Ultra-low temperature freezers

LIEBHERR

The advantages at a glance

Active Green

ActiveGreen
State-of-the-art refrigeration technology with climate-neutral refrigerants and lowest energy consumption thanks to, among other things, the extensive use of high-quality vacuum insulation panels.

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

Flexibly positionable stainless steel storage shelves
Three storage shelves in the interior, which are freely adjustable at increments of 24 mm, offer flexibility for space-saving storage, tailored to your requirements. Further storage shelves can be added as an option.

Volt-free contact
Volt-free contact for relaying alarms to an external remote monitoring system – for more safety.

2 x access ports, 28 mm
Two access ports on the upper left and lower left let you install external monitoring or data recording systems with separate sensors in the interior.

Integrated unloading ramp
No forklift necessary: The unloading ramp integrated in the packaging helps you easily position the appliance.

Door seal concept

The innovative door seal concept, comprising two separate multi-chamber profiled gaskets, enables fully sealed closure of the door. This also helps to reduce energy consumption. The seals can be replaced separately and without tools.
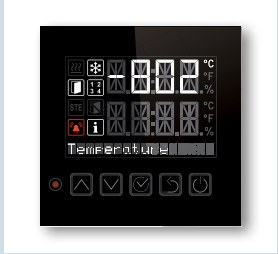
Detachable stainless steel inner doors

The detachable, rust-proof, stainless steel inner doors reduce the loss of cold air when the outer door is opened and are also easy to clean.

Alarm messages in critical situations

The three-stage monitoring system consisting of integrated alarm notifications for temperature, door or mains electrical faults, upgradable features such as CO_2 emergency cooling and online monitoring, ensure the very best protection for your stored items. In the event of a power failure, integrated 12-volt batteries immediately supply the controller with power. Notification is provided in critical situations.

Integrated controller

The intuitive controller with an integrated real-time clock has a temperature setting option accurate to 0.1 °C. 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 to and qualified for your applications and requirements.

Highly efficient insulation

The combination of CFC-free PU foam with high-quality vacuum-insulated panels ensures the best possible insulation for preventing rapid temperature increases and ensuring low energy consumption.

Pressure relief valve

When the door is opened, the air exchange creates a vacuum which makes it difficult to open the door repeatedly. With the aid of the heated pressure relief valve, the vacuum is quickly equalised and the door can easily be opened again after just a few seconds.

SUFsg 5001

Ultra-low temperature freezers	SUFsg 7001 MediLine	SUFsg 7001 version H72 *Special order MediLine
Total gross / net volume	728 / 700 litre	728 / 700 litre
Exterior dimensions in mm (w / d / h)	1204 / 1082 / 1966	1204 / 1082 / 1966
Interior dimensions in mm (w / d / h)	890 / 605 / 1300	890 / 605 / 1300
Energy consumption in 365 days	2957 kWh	2957 kWh
Ambient temperature range	+16 °C to +32 °C	+16 °C to +32 °C
Heat output	1224 kJ/h	1224 kJ/h
Heat output system / Refrigeration system	air cooling / 2-stage cascade system	water-cooled / 2-stage cascade system
Refrigeration circuits	2	2
Refrigerant	R 290 / R 170	R 290 / R 170
Sound power level[1]	47 dB(A)	47 dB(A)
Connection rating	7.0 A / 1600 W	7.0 A / 1600 W
Frequency / voltage	50 Hz / 230V~	50 Hz / 230V~
Temperature range	−40 °C to −86 °C	−40 °C to −86 °C
External cabinet finish	steel / white	steel / white
Door material	steel	steel
Internal liner material	Stainless steel	Stainless steel
Type of control / Temperature display	electronic controller / external digital	electronic controller / external digital
Interface / Volt-free alarm contact	LAN (Ethernet) / yes	LAN (Ethernet) / yes
Data logger	integrated, USB interface	integrated, USB interface
Power failure alarm	immediately upon power failure for 72 hrs	immediately upon power failure for 72 hrs
Cooling system	static	static
Pull-down time +22 °C to −80 °C	450 min	450 min
Warm-up time −80 °C to −60 °C / to 0 °C	250 min / 2220 min	250 min / 2220 min
Number / maximum number of storage shelves[2]	4 / 13	4 / 13
Adjustable shelves	3	3
Shelf material	stainless steel	stainless steel
Shelf loading	50 kg	50 kg
Number of racks per shelf	6	6
Max. number of cryoboxes, 50 mm / 75 mm	528 / 336	528 / 336
Castors	castors with brake at the front, fixed castors at the rear	castors with brake at the front, fixed castors at the rear
Replaceable door seal	yes	yes
Access ports	2 x Ø 28 mm	2 x Ø 28 mm
Lock	fitted	fitted
Door hinges	right hand hinged, not reversible	right hand hinged, not reversible
Gross / net weight	361 / 313 kg	361 / 313 kg
Accessories		
Racks for cryoboxes	see page 20	see page 20
Cryoboxes, set of 36	77790038	77790038
CO_2 backup system	77790048	77790048
Stainless steel storage shelves	77790050	77790050
Cover for mains switch incl. key lock	77790051	77790051
4 − 20mA analogue output	77790042	77790042

[1] Average sound pressure level at 1 m distance   [2] 3/12 adjustable shelves and 1 fixed bottom shelf.

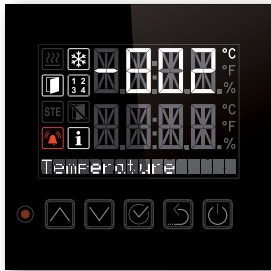| SUFsg 5001	SUFsg 5001 version H72 *Special order
MediLine	MediLine
491/477 litre	491/477 litre
920/1082/1966	920/1082/1966
606/605/1300	606/605/1300
2884 kWh	2884 kWh
+16 °C to +32 °C	+16 °C to +32 °C
1188 kJ/h	1188 kJ/h
air cooling/2-stage cascade system	water-cooled/2-stage cascade system
2	2
R 290/R 170	R 290/R 170
47 dB(A)	47 dB(A)
7.0 A/1600 W	7.0 A/1600 W
50 Hz/230V~	50 Hz/230V~
−40 °C to −86 °C	−40 °C to −86 °C
steel/white	steel/white
steel	steel
Stainless steel	Stainless steel
electronic controller/external digital	electronic controller/external digital
LAN (Ethernet)/yes	LAN (Ethernet)/yes
integrated, USB interface	integrated, USB interface
immediately upon power failure for 72 hrs	immediately upon power failure for 72 hrs
static	static
360 min	360 min
230 min/2160 min	230 min/2160 min
4/13	4/13
3	3
stainless steel	stainless steel
50 kg	50 kg
4	4
352/224	352/224
castors with brake at the front, fixed castors at the rear	castors with brake at the front, fixed castors at the rear
yes	yes
2 x Ø 28 mm	2 x Ø 28 mm
fitted	fitted
right hand hinged, not reversible	right hand hinged, not reversible
308/254 kg	308/254 kg
see page 20	see page 20
77790038	77790038
77790048	77790048
77790049	77790049
77790051	77790051
77790042	77790042

Quality right down to the smallest detail

Liebherr's ultra-low temperature freezers (ULT) set the benchmark in the temperature range -40 °C to -86 °C: In terms of safety, performance and ease of use, they offer all you need for meeting the demanding requirements of laboratories and scientific institutions, for example. Take advantage of the low operating costs, sustainable cooling, the large interior with practical

Alarm messages in critical situations.

Don't worry about security: Thanks to a three-stage monitoring system, consisting of integrated alarm messages for temperature, door or mains faults, upgradable features such as CO_2 emergency cooling and online monitoring ensure the very best protection for your stored samples at all times. In the event of a power failure, integrated 12-volt batteries immediately supply the electronics with power. You will also be notified in critical situations so that you can quickly rectify the fault.

Low heat emission.

Compared to older technologies, the efficient cascade cooling system with HC refrigerants generates significantly less heat. This saves costs in the thermal design of the room's air conditioning system. If heat dissipation via the room air conditioning is not possible, the option with water cooling is also available.

