



Laboratory
refrigerators
and freezers

LIEBHERR
Quality, Design and Innovation



Climate rating definitions

Climate rating **SN** = Ambient temperatures of +10 °C to +32 °C

Climate rating **N** = Ambient temperatures of +16 °C to +32 °C

Climate rating **ST** = Ambient temperatures of +16 °C to +38 °C

Climate rating **T** = Ambient temperatures of +16 °C to +43 °C

Customer service

As a company specialised in manufacturing refrigerators and freezers, Liebherr has a wide and comprehensive service network.

Visit us also at www.lab.liebherr.com



Content Page



The laboratory refrigerators and freezers with Profi electronic controllers 7 - 11



Laboratory refrigerators and laboratory fridge-freezer with Comfort electronic controller 12 - 17



Pharmacy refrigerators compliant with DIN 58345 18 - 21



Low temperature -45°C chest freezers 22 - 25



Laboratory refrigerators and freezers with Comfort electronic controller and spark-free interior 26 - 31



Laboratory refrigerators with mechanical control and spark-free interior 32 - 35

Fresh ideas for the environment:

Liebherr's energy-efficient refrigerators and freezers for commercial use

ActiveGreen

For Liebherr, ActiveGreen starts early on in the design stages of professional refrigerators and freezers. Liebherr uses high-quality components for reliable operation and top energy efficiency even if appliances are exposed to the toughest demands posed by professional use. By combining precision controllers with highly efficient refrigeration components, Liebherr's professional appliances offer exceptional energy savings. Liebherr is the first company to change over its entire range of professional refrigerators and freezers

to the environmentally friendly R 290 and R 600a refrigerants. They are HFC-free and have no detrimental effects whatsoever on the ozone layer and the associated greenhouse effect. In addition to this, the use of new, highly efficient compressors allows a significant reduction in the energy consumption of the appliances. All Liebherr production sites are certified to the international quality standard ISO 9001 and the international environmental management standard ISO 14001.



Know-how that matters!

With almost 60 years' experience, Liebherr-Hausgeräte specialises in the development and production of the very finest refrigeration appliances, which offer the highest quality and superb design. Innovative ideas pushing the envelope when it comes to convenience and energy saving are regularly incorporated into Liebherr's appliances. Back in 1993 Liebherr was the first manufacturer to change over to CFC-/HFC-free refrigerants for its entire range of free-standing domestic appliances.

Liebherr's manufacturing processes are also geared to the efficient use of resources. Take, for example, the heat naturally generated during appliance manufacture: it is recycled as heat energy. Liebherr uses environmentally compatible powder coatings for all its sheet metal. They contain no solvents and no waste water which might have a negative impact on the environment results. The plastic parts are marked for optimal recycling.

Award-winning energy efficiency

Energy efficiency always has been, and remains, of central importance to Liebherr. It is one of the major influences on the design of the commercial appliances. To illustrate the point, Liebherr received three of the five 2006 ProCool awards for energy-efficient and environmentally friendly refrigerators and freezers for commercial use. The energy consumption of the award-winning appliances was as much as 70 % below the market average. Liebherr's extremely

energy-efficient commercial appliances also enjoy top energy consumption rankings in various international countries and states, such as the Netherlands or California. Precision electronic control systems, optimised refrigeration components, maximum insulation, and highly efficient compressors ensure that energy efficiency is constantly improved.

Premium product quality

Product quality and the resulting long useful life are primary considerations when assessing the environmental life cycle of a commercial appliance. Liebherr uses high-quality and well-balanced components thus ensuring a long useful life expectancy. The refrigeration quality of the appliances plays an important role in keeping products fresher for longer – an aspect of particular importance in the professional sector. Rapid cooling, temperature

stability, correct humidity and quick defrosting are key aspects. Hygiene is another major factor and is fundamental to the design of all Liebherr professional appliances. For instance, wherever technically possible, the cabinets are designed and constructed to avoid joints and seams. As a prime example, the extensive use of moulded inner liners makes cleaning simpler and more hygienically effective.

Environmentally friendly in two respects

Liebherr is the first manufacturer to have changed over to environmentally friendly HFC-free refrigerants for its entire range of professional refrigerators and freezers for commercial use. Exclusive use is made of the ecologically harmless R 290 and R 600a refrigerants. Due to the changeover to these environmentally friendly refrigerants, refrigeration components of even greater efficiency can be employed, making the entire range even lower in energy consumption.



Innovative expertise and drive in the laboratory sector

The demands made on refrigerators and freezers are particularly high in all the sectors of professional use. Whether the issue is the refrigeration performance, specifying the materials, designing the refrigeration components or evolving the design concepts – all the decisions are directed to ensuring the long-term, trouble-free use of our appliances.

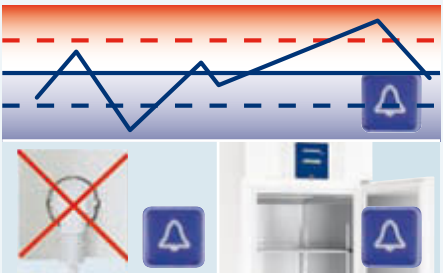
The most stringent reliability and safety standards apply to appliances in the laboratory sector. Therefore Liebherr has a range of purpose-built and factory-designed laboratory appliances in different temperature ranges for numerous applications. The MediLine appliances incorporating Profi electronic controllers offer many advantages. High-grade materials, high-performance components and accurate workmanship right down to the last detail ensure the high quality of the Liebherr appliances.

The laboratory refrigerators and freezers with Profi electronic controllers



The Profi electronic controller

The menu-guided Profi electronic controller with integrated real-time clock allows the temperature to be set to 1/10°C accuracy. The text display has German, English, French, Spanish or Italian language setting options. To satisfy laboratory hygiene requirements, the electronic controller is flush-fitted and has an easy-clean membrane keypad.



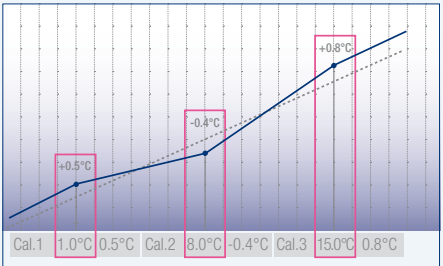
Integrated alarm systems

A visual and audible temperature alarm alerts the user if temperature deviation limits are exceeded. In addition, a visual and audible alarm is activated if the door is open for longer than 1 minute. There is also an immediate visual and audible alarm in the event of power failure.



Integrated data memory

The Profi electronic controller has an integrated data memory which logs the last 30 alarm events including date, time and maximum temperature as well as the internal temperature profile at 4-minute intervals. 2800 temperature logs are stored to memory, which corresponds to approximately a 7-day logging period.



3-point calibration

The laboratory appliances with Profi electronic controllers provide 3-point calibration 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 0.1K.



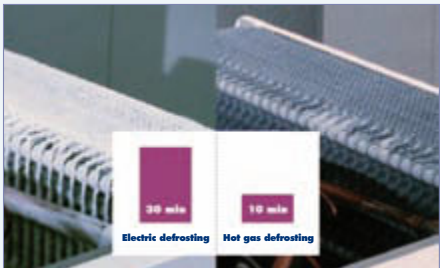
Mains-independent power supply of the electronic controller

In case of power failure, the electronic controller continues to operate from an integrated 12 V battery. As a result, the memory continues to log the internal temperatures for another 72 hours even in the event of power failure. Furthermore, if external alarm and documentation systems are connected, the data transfer is maintained for as long as 72 hours.



