

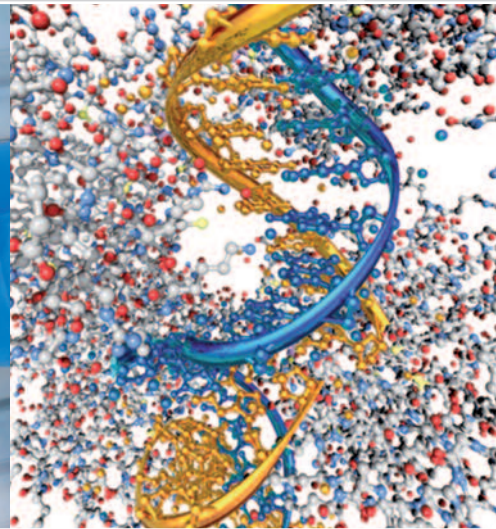


EvoSafe-series™

CELEBRATING
more than **30** years
MANUFACTURING ULT FREEZERS

Evolutionary Safe

Ultra-Low Temperature freezers -86°C



A full range of Ultra-Low Temperature freezers, in capacities from 120 up to and incl. 720 ltr. designed to protect your samples and to save energy at the same time.

snijders scientific
sharing technology



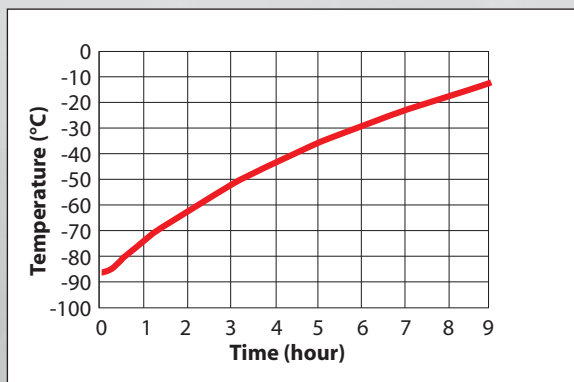
Snijders Scientific has been manufacturing Ultra-Low Temperature (ULT) freezers for over 30 years. The company is ISO-9001 certified for Development, Manufacturing, Sales and Service. Snijders Scientific operates worldwide by co-operating with factory certified and trained distributors for installation 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.

Isolation technology

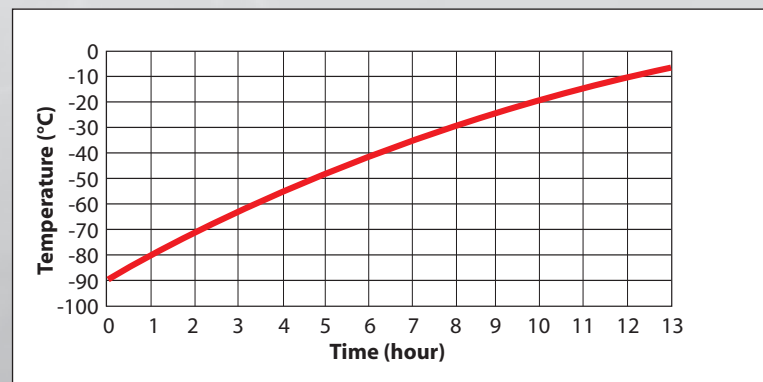
The EvoSafe-series are fitted by an unique insulation method installed between the interior and exterior metal profiles. A combination of PU blocks with twocomponent foam is used (the so-called 'foam in place' insulation). This system ensures that all the cooling is transferred to the interior of the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

Examples of temperature rise during power failure

Pull-up example from a freezer with vacuum insulation



Pull-up EvoSafe™ VF720-86



Vacuum insulation or PU

The internal and external dimensions of the EvoSafe-series™ are tailored to the European metric system (mm, cm and meters) to take European inventory systems, in contrast to other Asian and American producers.

