



EVOSAFE-SERIES™

ULTRA-LOW
TEMPERATURE FREEZERS





ULTRA-LOW TEMPERATURE FREEZERS

A full range of Ultra-Low Temperature freezers (-86°C), vertical as well as horizontal, in capacities from 120 up to and incl. 965 ltr. Designed to protect your samples and to save energy at the same time.

Snijders Labs has been manufacturing Ultra-Low Temperature (ULT) freezers for over 30 years. The company is ISO-9001 certified for Development, Manufacturing, Sales and Service. Snijders Labs operates worldwide by co-operating with factory certified and trained distributors for installation and service of the freezers. By adapting to customer requirements, focusing on technology and functionality, we are able to strengthen our market position and quality.

VERTICAL FREEZERS (VF)-86°C AND HORIZONTAL FREEZERS (HF)-86°C IN VARIOUS CAPACITIES.



INSULATION TECHNOLOGY

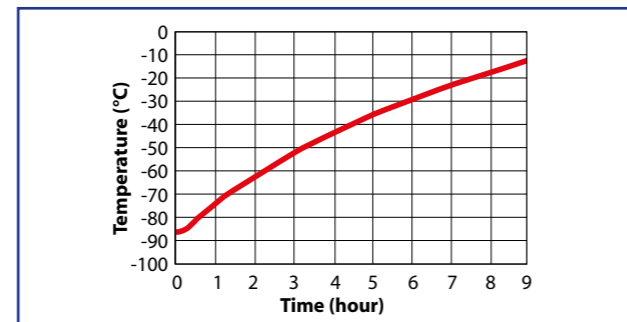
The EvoSafe-series are fitted with an unique insulation method installed between the interior and exterior. A combination of PU blocks with two component foam is used (the so-called 'foam in place' insulation). This system ensures that all the cooling is transferred to the interior of the freezer and hence improves considerably the insulation value over vacuum panel technology (see the comparison in the below pull-up graph).

VACUUM INSULATION OR PU

The internal and external dimensions of the EvoSafe-series™ are tailored to the European metric system to take European inventory systems, in contrast to other Asian and American producers. This allows a greater capacity of boxes to be stored while keeping the external dimensions to a minimum, even when using polyurethane insulation. Ask for EvoSafe-series™ datasheets for more information on the exact numbers of boxes and the total numbers of samples stored.

EXAMPLES OF TEMPERATURE RISE DURING POWER FAILURE

Pull-up example from a freezer with vacuum insulation



Pull-up EvoSafe™ VF720-86



CONCLUSION

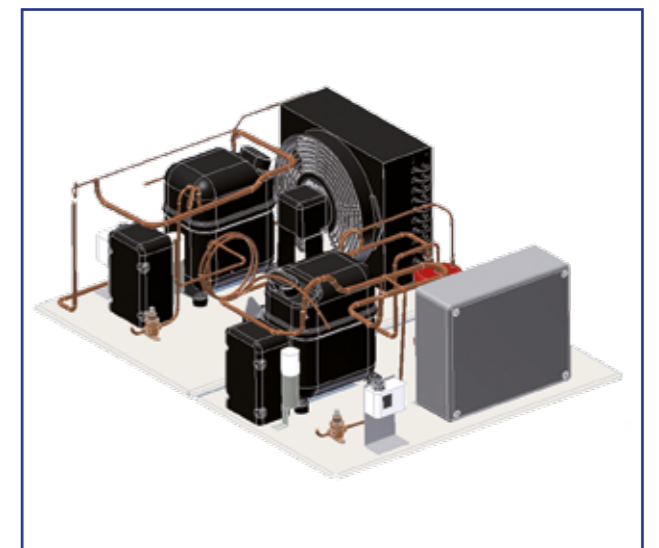
With any brand using vacuum insulation the 'Pull down' period is comparable to the EvoSafe™ freezers. However the difference in the 'Pull up' time is clearly visible. A freezer with vacuum insulation during a power failure reaches -10°C (from -86°C), within 9 hours. With the PU 'foam in place' insulation of the EvoSafe-series™ it takes 12 hours before the freezer reaches -10°C (from -86°C).

