Scientific and Healthcare 2022

LIEBHERR

Fridges and freezers

Contents

Quality, Design and Innovation

As a specialist for fridges and freezers, Liebherr offers an extensive range of robust special appliances for commercial use. The unique quality, timeless design and innovation that characterise our products are expressions of our many years of experience in the manufacture of modern refrigeration. Every day, Liebherr appliances allow our customers to experience and benefit from the expertise we have developed over decades in the commercial field.

Quality

For more than 60 years, the name Liebherr has stood for high-quality and innovative fridges and freezers. Our focus, from the product conception to development and production through to marketing, is on offering innovative top-quality products. In the process, we consistently implement new product ideas for the perfect and safe storage of foods and of sensitive samples, medication or research materials in laboratory use. We are familiar with the specific requirements and know what is needed to ensure that you can rely on your professional fridge or freezer one hundred percent, 24 hours a day, and 365 days a year. We conduct checks as early as the development stage to ensure that all refrigeration, mechanical and electronic components function dependably and over the long term, and we also make sure that optimal operability and operational reliability of appliances is guaranteed. For example, in the quality test, door hinges must complete at least 100,000 opening cycles – equivalent to usage of over 15 years. A visual inspection of processing quality also occurs. This helps us to ensure the optimal compatibility of all components with one another: for maximum functionality and efficiency.

5 year warranty

All Liebherr commercial appliances have a full 5 year warranty covering parts and labour, 12 month on accessories and spare parts – for total peace of mind.

Design

Liebherr appliances for professional use are characterised by a specific combination of aesthetics and functionality. With their elegant and timeless design, the fridges and freezers meet the highest aesthetic standards. The high-quality look of our commercial appliances shows itself in many details: from stainless steel processing to a selection of high-quality materials and to the interior features. Thanks to their consistent design, our professional appliances can be easily combined and also really catch the eye.

Innovation

The constant development of our high-quality products is particularly important to us. That is why all Liebherr production sites have development centres with modern equipment and highly qualified employees. We invest in research and development because only then can we truly offer our customers top quality in the long term, while simultaneously meeting our own high standards. Our aim is to be "best in class" in every aspect. Innovations, whether in refrigeration technology, convenience or safety, have always been an important and supporting pillar in our history and will remain so in future as well. With great dedication and passion we work hard to incorporate innovations into our appliances in order to set new standards in the field of professional fridges and freezers. Last but not least, our appliances for commercial use are highly efficient thanks to state-of-the-art electronics combined with optimised cooling circuits, so they make a considerable contribution towards economic and ecological sustainability.

Save energy
and act sustainably

As a family business operating globally, Liebherr bears great responsibility towards society, the environment, customers, employees and suppliers. Going beyond regulations and legislation, the environmental effects of products and production sites are reduced and kept to a minimum. This is why a responsible and sustainable approach to energy is especially important to Liebherr in all development processes.

Energy efficiency has always been a central issue for Liebherr, and it has a decisive effect even during the design of fridges and freezers for professional use. High-quality components allow the appliances to provide excellent cooling. Tailored for professional use, these components also help lower electricity costs. With our products, the concept of protecting the environment is taken into account throughout the life cycle. Liebherr was the first company to convert its entire range of professional fridges and freezers to CFC-free and HFC-free refrigerants. Since then we have been using the natural and environmentally friendly refrigerants R 290 and R 600a. In combination with powerful compressors and modern cooling components, they ensure that our appliances for professional use are particularly energy-efficient and economical.

The plastics used are marked for optimal recycling in accordance with our specifications as per ISO 1043, and our production processes are also arranged for efficient resource use. We would like to have become climate neutral at our European production sites by 2030. We have already, within two years, been able to reduce our CO_2 emissions by 62 percent. At an early stage, suppliers and service providers are integrated into the current quality and sustainability standards. Our integrated management system serves to fulfil these requirements and to achieve the objectives sought. Its effectiveness is regularly checked by audits. All European Liebherr production sites are certified according to the international standards for quality (ISO 9001), environmental management (ISO 14001) and energy management (ISO 50001). Liebherr accepts responsibility for the environment and for society. In this context, sustainable management is of central importance to us in meeting the global challenges of our time.

