



ULT freezers – maximum safety and efficiency at ultra-low temperatures

Liebherr ultra-low temperature freezers set new standards in the temperature range from $-40\text{ }^{\circ}\text{C}$ to $-86\text{ }^{\circ}\text{C}$. Not only do they offer unprecedented quality and reliability for storing highly sensitive substances, but also outstanding energy efficiency and ease of use that you will notice every day. Robust, economical and extremely safe, the series of appliances from the experts in freezing for laboratories and research facilities boasts an impressive number of functions and features, ensuring optimal protection for your valuable samples, chemicals, and research materials.

This allows you to fully concentrate on your work with peace of mind.

The advantages at a glance

SmartMonitoring

The cloud-based digital solution continuously documents temperatures with the help of external data loggers and alerts you immediately via email, text message or phone if any deviations occur.

Stainless steel workmanship

The interior, shelves and inner doors are made of rust-proof stainless steel and are therefore easy to clean. This enables optimum hygiene.

Shelves

Three stainless steel shelves in the interior, that can be freely adjusted in 24 mm increments, offer flexibility for space-saving storage, tailored to your requirements. You can add more shelves if required.

Serial interfaces

Interfaces for connecting to documentation and monitoring systems, as well as a volt-free contact for sending alarms to external remote warning systems.



Data recording

There are two feedthroughs (28 mm) on the top and bottom left for installing separate sensors for external monitoring or data recording systems in the interior.

Unloading ramp

No forklift required: the unloading ramp integrated in the packaging helps you easily position the appliance.

Detachable inner door

The detachable inner doors made of rust-proof stainless steel prevent loss of cold air when opening and are also easy to clean.



Door seals

The innovative door seal design, consisting of two all-round seals, makes the door completely airtight when closed. This also helps reduce energy consumption. The seals can be replaced separately and without tools.

Intuitive electronics

The intuitive electronics with integrated real-time clock allow the temperature to be set with an accuracy of one tenth of a degree. The control and display panel is resistant to dirt and easy to clean. Flexible parameter adaptations, such as offset and alarm value settings, allow the appliances to be quickly and easily adapted and qualified for your applications and requirements.



Monitoring system

The 3-stage monitoring system, consisting of integrated alarm notifications for temperature, door or mains electrical faults, upgradable features such as CO₂ emergency refrigeration and online monitoring, ensures optimum protection during storage. In the event of a power failure, integrated 12-volt batteries immediately supply the electronics with power. Notifications are provided in critical situations.

Insulation

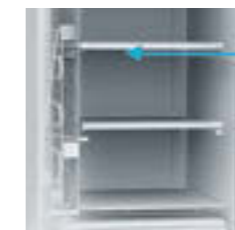
The combination of CFC-free polyurethane foam and vacuum-insulated panels ensures the best possible insulation to prevent rapid temperature increases.

Pressure compensation valve

When the door is opened and closed, the air exchange creates a vacuum which makes it difficult to open the door again immediately afterwards. The heated pressure compensation valve quickly equalises the vacuum and the door can be easily opened again after just a few seconds.



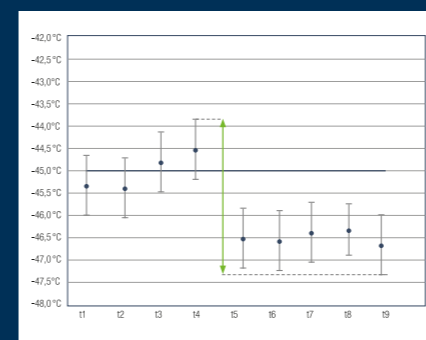
SUFsg 5001 MediLine



Quality right down to the smallest detail

Mechanical lock

The mechanical lock protects the stored products from unwanted access. The door is opened with an ergonomic and unbreakable aluminium lever handle.



Minimal temperature fluctuations

In order to maintain the quality of the stored samples, it is important to minimise temperature fluctuations. Liebherr ultra-low temperature freezers are characterised by extremely low fluctuations, both within the appliance and over time.



Low energy consumption

Ultra-low temperature freezers are among the appliances with the highest energy consumption in research facilities. Liebherr ultra-low temperature freezers are some of the most economical models on the market worldwide. In combination with highly insulating vacuum panels, the efficient cooling system allows economical operation, optimum energy savings and therefore low operating costs.



Low heat generation

The efficient cascade cooling system, using HC refrigerants, generates significantly less heat than previous technologies. This reduces costs in the thermal design of the room's air conditioning system. If heat dissipation via the room air conditioning is not possible, water cooling is available as an option.



Connection to documentation and monitoring systems

All the appliances have a volt-free alarm output and an Ethernet interface for remote monitoring. In addition, the temperature and alarm records can be read via the integrated USB interface. Optionally, a 4-20 mA output allows the temperature value to be integrated into existing data recording systems. External data loggers can be used to monitor the temperature in Smart-Monitoring, for example.



IQ, OQ, training

From installation qualification (IQ) to operational qualification (OQ) to training, we offer you comprehensive expert help with installation and commissioning. We carry out the various checks for you or set specific parameters for you on request. In addition, we provide on-site training for your staff on how to use the equipment and address any questions you may have. Our document folder also contains all the essential information about the devices.