'STATE OF THE ART' ULTRA LOW TEMPERATURE COOLING

The EvoSafe-series™ is the result of 30 years of experience with Cascade cooling technology. They are designed for high performance, sustainability, energy efficiency and low noise output, due partly to the selection of the L'Unité Hermétique compressor silent range. The cooling system layout has been improved to allow all the heat generated in the engine room to be discharged directly to the rear and out of the compartment.

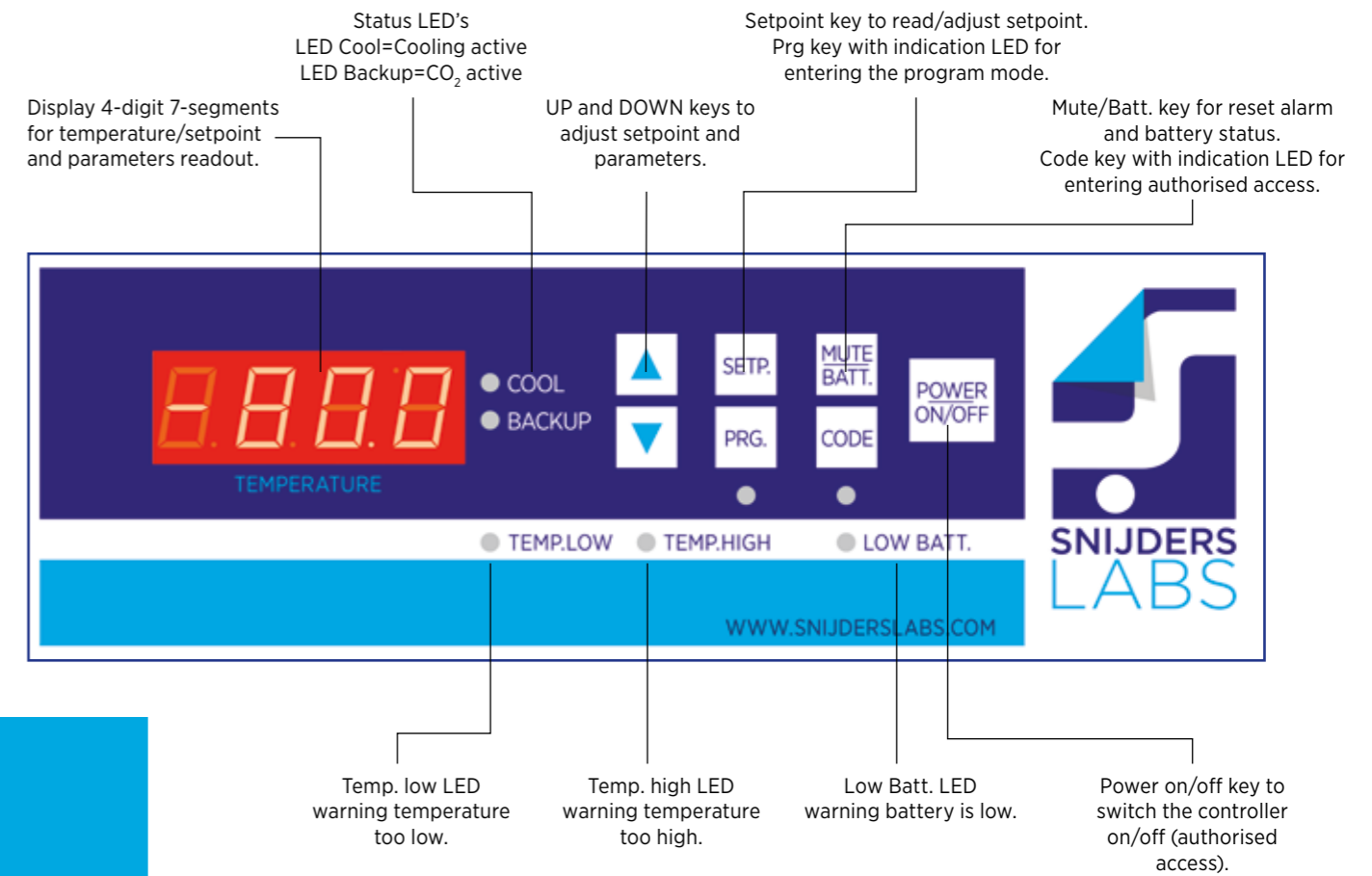
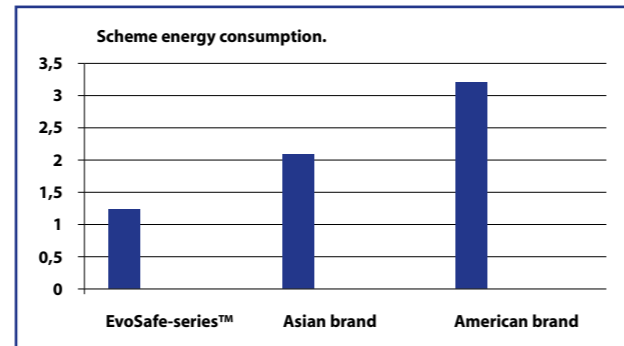
The EvoSafe cooling system has been filled with non-flammable, environment friendly CFC and HCFC free refrigerant. The ULT freezer performance and consistency is greatly increased due

