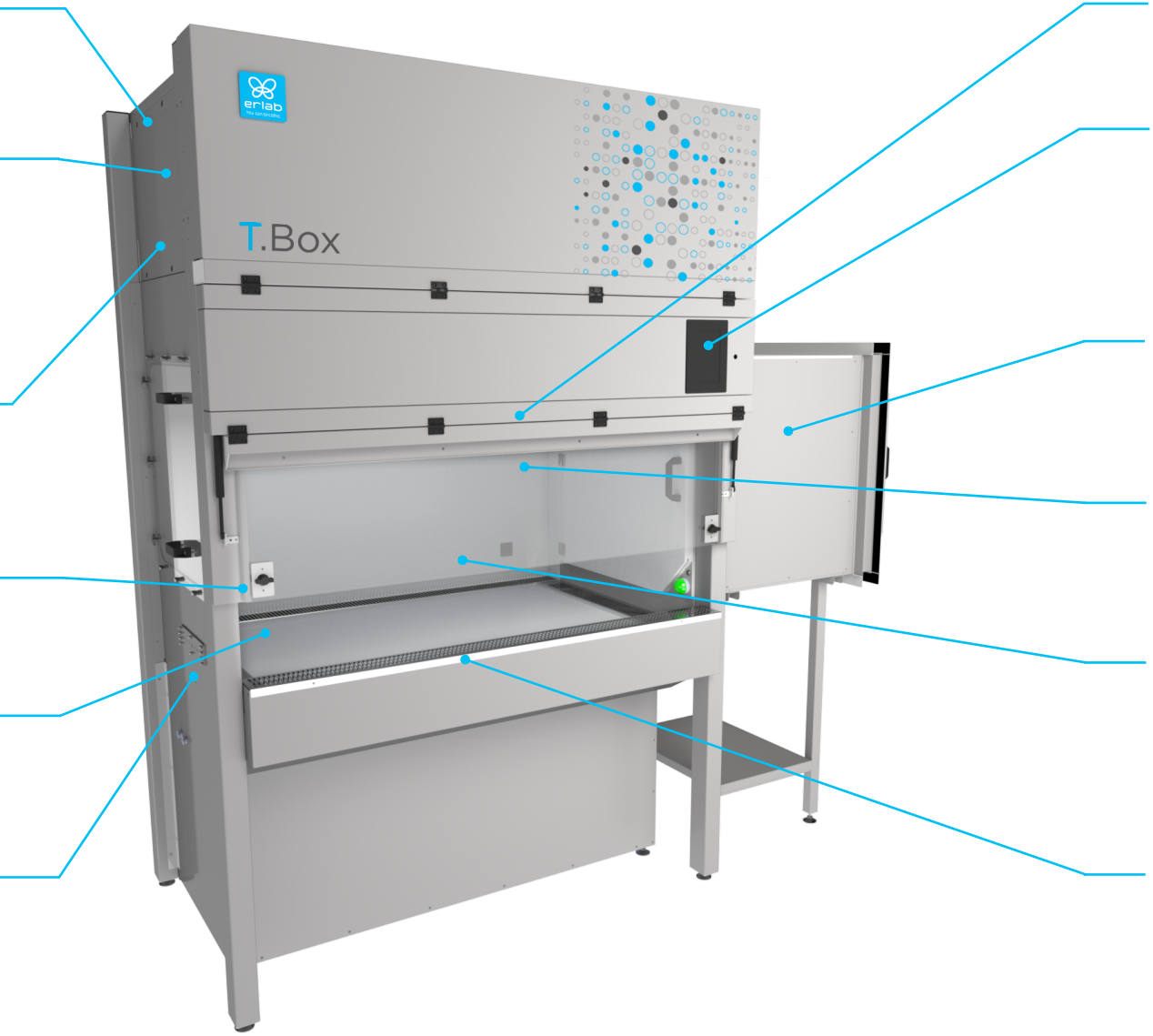
1 electrical outlet is provided to power small laboratory devices.

Workspace and work surface

304L stainless steel coating.
The work surface is concave to facilitate changing operations.

Cable port

1 integrated cable port, designed as 2 detachable parts to allow easy installation of cables with a large connector.
7 inputs are available: ø8 mm x 6, ø12 mm x 1.



Low-energy lighting

>750 lx LED lighting strips. Uniform lighting across the entire work surface, adjustable via the touch screen.

