



ULTRA.GUARD™

Ultra low temperature freezers for long-term storage at -86 °C

UF V 500, UF V 700



**ULTRA
GUARD**

LONG-TERM STORAGE OF SAMPLES

Always the right design

An ultra low temperature freezer must ensure reliable cooling to maintain the temperature of the samples. One of the most important requirements is the user-orientated safety and operating concept, for example the traceability of the temperature profile over the entire period of storage or opening the freezer without any great effort.

BINDER has developed a revolutionary ultra low temperature freezer that seamlessly joins the ranks of proven BINDER products in terms of reliability for the scientific laboratory as well as setting new standards for safety.



Biological samples



Pharmaceutical ingredients



Blood banking



Hospitals / institutes

THE RIGHT ULTRA LOW FREEZER FOR YOUR SAMPLES

Like no other ultra low temperature freezer, **ULTRA.GUARD™** offers clear benefits with its user-orientated design and technological features. Thanks to the combined and accumulated knowledge of more than 25 years of research and development by the technological leader **BINDER** our freezer is now one of the quietest freezers available on the market today.

► **ULTRA SAFE**

The **ULTRA.GUARD™** has personalized access control based on RFID technology. This innovation allows the laboratory administrator to define a closed user group. The integrated log memory of the **GUARD.CONTROL™** reliably documents every opening.



► **ULTRA USER-FRIENDLY**

Several standard communication interfaces allows integration of the **ULTRA.GUARD™** in the security and alarm infrastructure. For convenient analysis and logging of operating data, the **ULTRA.GUARD™** has an optional USB data logger, allowing the user to transfer data to a PC with no additional software.



► **ULTRA RELIABLE**

To ensure reliable, stable operation for the long term, the **ULTRA.GUARD™** has a 2-stage refrigeration cycle and has been equipped with energy- and space-saving vacuum insulation panels.

ULTRA GUARD



"MADE IN GERMANY" SAFETY

RFID key card and RFID reader

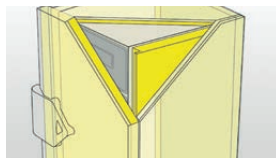
RFID key card: Only employees authorized by the laboratory administrator can open the freezer.

RFID reader: All openings are logged and can be read – for a complete user profile.

CLEAR BENEFITS THANKS TO TECHNOLOGICAL PROGRESS

Reduced energy consumption

Large-surface vacuum insulation panels for maximum insulation with optimum space utilization



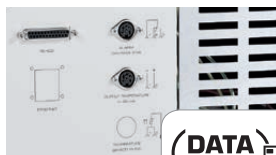
4 separate interior areas

Maintains cold temperatures with open door



Easy integration with alarm infrastructure

- 3 Standard interfaces
- RS 422 interface
- Zero-voltage relay alarm output
- Analog output 4 – 20 mA



Lockable adjusting feet and stable casters

For stability on uneven floors and for easy repositioning



Easy air filter access

For quick and easy filter replacement – no tools required





Sophisticated interior space design

For safe storage of up to 52,800 samples in standard racks and boxes



Automatic door mechanism

Ergonomic positioning of the control element for "push-button" opening



Personalized access control

Via key card based on RFID technology for personal access control



RFID reader

For reading out door openings and a complete usage protocol



OPTIONAL

Data Logger with USB connection

For quick and easy data transfer to a PC – no additional software required



OPTIONAL



FACTS THAT SPEAK FOR THEMSELVES

The new BINDER ultra low temperature freezers ensure safe long-term storage of samples at $-86\text{ }^{\circ}\text{C}$. The UF V series is based on a multi-stage security concept, which offers you everything you could want in a laboratory for a reliable operation.



► UF V 500 model



500 700

Available sizes (litres)

► EQUIPMENT

- Temperature range: $-86\text{ }^{\circ}\text{C}$ to $-40\text{ }^{\circ}\text{C}$
- Automatic door mechanism for easy door opening and closing
- Personalized access control with RFID technology
- User-friendly microprocessor controller with LED display
- Built-in visual and audible alarm system: for power failures, temperature deviations or battery failure
- Battery-operated backup system for full functionality of alarm functions in case of power failure for 72 hours
- Alarm test system
- Analog output 4 – 20 mA
- RS 422 interface
- Two-stage cascade refrigeration system with hermetically-sealed compressors
- Non-flammable refrigerant, CFC-free
- Inner chamber made of high-quality stainless steel
- Four compartment doors
- Internal, large-surface vacuum insulation panels
- Heated duplex door gasket prevents icing
- Zero-voltage relay alarm output
- Robust, adjustable and lockable casters
- Convenient air filter replacement without tools