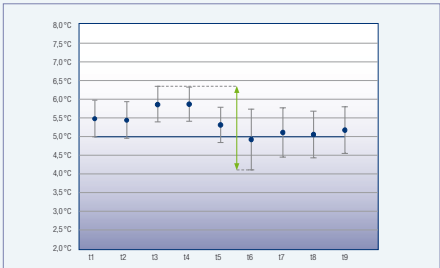
External temperature and alarm documentation

The laboratory appliances with Profi electronic controllers are equipped with a volt-free contact for alarm forwarding to an external remote warning system. The data stored in the internal memory can be read out via the infrared interface and transferred to a PC with documentation software. In addition, the appliances have an RS 485 serial interface enabling as many as 20 appliances to be networked with a central documentation and alarm system.



Energy-efficient hot-gas defrost system

The hot-gas defrost system with demand and time control permits very short defrost cycles: only 8 minutes for laboratory refrigerators and 12 minutes for laboratory freezers. As a result, the internal temperature remains almost constant during the defrost cycle. In addition, there is the option of initiating the defrost manually.



Maximum temperature stability and temperature consistency

Maximum temperature stability is ensured by the high-performance forced-air cooling system with double ventilation, in conjunction with optimal routing of the air flow. The very short defrost cycles allow the internal temperature to be kept almost constant during the defrost phase. All the laboratory appliances are tested according to the NF X 15-140 standard with regard to maximum temperature stability and optimal temperature consistency.



Access port for an external temperature sensor

In the laboratory appliances with Profi electronic controllers there is provision for an independent temperature sensor allowing, for instance, a PT 100 probe or similar measuring elements to be positioned in the interior. The diameter of the access port is 7.6 mm.



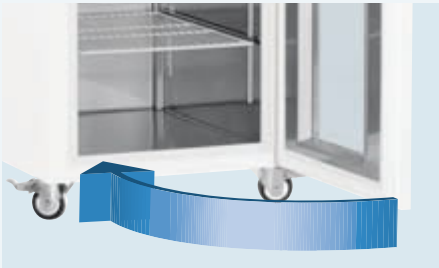
Refrigeration components

The refrigeration components are securely integrated in the ceiling area, allowing ready access. The compressor compartment panel can be simply raised for cleaning or servicing purposes and can be fully detached from an opening angle of 45° to provide very good access to the refrigeration components.



High-quality interior for versatile use

The smooth compartment liners are made entirely of 304-grade stainless steel and are therefore particularly easy to clean. The robust trayslides can be easily repositioned to suit needs and, together with the plastic-coated grid shelves, they ensure versatile use of the interior. The trayslides are U-shaped to make the grid shelves non-tilting.



Practical door

The doors remain open at 90° and are self-closing at less than 60° for convenient use. The integrated lock is exceedingly sturdy and protects the stored products against unauthorised access. The door hinges are interchangeable and the door seals are replaceable.



Castors

The LKPV and LGPV ranges come with castors as standard to allow easy and convenient cleaning underneath and versatile use of the appliances in different rooms. The brake of the two front castors provides a firm hold and ensures that the appliances cannot tip even if the grid shelves are extended. The castors can be removed in order to transport the cabinets. Doing so the height of the cabinets will be reduced by 13 cm.

Functional and practical accessories



Infrared key with documentation software

The alarm events and temperature profile data can be read out using the infrared key available as an accessory. Corresponding documentation software is included enabling visualisation of the read-out data on a PC.



NTC product temperature probe

An NTC product temperature probe for logging product temperatures is available as a retrofit kit for the laboratory appliances with Profi electronic controllers. The logged product temperatures can either be read by the electronic controller or transferred to an external documentation system via the existing RS 485 interface.



Interface converter with documentation software

A special interface converter including documentation software is available for central documentation of the temperature profile data and alarm events of multiple appliances via the RS 485 serial interface. Capability is provided for interconnecting as many as 20 laboratory appliances and centrally documenting their parameters.



U-shaped trayslides and grid shelves

Additional U-shaped trayslides and plastic-coated grid shelves can be retrofitted as required to provide extra storage options. The robust grid shelves have an extremely high loading capacity of up to 60 kg.



Laboratory refrigerators and freezers with Profi electronic controllers	LKPv 1423 MediLine	LKPv 8420 MediLine	LKPv 6520 MediLine	LGPv 1420 MediLine	LGPv 8420 MediLine	LGPv 6520 MediLine
Gross capacity	1427 l	856 l	601 l	1427 l	856 l	601 l
Exterior dimensions in mm (w/d/h)	1430 / 830 / 2150	790 / 980 / 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	1250 / 700 / 1550	620 / 850 / 1550	520 / 700 / 1550
Energy consumption in 24h*	3.923 kWh	2.400 kWh	1.775 kWh	8.887 kWh	5.500 kWh	4.715 kWh
General						
Cooling system	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
Defrosting method	automatic	automatic	automatic	automatic	automatic	automatic
Temperature range	0°C to +16°C	-2°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⁾
Housing material / colour	steel / white	steel / white	steel / white	steel / white	steel / white	steel / white
Door / lid material	glass door	steel	steel	steel	steel	steel
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
Type of control	electronic controller with data logger and text display	electronic controller with data logger and text display	electronic controller with data logger and text display	electronic controller with data logger and text display	electronic controller with data logger and text display	electronic controller with data logger and text display
Temperature display	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
Temperature and door open alarm	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible
Interface	RS 485	RS 485	RS 485	RS 485	RS 485	RS 485
Volt-free contact	•	•	•	•	•	•
Interior light	LED lighting, with separate switch					
Adjustable storage shelves	8	4	4	8	4	4
Usable shelf area in mm (w/d)	1024 / 650	600 / 800	512 / 650	1024 / 650	600 / 800	512 / 650
Shelf material	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated
Shelf loading capacity	60 kg	60 kg	60 kg	60 kg	60 kg	60 kg
Castors	castors with brake at the front, castors at the rear	castors with brake at the front, fixed castors at the rear	castors with brake at the front, fixed castors at the rear	castors with brake at the front, castors at the rear	castors with brake at the front, fixed castors at the rear	castors with brake at the front, fixed castors at the rear
Handle	Handle moulding	Handle moulding	Handle moulding	Handle moulding	Handle moulding	Handle moulding
Lock	•	•	•	•	•	•
Self-closing door	•	•	•	•	•	•
Door hinges		right hand, reversible	right hand, reversible		right hand, reversible	right hand, reversible
Gross / net weight	284 / 229 kg	187 / 154 kg	158 / 132 kg	262 / 219 kg	197 / 164 kg	171 / 143 kg
Climate rating	T	T	T	T	T	T
Sound power level	55 dB (A)	55 dB (A)	55 dB (A)	60 dB (A)	60 dB (A)	60 dB (A)
Refrigerant	R 290	R 290	R 290	R 290	R 290	R 290
Voltage / Connection rating	220-240 V~ / 3.0 A	220-240 V~ / 2.0 A	220-240 V~ / 2.0 A	220-240 V~ / 4.5 A	220-240 V~ / 4.0 A	220-240 V~ / 4.0 A
Accessories						
Grid shelf, plastic-coated	7112393	7113643	7112393	7112393	7113643	7112393
U-shaped trayslide, right	9001761	9005067	9001761	9001761	9005067	9001761
U-shaped trayslide, left	9001757	9005069	9001757	9001757	9005069	9001757
Infrared key incl. software	9590389	9590389	9590389	9590389	9590389	9590389
Converter incl. software (serial connection)	9590387	9590387	9590387	9590387	9590387	9590387
NTC product temperature sensor	9590407	9590407	9590407	9590407	9590407	9590407
Also available as	LKPv 1420 with solid doors		LKPv 6523 with glass door			

* 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.