Touch screen

The touch screen fitted to the T.Box allows easy control of the hood. The home screen displays the flow speed and alarms. Available applications: calculator, timer, webcam, MP3 reader, etc.
Hood personalisation and monitoring: date of installation, date of next service, etc.

Airlock

Secure door opening with warning light.
The airlock door's windows are made of safety glass, which is highly resistant to cleaning and decontamination agents.

Electronic anemometer

This system permanently controls the air velocity in the workspace to between 0.25 and 0.50 m/s, in accordance with the ISO 14644 standard.

Front window

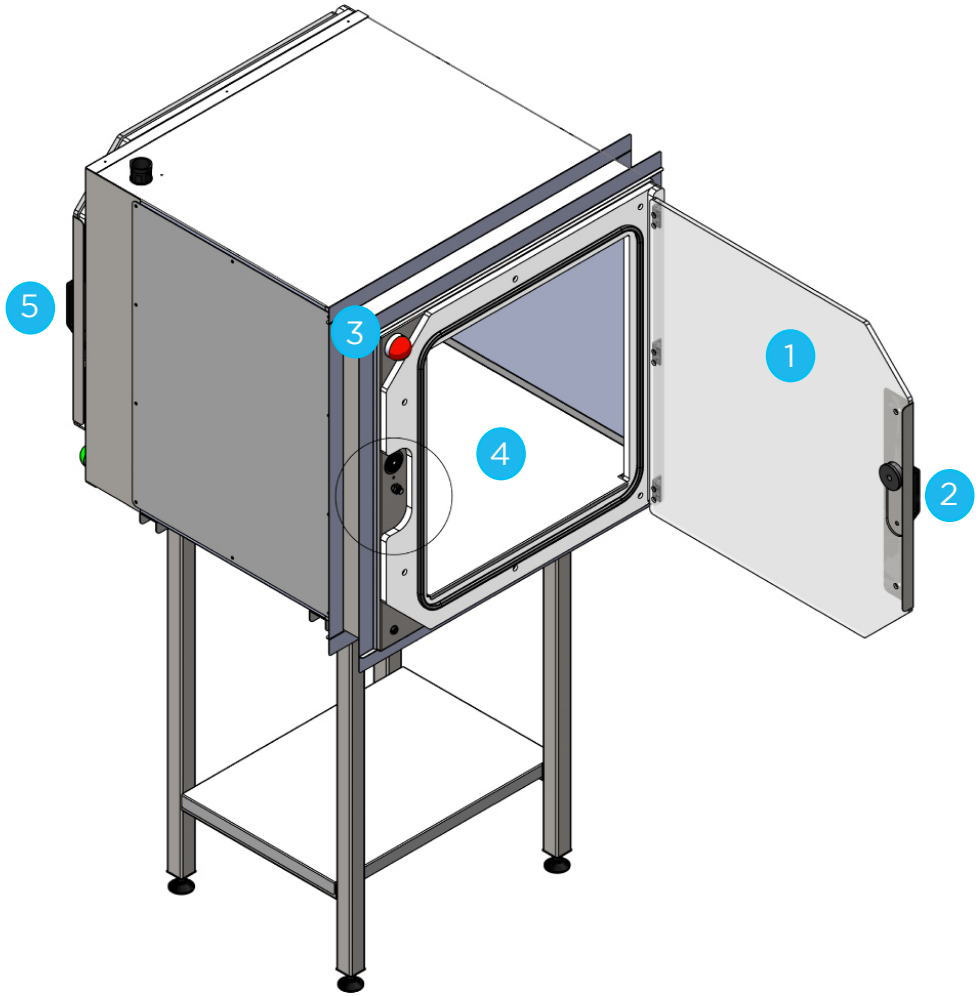
Transparent PMMA
Fully opening, actuator-assisted front window, for full access to the workspace.

Air barrier

An air barrier is created between the handling and the operator, thus capturing any ingress/egress of potentially pathogenic particles for optimal safety.

How does the T.Box's airlock work?

Rodent transport boxes are deposited in the airlock entrance by an animal technician, located in the "unclean" receiving area.
After closing the airlock door, an animal technician in the "clean" area collects the rodents by opening the airlock door. The transfer hood then provides total containment, allowing the animals to be caged in complete safety. The technicians in the "clean" area can then collect the cages to place them in secure breeding racks, animal cabinets or isolators.