Perfect quality assurance – logged temperature measurement

Whether for biotechnology, pharmaceutical research or healthcare, professional Liebherr fridges and freezers are used wherever stringent requirements for storage safety and temperature consistency apply. Integrated alarm systems document the temperatures, alert the user of deviations and offer optimum safety.

The dynamic cooling system in laboratory and pharmaceutical appliances, in combination with precise electronics, guarantees maximum temperature stability in the interior. In addition, very short defrost cycles avoid the risk of temperature spikes. Liebherr laboratory appliances are designed for optimal temperature stability and consistency as per EN 60068-3 in order to ensure the best storage conditions for sensitive samples and medication. They are also equipped with a volt-free contact to relay alarms to an external remote monitoring system. In addition, they feature a serial interface RS 485 for central documentation of temperature curves and possible alarm events. Up to 20 appliances can thus be connected to a central documentation and alarm system in order to provide greater safety. The integrated data memory documents and saves the min. / max. values for up to 41 days.

Worldwide comprehensive service – long-term availability of spare parts

Liebherr service is characterised by a strong customer focus. The main aim is to ensure customer satisfaction through fast processing. The worldwide Liebherr customer service network provides competent experts on all matters relating to service – via email, phone or mail.

As a manufacturer of high-quality fridges and freezers for professional use, we want to live up to our standard of being a competent and reliable partner, and when it comes to servicing and customer service as well. That is what Liebherr customers expect from us, and we want to justify it with our performance. All incoming questions, whether asked in writing or in person, are recorded in our customer database and processed quickly by our customer service employees, who are highly qualified master craftsmen and technicians. We always aim to offer our customers the best possible solution.

Liebherr stands for reliability and durability. That is why we use only the highest quality materials and components in production. Every appliance is tested intensively for quality and functionality, even during the production process. We are always working to develop our appliances, optimise all components and process them properly to the last detail, so we can guarantee the proverbial Liebherr quality with the long durability of our appliances. And if you should still need a spare part for our appliances with their essentially maintenance-free design, you can rely on our service at all times. We provide only original Liebherr spare parts – in most cases for up to ten years after the appliance was purchased.

Verified quality for the highest professional standards

A great deal of know-how, development work and attention to detail is invested in every single Liebherr appliance. Before an appliance goes into series production, engineers have completed months of research and development to ensure that a high quality product is created which meets all the requirements of professional use.

As a premium manufacturer we have something essential in common with our customers: we set the highest possible standards for our appliances and components. The quality of Liebherr appliances is a solid foundation for the high level of trust that customers have in the Liebherr brand. At our production locations, we are working constantly on the further development and optimisation of all appliance components and materials. Our professional appliances and components undergo continuous quality monitoring throughout the entire production process. In order to guarantee these high standards of quality, we subject all components to extreme loads in extensive and practical testing. In doing so, we ensure that only the highest quality appliances, which fully meet the particular requirements for commercial use, leave our production locations. Our highly-qualified and well-trained employees are also a central factor here. Thanks to their dedication and commitment, Liebherr continues to set high standards and guarantee outstanding quality. No wonder then that customers around the world are impressed by the durability of our fridges and freezers.

Symbol picture

Good reasons
to choose Liebherr

Highest performance

Liebherr appliances for the laboratory and pharmacy sectors offer constant cooling even in extreme ambient temperatures. The use of ultra-advanced components, high-performance and environmentally-friendly refrigerants, and precision controls ensures optimal storage for chemicals and research materials, medication and sensitive samples. Thanks to innovative hot-gas defrosting, they need to be defrosted less often. The process is also considerably quicker and temperature spikes are avoided. 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 precise 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.

Reliability

All laboratory appliances are designed according to the EN 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 are optimally coordinated – perfect for use in the laboratory and pharmacy sectors.

