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 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 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).

**Examples of temperature rise during power failure**

**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.
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.
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**
**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.

**Legend graph:**
- Red: Adjust temperature [°C],
- Blue: Condensor temperature [°C],
- Green: Set point [°C],
- Yellow: Battery voltage [Vdc],
- AC:

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

**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 an 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 condensor 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

- High quality stainless steel interior
- Capillary CO₂ emergency cooling system
- Flexible interior for each type of rack
- Stainless steel platforms, removable and height adjustable
- Insulated stainless steel inner doors
- ‘One movement’ handle with cylinder lock
- Internal door closure
- USB port located behind the removable rear condenser plate
- 4 castors; the front two with brakes
- Condenser + filter
- Web based controller with iFreeze technology
- Vacuum release
- Receiver lock
- Door heating
- Door seal
- Machine room
- Door alarm switch

Details about key features:

- **Stainless Steel Interior**
  - High quality stainless steel interior ensures durability and hygiene.
- **Vacuum Release**
  - Facilitates easy opening and closing, reducing energy consumption.
- **Door Heating**
  - Prevents condensation and ice formation, ensuring even temperature distribution.
- **USB Port**
  - Located behind the removable condenser plate, convenient for connectivity.
- **Web Based Controller**
  - With iFreeze technology, offers efficient temperature control.
- **Stainless Steel Platforms**
  - Removable and height adjustable, offering flexibility and ease of maintenance.
- **Internal Door Closure**
  - Ensures airtight seal for optimal temperature retention.
- **Machine Room**
  - Provides space for components, enhancing overall efficiency.
- **Door Seal**
  - Ensures a tight seal, preventing temperature fluctuations.
- **Receiver Lock**
  - Provides security and protection against unauthorized access.
- **4 Castors**
  - The front two with brakes, ensuring stability and easy movement.

These features collectively ensure high-quality performance and reliability in temperature controlling applications.
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).
Cryothèque® - 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.

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