1. Entry door from the "unclean" area to the airlock
2. Secure closure of the door with integrated magnetic mechanism
3. Warning light to indicate the door status
   (Red light: door open / Green light: door closed)
4. Airlock interior in 304L stainless steel
5. Exit door from the airlock to the "clean" area
   (T.Box transfer hood)

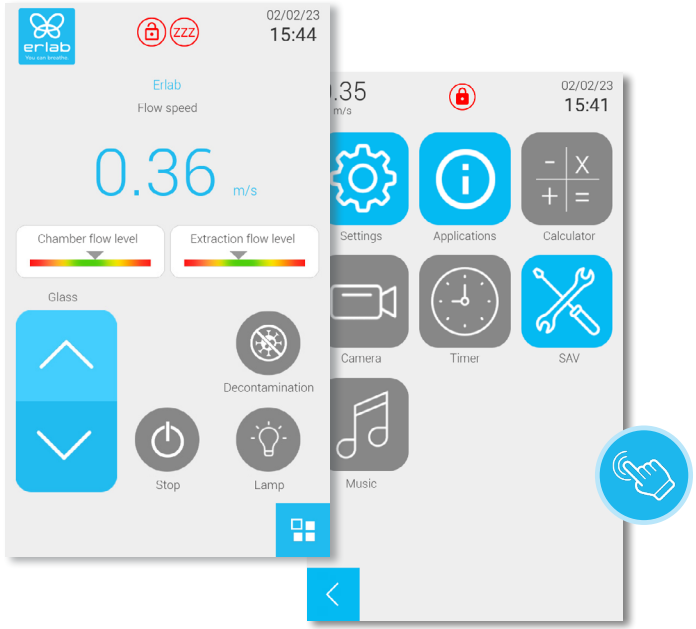
TOUCH SCREEN INTERFACE

Control your T.Box using a stylish and interactive touch screen.

Through its **simple and intuitive** operation, the truly innovative touch screen allows users to focus all their attention on what is important:
handling.

Using light and sound signals, the home screen indicates the level of user protection. It provides real-time information on the device's operational status.

Its interface offers a unique and customisable experience for each operator.



TOUCH SCREEN BENEFITS:

SIMPLICITY

Home screen and menu **for greater ease of use.**

SAFETY

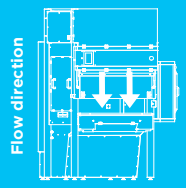
Through visual and audible alarms, the interface **keeps you informed of your protection status in real time.**

APPLICATIONS

Various new applications **to improve your day-to-day work.**

PERSONALISATION

Personalise the **settings of your T.Box hood.**



T.Box

Filtration
HEPA H14 filters

Pre-filtration
G4 pre-filters

Incoming flow velocity
>0.40 m/s

Outgoing flow velocity
Between 0.25 and 0.50 m/s

Window opening
200 mm

Frame
304L stainless steel or painted steel
PMMA side and front panels

Work surface
304L stainless steel – monobloc – concave

Number of electrical outlets
2

Lighting
LED – 750 lx – 4000K

Voltage/frequency
230 V / 50 Hz

Tests and labelling CE

Dimensions (mm):
To be specified according to your needs

Animals handled

Mice

Rats

OPTIONS

for T.Box class II transfer hoods

Electrical outlets

Additional electrical outlet

Possibility to add up to 3 electrical outlets in the workspace in addition to the electrical outlet already integrated in the hood.

Decontamination

UV decontamination

For decontaminating the workspace using germicidal UV tubes. The cycle duration is programmable via the touch screen. This displays the status of the UV tubes to determine when they should be replaced.

To be supplemented with a closing panel.

Rotating closing panel

Closing panel for UV decontamination

For completely closing the front panel of the hood during operation of the UV tubes or periods of non-use.

ANIMAL EQUIPMENT

I.Box zoo ZOOTECHNICS ISOLATORS

I.Box zoo isolators ensure that the specific sanitary conditions of the animals housed are strictly maintained. They offer **a very high level of containment**, providing the operator and rodents with absolute biological protection.

These devices are specially designed for biomedical research applications in zootechnics: housing and breeding of immunocompromised mice, axenic mice, rodents with a specific health status, poultry, etc.

The devices are customised and configured according to the handling operations performed, the size of the cages and the operating protocol of the animal facility.
The fully transparent casing makes the interior of the isolator clearly visible, and the large work surface makes it easy to use. The ventilation unit has a clear display. Hand-operated opening/closing of the sealed double transfer port (DPTE) provides secure access to the transfer container.

Shelves

2 fully removable tubular shelves in 304L stainless steel.