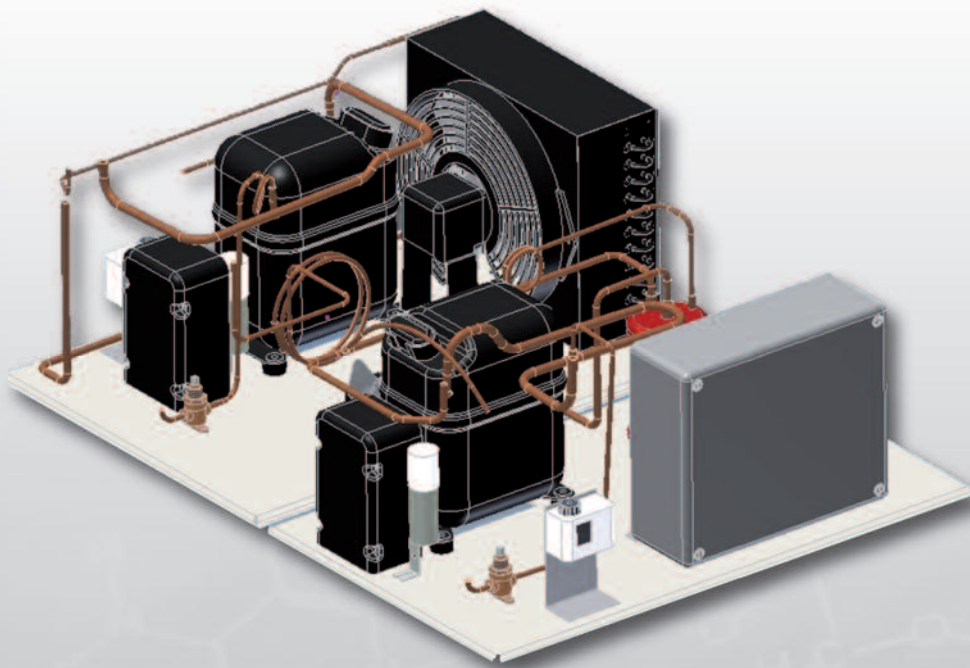
This allows a greater capacity of boxes to be stored while using the conventional polyurethane insulation while keeping the external dimensions to a minimum.

Ask for EvoSafe-series™ **datasheets** for more information on, among others, the exact numbers of boxes and dimensions.

Temperature freezers

Conclusion

With any brand using vacuum insulation the Pull down period is comparable to the EvoSafe™ freezers. The difference in the 'Pull up' time, however, 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

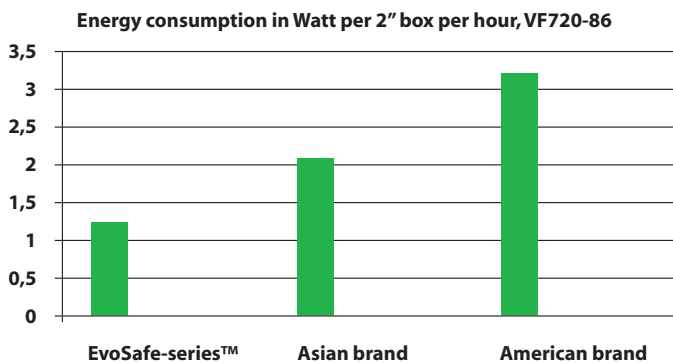
The EvoSafe-series™ is the result of 30 years of experience with Cascade cooling technology. They are designed for high performance, sustainability, energy efficiency and low noise output, due partly to the selection of the Tecumseh compressor silent range.

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 consistency is greatly increased due to using an uniquely designed PC based coolant dosing system, which can fill with an accuracy of 0.01 gram. The freezers are then tested 3x for leakages within our own testing facility.

Energy consumption

The graph below gives a representation of the energy consumption in Watt, per box, per hour and is based on the EvoSafe™ model VF720-86 (capacity: 528 pcs. 2"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 installed with a water-cooled condenser and when installed they will use 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 housed.

Capacity

Maximisation of capacity, calculated in litres, was achieved by matching the internal dimensions to the standard box and racking system used throughout Europe.

This results in more boxes per freezer, a lower volume in litres and therefore optimum sample storage capacity.

Brand A

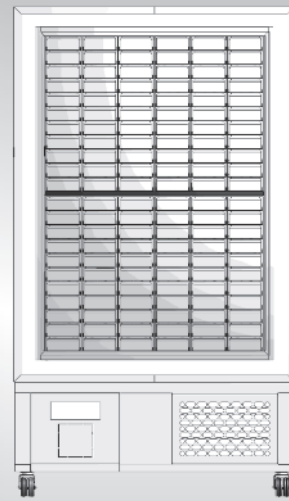
725 litre freezer with 3 inner doors (based on 2" boxes).



Total capacity 504 pcs. 2"boxes.
Racks required : 18 pcs.

EvoSafe-series™

720 litre freezer (VF720-86) with 2 inner doors (based on 2" boxes).

