

# LabAirTec

Advanced filtering systems for fume cupboards that can be integrated.



# Tradition.

### Swiss tradition with a great future

Renggli, founded in 1927, is an established Swiss family enterprise with international orientation in the realm of complete laboratory solutions. As one of the leading producers, Renggli designs and implements state-of-the-art laboratories for research, industry, medicine and education.

Many innumerable reference installations are evidence that Renggli is a reliable partner covering the entire range of laboratory technology.

### Everything from a single source



### Our Core Competences

#### Counselling Competence

Our laboratory experts are eager to support you in all facets of laboratory technology. They will advise you accurately on all pertinent norms, legal provisions and safety aspects.

#### Planning and Engineering Competence

Our specialists are at your disposal to carry out the planning of the entire project. They even cover the engineering part, from media supply of the individual workplace all the way to interfacing with the building control systems.

#### System Competences

In addition to being a dependable supplier of laboratory installations and equipment, we are your comprehensive one-stop service for counselling, planning/engineering, production, installation and maintenance/service. This is the key and guarantee for decades of perfect performance of your laboratories.



# The Benefits.



**Complies with EN 14175-3 and optional NFX15-211**

## Enhanced Safety

- Risk assessment: Chemical hazards are assessed by the Erlab laboratory to ensure the best filtration solution through our ValiQuest service.
- High levels of filtration and containment, guaranteed by the most rigorous safety standards: EN 14175-3 and optional NF X15-211.
- Splash protection with a vertically sliding front panel.
- Constant monitoring of safety settings with an integrated set of sensors and real-time smart alarm alerts through the App.
- Monitoring of the fume hood throughout its service life with the Safety Program.

## Reduced Environmental Impact

- Chemical pollutants captured at the source: no chemical emissions released into the atmosphere.
- Filters made from environmentally friendly raw materials and recycled through energy recovery.
- Low consumption.
- Reducing the environmental impact of buildings: indoors and outdoors.

## Flexibility + Adaptability

- Versatile filters and sensors suitable for a wide range of laboratory operations.
- Plug & Play fume hood: simplified installation of new ductless filtering fume hoods for immediate use (no impact on laboratory ventilation).
- Portable equipment: to be reconfigured as desired.

## Reduced Costs

- Infrastructure costs:
  - Standalone system: decoupled from ventilation air
  - Less space required for HVAC equipment
  - More space for work
  - Ductless ventilation
  - No air compensation is required for the fume hood to operate: reduced costs from the air handling unit
- Operating Costs:
  - Low energy costs: less than CHF 150 per year
  - Filter service life: up to 48 months

## Optimisation of Laboratory Design

- Standalone, ductless filtering fume hood that can be integrated at any time (design original on added later).
- Simplification of the building's heating, ventilation and air conditioning (HVAC) system: less space required for technology, more space for work.
- Room configuration not constrained by extraction: no limits to creativity.
- Fume hoods have no impact on the air balance in the building: all fume hoods can be used simultaneously.
- Fume hoods can be moved at any time according to users' needs
- Possibility of setting up temporary or mobile laboratories without any specific infrastructure.

# LabAirTec green Technology.



**Neutrodine® Unisorb filtration**  
 Universal vapour filtration for general chemistry, with advanced retention capacity

**Anemometer**  
 Ensures a consistent air face velocity, a guarantee of effective protection

**Tachometer**  
 Real-time monitoring of fan operation

**Temperature sensor**  
**Humidity sensor**  
 For optimal containment and filtration conditions

**Smart Technology**  
 A simplified human-machine interface that is focused on safety to ensure it is simpler and safer to use

# Neutrodine® Unisorb.



## A molecular filter for laboratory vapours and gases

The product of our latest research, LabAirTec green, is equipped with a new generation of filters: Neutrodine® Unisorb.

We have been developing this technology at our R&D laboratory for over 5 years. It has been tested hundreds of times, from the first attempts at formulating new filtration materials right up to the performance evaluation of these new filters in real-life situations.

Neutrodine® Unisorb greatly increases the retention capacity for the majority of vapours emitted from laboratory procedures. These improvements are significant for the molecules known to be the most difficult to retain with classic activated carbon filters, such as polar VOCs with low molar mass and boiling points. Improved performance compared to conventional filters.