Easy cleaning

Hygiene and easy cleaning play a special role in research, in laboratories and in the medical sector. That is why Liebherr appliances feature, among other things, moulded inner liners with large radii that are convenient to clean. High-quality seals prevent condensation, dirt and dust accumulation. Robust castors ensure that the surfaces under the appliances can also be easily cleaned.

Safety

In order to meet the highest standards for reliability and precise temperature consistency, Liebherr appliances are equipped with integrated alarm systems: If unwanted temperature fluctuations occur, a visual and audible alarm provides a warning – as it does if the door is opened for more than 1 minute. A visual power failure alarm and a sensor defect alarm provide additional safety. 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 electronic controller is powered by a battery for 12 hours (on MKv and MKUv) respectively 72 hours (on LKPv and LGPv) to prevent data loss. The calibration option allows precise temperature control adapted to specific applications. On MKv and MKUv models all alarm parameters are pre-set as per the requirements of DIN 58345.

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 ceiling-mounted cooling components, these components are integrated in an easily accessible way. The door remains open at 90° and is self-closing at less than 60° for convenient use. The interior is easy to clean. The variable adjustment of grid shelves also allows optimum utilisation of the space. The separately controlled LED ceiling lighting on glass-door appliances ensures the best possible illumination. You therefore quickly gain an overview of the contents.

Maximum efficiency and safety at the lowest temperatures

Fridges and freezers used in laboratories and research have to meet particularly high requirements. This is why our devices have numerous functions and features – especially for safety, performance, temperature consistency and ease of use – to ensure ideal storage of sensitive samples, chemicals and research materials. And our new series of ultra-low temperature (ULT) freezers set new standards – especially in the -40 °C to -86 °C temperature range. Take advantage of the low operating costs, sustainable refrigeration, large interior space and numerous safety functions of the ULT freezers. Put your trust in our extensive experience as specialists in refrigeration and freezing. Our refrigerators and freezers offer you the safety that is essential in the laboratory and research sector – 24 hours a day, 365 days a year.

The advantages at a glance

Active Green

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

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

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

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

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

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

Door seal concept

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

Detachable stainless steel inner doors

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

Alarm messages in critical situations

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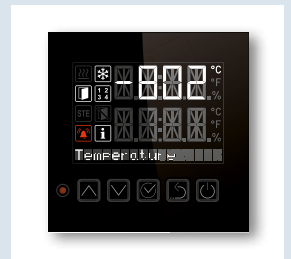
Integrated controller

The intuitive controller with an integrated real-time clock has a temperature setting option accurate to 0.1 °C. The control and display panel is resistant to dirt and easy to clean. Flexible parameter adaptations, such as offset and alarm value settings, allow the appliances to be quickly and easily adapted to and qualified for your applications and requirements.

Highly efficient insulation

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

Pressure relief valve

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

SUFsg 5001

Quality right down to the smallest detail

Liebherr's ultra-low temperature freezers (ULT) set the benchmark in the temperature range -40 °C to -86 °C: In terms of safety, performance and ease of use, they offer all you need for meeting the demanding requirements of laboratories and scientific institutions, for example. Take advantage of the low operating costs, sustainable cooling, the large interior with practical
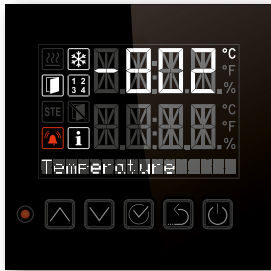
Alarm messages in critical situations.
Don't worry about security: Thanks to a three-stage monitoring system, consisting of integrated alarm messages for temperature, door or mains faults, upgradable features such as CO_2 emergency cooling and online monitoring ensure the very best protection for your stored samples at all times. In the event of a power failure, integrated 12-volt batteries immediately supply the electronics with power. You will also be notified in critical situations so that you can quickly rectify the fault.