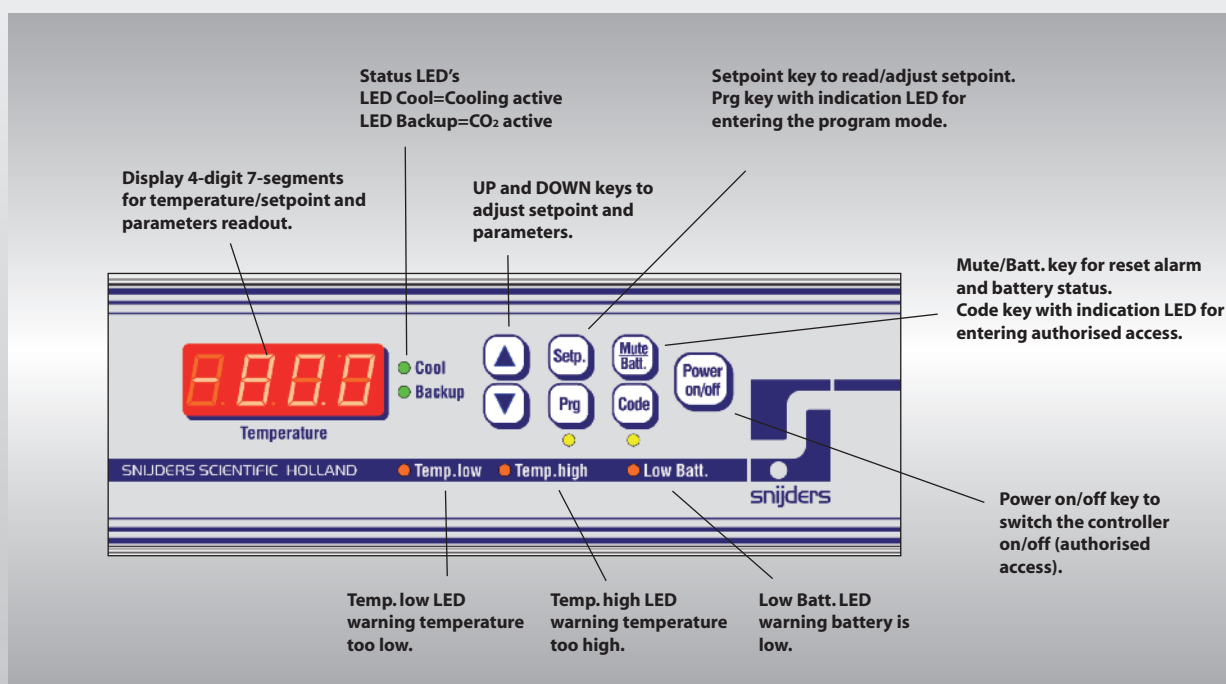


Total capacity 528 pcs. 2"boxes.
Racks required: 12 pcs. single or 6 pcs. double.

Temperature freezers

Webbased 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.



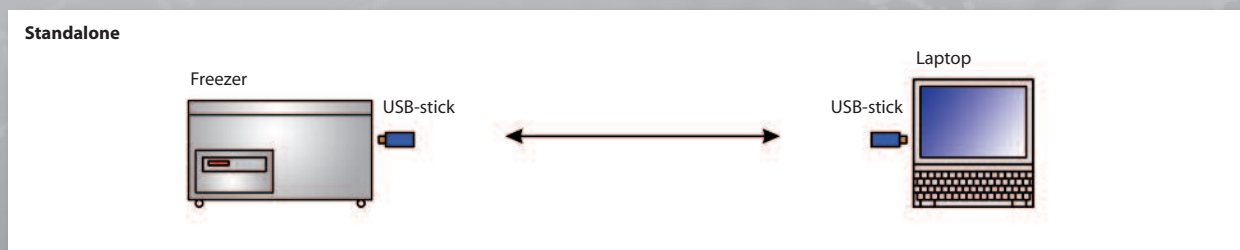
Communication with the freezer

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

1. Through USB-port

The temperature is logged and displayed graphically. The USB-port is located behind the removable rear 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.