Cyclohexane	Acetone	Isopropanol	HCl	Ammonia	Ethanol
<b>+50%</b>	<b>+50%</b>	<b>+90%</b>	<b>+60%</b>	<b>+50%</b>	<b>+280%</b>

**and over 700 other chemicals filtered!**

### Neutrodine® Unisorb Filtration

- Ability to simultaneously handle solvents, acids and bases with the same filter.
- Unprecedented retention capacity.
- Unique formulation without carbon blend.
- No heavy metal impregnation.

# Composition of the LabAirTec green column.

## Intelligent filter:

An embedded microchip enables its management to be optimized during use.

## Filtration performance sensor:

Sensors: solvents, acids, formaldehyde.

## Smart handles:

Automatic filter recognition and improved grip.

## Blade/Gutter:

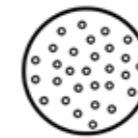
The blade/gutter system guarantees the perfect seal between the two filters.

## Humidity/temperature sensor:

Detection of abnormal values in the enclosure.

## Pre-filter:

Particulate and molecular pre-filter for improved retention.



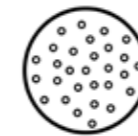
### Safety Neutrodine® Unisorb filter module

No release of pollutants into the laboratory, even if the main filter is saturated.



### Ventilation module

- Ventilation regulation
- Low energy consumption
- Reduced noise level



### Safety Neutrodine® Unisorb filter module

Increased filtration efficiency. Single filter for simultaneous handling: solvents, acids and bases. Unique formulation without carbon blend. No heavy metal impregnation.



### HEPA H14 particulate filter module

High-efficiency particulate filtration. Guaranteed overall filtration efficiency of 99.995% (particles greater than 0,1 micron).



### Lighting module

Communication base with daylight LED lighting module, temperature sensor and humidity sensor.

# Detection System.



### Exclusive filtration quality monitoring system

The exclusive LabAirTec green detection system consists of a network of 3 sensors suitable for detecting a very broad spectrum of molecules. It allows users to monitor the Neutrodine® Unisorb filtration efficiency and performance. The LabAirTec green technology packs automatically include the VOC (Molecode S) sensor in each of the three possible configurations. The two other sensors, Formaldehyde (Molecode F) and Acids (Molecode A), will be integrated following the automatic online chemical hazard analysis via our ValiQuest service.