to a PC based coolant dosing system. It is an unique system designed specifically for Snijders. The system can fill to an accuracy of 0.1 gram. Each freezer is tested for leaks three times. It's tested on temperature in our own temperature controlled test facility.



ENERGY CONSUMPTION

The graph on the right gives a representation of the energy consumption in Watts, per box, per hour and is based on the EvoSafe™ model VF720-86 (capacity: 528 pcs. 50 mm boxes). For comparison the graph shows a freezer with a similar capacity selected from the Asian and American markets.

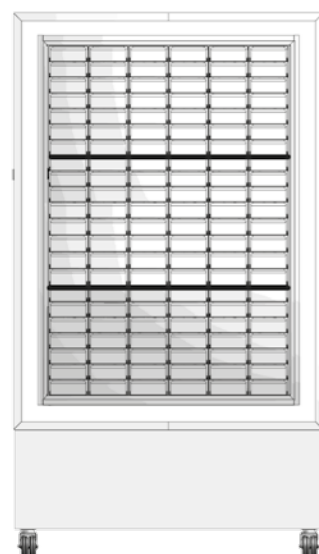


WATER COOLING OPTION

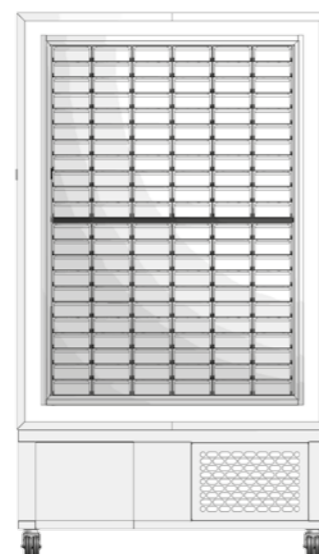
Our ULT freezer can be executed with a water-cooled condenser which uses between 5 to 10% less energy. This system rejects less heat to atmosphere and therefore there are significant cost savings to be made by using less air-conditioning to cool the ambient in the space where the freezers are located.

CAPACITY

Maximisation of capacity, calculated in litres, was achieved by matching the internal dimensions to the standard box and racking system used throughout the world. This results in more boxes per freezer, a lower volume in litres and therefore optimum sample storage capacity.



Brand A
725 litre freezer with 3 inner doors.
Total capacity:
504 pcs. 4 x 50 mm boxes.
Racks required : 18 pcs.



EvoSafe-series™
720 litre freezer (VF720-86) with 2 inner doors.
Total capacity:
528 pcs. 4 x 50 mm boxes.
Racks required: 12 pcs. single or 6 pcs. double.

WEB BASED CONTROLLER WITH IFREEZE TECHNOLOGY

The controller is the brain of the freezer, which uses the most advanced measurement and control techniques. Developed specifically for the EvoSafe-Series™, to give maximum security and reliability, including modern multimedia and communication technologies.