Scheme 1

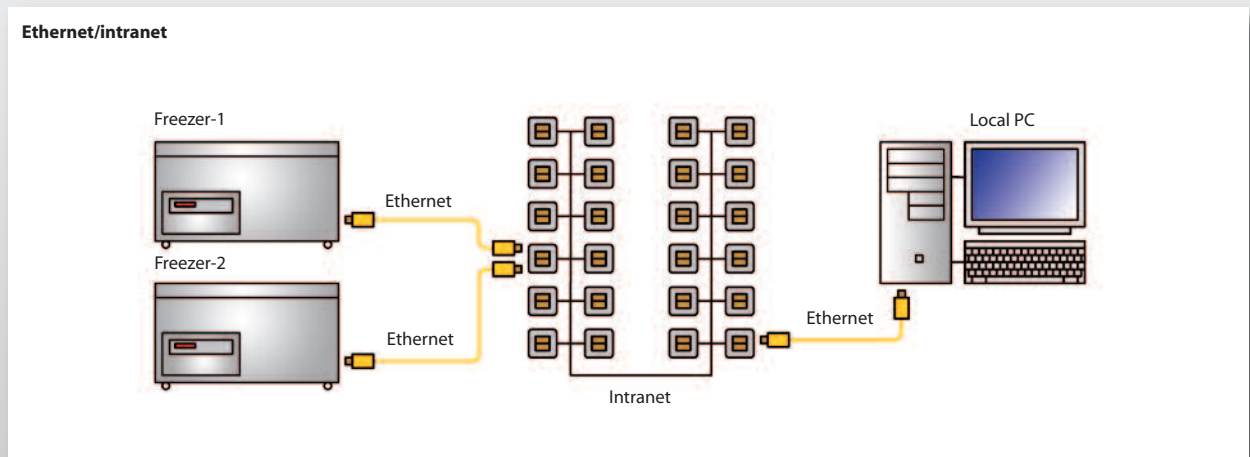


2. Via a local network

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.

Scheme 2

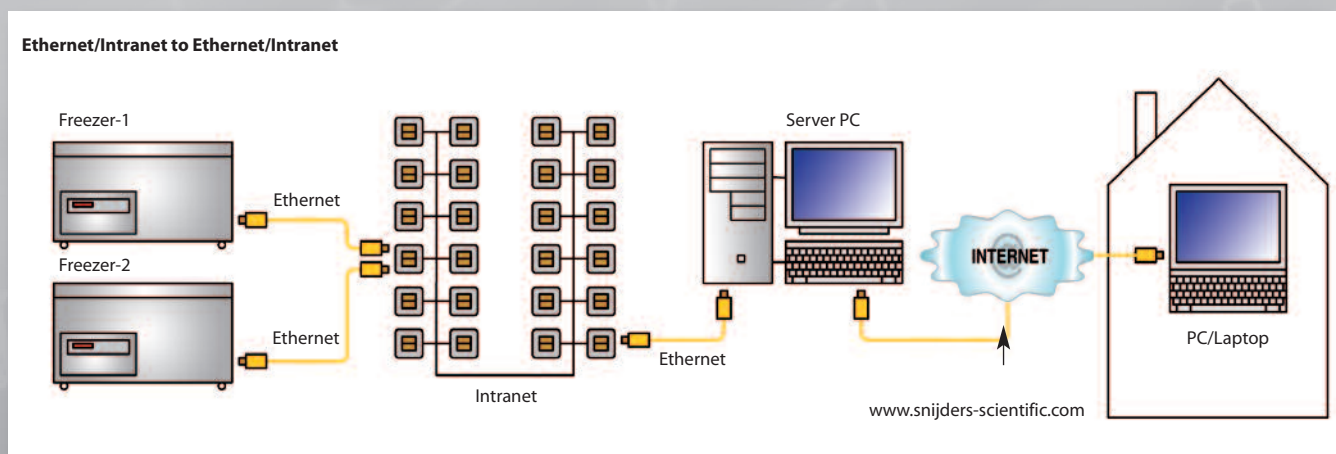


3. Via Internet

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.

