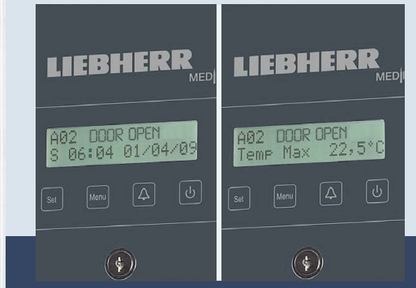
Good reasons to choose Liebherr



Highest performance

Liebherr research and laboratory freezers provide constant refrigeration performance even in extreme climate conditions. The use of ultra-modern components, efficient and environmentally-friendly refrigerants as well as precision controls ensures that samples, chemicals and research materials are stored optimally. Optional documentation software continuously logs the temperature profile – and if required, warning systems alert the user when defined temperature limits are exceeded.

Efficiency

Highly efficient with low energy consumption: the precision electronic controller, the dynamic refrigeration system and highly effective insulation guarantee low operating costs and are eco-friendly as well. The high quality of the appliances guarantees long life and reliable operation and provides for economic and ecological sustainability in laboratory and research applications.

Reliability

All laboratory appliances are designed according to the ISO 60068-3 standard with regard to maximum temperature stability. They are specially constructed for intensive professional use and feature a very sturdy design – with highest-quality materials and perfect workmanship right down to the smallest detail. The exemplary quality of the appliances is ensured by elaborate tests. All electronic and refrigeration components fulfill Liebherr's stringent specifications to form a well-balanced and therefore reliable system – ideal for research and laboratory.

Easy cleaning

Hygiene plays a special role in research and in the laboratory. That is why Liebherr appliances are equipped with moulded inner liners with large radii that are easy to clean. Flush seals prevent condensation and the accumulation of dirt and dust. Sturdy castors also allow easy cleaning of the floor space underneath the appliances.

Safety

To meet the most stringent requirements regarding reliability and accurate temperature consistency in laboratory applications, Liebherr appliances are equipped with many useful features: a visual and audible door alarm alerts the user to undesired temperature deviations. The appliances can be connected via the volt-free contact to an external remote warning system – and up to 20 appliances can be networked with a monitoring and alarm system via the serial interface RS 485. In case of a power failure, the Profi electronic controller (in LKPv and LGPv) is powered by a battery for 72 hours to prevent data loss. The calibration option allows precise temperature control adapted to specific applications.

Easy servicing

Durability and reliability are given top priority in the material selection and development of Liebherr laboratory appliances. The exemplary quality and easy usability of the appliances are ensured by elaborate tests. In appliances with a Profi electronic controller, the refrigeration components are integrated in the ceiling area, allowing easy access. The practical door remains open at 90° and is self-closing at less than 60° for convenient use. And the sturdy inner liners are easy to clean and allow variable adjustment of the grid shelves.

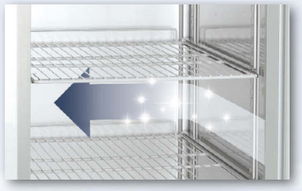
The advantages at a glance

The **refrigeration components** are securely integrated in the ceiling area, allowing ready access.

The **Profi electronic controller** has an integrated data memory for **temperature recording**.

Laboratory appliances with a **Profi electronic controller** are equipped with an access port (7.0 mm in diameter) in the ceiling area to enable connection of an **independent temperature sensor**.

In case of power failure, the electronic controller is immediately powered by an **integrated 12 V battery**. As a result, the **integrated memory continues to log** the internal temperatures without interruption for another 72 hours.



The **smooth interior** made of 304-grade stainless steel is easy to clean and enables **optimum hygiene**.

To increase the **net capacity** of the inner liner, functional parts like fans and evaporators are located **outside** the refrigerator compartment to save space.

The **practical door** remains open at 90° and is **self-closing** at less than 60° for convenient use.

LKPv 6520

The temperature can be set to 1/10 °C accuracy via the menu-guided, multilingual **Profi electronic controller** with integrated real-time clock.

After a refrigerator or freezer door has been opened, a **vacuum** is built up by **air exchange** – with the effect that the door is hard to reopen immediately afterwards. The **integrated pressure relief valve** ensures that the vacuum is quickly equalised so that the door can easily be reopened.

The laboratory appliances with a **Profi electronic controller** are equipped with a volt-free contact for **alarm forwarding** to an external warning system.

Maximum temperature stability in the interior is ensured by the **dynamic cooling system** with double ventilation, in conjunction with optimal routing of the air flow.

Visual and audible door **alarms** alert the user if the **door is open** for longer than 1 minute.

The **hot-gas defrost system with demand and time control** permits very short defrost cycles: 8 minutes for laboratory refrigerators, 12 minutes for laboratory freezers. To additionally improve temperature stability during defrost, the internal temperature is lowered by 1 °C (refrigerators) or 2 °C (freezers) shortly before.