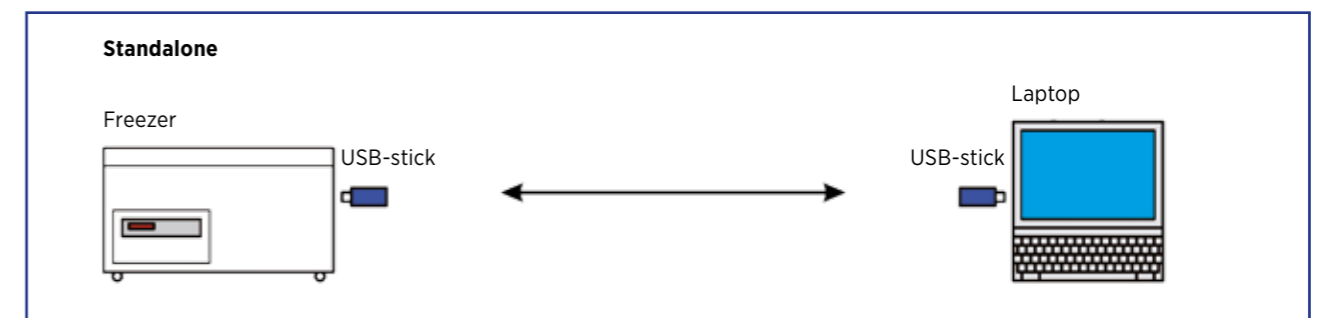
COMMUNICATION WITH THE FREEZER

There are three different ways to communicate with the freezer as shown below in the scheme diagrams.

1. Through USB-port

The temperature can be read graphically by a computer program. The USB-port is located behind the removable condenser plate. After installing the Snijders iFreeze log-viewer software, the chart can easily and quickly be read on any Windows PC. The chart can also be viewed and stored by a direct connection to a PC or laptop.

Fig. Scheme 1 through USB-port



2. Via a local network

If a local network (Ethernet) is available a user can view the status of the freezer through the web page 'Freezer Statistics'. For example: the actual temperature, set point, ambient temperature, door open or closed and/or whether there has been an alarm. This application is also suitable for simultaneous use.

3. Via Internet

To expand communication capability it is possible to access the freezer(s) through any internet connection. This requires a right to be called up to enter the local network via internet.

IFREEZE LOGVIEW

By one of the three aforementioned forms of communication, the temperature log of the freezer can be retrieved. Through the 512 MB memory the freezer logs every 20 minutes the most critical parameters. The maximum storage is 6 months. In the example on the right, you can see a temperature-time log graph.

Legend graph:

- Adjust temperature (°C)
- Condensor temperature (°C)
- Set point (°C)
- Battery voltage (Vdc)
- AC

In the status bar below the chart is stated when these functions have been active.