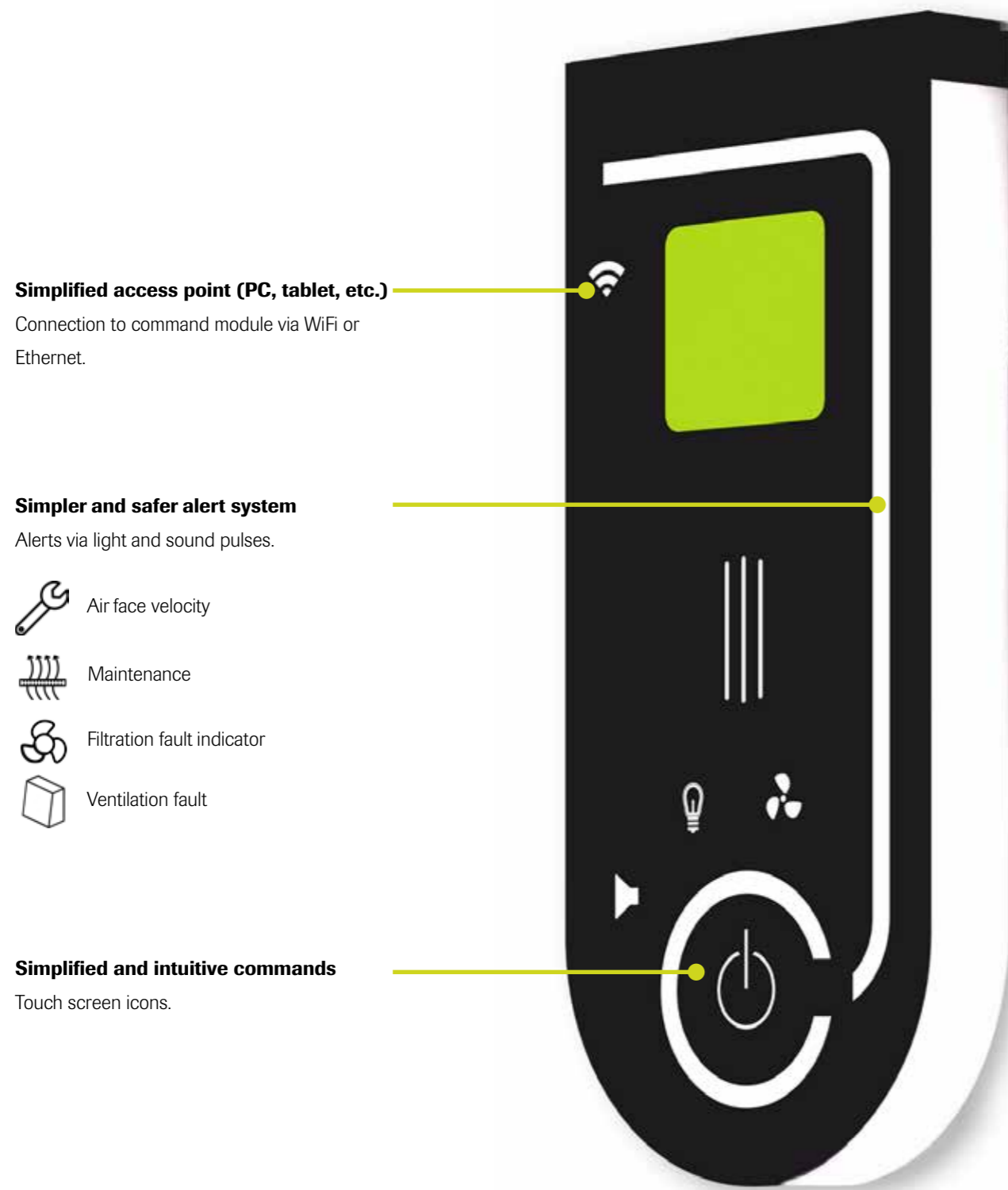
The detection system has 4 other sensors which monitor the correct operation of your enclosure in real time.

### Technology LabAirTec green packs

Up to 7 sensors for optimum containment of the enclosure and total handling safety





<p><b>Formaldehyde (Molecode F)</b></p> <p>Filtration performance monitoring for formaldehydes</p> <p>Included as per the ValiQuest</p>	<p><b>Acids (Molecode A)</b></p> <p>Filtration performance monitoring for acids</p> <p>Included as per the ValiQuest</p>	<p><b>VOC (Molecode S)</b></p> <p>Filtration performance monitoring for VOC</p> <p>✓ Included</p>	<p><b>Temperature</b></p> <p>Real-time monitoring of the temperature inside the enclosure</p> <p>✓ Included</p>
<p><b>Humidity</b></p> <p>Real-time monitoring of relative humidity</p> <p>✓ Included</p>	<p><b>Anemometer</b></p> <p>Monitoring of air face velocity</p> <p>✓ Included</p>	<p><b>Tachometer</b></p> <p>Monitoring of fans</p> <p>✓ Included</p>	

# Communication.



**Simplified access point (PC, tablet, etc.)**  
 Connection to command module via WiFi or Ethernet.

**Simpler and safer alert system**  
 Alerts via light and sound pulses.

-  Air face velocity
-  Maintenance
-  Filtration fault indicator
-  Ventilation fault

**Simplified and intuitive commands**  
 Touch screen icons.

## Optimisation of the main filters' life

Free yourself from operational constraints with the new Command Module. Activate the simple and intuitive power of Smart Technology.

Erlab has developed its protective technology so you can concentrate on what is important: chemical handling. Smart Command, included in all our LabAirTec green filtration packs, will seamlessly alert you.