Service hatch

Service hatch is 500 mm in diameter, allowing large equipment to be fitted at the time of installation or during major changes to the processes carried out in the isolator.

Fluid plate

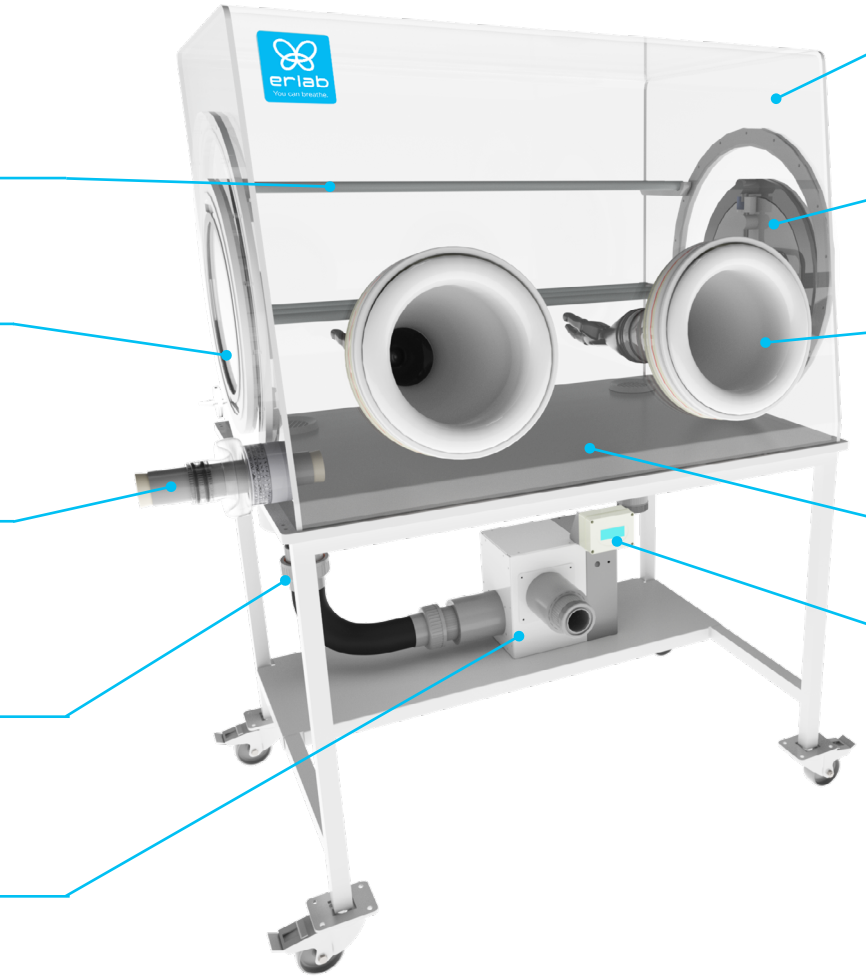
Featuring a waterproof electrical outlet and a cable port.

H13 filtration

To ensure a high level of containment, the isolator is fitted with H13 filters at the inlet and outlet of the ventilation system.

Ventilation

To control the pressure in the isolator.
Operational in overpressure or underpressure.



Casing

Fully transparent for a clear workspace.
In PMMA for easy cleaning. Highly resistant to sterilising agents: hydrogen peroxide, peracetic acid.
The front panel is tilted at 12°, providing an ergonomic working position.

DPTE port

Secure connection of containers, transfer isolators or MSCs via a DPTE port.
DPTE port diameter: 270 or 350 mm.

Oversleeves and gloves

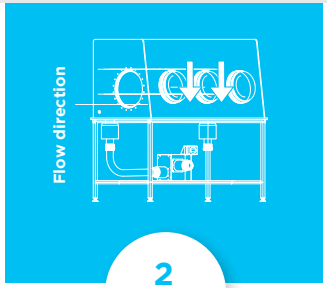
Fitted with wide (310 mm diameter) oversleeves, providing a wide range of motion, a comfortable working position, and allowing the DPTE port to be easily opened.
PVC-coated jersey oversleeves, fitted to wrist cuffs.
Neoprene gloves.
Size on request.

Work surface

In ultra-smooth white PMMA for easy cleaning.

Control system

Pressure display and adjustment (in pascal).
Ventilation stop button for sterilisation cycles.