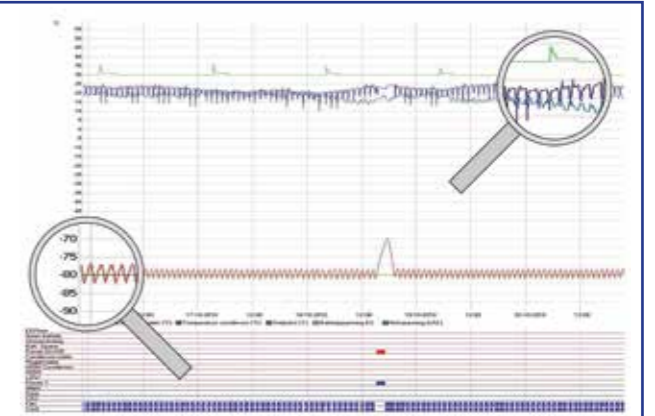


Fig. Scheme 2 via a local network

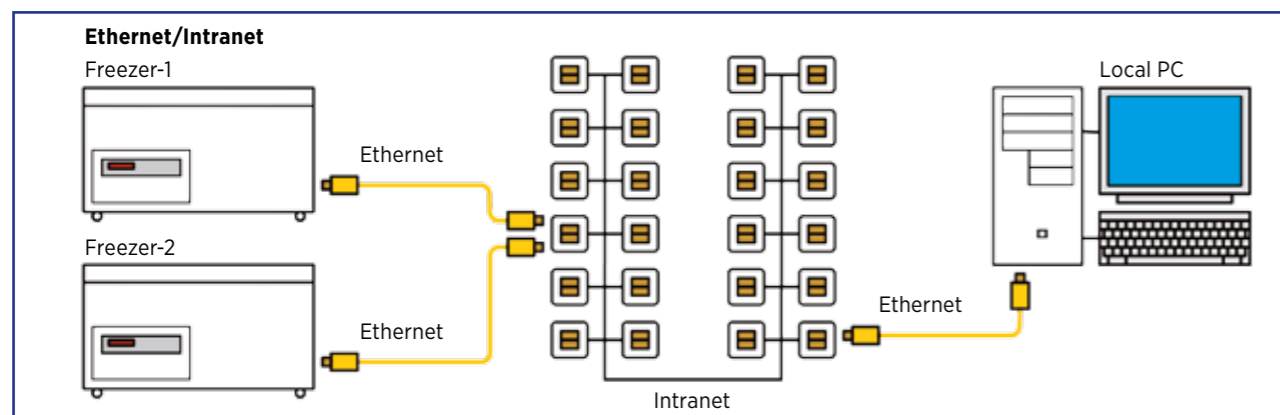
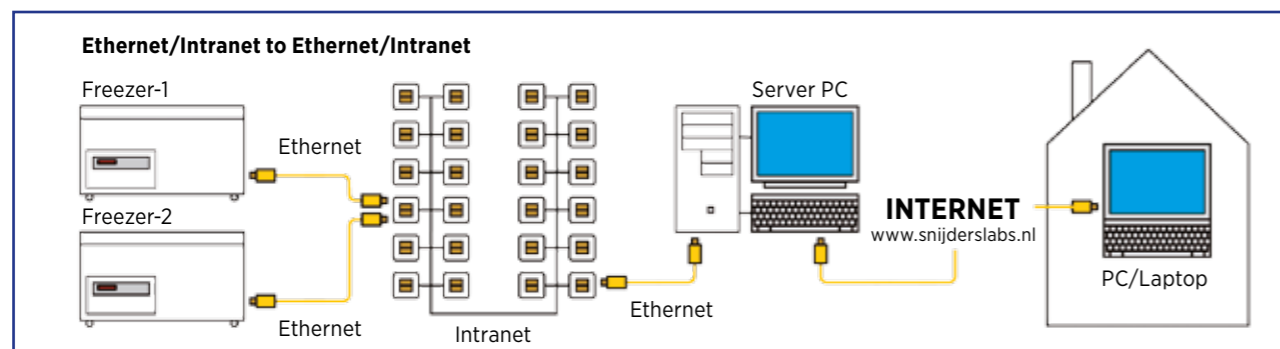