Scheme 3

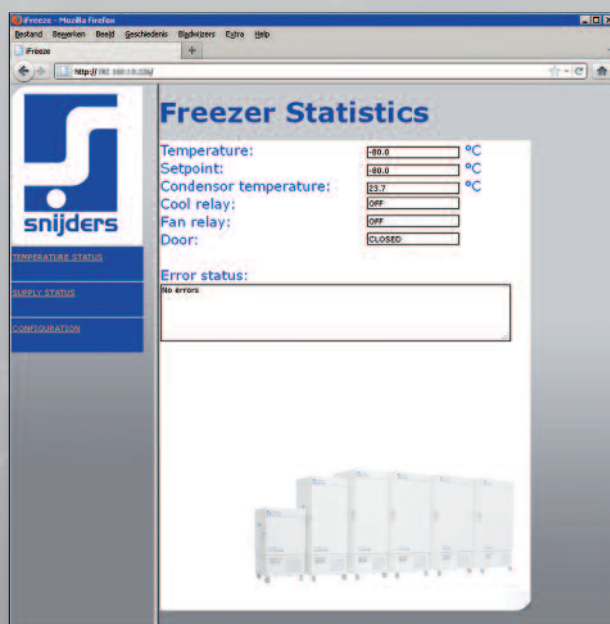
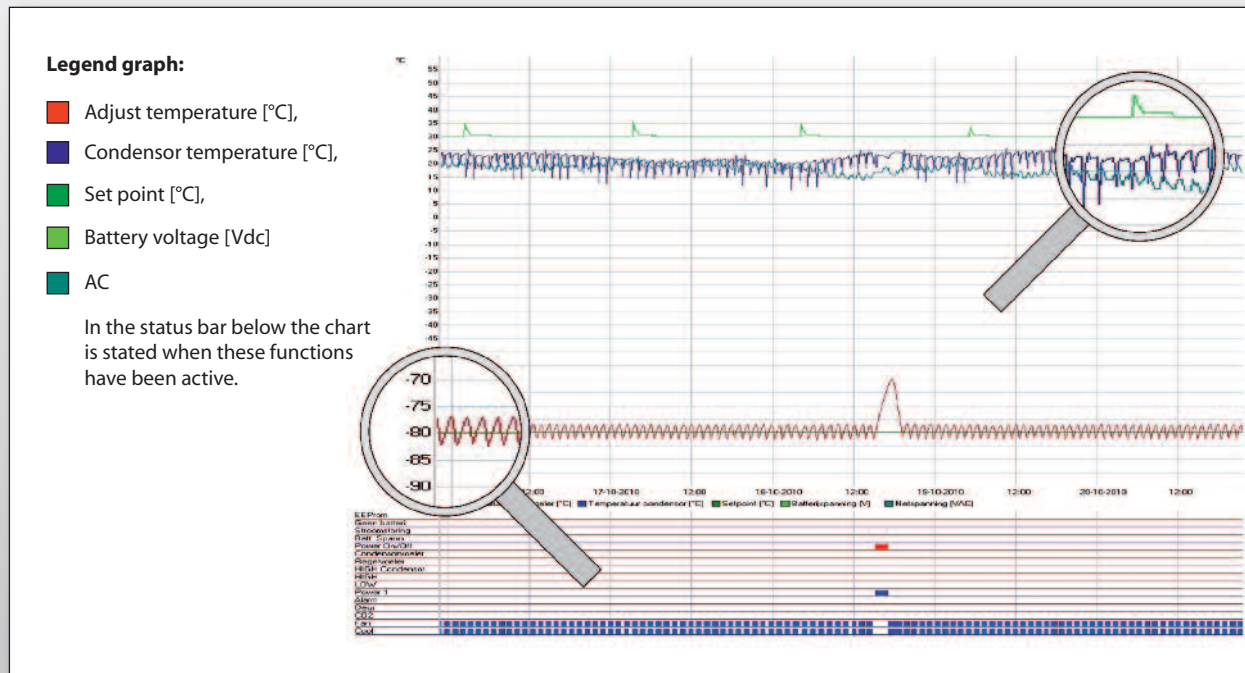


Temperature freezers

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.

Below is an example of a temperature-time log graph.



Freezer Statistics

By using the standard webinterface including a 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, such as among others:

- 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

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. Under normal use and with preventive maintenance the EvoSafe freezers have a lifetime of at least 10 years.

European quality

All used 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: Tecumseh compressors, EBM Pabst ventilators, Siemens relays, Jumo sensors, DuPont refrigerant and Danfoss components. Our suppliers comply with the latest European directives in the field of energy, environment and safety. No low-cost components are used, thereby ensuring quality and sustainability remains.

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
- filter alarm
- damaged sensor (the sensor in both the freezer and the condenser sensor)
- battery voltage too low
- battery empty
- voltage deviation
- ambient temperature too high
- condenser fan failure.