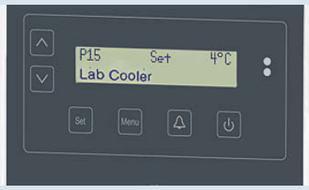
In laboratory appliances with a **Profi electronic controller, 3-point calibration** enables temperature control adapted to the user.

The LKPv and LGPv ranges **come with castors as standard** to allow versatile use depending on the available space and convenient cleaning also underneath the appliances.

Quality right down to the smallest detail

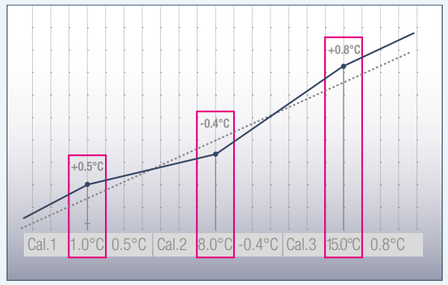
The MediLine range appliances with a Profi electronic controller are equipped with many features to guarantee the safety of stored products and temperature stability in the interior. High-quality materials and precise workmanship, extremely efficient refrigeration components as well as documentation and alarm functions ensure optimum storage of sensitive samples, chemicals and research materials.

The Profi electronic controller.
The menu-guided, multilingual Profi electronic controller with integrated real-time clock allows the temperature to be set to 1/10 °C accuracy. The membrane keyboard is dirt resistant and easy to clean – to meet the most stringent hygiene requirements in the laboratory.



Integrated alarm systems.
A visual and audible door alarm alerts the user to temperature deviations. An alarm is also raised if the door is open for longer than one minute or in the event of power failure.

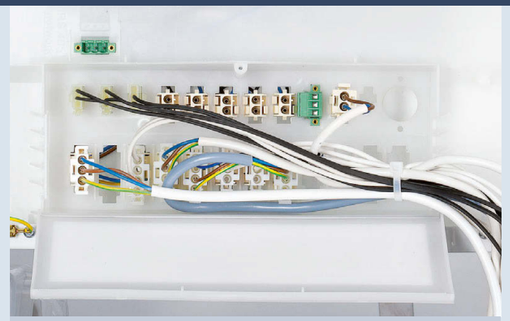
Integrated data memory.
The Profi electronic controller is equipped with data memory which records the last 30 alarm events together with the date, time and maximum temperature. In addition, the internal temperature is logged in 4-minute intervals. The last 2,800 temperature logs are respectively available, which corresponds approximately to a 1-week logging period.



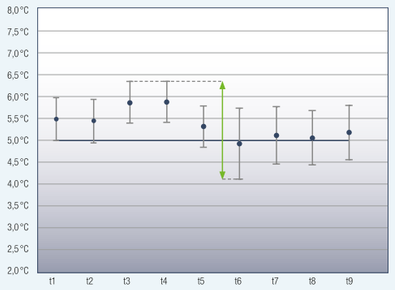
Precision with 3-point calibration.
The laboratory appliances with a Profi electronic controller have a 3-point calibration function for extremely accurate temperature control. This permits compensation between the set temperature and the actual internal temperature at as many as three temperature points. Positive or negative changes to the correction value can be made in steps of 0.1 K.

Mains-independent power supply of the electronic controller.
In case of power failure, the electronic controller is powered by a battery. As a result, the memory continues to log the internal temperatures without interruption for another 72 hours. If external alarm and monitoring systems have been connected, then data transfer to these is also maintained.

External temperature sensor.
The laboratory appliances have an access port (diameter 7.0 mm) in the appliance ceiling which allows a temperature sensor to be positioned in the interior.



External temperature and alarm documentation.
The laboratory appliances with a Profi electronic controller are equipped with a volt-free contact for alarm forwarding to an external remote warning system. The data can be read out of the internal memory and transferred to a PC via an infrared interface. In addition the appliances have an RS 485 interface which enables as many as 20 appliances to be networked with a central monitoring and alarm system.



Maximum temperature consistency.
Maximum temperature stability in the interior is ensured by the dynamic cooling system with double ventilation. Very short defrost cycles allow the internal temperature to be kept almost constant during the defrost phases. All laboratory appliances are designed according to the ISO 60068-3 standard with regard to maximum temperature stability and consistency.

Advantage of hot gas defrost
It is quick, with minimal temperature rise.

30 min
Electric defrost

10 min
Hot gas defrost

Energy-efficient hot-gas defrost system.
Defrost less often and faster: the controller calculates the optimum defrost cycles based on the compressor run-time. Then the refrigerators defrost in just 8 minutes and the freezers in just 12 minutes. The internal temperature is slightly lowered shortly before so it remains almost constant during the defrost cycle.

Versatile interior.
Sturdy and versatile: the U-shaped trayslides are height-adjustable – so refrigerated or frozen products of any kind can be stored optimally on the plastic-coated grid shelves. Hygienic benefit: the interior made of high-quality 304-grade stainless steel is easy to clean thanks to the large corner radii.