Installation service for accessories

Our qualified installation service assists you with professional installation and connection of accessories, such as the analogue temperature sensor or CO₂ emergency refrigeration.



SUFsg 7001
MediLine

SUFsg 7001 ver. H72
MediLine

Gross / net capacity	728 / 700 litre
Exterior dimensions in mm (w / d / h)	1204 / 1082 / 1966
Interior dimensions in mm (w / d / h)	890 / 605 / 1300
Energy consumption in 365 days ¹	2957 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1224 kJ/h
Heat output system / Refrigeration system	air cooling / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	450 min
Warm-up time -80 °C to -60 °C / to 0 °C	250 min / 2220 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	860 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	6
Max. number of cryoboxes, 50 mm / 75 mm	528 / 336
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	361 / 313 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790050
Foamed inner doors	7790127
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367

Gross / net capacity	728 / 700 litre
Exterior dimensions in mm (w / d / h)	1204 / 1082 / 1966
Interior dimensions in mm (w / d / h)	890 / 605 / 1300
Energy consumption in 365 days ¹	2957 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1224 kJ/h
Heat output system / Refrigeration system	water-cooled / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	450 min
Warm-up time -80 °C to -60 °C / to 0 °C	250 min / 2220 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	860 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	6
Max. number of cryoboxes, 50 mm / 75 mm	528 / 336
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	361 / 313 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790050
Foamed inner doors	7790127
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367

Gross / net capacity	491 / 477 litre
Exterior dimensions in mm (w / d / h)	920 / 1082 / 1966
Interior dimensions in mm (w / d / h)	606 / 605 / 1300
Energy consumption in 365 days ¹	2884 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1188 kJ/h
Heat output system / Refrigeration system	air cooling / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	360 min
Warm-up time -80 °C to -60 °C / to 0 °C	230 min / 2160 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	580 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	4
Max. number of cryoboxes, 50 mm / 75 mm	352 / 224
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	308 / 254 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790049
Foamed inner doors	7790070
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367



SUFsg 5001
MediLine

SUFsg 5001 ver. H72
MediLine

Gross / net capacity	491 / 477 litre
Exterior dimensions in mm (w / d / h)	920 / 1082 / 1966
Interior dimensions in mm (w / d / h)	606 / 605 / 1300
Energy consumption in 365 days ¹	2884 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1188 kJ/h
Heat output system / Refrigeration system	water-cooled / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	360 min
Warm-up time -80 °C to -60 °C / to 0 °C	230 min / 2160 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	580 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	4
Max. number of cryoboxes, 50 mm / 75 mm	352 / 224
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	308 / 254 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790049
Foamed inner doors	7790070
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367

Gross / net capacity	491 / 477 litre
Exterior dimensions in mm (w / d / h)	920 / 1082 / 1966
Interior dimensions in mm (w / d / h)	606 / 605 / 1300
Energy consumption in 365 days ¹	2884 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1188 kJ/h
Heat output system / Refrigeration system	water-cooled / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	360 min
Warm-up time -80 °C to -60 °C / to 0 °C	230 min / 2160 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	580 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	4
Max. number of cryoboxes, 50 mm / 75 mm	352 / 224
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	308 / 254 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790049
Foamed inner doors	7790070
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367



SUFsg 3501
MediLine

Gross / net capacity	402 / 382 litre
Exterior dimensions in mm (w / d / h)	797 / 1082 / 1966
Interior dimensions in mm (w / d / h)	466 / 605 / 1300
Energy consumption in 365 days ¹	2738 kWh
Ambient temperature range	+16 °C to +32 °C
Heat output	1116 kJ/h
Heat output system / Refrigeration system	air cooling / 2-stage cascade system
Refrigerant	R 290 / R 170
Sound power level ²	47 dB(A)
Voltage / frequency / Connection rating	230V~ / 50 Hz / 7.0 A
Temperature range	-40 °C to -86 °C
External cabinet finish	steel / white
Door material / colour	steel / white
Internal liner material	stainless steel
Type of control	LED 7-segment display with buttons
Volt-free alarm contact	yes
SmartMonitoring compatible / Connectivity type	yes / external data loggers
Connectivity solution	retrofittable
Interface	LAN (Ethernet)
Data logger	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs
Cooling system	static
Pull-down time +22 °C to -80 °C	180 min
Warm-up time -80 °C to -60 °C / to 0 °C	170 min / 1300 min
Number / maximum number of storage shelves	4 / 11
Adjustable shelves	3
Shelf material	stainless steel
Usable shelf area in mm (w / d)	460 / 590
Shelf loading / Maximum total load	50 kg / 200 kg
Number of racks per shelf	3
Max. number of cryoboxes, 50 mm / 75 mm	264 / 168
Castors	castors with brake at the front, fixed castors at the rear
Access ports	3 x Ø 28 mm
Type of lock / Door hinges	mechanical / right-hand hinged, not reversible
Gross / net weight	260 / 226 kg
Accessories	
Racks for cryoboxes	see page 38
Cryoboxes, set of 36	7790038
CO ₂ backup system	7790048
Stainless steel storage shelves	7790657
Foamed inner doors	7790656
Cover for mains switch incl. key lock	7790051
4 - 20mA analogue output	7790042
Data logger, ULT	6145367