The ways in which the freezer gives an alarm:

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

Temperature freezers

Details

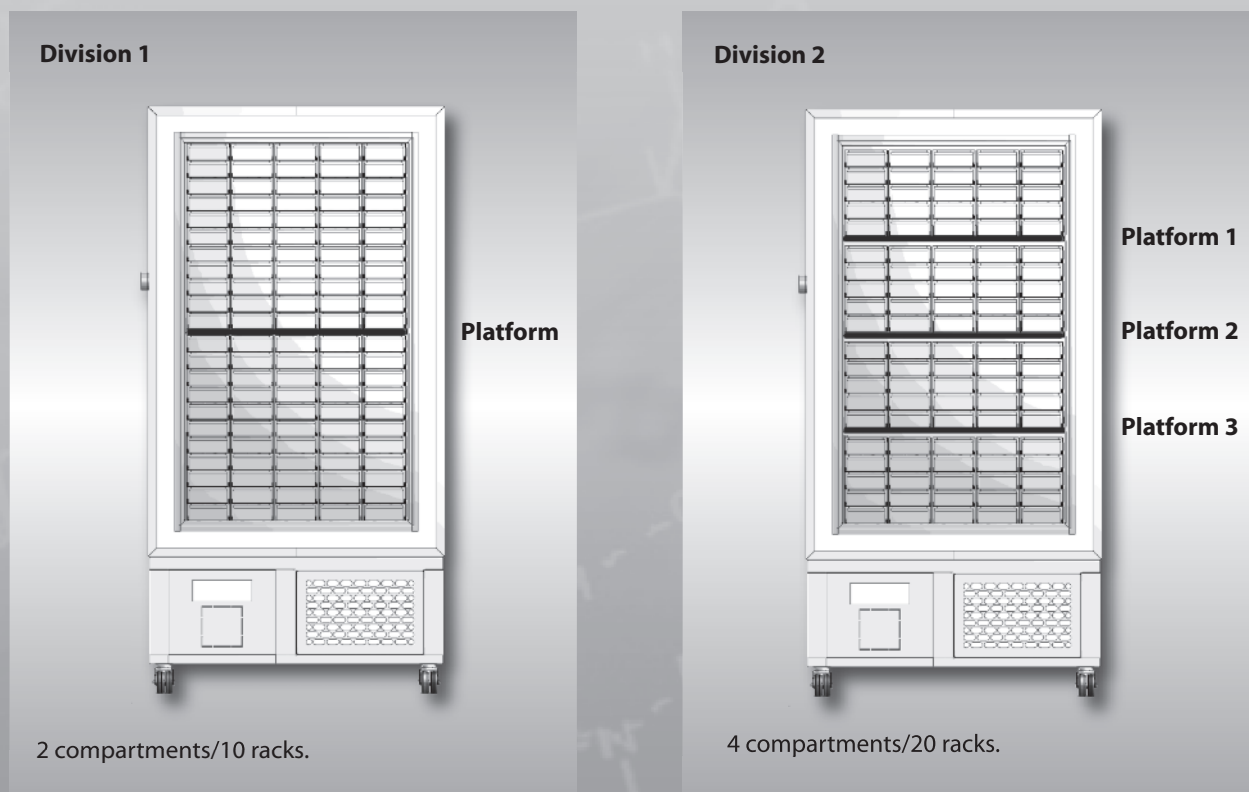


Rear freezer



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 below of the VF720-86 freezer with 2 different divisions (2 and 4 compartments).



Temperature freezers

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 storage of valuable client samples.

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.



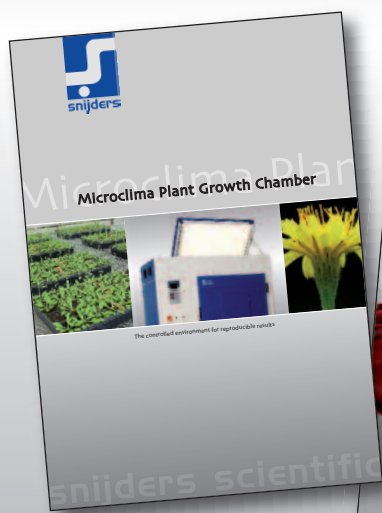
Service and warranty

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



Visit our website www.snijders-scientific.com

For more information about the ULT-freezers and to view our entire product range, including:



- various climate chambers for plant and insect research; with temperature, light and humidity control.



- (cooled) incubators and incubator walls designed for general microbiological research of among others food and water and medical laboratories.



snijders scientific b.v.

www.snijders-scientific.com

Office and Production:
Laurent Janssensstraat 105
5048 AR Tilburg – The Netherlands

Showroom and Testfacility:
Gebroeders Salastraat 40
5048 AL Tilburg – The Netherlands

Tel.: (+31)13-4633600
Fax (+31)13-4638635
info@snijders-tilburg.nl

- Ask us for the datasheet of the freezer type, incl. accessories, you're interested in.