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

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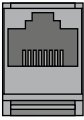
Low energy consumption.
Ultra-low temperature freezers are among the appliances with the highest energy consumption in research facilities. Liebherr ultra-low temperature freezers are among the most economical models on the market worldwide. In combination with highly insulating vacuum panels, the efficient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

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

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

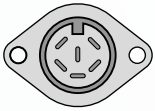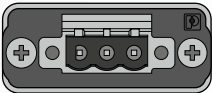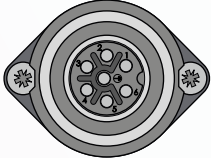Ethernet   USB   Output temperature

4-20mA

Remote Alarm

CO$_2$-Unit

24V/ Max. 2,5A

COM   N.C.   N.O.

°C

t1   t2   t3   t4   t5   t6   t7   t8   t9

Interfaces.
For remote monitoring, all appliances are equipped with voltfree contacts and ethernet interfaces. The temperature and alarm records can also be read via the integrated USB interface. Optionally, a 4-20 mA output enables the integration of the temperature value into existing systems for data recording.
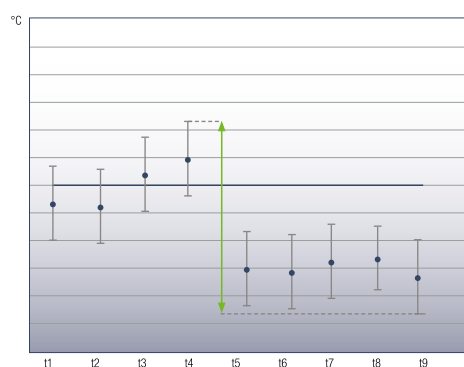
Minimal temperature fluctuations.
In order to maintain the quality of the stored samples, minimal temperature fluctuations are very important. The Liebherr ultra-low temperature freezers have the lowest possible fluctuations both internally within the appliance and over time.

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

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

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

Racks for cryoboxes

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

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

Cryoboxes

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

Cryoboxes, set of 36	77790038

CO_2 backup system

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

CO2 backup system	77790048

Stainless steel storage shelves

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

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

Cover for mains switch incl. key lock

Protection against unintended disconnection or manipulation of the mains switch.

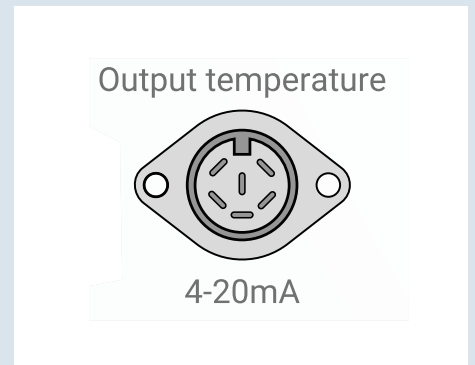|	
Cover for main-switch, lockable	77790051

4-20mA analogue output

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

Electronic Adapter for a 4-20mA output	77790042

Output temperature

4-20mA

Refrigerators and freezers for laboratories and research: Perfection is our benchmark.

Whether for biotechnology, pharmaceutical research or healthcare – our professional refrigerators and freezers for use in laboratories or in research are used wherever stringent requirements for storage safety and temperature consistency apply. Integrated visual and audible alarm systems offer optimum safety by showing the operating condition and any discrepancies. The precision electronics enable temperature adjustment down to the nearest degree – and, in conjunction with the highly efficient insulation and cooling system, create optimum storage conditions. High-quality materials and perfectly coordinated components and functional parts ensure the maximum quality, durability and lasting efficiency of our appliances. We settle for nothing but the best when it comes to laboratories and research.

The advantages at a glance

The **refrigeration components** are securely integrated in the ceiling area, allowing ready access.
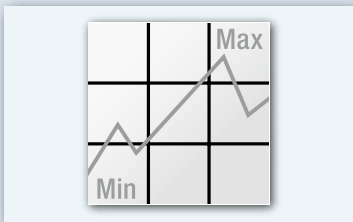
The integrated data logger includes a **min/max temperature memory function**.

These appliances have 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.

The LKPv 1420, LKPv 1423 and LGPv 1420 body can be split and reassembled for difficult delivery situations. This needs to be undertaken by a trained engineer. Contact sales for more information.