Laboratory appliances in compact format

Wherever floor space is limited or under-worktop installation is planned, the Mediline laboratory refrigerators with Comfort electronic controllers are the ideal solution. These appliances meet the exacting demands made of laboratory appliances. The range comprises two freestanding and two underworktop laboratory refrigerators, in each case with glass door and solid door versions. The temperature can be set from +3 °C to +8 °C. The forced-air cooling system in conjunction with the

precision electronic controller ensures temperature consistency and uniform temperature distribution in the interior. The LCv 4010 laboratory fridge-freezer further extends the range of compact laboratory appliances. It has two separately adjustable cooling circuits providing the utmost temperature stability and temperature consistency for both the refrigerator compartment and the freezer compartment.

The Comfort electronic controller

The precision Comfort electronic controller with digital temperature display enables temperatures to be set accurately. Symbols indicate the operating status of the appliance at all times. To satisfy laboratory hygiene requirements, the Comfort electronic controller is flush-mounted and has an easy-clean membrane keypad.

Integrated alarm systems

A visual and audible temperature alarm alerts the user if temperature deviation limits are exceeded. The parameters for the temperature alarm can be individually set. In addition, a visual and audible door alarm is activated if the door is open for longer than 1 minute. The door-open alarm delay can be adjusted between 1 and 5 minutes. Furthermore, the laboratory appliances with Comfort electronic controllers have a visual power failure alarm when mains power returns and a sensor defect alarm.

Integrated data memory with min/max temperatures

The Comfort electronic controller has an integrated data memory. It logs the maximum and minimum internal temperatures that occurred once the set temperature was reached, the last three temperature alarms and power failures, together with the time, date and duration of the alarm. The respective data can be recalled using the AlarmLog function and read on the display panel.

1-point calibration

The laboratory appliances with Comfort electronic controllers provide 1-point calibration for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature. Positive or negative changes to the correction value can be made in steps of 0.1K.

External temperature and alarm connections

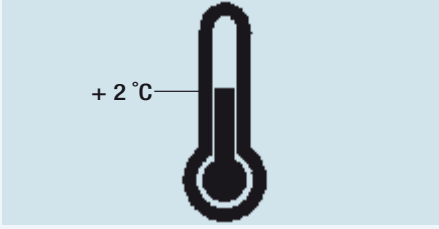
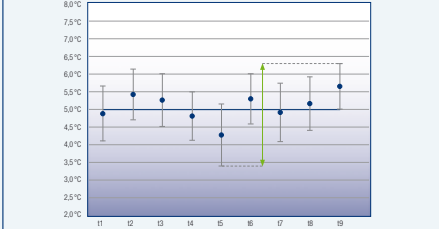
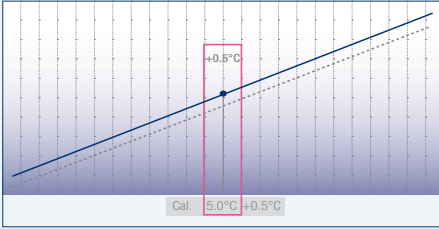
The laboratory appliances with Comfort electronic controllers are equipped with a volt-free contact for alarm forwarding to an external remote warning system. In addition, the appliances have an RS 485 serial interface for central documentation of the temperature profile data and alarm events.

Maximum temperature stability and temperature consistency

The forced-air cooling system in conjunction with the precision Comfort electronic controller ensures maximum temperature stability and high temperature consistency in the interior. All the laboratory appliances with Comfort electronic controllers are tested according to the NF X 15-140 standard with regard to maximum temperature stability and optimal temperature consistency.

Safety thermostat

Laboratory appliances are fitted with a safety thermostat to ensure the temperature does not fall to below +2 °C. This means that, in the event of a fault, any sensitive products being stored are protected from damage.





Access port for an external temperature sensor

In the laboratory appliances with Comfort electronic controllers there is provision for an independent temperature sensor allowing, for instance, a PT 100 probe or similar measuring elements to be positioned in the interior. The diameter of the access port is 10 mm.



Hygienic interior for versatile use

The seamless commercial-grade polystyrol inner liner is exceptionally easy to clean. The moulded trays prevent the grid shelves from tipping and allow height-adjustment in increments of 32 mm for particularly versatile use of the interior.



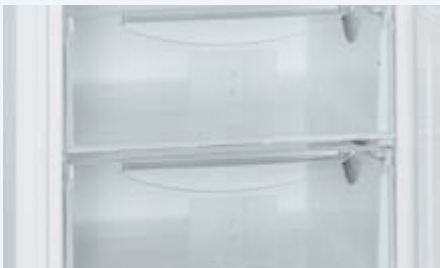
Close-mesh grid shelves

The plastic-coated grid shelves are easily adjustable in height and can be removed at a door opening angle of 90°. The close-mesh grid shelves ensure secure storage even for small items. The grid shelves have an extremely high loading capacity of up to 60 kg.



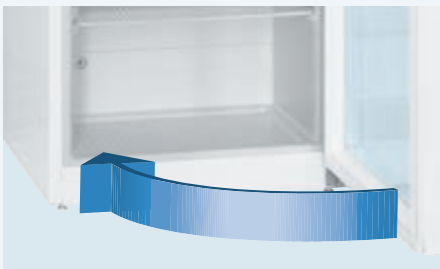
LED light

The LKv 3913 and LKUv 1613 laboratory refrigerators with glass door have a LED light light with separate switch for uniform illumination of the interior and fast, direct access to the stored products.



Convenient, clear view drawers

The drawers in the freezer compartment of the LCv 4010 fridge-freezer can be removed at a door opening angle of 90°. They have a transparent front providing a clear view of the substances stored inside, and handles recessed in the sides for easy carrying when the drawers are removed. There is the additional possibility of using the freezer compartment just with the two integrated glass shelves as storage areas.



Practical door

The doors are self-closing for convenient use. The integrated lock is exceedingly sturdy and protects the stored products against unauthorised access. The doors hinges are reversible and the gaskets are replaceable.

Functional and practical accessories



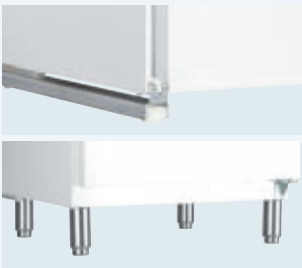
Additional lock barrels

For specific locking requirements, up to 10 lock barrels each with a different key can be retrofitted to the laboratory models with Comfort controllers.



Evaporator cover

A white-coated aluminium evaporator cover is available as a retrofit kit for the LKv, LCv and LKUv models to prevent laboratory preparations from freezing onto the rear-wall evaporator.



Roller sets and adjustable-height feet

30 mm-high roller sets can be retrofitted to the under-worktop LKUv models and adjustable-height feet can be retrofitted to the LKv models to allow easy cleaning underneath. The feet are adjustable between 115 mm and 170 mm in height.



Plastic-coated grid shelves

Additional plastic-coated grid shelves can be retrofitted as required to provide extra storage options. The robust grid shelves have an extremely high loading capacity of up to 60 kg.



Stacking kit

A stacking kit is available as an accessory for the LKUv 1613 and LKUv 1610 models. This enables laboratory refrigerators and freezers with independent temperatures to be combined on a small footprint.



NTC product temperature probe



An NTC product temperature probe for logging product temperatures is available as a retrofit kit for the laboratory appliances with Comfort electronic controllers. The logged product temperatures can either be read by the electronic controller or transferred to an external documentation system via the existing RS 485 interface.



Interface converter with documentation software

A special interface converter including documentation software is available for central documentation of the temperature profile data and alarm events of multiple appliances via the RS 485 serial interface. Up to 20 laboratory appliances can be networked for central monitoring and temperature recording.