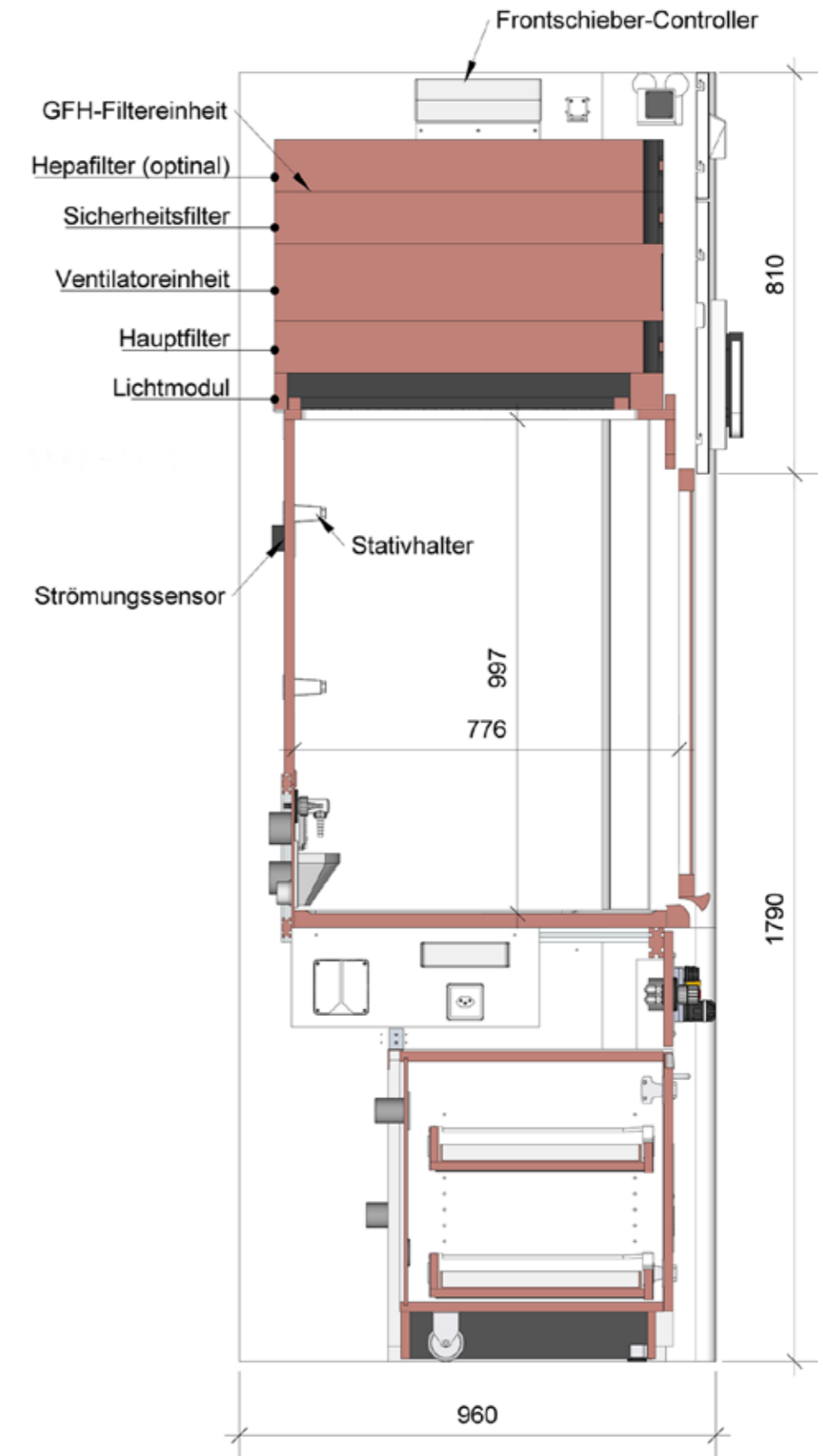
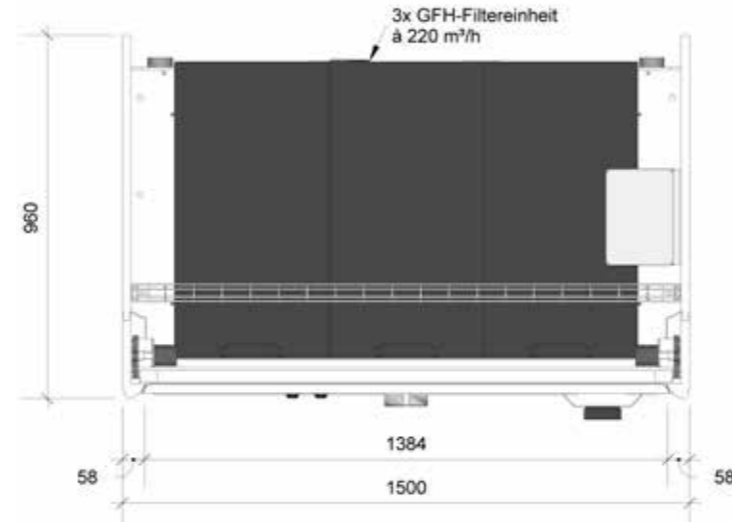
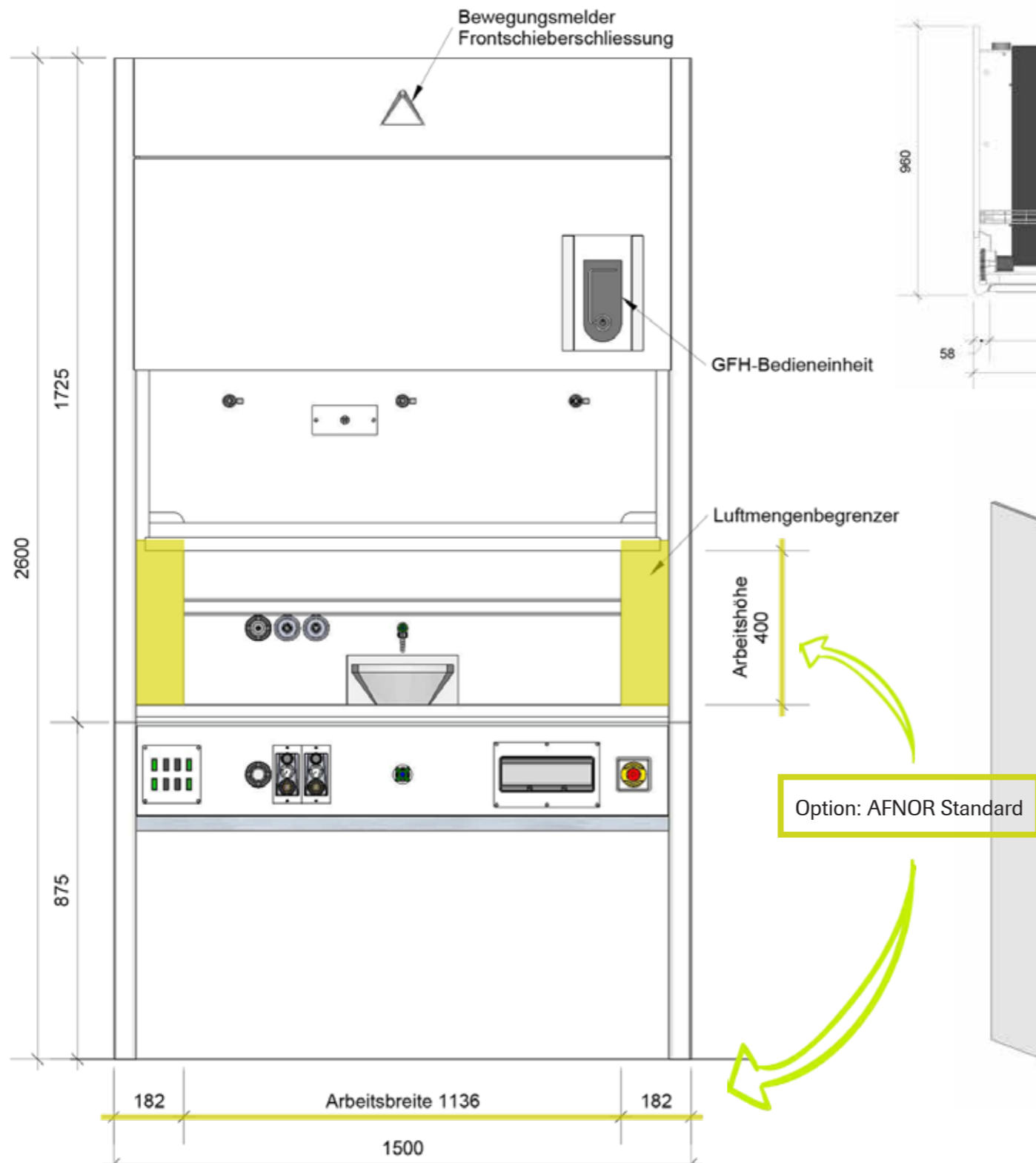
## What is Smart Technology?

