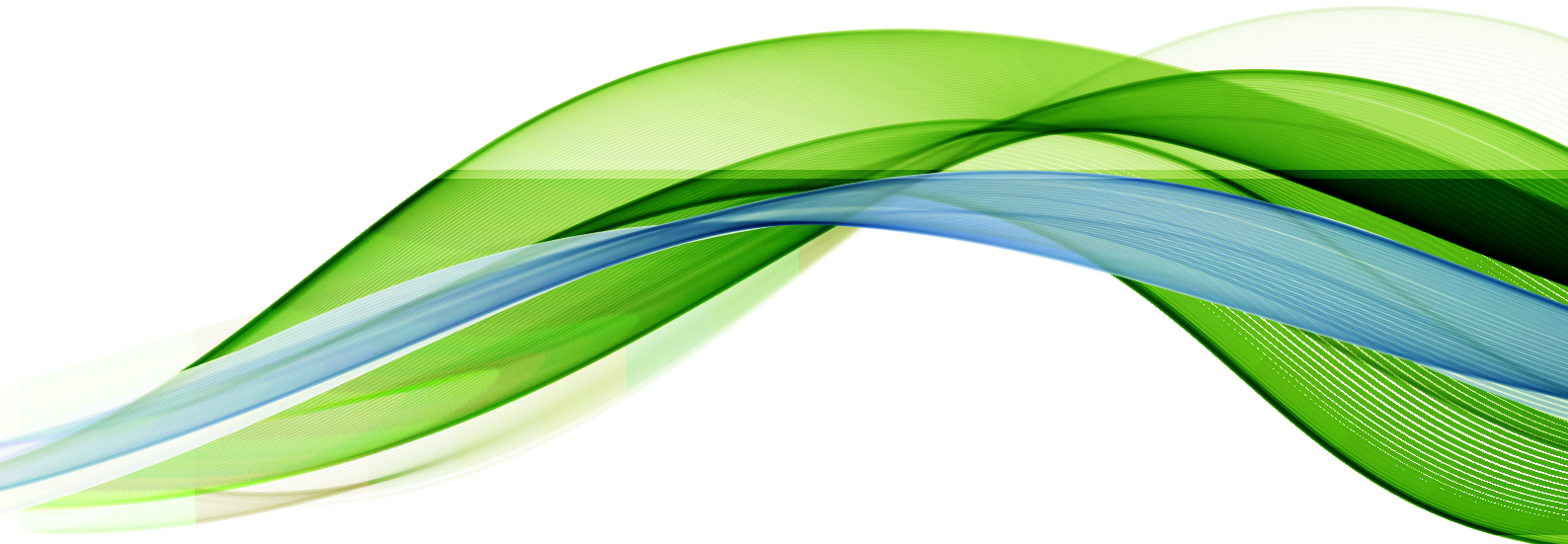




evosafe ecologic



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, to take responsibility for the environment, to save energy and to be sustainable at the same time.**

Snijders Labs has been manufacturing Ultra-Low Temperature (ULT) freezers for over 35 years. The company is ISO-9001 and ISO-13485 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.

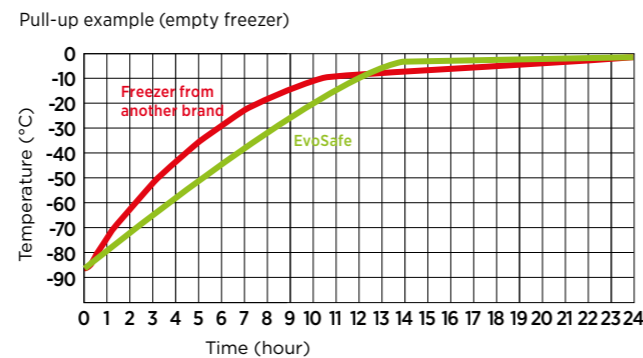
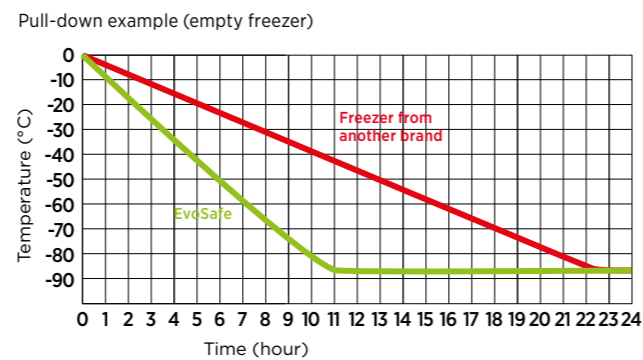


INSULATION TECHNOLOGY

The basic 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.