Number of gloves
2

Number of filters
2

Number of fans
1

Casing
Transparent PMMA

Base
Painted steel

Work surface
White PMMA

Number of shelves
2 shelves – 304L stainless steel

Number of electrical outlets
1

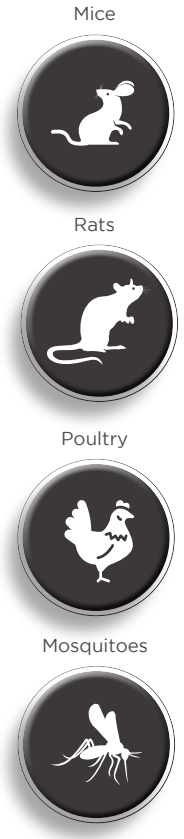
Number of cable ports
1

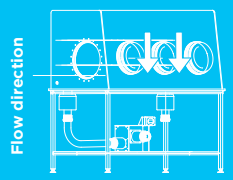
Tests and labelling CE

Dimensions (mm):
Internal W 1200 x D 700 x H 750
External W 1250/1545* x D 740 x H 1600

* Min/max width depending on female/male DPTE port

Type of animal housed





3 gloves

Number of gloves
3

Number of filters
2

Number of fans
1

Casing
Transparent PMMA

Base
Painted steel

Work surface
White PMMA

Number of shelves
2 shelves – 304L stainless steel

Number of electrical outlets
1

Number of cable ports
1

CONFORMS WITH THE ISO 14644-1 ISO 5

Tests and labelling CE

Dimensions (mm):
Internal W 1500 x D 700 x H 750
External W 1550/1845* x D 740 x H 1600

* Min/max width depending on female/male DPTE port

Type of animal housed

Mice

Rats

Poultry

Mosquitoes

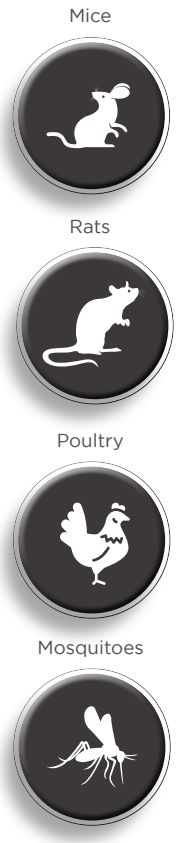
Number of gloves	4
Number of filters	2
Number of fans	1
Casing	Transparent PMMA
Base	Painted steel
Work surface	White PMMA
Number of shelves	2 shelves – 304L stainless steel
Number of electrical outlets	1
Number of cable ports	1

Tests and labelling CE

Dimensions (mm):
Internal W 1800 x D 700 x H 750
External W 1850/2145* x D 740 x H 1600

* Min/max width depending on female/male DPTE port

Type of animal housed



OPTIONS

for I.Box zoo zootechnics isolators

Electrical outlets

Additional electrical outlet

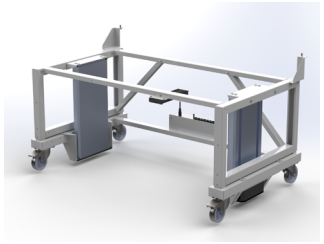
Possibility to add an electrical outlet to the fluid plate.

Container

Aluminium container

For secure transfers using DPTE technology. The container is fitted with a male DPTE port with a diameter of 270 or 350 mm and handles for easy movement.
Length: 500 mm.

Electric base



Electric base

Adapts to each operator's body shape.
Allows you to work in a seated or standing position.
Maximum travel distance of 400 mm.
3 saveable working positions.

Dual isolator

Dual isolator

Two isolators placed on top of each other to increase housing capacity when space is limited.

Activated carbon

Activated carbon filter

Placed at the ventilation outlet to effectively stop odorous molecules. Easily replaceable by the operator.

Activated carbon

Polyethylene container

For secure transfers using DPTE technology. The container is fitted with a male DPTE port with a diameter of 270 or 350 mm, filters and connection ports to facilitate sterilisation, and handles for easy movement.
Length: 500 mm.

Transfer isolator

Transfer isolator

Small, non-ventilated isolator, easily connected to a housing isolator for cage transfer to prevent any containment breaches.

ERLAB MAINTENANCE

Installation, Training and Maintenance Services.

Preventative maintenance

Preventative maintenance is carried out to avoid malfunction.

This is to assess the general condition of the device and ensure it is operating properly. It highlights any changes that are required to the key components (pre-filters, HEPA filters, activated carbon filters, UV tubes, etc.). Attention is mainly focused on the effectiveness of absolute filters, which ensure sterility of the workspace and user protection.