Laboratory refrigerators with Profi electronic controller

Laboratory freezers with Profi electronic controller

Laboratory refrigerators and freezers with Profi electronic controller	**LKPv 1423** MediLine	**LKPv 8420** MediLine	**LKPv 6523** MediLine	**LKPv 6520** MediLine	**LGPv 1420** MediLine	**LGPv 8420** MediLine	**LGPv 6520** MediLine
Gross capacity	1427 litre	856 litre	601 litre	601 litre	1427 litre	856 litre	601 litre
Exterior dimensions in mm (w/d/h)	1430/830/2150	790/980/2150	700/830/2150	700/830/2150	1430/830/2150	790/980/2150	700/830/2150
Interior dimensions in mm (w/d/h)	1250/700/1550	620/850/1550	520/700/1550	520/700/1550	1250/700/1550	620/850/1550	520/700/1550
Energy consumption in 24 h *	3.923 kWh	2.400 kWh	2.731 kWh	1.775 kWh	8.887 kWh	5.500 kWh	4.715 kWh
General							
Cooling system	forced-air	forced-air	forced-air	forced-air	forced-air	forced-air	forced-air
Defrost	automatic	automatic	automatic	automatic	automatic	automatic	automatic
Temperature range	0°C to +16°C	-2°C to +16°C	0°C to +16°C	-2°C to +16°C	-10°C to -26°C	-10°C to -35°C [1]	-10°C to -35°C [1]
External cabinet finish	steel/white	steel/white	steel/white	steel/white	steel/white	steel/white	steel/white
Door/lid material	glass door	steel	glass door	steel	steel	steel	steel
Internal liner material	304-grade stainless steel	304-grade stainless steel	304-grade stainless steel	304-grade stainless steel	304-grade stainless steel	304-grade stainless steel	304-grade stainless steel
Type of control	electronic controller with text display	electronic controller with text display	electronic controller with text display	electronic controller with text display	electronic controller with text display	electronic controller with text display	electronic controller with text display
Temperature display	external digital	external digital	external digital	external digital	external digital	external digital	external digital
Power failure alarm	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs	immediately upon power failure for 72hrs
Fault: warning signal	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible
Interface/Volt-free alarm contact	RS 485/yes	RS 485/yes	RS 485/yes	RS 485/yes	RS 485/yes	RS 485/yes	RS 485/yes
Interior light	LED lighting, with separate switch		LED lighting, with separate switch				
Adjustable shelves	8	4	4	4	8	4	4
Usable shelf area in mm (w/d)	1250/650	620/800	520/650	520/650	1250/650	620/800	520/650
Shelf material	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated
Shelf loading	60 kg	60 kg	60 kg	60 kg	60 kg	60 kg	60 kg
Castors	castors with brake at the front,	castors with brake at the front,	castors with brake at the front,	castors with brake at the front,	castors with brake at the front,	castors with brake at the front,	castors with brake at the front,
	castors at the rear	fixed castors at the rear	fixed castors at the rear	fixed castors at the rear	castors at the rear	fixed castors at the rear	fixed castors at the rear
Handle	full-length integrated handle	full-length integrated handle	full-length integrated handle	full-length integrated handle	full-length integrated handle	full-length integrated handle	full-length integrated handle
Lock	fitted	fitted	fitted	fitted	fitted	fitted	fitted
Self-closing door	yes	yes	yes	yes	yes	yes	yes
Door hinges		right, reversible on site	right, reversible on site	right, reversible on site		right, reversible on site	right, reversible on site
Gross/net weight	284/229 kg	187/154 kg	167/141 kg	158/132 kg	262/219 kg	197/164 kg	171/143 kg
Climate rating	T (5)	T (5)	T (5)	T (5)	T (5)	T (5)	T (5)
Sound power level	58 dB(A)	58 dB(A)	58 dB(A)	58 dB(A)	60 dB(A)	60 dB(A)	60 dB(A)
Refrigerant	R 290	R 290	R 290	R 290	R 290	R 290	R 290
Voltage/Connection rating	220–240V~/3.0 A	220–240V~/2.0 A	220–240V~/2.0 A	220–240V~/2.0 A	220–240V~/4.5 A	220–240V~/4.0 A	220–240V~/4.0 A
Accessories							
Shelf, plastic-coated	7112393	7113643	7112393	7112393	7112393	7113643	7112393
U-shaped trayslide, right	9001761	9005067	9001761	9001761	9001761	9005067	9001761
U-shaped trayslide, left	9001757	9005069	9001757	9001757	9001757	9005069	9001757
Infrared key incl. software	9590389	9590389	9590389	9590389	9590389	9590389	9590389
RS 485/RS 232 adapter, data log software	9590387	9590387	9590387	9590387	9590387	9590387	9590387
NTC product temperature probe	9590407	9590407	9590407	9590407	9590407	9590407	9590407
Also available as	**LKPv 1420** with solid doors						

* measured at +25 °C ambient temperature and +5 °C set temperature for fridges and -20 °C for freezers

1) The temperature range is valid at a maximum ambient temperature of +30 °C

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