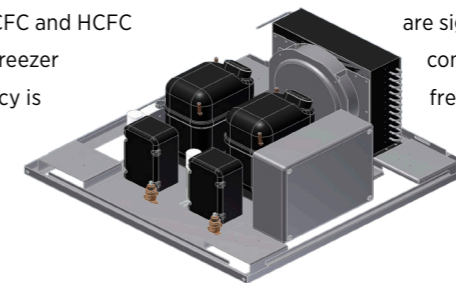
The internal and external dimensions of the EvoSafe™-series are tailored to the European metric system to take European inventory systems, in contrast to other Asian and American producers. This allows a greater capacity of boxes to be stored while keeping the external dimensions to a minimum, even when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

EXAMPLES OF PULL DOWN AND PULL UP



'STATE OF THE ART' ULTRA LOW TEMPERATURE COOLING

The EvoSafe™-series are the result of 35 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 Green cooling system has been filled with environment friendly CFC and HCFC free green gases. 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. It's tested on temperature in our own temperature controlled test facility.

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.

## VACUUM INSULATED PANEL

VIP is a form of thermal insulation consisting of a gas-tight enclosure surrounding a rigid core, from which the air has been evacuated. We use these in the building construction to provide better insulation performance than conventional insulation materials and more effective content.



The switch from CFCs and HCFCs to HFCs represents a classic example of industry replacing one harmful chemical with another while protecting the status quo and their market share. All these chemicals contribute to climate change, most with Global Warming Potential (GWP) thousands of times higher than CO<sub>2</sub>. By shifting to HCFCs and now HFCs since banning CFCs, we have continued to destroy the ozone layer with HCFCs and harm the climate with both alternatives, and will keep on doing so for the next several decades at least. There were natural solutions available when HFCs were originally introduced. We believe that these chemicals can and should be replaced with climate-friendly natural refrigerants. This is the only responsible course of action. Natural refrigerants are naturally occurring, non-synthetic substances that can be used as cooling agents in refrigerators and air conditioners. These substances include hydrocarbons (propane, butane, and cyclopentane), CO<sub>2</sub>, ammonia, water and air. It does

seem strange that we are arguing for the uptake of carbon dioxide in one area and pushing for its reduction in another. CO<sub>2</sub> has a GWP of 1, and the F-gases currently popular on the market have a GWP in the thousands. Carbon dioxide has no ozone depletion potential (ODP=0) and negligible direct global warming potential when used as a refrigerant in closed cycles. To put it in perspective, while the average car emits 5 tons of carbon dioxide per year, a CO<sub>2</sub>-charged refrigerator or vending machine would emit say 300 grams of CO<sub>2</sub> after its 10-year lifetime. Ammonia has both no ozone depletion potential (ODP = 0) and no global warming potential (GWP=0). It is considered a natural refrigerant because although produced synthetically for refrigeration, it occurs in nature's material cycles. It is a hazardous substance, but is used widely and safely around the world in large-scale industrial cooling systems such as food processing and building air conditioning



## WEB-BASED 7" TOUCH SCREEN

- + 7" (inch) touch screen
- + Energy saving standby mode
- + Heart beat showing good operation
- + Personal codes for entry
- + Service program
- + Monitoring alarm history and service activities
- + Red colored flashing bar in display during alarm
- + Temperature data with scroll function