A detailed report is issued after each maintenance operation. This often draws upon regulatory provisions and manufacturer recommendations.

Curative maintenance

Curative maintenance thoroughly repairs the machine.

This involves replacing a component in the event of a breakdown, malfunction, or when a repair is not possible.

The maintenance contract includes one visit per year, carried out on a specific date agreed with the relevant department. The schedule can be tailored to your needs according to the intensity of use (six-monthly, annually, every two years or more). In addition, we provide a breakdown assistance service within 48 hours (in France).

The aim is to assess the general condition of the device and, above all, check the operating parameters, which guarantee the effectiveness of its protection.

MONITORING PROCEDURES

The measuring devices are properly calibrated.

The below table outlines the recommended intervals for the replacement of consumables:

Consumables	Replacement frequency
Pre-filters	Every year
HEPA filters	Every 4 to 5 years
Activated carbon filter	According to your eValiQuest
Gloves, oversleeves, seals (I.Box)	Usage dependant

Standard qualification at installation

This involves checking the air barrier, alarms and mechanics, as well as mapping the flow and performing a particle count in the workspace.

A PDF report is issued after the equipment is installed.

Filter integrity tests at installation

These test the effectiveness of the H14 filters in compliance with the EN 1822-1 standard. They guarantee a filtration rate of 99.995% MPPS (Most Penetrating Particle Size).

Installation qualification (IQ)

This involves checking documents to ensure they comply, careful examination of components to ensure they meet the required specifications, checking the touch screen, thorough inspection of the electrical installation, and management of non-compliances.

Operational qualification (OQ)

This involves performing rigorous tests on the commands, signals and alarms to ensure they are working correctly.

It also involves checking the flow velocity in the workspace, verifying the clean air class to guarantee a safe work environment, performing a smoke test to assess the protection of the handler, and checking the integrity of the absolute filters at supply and extraction.

A PDF report is issued after the equipment is installed.

In addition to the installation and qualifications noted above, Erlab Life Sciences technicians also provide training to operators.

PROCESSING OUR USED FILTERS

Through this proactive approach, **we are strengthening our commitment to protecting the environment,** reducing carbon emissions and working towards a more sustainable future.

We are harnessing our partner's recycling expertise and knowledge in order to manage our waste in a responsible, efficient way.

We are proud of our commitment to sustainable development and energy recovery.

We are working together to foster a greener, more environmentally friendly future.

Please contact us for more information.

CLICKECO

Clickeco's efforts are focused on the management of hazardous industrial waste, with particular emphasis on the sorting, collection, treatment, recovery and overall management thereof.

They provide sustainable solutions for the responsible management of hazardous waste while engaging companies in environmental preservation.

Furthermore, at Erlab we are deeply committed to Corporate Social Responsibility (CSR). Recognising the importance of our impact on the environment, we have pledged to reduce our carbon footprint and adopt environmentally friendly practices.

We have made effective, permanent changes to minimise our energy consumption, optimise our waste management and foster a culture of sustainability within the company.

By using this service, we are actively contributing to energy recovery.

We are ensuring that a large proportion of our chemical waste is collected and recycled, which is then treated by approved facilities.

We are promoting responsible, sustainable waste management through this approach, while also encouraging environmentally friendly practices that support the circular economy.

Did you know that your used carbon filter could become a valuable source of energy?

A specific treatment facility

The used filters from your device are a special type of industrial waste. They must, as required by law, be collected and disposed of in a suitable facility, which must guarantee the traceability of the disposal process, from collection to destruction.

A suitable disposal method

Your filter is disposed of by thermal treatment, which involves incineration at very high temperatures in specific incinerators for this type of waste.

Your used filter is a precious resource.

Recovering the heat released by the thermal treatment of your used filter provides a source of energy. This energy provides an alternative to the use of natural resources which must be preserved. By making use of your used filter, you are reducing your environmental impact.

ERLAB D.F.S. S.A.S

Val de Reuil:

Parc d'Affaires des Portes - B.P. 403 - 27104 Val-de-Reuil – France

Nantes:

13 rue des Côteaux de Grandlieu - 44830 Bouaye – France

www.erlab.com

France ventes@erlab.net

United States captairsales@erlab.com

China sales.china@erlab.com.cn

Germany export.north@erlab.net

United Kingdom export.north@erlab.net

Spain export.south@erlab.net

Italy export.south@erlab.net