Laboratory refrigerators with Comfort electronic controllers	LKv 3913 MediLine 	LKv 3910 MediLine	LKuv 1613 MediLine 	LKuv 1610 MediLine
Total gross / net capacity	360 / 344 l	360 / 344 l	141 / 130 l	141 / 130 l
Exterior dimensions in mm (w/d/h)	600 / 615 / 1840	600 / 615 / 1840	600 / 615 / 820	600 / 615 / 820
Interior dimensions in mm (w/d/h)	440 / 435 / 1635	440 / 435 / 1635	440 / 435 / 670	440 / 435 / 670
Energy consumption in 24h*	1.315 kWh	0.846 kWh	1.010 kWh	0.747 kWh
General				
Cooling system	dynamic	dynamic	dynamic	dynamic
Defrosting method	automatic	automatic	automatic	automatic
Temperature range	+3°C to +8°C	+3°C to +8°C	+3°C to +8°C	+3°C to +8°C
Housing material / colour	steel / white	steel / white	steel / white	steel / white
Door / lid material	glass door	steel	glass door	steel
Liner material	white plastic	white plastic	white plastic	white plastic
Type of control	electronic controller	electronic controller	electronic controller	electronic controller
Temperature display	external digital	external digital	external digital	external digital
Power failure alarm	when mains power returns	when mains power returns	when mains power returns	when mains power returns
Temperature and door open alarm	visual and audible	visual and audible	visual and audible	visual and audible
Interface	RS 485	RS 485	RS 485	RS 485
Volt-free contact	•	•	•	•
Interior light	LED lighting, with separate switch		LED lighting, with separate switch	
Adjustable storage shelves	5	5	3	3
Usable shelf area in mm (w/d)	440 / 420	440 / 420	440 / 420	440 / 420
Shelf material	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated
Shelf loading capacity	60 kg	60 kg	60 kg	60 kg
Handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle
Lock	•	•	•	•
Self-closing door	•	•	•	•
Door hinges	right hand, reversible	right hand, reversible	right hand, reversible	right hand, reversible
Gross / net weight	90 / 84 kg	71 / 65 kg	46 / 43 kg	39 / 37 kg
Climate rating	SN-ST	SN-ST	SN-ST	SN-ST
Sound power level	43 dB (A)	43 dB (A)	42 dB (A)	42 dB (A)
Refrigerant	R 600a	R 600a	R 600a	R 600a
Voltage / Connection rating	220-240 V~ / 1.5 A	220-240 V~ / 1.5 A	220-240 V~ / 1.0 A	220-240 V~ / 1.0 A
Accessories				
Grid shelf, plastic-coated	7112313	7112313	7112313	7112313
Stacking kit, white			9876687	9876687
Roller set			9590521	9590521
Evaporator cover, white	9590525	9590525	9590523	9590523
Adjustable legs	9590233	9590233		
NTC product temperature sensor	9590407	9590407	9590407	9590407
Converter incl. software (serial connection)	9590387	9590387	9590387	9590387
Additional lock barrels (up to 10)	on request	on request	on request	on request

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



Laboratory fridge-freezer with Comfort electronic controllers		LCv 4010 MediLine
Total gross / net capacity	fridge compartment	254 / 240 l
Total gross / net capacity	freezer compartment	107 / 105 l
Exterior dimensions in mm (w/d/h)		600 / 615 / 2000
Interior dimensions in mm (w/d/h)	fridge compartment	440 / 435 / 1105
Interior dimensions in mm (w/d/h)	freezer compartment	431 / 435 / 597
Energy consumption in 24h*		1.800 kWh
General		
Cooling system	fridge / freezer comp.	forced-air / static
Defrosting method	fridge / freezer comp.	automatic / manual
Temperature range	fridge / freezer comp.	+3°C to +8°C / -9°C to - 30°C
Housing material / colour		steel / white
Door / lid material		steel
Liner material		white plastic
Type of control		electronic controller
Temperature display		external digital
Power failure alarm		when mains power returns
Temperature and door open alarm		visual and audible
Interface		RS 485
Volt-free contact		•
Adjustable storage shelves	fridge compartment	4
Usable shelf area in mm (w/d)	fridge compartment	440 / 420
Shelf material	fridge / freezer comp.	grid shelves, plastic-coated / glass
Shelf loading capacity	fridge / freezer comp.	60 kg / 24 kg
Number of drawers	freezer compartment	3
Handle		ergonomic slimline handle
Lock		•
Self-closing door		•
Door hinges		right hand, reversible
Gross / net weight		91 / 85 kg
Climate rating		SN-ST
Sound power level		43 dB (A)
Refrigerant		R 600a
Voltage / Connection rating		220-240 V / 1.5 A
Accessories		
Grid shelf, plastic-coated, for	fridge compartment	7112313
Evaporator cover, white, for	fridge compartment	9590391
NTC product temperature sensor		9590407
Converter incl. software (serial connection)		9590387
Additional lock barrels (up to 10)		on request

* measured at +25°C ambient temperature and +5°C set temperature for fridge compartment and -20°C for freezer compartment.

Pharmacy refrigerators compliant
with DIN 58345

DIN

In the medical sector safety and reliability is of the utmost importance and therefore pharmacies, surgeries, hospitals as well as companies make high demands on the cabinets which are intended to store pharmaceutical products. Liebherr's pharmacy refrigerators are explicitly designed for the safe storage of pharmacy products compliant with DIN 58345. True to the motto „product quality on the highest level” Liebherr pharmacy cabinets are both energy-efficient and environmentally friendly. The range comprises two freestanding and two under-worktop pharmacy refrigerators, in each case with glass door and solid door versions. The forced-air cooling system in conjunction with the precision electronic controller ensures temperature stability and uniform temperature distribution in the interior. Numerous alarm and safety functions provide additional safety for the pharmacy products stored within the unit.



The Comfort electronic controller

The precision Comfort electronic controller enables temperatures to be set to 1/10°C accuracy. Symbols indicate the operating status of the appliance at all times. To satisfy hygiene requirements, the Comfort electronic controller is flush-mounted and has an easy-clean membrane keypad.



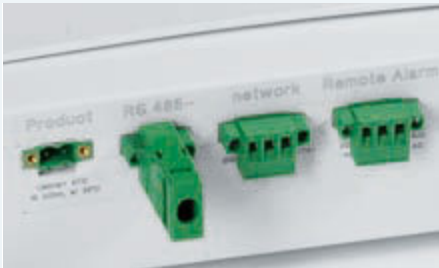
Integrated alarm systems

A visual and audible temperature alarm alerts the user if temperature deviation limits of +2 °C and +8 °C are exceeded. In addition, a visual and audible alarm is activated if the door is open for longer than 1 minute. The door-open alarm delay can be adjusted between 1 and 5 minutes.



Integrated data memory with min/max temperatures

The Comfort electronic controller has an integrated data memory. It logs the maximum and minimum internal temperatures that occurred once the set temperature was reached, the last three temperature alarms and power failures, together with the time, date and duration of the alarm. The respective data can be recalled using the AlarmLog function and read on the display panel.



External temperature and alarm connections

The pharmacy refrigerators with Comfort electronic controllers are equipped with a volt-free contact for alarm forwarding to an external remote warning system. In addition, the appliances have an RS 485 serial interface for central documentation of the temperature profile data and alarm events.



Access port for an external temperature sensor

In the pharmacy refrigerators with Comfort electronic controllers there is provision for an independent temperature sensor allowing, for instance, a PT 100 probe or similar measuring elements to be positioned in the interior. The diameter of the access port is 10 mm.



Hygienic interior for versatile use

The seamless commercial-grade polystyrol inner liner is exceptionally easy to clean. The moulded trayslides prevent the grid shelves from tipping and allow height-adjustment in increments of 32 mm for particularly versatile use of the interior.