## 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.

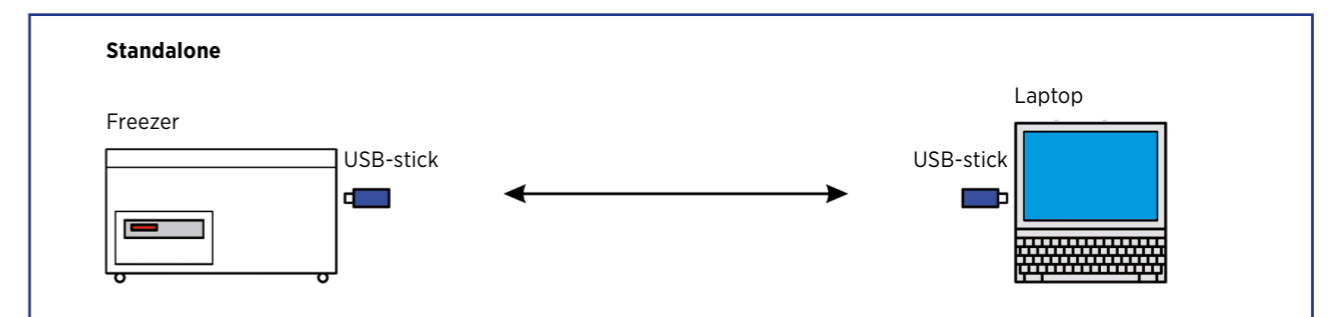
## COMMUNICATION WITH THE FREEZER

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

### 1. Via USB-port

The full data log 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 minute the most critical parameters. The maximum storage is at least 1 year. In the example on the right, you can see a temperature-time log graph.

### Legend graph:

- Process value temperature (°C)
- Condenser temperature (°C)
- Set point (°C)
- Battery voltage (Vdc)
- AC

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

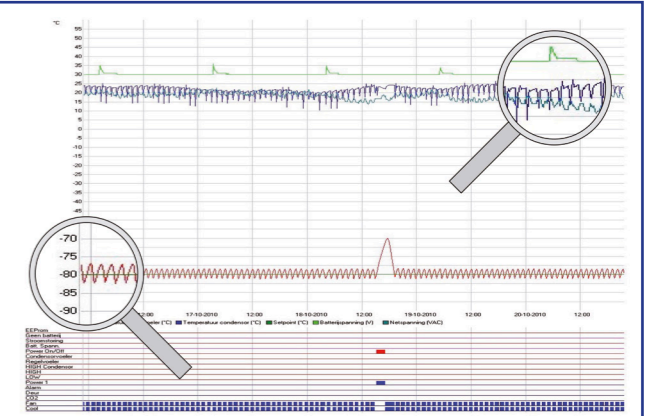


Fig. Scheme 2 via a local network

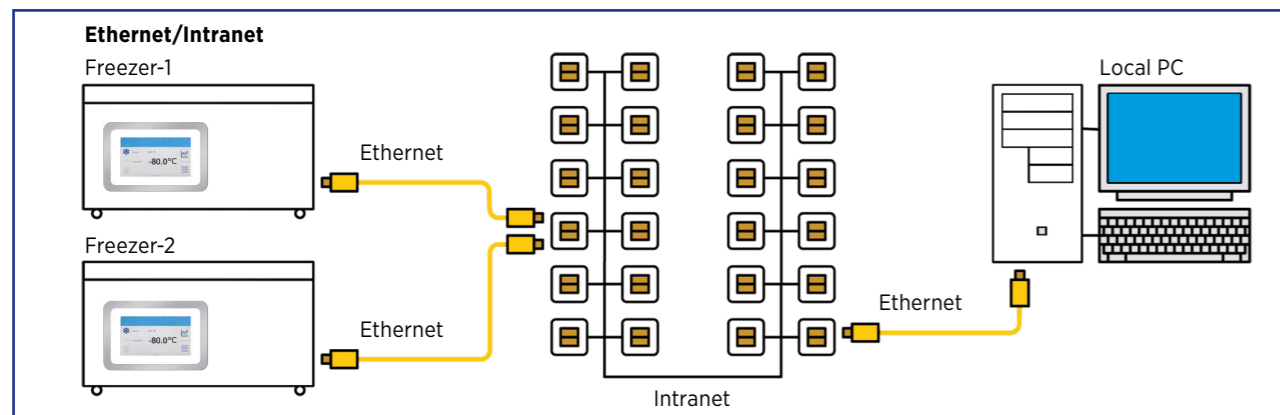
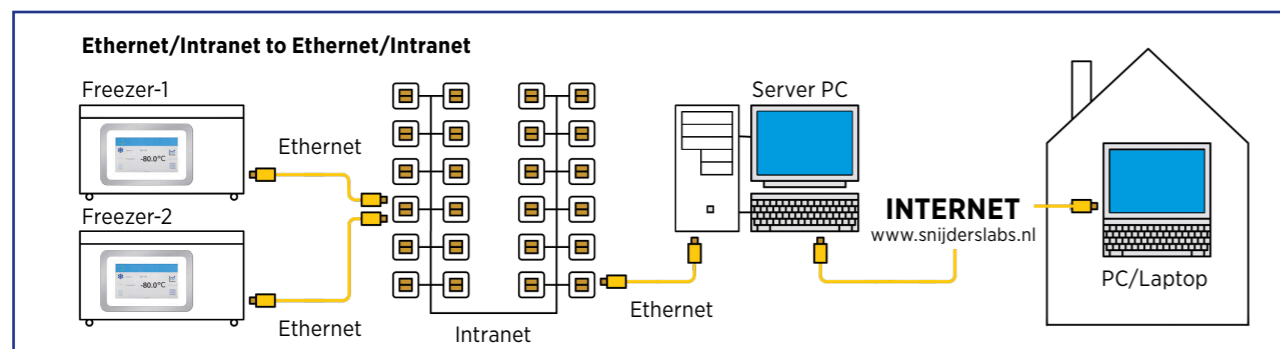