Fig. Scheme 3 via internet

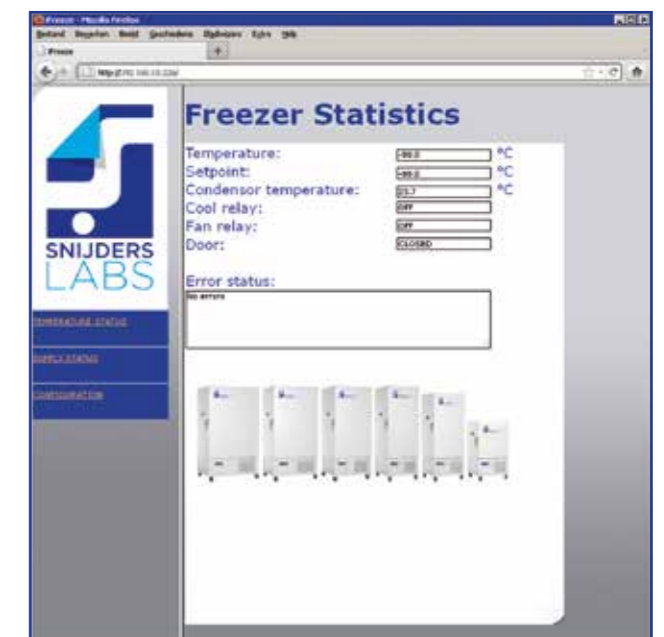


FREEZER STATISTICS

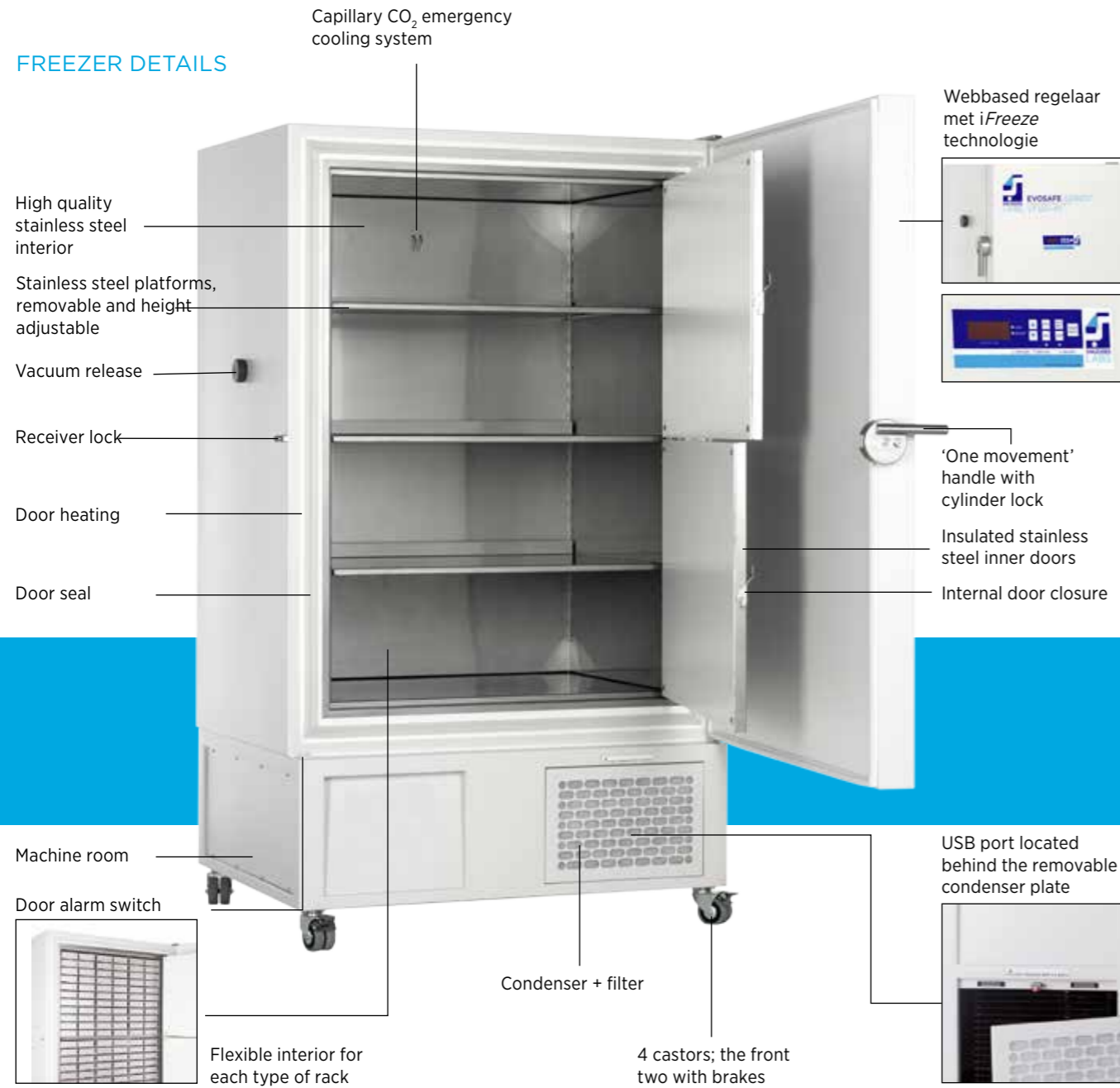
By using the standard web interface including an unique TCP/ IP address, it's possible to approach one or more freezers.

In this way it will be possible to look at a number of important parameters, for example:

- + set temperature and actual temperature
- + if the fan is running
- + if the door is closed
- + if there is an alarm or has been an alarm.