► SPECIFICATIONS

	UF V 500	UF V 700
Exterior dimensions		
Width (mm)	900	1200
Height (mm)	1970	1970
Depth including controller (mm)	935	935
Wall clearance, rear (mm)	100	100
Wall clearance, side (side without door stop) (mm)	100	100
Wall clearance, side (side with door stop) (mm)	245	245
Interior dimensions		
Interior width (mm)	619	911
Shelf width (mm)	588	880
Interior height (mm)	1300	1300
Interior depth / shelf depth (mm)	600	600
Interior volume, total (l)	483	711
No. of shelves	3	3
Number of compartments/compartment doors	4 / 4	4 / 4
Permitted load per shelf (kg)	50	65
Permitted total load (kg)	200	260
Weight (empty) (kg)	320	360
Temperature data		
Setting range (°C)	-90 – -40	-90 – -40
Measuring range, ambient temperature up to (°C)	-90	-90
Average temperature variation (±K) ³⁾	2.5	2.5
Cooling down time from +25 °C to -80 °C ¹⁾ (in h)	6	6
Heating up time in case of power failure from -80 °C to -60 °C (in h)	2.5	2.5
Electrical data UF V		
IP protection class according to EN 60529	20	20
Nominal voltage (±10 %) 50 Hz (in V)	230	230
Energy consumption at -80 °C and Tu = 25 °C (in kWh/day)	13.9	13.9
Average heat dissipation at set value -80 °C and Tu = 25 °C ²⁾ (in W)	580	580
Model no. door stop, right	9020-0236	9020-0233

¹⁾ to 98% of the set value with empty freezer // ²⁾ These values can be used for evaluation of air-conditioning systems. ³⁾ at -80 °C /// All technical data are specified exclusively for standard units at an ambient temperature of +25 °C and a voltage fluctuation of ±10%. The temperature data are determined in accordance to BINDER factory standard following DIN 12880 and are based on recommended wall clearances of 10% of the height, width and depth of the inner chamber. We reserve the right to change technical specifications at any time.

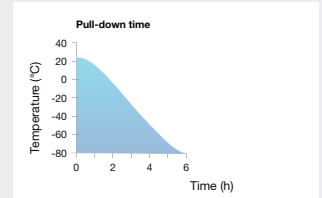
► OPTIONS

- Access port 30 mm, back side
- Sealing kit for access port 10 mm, back side
- Right hinged or left hinged door
- CO₂ back up system
- Water cooling
- Ethernet interface
- Additional PT 100 sensor with lemo socket
- GSM remote alarm box
- Advanced voltage booster
- Read-out box for RFID system
- PDF Data logger with USB port
- Chart recorder

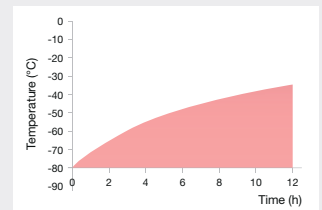
► ACCESSORIES

- Various chamber racks 5x4 and 6x4 for or with 50 mm boxes
- Various sliding drawer racks 5x4 and 6x4 for or with 50 mm boxes
- Standard cryo boxes
- De-icing kit including de-icing tray, wiper and scraper
- Deep temperature gloves
- Magnetic document holder

► COOLING DOWN / DE-ICING TIME AFTER POWER FAILURE



Cooling down time without loading at 25 °C ambient temperature



Deicing time without loading at 25 °C ambient temperature



Temperature recording via USB-PDF data logger



Large selection of racks and boxes



De-icing kit including de-icing tray, wiper and scraper



Solutions tailored to your requirements



Best service for your success

Service made to order

Like every BINDER product, the **ULTRA.GUARD™** offers a 5year warranty with comprehensive services and fast response times.

SIMPLY UNMATCHED IN DAILY USE

In laboratory practice, it is not only important that an ultra low temperature freezer cools reliably. A simple and self-explanatory operating concept is just as important.

Ease of operation



The ergonomically designed door mechanism of the new **ULTRA.GUARD™** has an ideal height and is easily opened by the push of a button as well as easily closed without any great effort. Its sophisticated inner chamber design can handle racks and box types commonly used throughout the world.

The chamber was designed in accordance with relevant standards and guidelines for product and user safety, as well as from the areas of laboratory design and equipment.

Data management



A chart record is used to record temperatures in the ultra low range. The **ULTRA.GUARD™** has an optional data logger with USB connection and independent temperature sensor, which can be used to export operating data to a PC with no additional software.

The additional APT-COM™ documentation software for GLP-compliant control, consists of programming and documentation which makes it possible to network up to 30 units. Data management supports compliance according to FDA 21 CFR Part 11.

Easy transport and positioning



Thanks to its DIN-compliant dimensions, the **ULTRA.GUARD™** fits in any modern laboratory. Stable and extremely durable casters facilitate transporting the **ULTRA.GUARD™** to its place of use. Adjustable feet make it easy for laboratory staff to compensate for uneven floors and to securely position the **ULTRA.GUARD™**.

Easy maintenance and cleaning



The **ULTRA.GUARD™** has an easy access air filter that can be replaced with just a few simple steps without tools.

The easy-to-monitor de-icing tray ensures easy defrosting.

DISTRIBUTOR: