Racks for cryoboxes

Convenient and temperature-resistant storage systems for the clear way to store samples. Available as an aluminium or stainless steel rack for 5x4 or 6x4 50 mm boxes and as a stainless steel drawer rack for 5x4 or 6x4 50 mm boxes.

Aluminium cabinet rack 5x4	7790003	Stainless steel cabinet rack 5x4	7790027
Aluminium cabinet rack 6x4	7790014	Stainless steel cabinet rack 6x4	7790028
Aluminium cabinet rack 5x4 + cryobox	7790015	Stainless steel cabinet rack 5x4 + drawers	7790031
Aluminium cabinet rack 6x4 + cryobox	7790025	Stainless steel cabinet rack 6x4 + drawers	7790032
Stainless steel cabinet rack 5x4 + cryobox	7790029	Stainless steel cabinet rack 5x4 + drawers	7790033
Stainless steel cabinet rack 6x4 + cryobox	7790030	Stainless steel cabinet rack 6x4 + drawers	7790036

Cryoboxes

For safe storage and transport of valuable samples with a fixed 9x9 grid. The robust and temperature-resistant cardboard boxes are available in sets of 36.

Cryoboxes, set of 36	7790038

CO_2 backup system

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

CO_2 backup system	7790048

Stainless steel storage shelves/foam inner doors

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

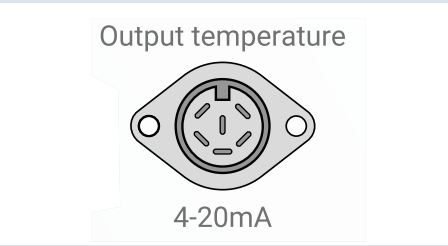|			
Stainless steel storage shelf SUFsg 50	7790049	Foam inner doors SUFsg 50	7790070
Stainless steel storage shelf SUFsg 70	7790050	Foam inner doors SUFsg 70	7790127

Cover for main switch incl. key lock

Protection against unintended disconnection or manipulation of the main switch.

Cover for main switch incl. key lock	7790051

4-20mA analogue output

Output temperature

4-20mA

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.

4-20 mA analogue output	7790042

Ultra-low temperature freezers	SUFsg 5001 Smart Monitoring	SUFsg 7001 Smart Monitoring
	MediLine	MediLine
Total gross / net capacity	491 / 477 litre	728 / 700 litre
Exterior dimensions in mm (w / d / h)	920 / 1082 / 1966	1204 / 1082 / 1966
Interior dimensions in mm (w / d / h)	606 / 605 / 1300	890 / 605 / 1300
Energy consumption in 365 days	2884 kWh	2957 kWh
Ambient temperature range	+16 °C to +32 °C	+16 °C to +32 °C
Heat output	1188 kJ/h	1224 kJ/h
Heat output system	air cooling	air cooling
Refrigerant	R290 / R170	R290 / R170
Sound power level	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	electronic controller	electronic controller
Temperature display	external digital	external digital
Interface	LAN (Ethernet)	LAN (Ethernet)
Volt-free alarm contact	yes	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
Refrigeration +22 °C to −80 °C	360 min	450 min
Warming −80 °C to −60 °C / to 0 °C	230 min / 2160 min	250 min / 2220 min
Number / maximum number of storage shelves	4 / 13	4 / 13
Shelf material	stainless steel	stainless steel
Shelf loading	50 kg	50 kg
Number of racks per insertion	4	6
Max. number of cryoboxes, 50 mm / 75 mm	352 / 224	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
Sensor feedthrough	2 × Ø 28 mm	2 × Ø 28 mm
Lock	fitted	fitted
Door hinges	right hand hinged, not reversible	right hand hinged, not reversible
Gross / net weight	308 / 254 kg	361 / 313 kg
Water cooling also available as	**SUFsg 5001 version H72**	**SUFsg 7001 version H72**

* Average sound pressure level at 1 m distance

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The ultimate way to store safely

Ultra-low temperature freezers

Quality, design and innovation

5 YEARS WARRANTY
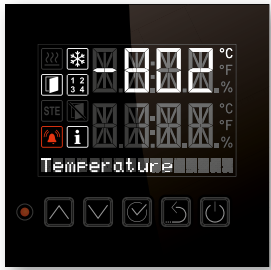
LIEBHERR

Safe storage at the lowest temperatures

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 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.
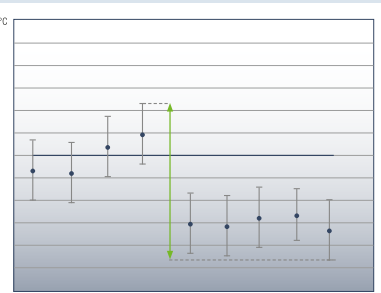
Alarm messages in critical situations
Don't worry about security: Thanks to a three-stage monitoring system, consisting of integrated alarm messages for temperature, door or mains faults, upgradable features such as CO_2 emergency cooling and online monitoring ensure the very best protection for your 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.
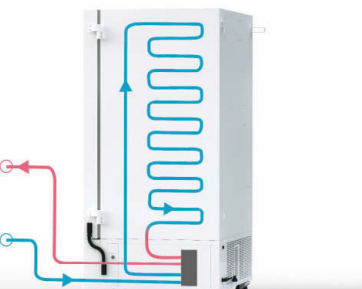
Mechanical key lock
The mechanical key lock protects the stored products from unwanted access.
The door is opened with an ergonomic and unbreakable aluminium lever handle.

Minimal temperature fluctuations
In order to maintain the quality of the stored samples, 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.
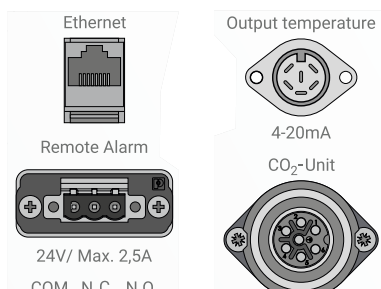
Low heat generation
Compared to older technologies, the efficient cascade cooling system with HC refrigerants generates significantly less heat. This saves costs in the thermal design of the room's air conditioning system. If heat dissipation via the room air conditioning is not possible, the option with water cooling is also available.

Low energy consumption
Ultra-low temperature freezers are among the devices 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.

Ethernet

Output temperature

4-20mA

Remote Alarm

CO_2-Unit

24V/ Max. 2,5A

COM   N.C.   N.O.

Interfaces
For remote monitoring, all appliances are equipped with potential-free 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.

Other 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, extensive vacuum heat insulation.

Interior/storage shelves/inner doors
The interior, shelf areas 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 intervals of 24 mm, offer flexibility for space-saving storage, tailored to your requirements. Further storage shelves can be added as an option.

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

2x sensor feedthrough, 28 mm
Two sensor feedthroughs 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 circumferential seals, 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 prevent cold loss when 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 electronics with power. Notification is provided in critical situations.

Integrated electronics
The intuitive electronics with an integrated real-time clock has a temperature setting option accurate to 1/10 °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 vacuum-insulated panels ensures the best possible insulation for preventing rapid temperature increases.

Pressure compensation 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 compensation valve, the vacuum is quickly equalised and the door can easily be opened again after just a few seconds.

SUFsg 5001