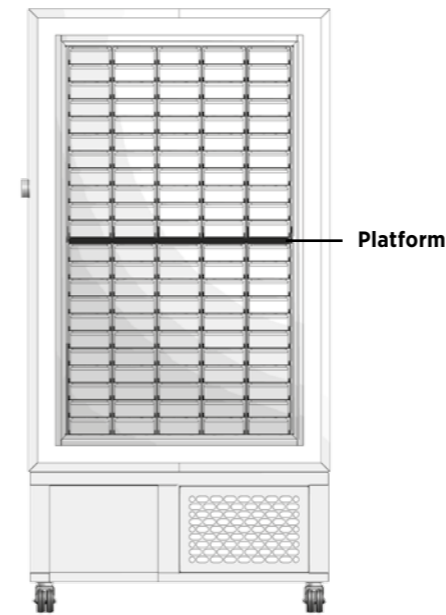
FREEZER DETAILS



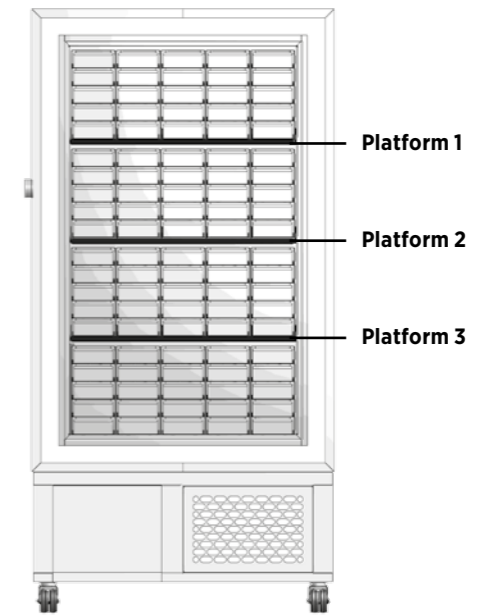
REAR FREEZER DETAILS



Division 1
2 compartments/10 racks.



Division 2
4 compartments/20 racks.



FLEXIBLE DIVISIONS

All upright freezers are fitted with in height adjustable platforms allowing virtually any format and any type of rack to be used. The example above is of the VF620-86 freezer with 2 different divisions (2 and 4 compartments).

SAFETY

Monitoring 24 hours a day 7 days a week. Alarms will be notified, acoustically and visually, through a code in the display and via the potential free contact. Normal use and preventive maintenance increases the lifetime of the EvoSafe freezers.

EUROPEAN QUALITY

All installed electronic and cooling components are sourced from reputable European brands. This selection process has a positive effect on the lifetime of the freezers. For example: L'Unité Hermétique compressors, EBM ventilators, Siemens time relay, Jumo sensors, DuPont refrigerant and Danfoss components. Our suppliers comply with the latest European directives in the field of energy saving, environment and safety. No low-cost components are used, thereby ensuring quality and reliability.

ALARM FUNCTIONS

In the event of a failure or warning, the freezers are equipped with various alarms. Each alarm has a unique code that is seen on the display of the controller. There is a mute button for audible alarm. Available and selectable alarm functions:

- + minimum or maximum temperature exceeded
- + door alarm
- + damaged sensor (in cabinet and/or condenser)
- + battery voltage too low
- + battery empty
- + voltage deviation
- + ambient temperature too high
- + power fan failure
- + back up alarm
- + telephone dialing system alarm.

The ways in which the freezer alarms:

- + acoustically via a buzzer
- + visually in the display by a code and/or LED indication
- + via an e-mail
- + via an SMS text message (optional)
- + via the potential free contact to a BMS (Building Monitoring System).

CRYOTHEQUE® BIOBANK

In addition to the manufacturing and delivery of ULT freezers Snijders also offers the facility to store the valuable samples of customers in either their own ULT freezers or ones supplied by us in our fully conditioned storage facility. This facility includes temperature controlled storage rooms, fitted with all necessary safety devices for 24 hours a day, 7 days a week. For example: burglar and fire alarm, temperature logging and alarms, emergency power, visitor registration and backup freezers if required. This offers advantages such as:

- + maximum security during the storage of your samples
- + freezers no longer located at the customers site, hence saving space, no heat removal requirements, no excess noise, energy saving and no maintenance or malfunctions
- + spreading costs
- + opportunity for third party clinical trials
- + risk management of the unique collection of patient DNA or irreplaceable material.

SNIJDERS LABS: EXPERIENCED INNOVATORS

SNIJDERS LABS forms part of the Snijders Group, which actively delivers equipment and products for scientific research & development as well as internal transport systems and examination couches for the health care sector under SNIJDERS CARE. All design, manufacture and testing is held in

house to assure high quality production and investment in new technologies for the production of all Snijders products. The total control of the manufacturing line means that Snijders can offer total quality, in-depth knowledge and detailed assistance to all of their clients.

SERVICE AND WARRANTY

Contact your local distributor who will guarantee quality and service (if necessary check our website for distributor details).

VISIT OUR WEBSITE

WWW.SNIJDERSLABS.COM

There you'll find all the latest information about:

- + a variety of climate cabinets for plants, seed germination, fungi, snails and insects research with temperature-, light- and humidity control
- + (cooled) incubators and incubator walls, designed for general microbiological research of among others food, water and medical laboratories.
- + stability chambers.

*Specifications subject to change



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