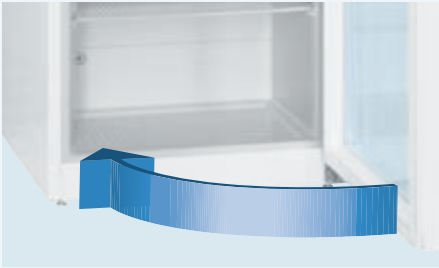
Close-mesh grid shelves

The plastic-coated grid shelves are easily adjustable in height and can be removed at a door opening angle of 90°. The close-mesh grid shelves ensure secure storage even for small items. The grid shelves have an extremely high loading capacity of up to 60 kg.



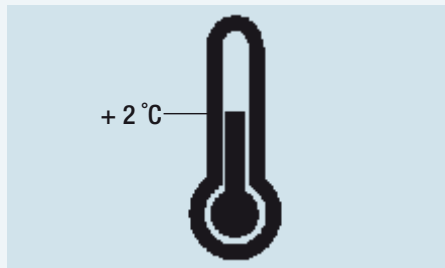
LED light

The MKv 3913 and MKUv 1613 pharmacy refrigerators with glass door have a LED light with separate switch for uniform illumination of the interior and fast, direct access to the stored products.



Practical door

The doors are self-closing for convenient use. The integrated lock is exceedingly sturdy and protects the stored products against unauthorised access. The doors hinges are reversible and the gaskets are replaceable.



Safety thermostat

The pharmacy refrigerators are fitted with a safety thermostat to ensure the temperature does not fall to below +2°C. This means that, in the event of a fault, any sensitive products being stored are protected from damage.



Power failure alarm

An integrated power-failure alarm with incorporated self-charging battery warns in case of supply power failure for up to 12 hrs. The audible alarm can be muted using the reset button.

Functional and practical accessories



Additional lock barrels

For specific locking requirements, up to 10 lock barrels each with a different key can be retrofitted to the pharmacy refrigerators with Comfort controllers.



Roller sets and adjustable-height feet

30-mm-high roller sets can be retrofitted to the under-worktop MKUv models and adjustable-height feet can be retrofitted to the MKv models to allow easy cleaning underneath. The feet are adjustable between 115 mm and 170 mm in height.



Stacking kit

A stacking kit is available as an accessory for the MKUv 1613 and MKUv 1610 models. This enables laboratory refrigerators and freezers with independent temperatures to be combined on a small footprint.



Plastic-coated grid shelves



Additional plastic-coated grid shelves can be retrofitted as required to provide extra storage options. The robust grid shelves have an extremely high loading capacity of up to 60 kg.



Interface converter with documentation software

A special interface converter including documentation software is available for central documentation of the temperature profile data and alarm events of multiple appliances via the RS 485 serial interface. Up to 20 laboratory appliances can be networked for central monitoring and temperature recording.



Pharmacy refrigerators compliant with DIN 58345	MKV 3913 MediLine 	MKV 3910 MediLine	MKUv 1613 MediLine 	MKUv 1610 MediLine
Total gross / net capacity	360 / 281 l	360 / 300 l	141 / 115 l	141 / 116 l
Exterior dimensions in mm (w/d/h)	600 / 615 / 1840	600 / 615 / 1840	600 / 615 / 820	600 / 615 / 820
Interior dimensions in mm (w/d/h)	440 / 435 / 1635	440 / 435 / 1635	440 / 435 / 670	440 / 435 / 670
Energy consumption in 24h*	1.315 kWh	0.846 kWh	1.010 kWh	0.747 kWh
General				
Cooling system	dynamic	dynamic	dynamic	dynamic
Defrosting method	automatic	automatic	automatic	automatic
Temperature range	+5°C	+5°C	+5°C	+5°C
Housing material / colour	steel / white	steel / white	steel / white	steel / white
Door / lid material	glass door	steel	glass door	steel
Liner material	white plastic	white plastic	white plastic	white plastic
Type of control	electronic controller	electronic controller	electronic controller	electronic controller
Temperature display	external digital	external digital	external digital	external digital
Power failure alarm	immediately upon power failure for at least 12hrs	immediately upon power failure for at least 12 hrs	immediately upon power failure for at least 12 hrs	immediately upon power failure for at least 12 hrs
Temperature and door open alarm	visual and audible	visual and audible	visual and audible	visual and audible
Interface	RS 485	RS 485	RS 485	RS 485
Volt-free contact	•	•	•	•
Interior light	LED lighting, with separate switch		LED lighting, with separate switch	
Adjustable storage shelves	5	5	3	3
Usable shelf area in mm (w/d)	440 / 420	440 / 420	440 / 420	440 / 420
Shelf material	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated	grid shelves, plastic-coated
Shelf loading capacity	60 kg	60 kg	60 kg	60 kg
Handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle
Lock	•	•	•	•
Self-closing door	•	•	•	•
Door hinges	right hand, reversible	right hand, reversible	right hand, reversible	right hand, reversible
Gross / net weight	91 / 85 kg	71 / 66 kg	46 / 43 kg	40 / 37 kg
Climate rating	SN	SN	SN	SN
Sound power level	43 dB (A)	43 dB (A)	42 dB (A)	42 dB (A)
Refrigerant	R 600a	R 600a	R 600a	R 600a
Voltage / Connection rating	220-240 V~ / 1.5 A	220-240 V~ / 1.5 A	220-240 V~ / 1.0 A	220-240 V~ / 1.0 A
Accessories				
Grid shelf, plastic-coated	7112313	7112313	7112313	7112313
Stacking kit, white			9876687	9876687
Roller set			9590521	9590521
Adjustable legs	9590233	9590233		
Converter incl. software (serial connection)	9590387	9590387	9590387	9590387
Additional lock barrels (up to 10)	on request	on request	on request	on request

* measured at +25 °C ambient temperature and +5 °C set temperature

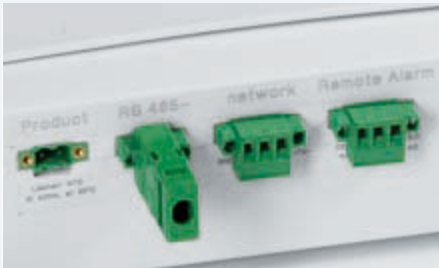
Low temperature -45 °C chest freezers

The low temperature -45°C chest freezers are designed to meet the specific requirements of an array of research, industrial or clinical applications. Where there is a need to store products or samples at lower than usual freezing temperatures freezers are the ideal solution. Offering supreme temperature stability as well as temperature uniformity within the units, they ensure the safe, cold storage of specimens, biological samples and other substances.

The low temperature chest freezers are available in three sizes and are equipped with a precision digital controller, which guarantees maximum temperature accuracy. Having a volt-free contact and an RS 485 serial interface, Liebherr's low temperature chest freezers can also be connected to a central alarm and documentation system, which provides additional safety for the samples within the unit.

External temperature and alarm connections

The low temperature chest freezers with Comfort electronic controllers are equipped with a volt-free contact for alarm forwarding to an external remote warning system. In addition, the appliances have an RS 485 serial interface for central documentation of the temperature profile data and alarm events.



The Comfort electronic controller

The precision Comfort electronic controller with digital temperature display enables temperatures to be set accurately. Symbols indicate the operating status of the appliance at all times. To satisfy laboratory hygiene requirements, the Comfort electronic controller has an easy-clean membrane keypad.