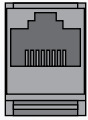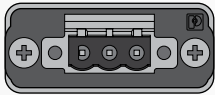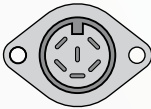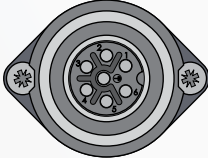Active Green

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 among the most economical models on the market worldwide. In combination with highly insulating vacuum panels, the efficient cooling system allows for efficient operation, optimum energy savings and, as a result, low operating costs.

features and the numerous safety functions of the ultra-low temperature freezers. Place your trust in our extensive experience as a specialist in cooling and freezing.
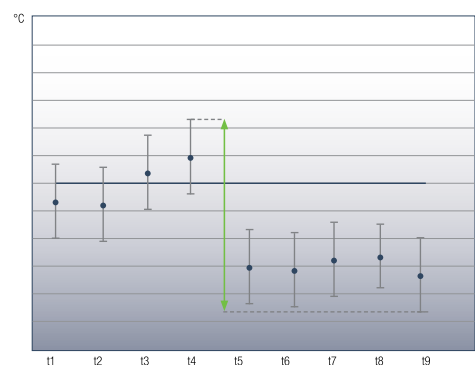

Mechanical key lock.
The mechanical key lock protects the stored products from unauthorised access. The door is opened with an ergonomic and unbreakable aluminium lever handle.

Interfaces.
For remote monitoring, all appliances are equipped with voltfree contacts and ethernet interfaces. The temperature and alarm records can also be read via the integrated USB interface. Optionally, a 4-20 mA output enables the integration of the temperature value into existing systems for data recording.

Minimal temperature fluctuations.
In order to maintain the quality of the stored samples, minimal temperature fluctuations are very important. The Liebherr ultra-low temperature freezers have the lowest possible fluctuations both internally within the appliance and over time.

Accessories

Racks for cryoboxes

Convenient and temperature-resistant storage systems for well-organised sample storage. Available as stainless steel front-access drawer racks for 5x4 or 6x4 50 mm boxes. Maximum Loading SUFsg 5001: 8x Rack 5x4 + 8x Rack 6x4 = 352 boxes x 81 pcs. 2mL samples, Maximum Loading SUFsg 7001: 12x Rack 5x4 + 12x Rack 6x4

Stainless steel front-access rack 5 x 4 + drawers	77790031
Stainless steel front-access rack 6 x 4 + drawers	77790032
Cabinet Rack Aluminium Side Load for 5x4 standard boxes 50mm	77790003
Cabinet Rack Aluminium Side Load for 6x4 standardboxes 50mm	77790014

Cryoboxes

The set contains 36 durable and temperature-resistant cryoboxes made from water-repellent cardboard, with fixed 9x9 grid, for safe storage and transport of valuable samples.

Cryoboxes, set of 36	77790038

CO_2 backup system

The CO_2 backup system ensures that the cooling of the stored samples continues at reduced temperatures for up to 72 hours in the event of a power failure. The CO_2 bottle is not part of the accessory.

CO2 backup system	77790048

Stainless steel storage shelves

Additional robust stainless steel shelves for flexible and individual partitioning of the interior at 24 mm increments. The foamed inner doors provide the best possible insulation and temperature stability, ensuring efficient cooling and low power consumption.

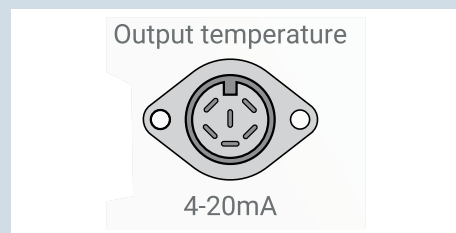|	
Additional shelf with mounting kit for SUFsg 5001	77790049
Additional shelf with mounting kit for SUFsg 7001	77790050

Cover for mains switch incl. key lock

Protection against unintended disconnection or manipulation of the mains switch.

Cover for main-switch, lockable	77790051

4-20mA analogue output

The 4-20mA interface displays the interior temperature as a current value, which for example can be imported into an independent system for recording or checking the internal temperature.

Electronic Adapter for a 4-20mA output	77790042

Output temperature

4-20mA

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