Fig. Scheme 3 via internet

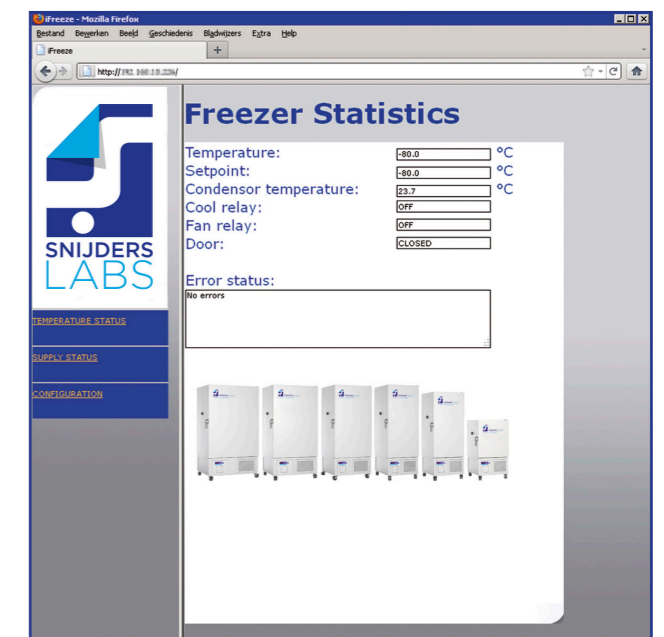


## FREEZER STATISTICS

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.



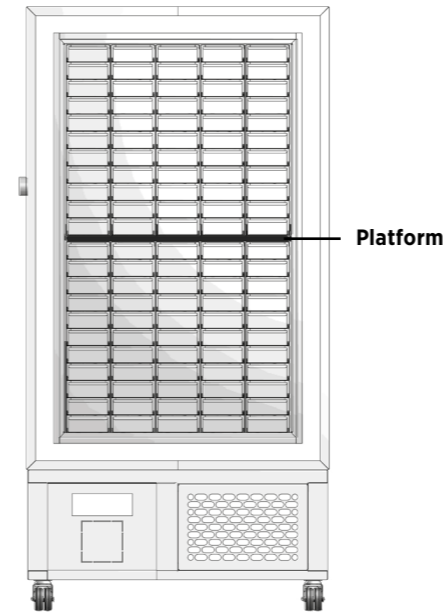
## FREEZER DETAILS



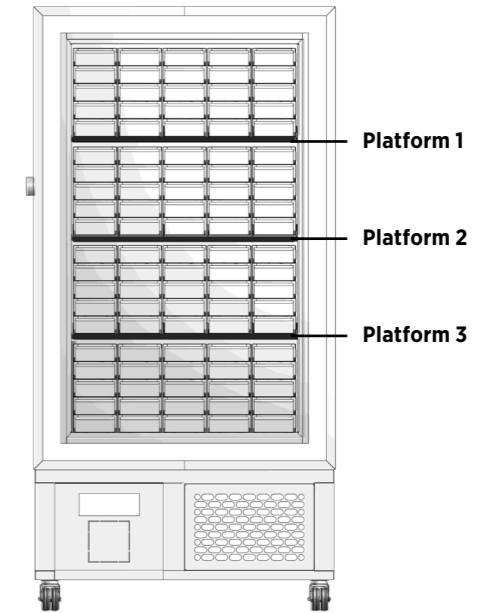
## REAR FREEZER DETAILS



**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 VF620-86G 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 with description in the display with red colored flashing bar, by e-mail (when connected to a network via the Ethernet connection) and via the potential free contact.

## 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, 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 an unique code with description 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 with description
- + via an e-mail
- + via an SMS text message (optional)
- + via the potential free contact to a BMS (Building Monitoring System)
- + red colored flashing bar in screen

## 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](http://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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