Integrated alarm systems

A visual and audible temperature alarm alerts the user if temperature deviation limits are exceeded. The parameters for the temperature alarm can be individually set. In addition, a visual and audible alarm is activated when the lid is open for longer than 1 minute. The door-open alarm delay can be adjusted between 1 and 5 minutes. Furthermore, the laboratory appliances with Comfort electronic controllers have a visual power failure alarm when mains power returns and a sensor defect alarm.



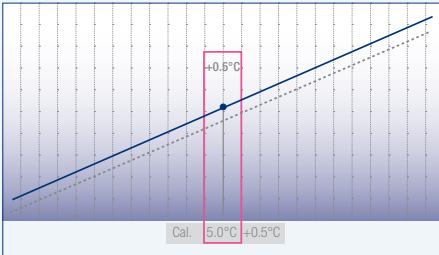
Integrated data memory with min/max temperatures

The Comfort electronic controller has an integrated data memory. It logs the maximum and minimum internal temperatures that occurred once the set temperature was reached, the last three temperature alarms and power failures, together with the time, date and duration of the alarm. The respective data can be recalled using the AlarmLog function and read on the display panel.



1-point calibration

The low temperature chest freezers with Comfort electronic controllers provide 1-point calibration for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature. Positive or negative changes to the correction value can be made in steps of 0.1K.



StopFrost-System

The Stop-Frost system fitted to the LGT models has 2 major advantages: frosting of the freezer and its contents is significantly reduced. This means the time-consuming process of defrosting is necessary far less often. The vacuum is also equalised quickly after the lid has been opened and closed and the chest freezer can be re-opened effortlessly.

Lid handle

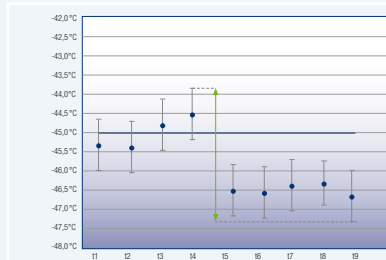
The aluminium lid handle of the LGT models is simple and tough for intensive commercial use. All models have locks as standard.





Access port for an external temperature probe

In the low temperature chest freezers with Comfort electronic controllers there is provision for an independent temperature probe allowing, for instance, a PT 100 probe or similar measuring elements to be positioned in the interior. The diameter of the access port is 10 mm.



Maximum temperature stability and temperature consistency

The precise Comfort controller guarantees maximum temperature control and stability. All laboratory chest freezers with comfort controller are tested to NFX 15-140 thus providing reliable and exact data on temperature stability and distribution within the freezer.

LED light

The freezer lid has an integrated LED light to improve visibility and potentially reduce lid opening duration.

One-piece lid

The lid of the LGT models is moulded from a single piece of steel. This makes it extremely resistant to any deformation from vacuum pressure after lid openings. Because it has no joins but instead radiused corners and edges it is also hygienic and easy to clean. The strong lid hinges are designed for at least 300 000 openings: they counterbalance the lid from about 45° thus improving safety and reducing the effort needed to open the freezer.

Functional and practical accessories



NTC product temperature probe

An NTC product temperature probe for logging product temperatures is available as a retrofit kit for the low temperature chest freezers with Comfort electronic controllers. The logged product temperatures can either be read by the electronic controller or transferred to an external documentation system via the existing RS 485 interface.



Interface converter with documentation software




A special interface converter including documentation software is available for central documentation of the temperature profile data and alarm events of multiple appliances via the RS 485 serial interface. Up to 20 laboratory appliances can be networked for central monitoring and temperature recording.



Optional high-quality baskets

The optional baskets facilitate the storage of small items and can help to improve the handling and organising of the freezer contents. The baskets have retractable handles can be stacked on the freezer base and/or hung from the top frame.



Low temperature -45 °C chest freezers	LGT 4725 MediLine 	LGT 3725 MediLine 	LGT 2325 MediLine 
Total gross / net capacity	459 / 431 l	365 / 342 l	215 / 200 l
Exterior dimensions in mm (w/d/h)	1648 / 808 / 919	1373 / 808 / 919	1132 / 760 / 919
Interior dimensions in mm (w/d/h)	1445 / 500 / 650	1170 / 500 / 650	889 / 410 / 630
Energy consumption in 24h*	4.352 kWh	2.928 kWh	2.256 kWh
General			
Cooling system	static	static	static
Defrosting method	manual	manual	manual
Temperature range	-10°C to -45°C	-10°C to -45°C	-10°C to -45°C
Housing material / colour	steel / white	steel / white	steel / white
Door / lid material	steel	steel	steel
Liner material	white coated aluminium	white coated aluminium	white coated aluminium
Type of control	electronic controller	electronic controller	electronic controller
Temperature display	external digital	external digital	external digital
Power failure alarm	when mains power return	when mains power return	when mains power return
Interface	RS 485	RS 485	RS 485
Volt-free contact	•	•	•
Isolation	100 mm	100 mm	120 mm
Number of baskets	0	0	0
Number of baskets, max	16	13	10
Interior light	LED	LED	LED
Handle	aluminium profile	aluminium profile	aluminium profile
Lock	•	•	•
Gross / net weight	94 / 81 kg	82 / 71 kg	68 / 58 kg
Climate rating	SN	SN	SN
Sound power level	55 dB (A)	55 dB (A)	55 dB (A)
Refrigerant	R 290	R 290	R 290
Voltage / Connection rating	220-240 V~ / 3.5 A	220-240 V~ / 3.0 A	220-240 V~ / 2.0 A
Accessories			
NTC product temperature probe	9590407	9590407	9590407
Converter incl. software (serial connection)	9590387	9590387	9590387
Baskets	7112947	7112947	7112317

* measured at +25 °C ambient temperature and -45 °C set temperature

Storage of explosive and highly flammable substances

The range of laboratory appliances with Comfort electronic controllers comprises two refrigerators and two freezers with spark-free interior for storing explosive and highly flammable substances - for instance in the chemical industry or in special laboratories. The interiors of the appliances are in compliance with the safety requirements of the EU Directive 94/9/EC (ATEX 95) and have been tested to the EN 1127-1, IEC 60079-0 and IEC 60079-15 standards by electro-suisse – SEV (Swiss Association for Electrical Engineering, Power and Information Technologies), the ATEX conformity evaluation organisation.



Certified to ATEX 95

All laboratory refrigerators and freezers with spark-free interior are tested according to the 94/9 EC (ATEX 95) Directive. Rated as II 3G Ex nA II T6, these appliances are suitable for storing explosive and highly flammable substances in sealed containers.



The Comfort electronic controller

The precision Comfort electronic controller with digital temperature display enables temperatures to be set accurately. Symbols indicate the operating status of the appliance at all times. To satisfy laboratory hygiene requirements, the Comfort electronic controller is flush-mounted and has an easy-clean membrane keypad.



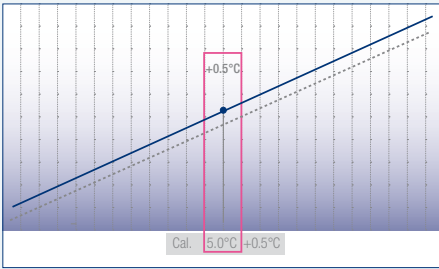
Integrated alarm systems

A visual and audible temperature alarm alerts the user if temperature deviation limits are exceeded. The parameters for the temperature alarm can be individually set. In addition, a visual and audible door alarm is activated if the door is open for longer than 1 minute. The door-open alarm delay can be adjusted between 1 and 5 minutes. Furthermore, the laboratory appliances with Comfort electronic controllers have a visual power failure alarm when mains power returns and a sensor defect alarm.