Smart Technology is a simple and innovative method of communication for added safety. Through its simple and intuitive operation, this communication interface allows operations to focus all their attention on what is important: handling. Using light and sound signals, the technology indicates the user's level of protection.



# LabAirTec green 150.

Available in W= 1200 / 1500 / 1800 mm



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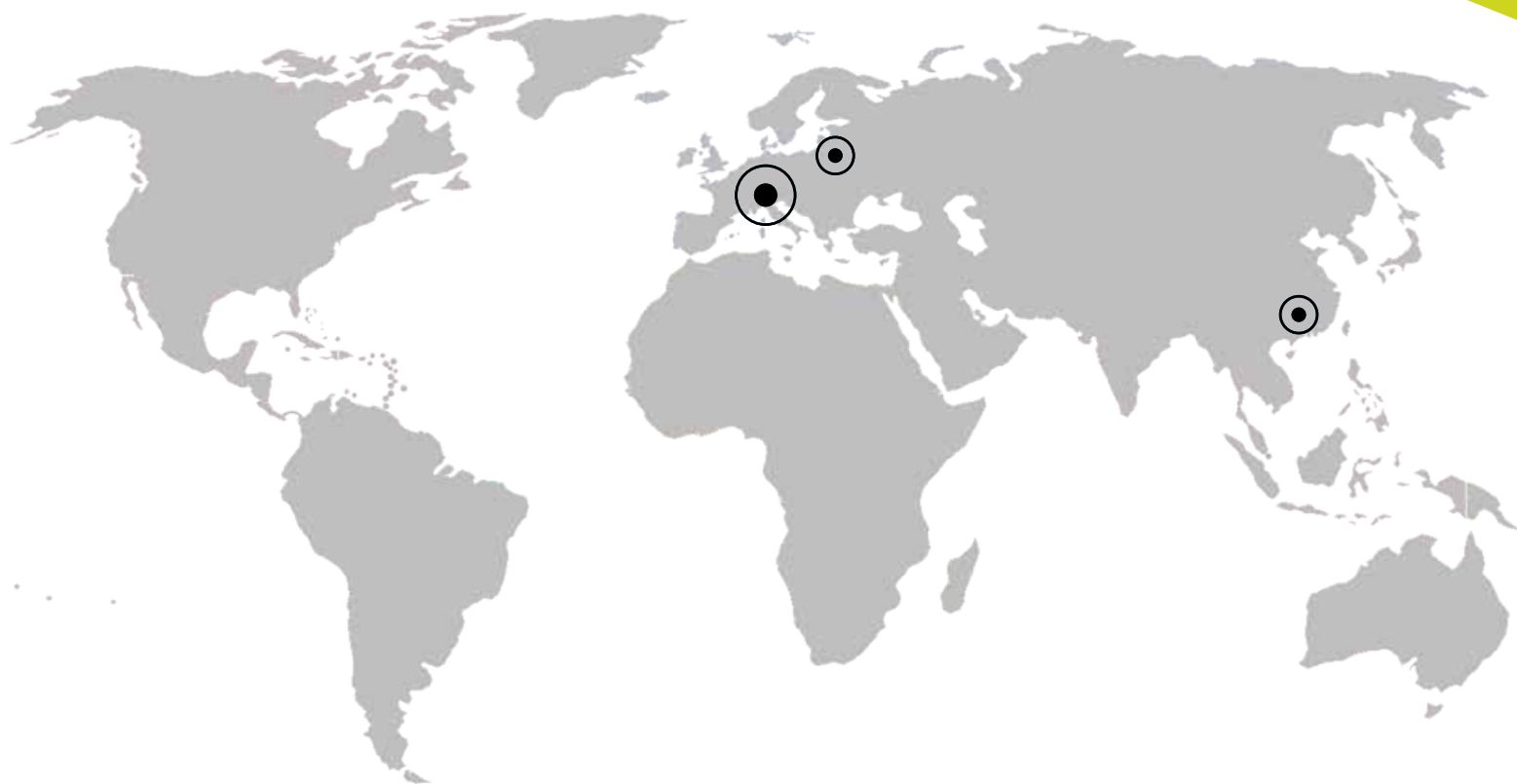
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**renggli**

Laboratory  
Systems