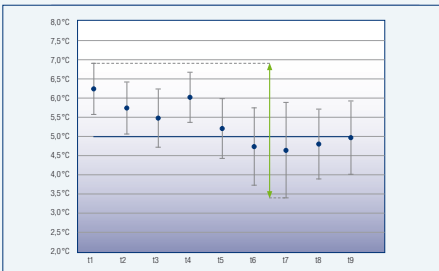
Integrated data memory with min/max temperatures

The Comfort electronic controller has an integrated data memory. It logs the maximum and minimum internal temperatures that occurred once the set temperature was reached, the last three temperature alarms and power failures, together with the time, date and duration of the alarm. The respective data can be recalled using the AlarmLog function and read on the display panel.



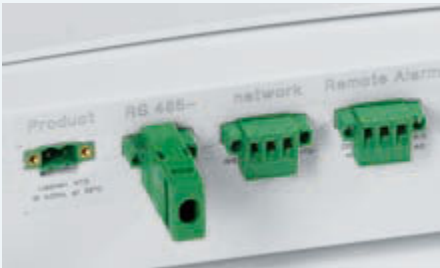
1-point calibration

The laboratory appliances with Comfort electronic controllers provide 1-point calibration for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature. Positive or negative changes to the correction value can be made in steps of 0.1K.



Maximum temperature stability and temperature consistency

In conjunction with the precision Comfort electronic controller, the forced-air cooling system of the laboratory refrigerators and the static cooling system of the laboratory freezers with spark-free interior ensure maximum temperature stability and high temperature consistency. The laboratory refrigerators are equipped with a secondary safety thermostat to prevent temperatures below +2°C in case of a fault. All the laboratory appliances with Comfort electronic controllers are tested according to the NF X 15-140 standard with regard to maximum temperature stability and optimal temperature consistency.



External temperature and alarm connections

The laboratory appliances with Comfort electronic controllers are equipped with a volt-free contact for alarm forwarding to an external remote warning system. In addition, the appliances have an RS 485 serial interface for central documentation of the temperature profile data and alarm events.



Access port for an external temperature sensor

In the laboratory appliances with Comfort electronic controllers and spark-free interior there is provision for an independent temperature sensor allowing, for instance, a PT 100 or similar measuring elements to be positioned in the interior. The access port diameter is 10 mm.



Hygienic interior for versatile use

The seamless commercial-grade polystyrol inner liner of the laboratory refrigerators with spark-free interior is exceptionally easy to clean. The moulded trayslides prevent the glass shelves from tipping and allow height-adjustment in increments of 32 mm for particularly versatile use of the interior.



Glass shelves

The glass shelves of the laboratory refrigerators with spark-free interior are easily adjustable in height and can be removed at a door opening angle of 90°. They ensure secure storage even for small items and have a loading capacity of up to 40 kg.



Convenient, clear view drawers

The drawers of the spark-free laboratory freezers can be removed at a door opening angle of 90°. They have a transparent front providing a clear view of the substances stored inside, and handles recessed in the sides for easy carrying when the drawers are removed.



Practical door

The doors are self-closing for convenient use. The integrated lock is exceedingly sturdy and protects the stored products against unauthorised access. The door hinges are reversible and the gaskets are replaceable.

Functional and practical accessories



Additional lock barrels

For specific locking requirements, up to 10 lock barrels each with a different key can be retrofitted to the laboratory models with Comfort controllers.



Evaporator cover

A white-coated aluminium evaporator cover is available as a retrofit kit for the LKexv and LKUexv models to prevent laboratory preparations from freezing onto the rear-wall evaporator.



Roller sets and adjustable legs

30 mm-high roller sets can be retrofitted to the under-worktop LKUexv 1610 and LGUex 1500 models and adjustable legs can be retrofitted to the LKexv 3910 and LGex 3410 models to allow easy cleaning underneath. The feet are adjustable between 115 mm and 170 mm in height.



Glass shelves

Additional glass shelves can be retrofitted to the LKexv and LKUexv models as required to provide extra storage options. The robust glass shelves have an extremely high loading capacity of up to 40 kg.



Stacking kit

A stacking kit is available as an accessory for the LKUv, LKUexv and LGUex models. This enables laboratory refrigerators and freezers with independent temperatures to be combined on a small footprint.



NTC product temperature probe

An NTC product temperature probe for logging product temperatures is available as a retrofit kit for the laboratory appliances with Comfort electronic controllers. The logged product temperatures can either be read by the electronic controller or transferred to an external documentation system via the existing RS 485 interface.



Interface converter with documentation software

A special interface converter including documentation software is available for central documentation of the temperature profile data and alarm events of multiple appliances via the RS 485 serial interface. Up to 20 laboratory appliances can be networked for central monitoring and temperature recording.

Laboratory fridge-freezer with Comfort electronic controller and spark-free interior



**Laboratory fridge-freezer with
Comfort electronic controller
and spark-free interior**

Total gross / net capacity	fridge compartment
Total gross / net capacity	freezer compartment
Exterior dimensions in mm (w/d/h)	
Interior dimensions in mm (w/d/h)	fridge compartment
Interior dimensions in mm (w/d/h)	freezer compartment
Energy consumption in 24h*	
General	
Cooling system	fridge / freezer comp.
Defrosting method	fridge / freezer comp.
Temperature range	fridge / freezer comp.
Housing material / colour	
Door / lid material	
Liner material	
Type of control	
Temperature display	
Power failure alarm	
Temperature and door open alarm	
Interface	
Volt-free contact	
Adjustable storage shelves	fridge compartment
Usable shelf area in mm (w/d)	fridge compartment
Shelf material	fridge / freezer comp.
Shelf loading capacity	fridge / freezer comp.
Number of drawers	freezer compartment
Handle	
Lock	
Self-closing door	
Door hinges	
Gross / net weight	
Climate rating	
Sound power level	
Refrigerant	
Voltage / Connection rating	

Accessories

Glass shelf
NTC product temperature sensor
Converter incl. software (serial connection)
Additional lock barrels (up to 10)

LCexv 4010
MediLine

- 254 / 240 l
- 107 / 105 l
- 600 / 615 / 2000
- 440 / 435 / 1105
- 431 / 435 / 597
- 1.800 kWh
- dynamic / static
- automatic / manual
- +3°C to +8°C / -9°C to -30°C
- steel / white
- steel
- white plastic
- electronic controller
- external digital
- when mains power returns
- visual and audible
- RS 485
-
- 4
- 440 / 420
- glass / glass
- 40 kg / 24 kg
- 3
- ergonomic slimline handle
-
-
- right hand, reversible
- 93 / 87 kg
- SN-ST
- 43 dB (A)
- R 600a
- 220-240 V~ / 1.5 A

9293629
9590407
9590387
on request

Laboratory refrigerators and freezers with Comfort electronic controller and spark-free interior

Total gross / net capacity
Exterior dimensions in mm (w/d/h)
Interior dimensions in mm (w/d/h)
Energy consumption in 24h*
General
Cooling system
Defrosting method
Temperature range
Housing material / colour
Door / lid material
Liner material
Type of control
Temperature display
Power failure alarm
Temperature and door open alarm
Interface
Volt-free contact
Adjustable storage shelves
Usable shelf area in mm (w/d)
Shelf material
Shelf loading capacity
Number of drawers / baskets
Shelf height in mm
Handle
Lock
Self-closing door
Door hinges
Gross / net weight
Climate rating
Sound power level
Refrigerant
Voltage / Connection rating

Accessories

Glass shelf
Stacking kit, white
Roller set
Evaporator cover, white
Adjustable legs
NTC product temperature sensor
Converter incl. software (serial connection)
Additional lock barrels (up to 10)

Laboratory refrigerators and freezers with Comfort electronic controller and spark-free interior



LKexv 3910
MediLine

360 / 344 l
600 / 615 / 1840
440 / 435 / 1635
0.865 kWh
dynamic
automatic
+3°C to +8°C
steel / white
steel
white plastic
electronic controller
external digital
when mains power returns
visual and audible
RS 485
•
5
440 / 420
glass
40 kg

- ergonomic slimline handle
-
-
- right hand, reversible
- 74 / 68 kg
- SN-ST
- 43 dB (A)
- R 600a
- 220-240 V~ / 1.5 A

9293629
9590525
9590233
9590407
9590387
on request

LKUexv 1610
MediLine

141 / 130 l
600 / 615 / 820
440 / 435 / 670
0.863 kWh
dynamic
automatic
+3°C to +8°C
steel / white
steel
white plastic
electronic controller
external digital
when mains power returns
visual and audible
RS 485
•
3
440 / 420
glass
40 kg

ergonomic slimline handle
•
•
right hand, reversible
41 / 39 kg
SN-ST
42 dB (A)
R 600a
220-240 V~ / 1.0 A

9293629
9876687
9590521
9590523
9590407
9590387
on request

LGex 3410
MediLine

310 / 284 l
600 / 615 / 1840
420 / 400 / 1587
1.309 kWh
static
manual
-9°C to -30°C
steel / white
steel
white plastic
electronic controller
external digital
when mains power returns
visual and audible
RS 485
•
evaporator plates
24 kg
8 / -
185

ergonomic slimline handle
•
•
right hand, reversible
92 / 87 kg
SN-ST
45 dB (A)
R 600a
220-240 V~ / 1.5 A

9590233
9590407
9590387
on request

LGUex 1500
MediLine

139 / 129 l
600 / 615 / 820
454 / 450 / 663
0.926 kWh
static
manual
-9°C to -26°C
steel / white
steel
white plastic
electronic controller
external digital
when mains power returns
visual and audible
RS 485
•
evaporator plates
24 kg
3 / 1
149

- ergonomic slimline handle
-
-
- right hand, reversible
- 45 / 42 kg
- SN-ST
- 42 dB (A)
- R 600a
- 220-240 V~ / 1.0 A

9876687
9590521
9590407
9590387
on request

Robust and spark-free

The laboratory refrigerators with dynamic cooling and spark-free interior are designed specifically for storing explosive and highly flammable substances. The interiors of the LKexv models meet all the safety requirements of the EU Directive 94/9EC (ATEX 95). The

appliances excel with a large capacity and rugged design. The cooling temperature is continuously adjustable from +1 °C to +15 °C with the aid of the thermostat integrated in the control panel.



Certified according to ATEX 95

The LKexv models are labelled clearly and permanently on the outer housing and inside in accordance with the ATEX Directive 94/9 EC, including information for cleaning. Rated as II 3G Ex nA II T6, these appliances are suitable for storing explosive and highly flammable substances in sealed containers.



Hygienic interior for versatile use

The seamless plastic compartment liner is exceptionally easy to clean. The moulded trayslides prevent the glass shelves from tipping and allow them to be varied in height.



Glass shelves

The glass shelves ensure secure storage even for small items and have a loading capacity of up to 40 kg.



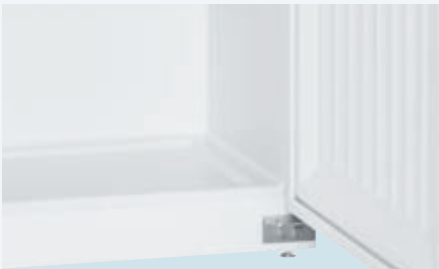
Water tray

The defrost water drain in the laboratory appliances with spark-free interior is sealed for compliance with the ATEX Directive 94/9 EC. The defrost water obtained during the automatic defrost cycle is collected in a tray which has to be emptied manually at regular intervals.



Lock

The integrated lock is exceedingly sturdy and protects the stored products against unauthorised access.



Reversible door hinges

The door hinges of the LKexv models are reversible to permit adaptation to individual space conditions. The door gaskets can also be replaced as required.

Functional and practical accessories



Castor base

A castor base is available as an accessory for the LKexv models to allow flexible use of the appliances in different rooms.



Adjustable legs

Adjustable legs can be retrofitted to the LKxv models for easy cleaning underneath. The legs are adjustable between 115mm and 170mm in height.

Glass shelves

Additional glass shelves can be retrofitted as required to provide extra storage options. The robust glass shelves have a loading capacity of up to 40 kg.



Additional lock barrels

For specific locking requirements, up to 10 lock barrels each with a different key can be retrofitted to the LKexv models.



Laboratory refrigerators with analogue controls and spark-free interior

Total gross / net capacity
Exterior dimensions in mm (w/d/h)
Interior dimensions in mm (w/d/h)
Energy consumption in 24h*
General
Cooling system
Defrosting method
Temperature range
Housing material / colour
Door / lid material
Liner material
Type of control
Temperature display
Adjustable storage shelves
Usable shelf area in mm (w/d)
Shelf material
Shelf loading capacity
Handle
Lock
Door hinges
Gross / net weight
Climate rating
Sound power level
Refrigerant
Voltage / Connection rating

Accessories

Glass shelf
Castor base
Set of adjustable legs
Additional lock barrels (up to 10)

LKexv 5400	LKexv 3600	LKexv 2600	LKexv 1800
MediLine	MediLine	MediLine	MediLine
554 / 520 l	333 / 307 l	240 / 221 l	180 / 160 l
750 / 730 / 1640	600 / 610 / 1640	600 / 610 / 1250	600 / 600 / 860
600 / 560 / 1452	470 / 440 / 1452	470 / 440 / 1062	513 / 441 / 702
0.983 kWh	0.947 kWh	0.786 kWh	0.898 kWh
dynamic automatic	dynamic automatic	dynamic automatic	dynamic automatic
+1°C to +15°C	+1°C to +15°C	+1°C to +15°C	+1°C to +15°C
steel / white	steel / white	steel / white	steel / white
steel	steel	steel	steel
white plastic	white plastic	white plastic	white plastic
mechanical control system	mechanical control system	mechanical control system	mechanical control system
external digital	external digital	external digital	external digital
5	5	4	3
600 / 550	470 / 425	470 / 425	513 / 412
glass	glass	glass	glass
40 kg	40 kg	40 kg	40 kg
ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle
•	•	•	•
right hand, reversible	right hand, reversible	right hand, reversible	right hand, reversible
84 / 77 kg	64 / 59 kg	53 / 49 kg	40 / 38 kg
SN-T	SN-T	SN-T	SN
45 dB (A)	43 dB (A)	43 dB (A)	43 dB (A)
R 600a	R 600a	R 600a	R 600a
220-240 V~ / 1.5 A	220-240 V~ / 1.5 A	220-240 V~ / 1.0 A	220-240 V~ / 1.0 A
9293613	9293615	9293615	9293631
9086365	9086323	9086323	
9590233	9590233	9590233	
on request	on request	on request	on request

*measured at +25 °C ambient temperature and +5 °C set temperature

Internet

You will also find all Liebherr's laboratory appliances together with illustrations and technical data on our website at www.liebherr.com and www.lab.liebherr.com. Under „Info & Service“ the “Laboratory Technical Sales Manual” is available for download which provides detailed technical information on the appliances and NFX 15-140 temperature charts.



www.lab.liebherr.com



Liebherr laboratory refrigerators or freezers do not comply with the German Institute for Standardisation norm DIN 58371 regarding the requirements for the storage of conserved blood and DIN 58375 regarding the requirements for the storage of blood plasma. The MKv and MKUv models comply with the German Institute for Standardisation norm DIN 58345 which refers to the specification of pharmacy refrigerators. All other Liebherr refrigerators and freezers in this catalogue do not comply with this standard.