The state-of-the-art **controller** has an integrated real time clock and can be **set to 1/10°C accuracy**.
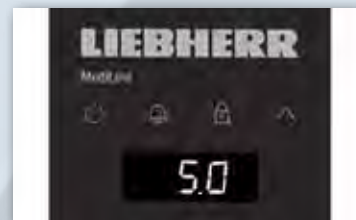
After a refrigerator or freezer door has been opened, a **vacuum** is built up by **air exchange** – with the effect that the door is hard to reopen immediately afterwards. The **integrated pressure relief valve** ensures that the vacuum is quickly equalised so that the door can easily be reopened.

The laboratory appliances 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 two evaporator fans, in conjunction with optimal routing of the air flow.

If a **door is open** for longer than 1 minute, a visual and acoustic alarm is triggered. The temperature and power failure alarm indicates that the temperature is either exceeded or not met, and also warns in the event of power failures.

The **hot-gas defrost on demand with electronic control** avoids temperature spikes. To additionally improve temperature stability during defrost, the internal temperature is lowered slightly, shortly before the defrost starts.

The calibration function enhances validation and enables temperature control adapted to the specific application.

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.


LKPv 6520

Quality right down to the smallest detail

The MediLine range appliances 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

Integrated digital controller.
The intuitive controller with integrated real-time clock allows the temperature to be set to 1/10°C accuracy. The large display allows improved temperature visibility at a glance. The keyboard is dirt resistant and easy to clean – to meet the most stringent hygiene requirements in the laboratory.
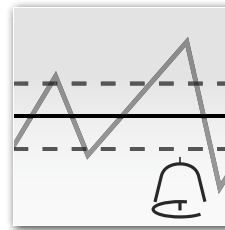
Integrated alarm systems.
A visual and audible door alarm alerts the user to temperature deviations. An alarm is also raised if the door is open for longer than one minute or in the event of power failure.

Integrated data memory.
The min/max temperature memory function stores the values for up to 41 days. In addition the alarm memory function records the last 3 alarm conditions with alarm type, date and time, duration and maximum temperature.

External temperature and alarm documentation.
The laboratory appliances are equipped with a volt-free contact for alarm forwarding to an external remote warning system. 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.
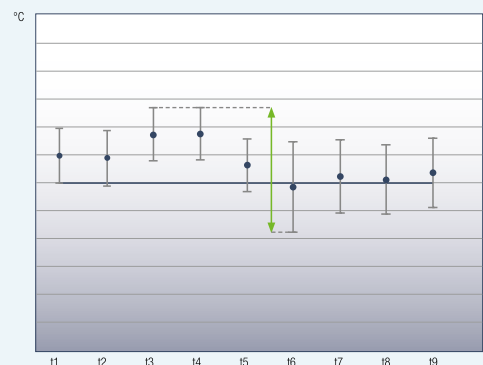
Maximum temperature consistency.
Maximum temperature stability in the interior is ensured by the dynamic cooling system with double ventilation. Very short defrost cycles allow the internal temperature to be kept almost constant during the defrost phases. All laboratory appliances are designed according to the EN 60068-3 standard with regard to maximum temperature stability and consistency.

as documentation and alarm functions ensure optimum storage of sensitive samples, chemicals and research materials.
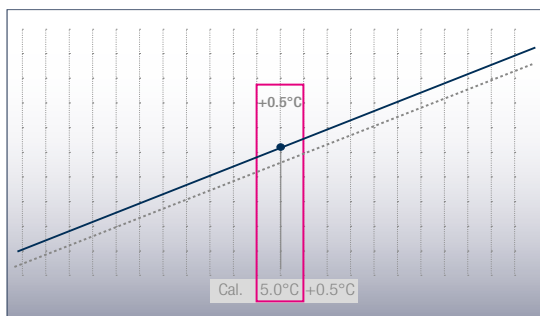
Accurate 1-point calibration.
The digital controller includes a calibration function for extremely accurate temperature control and display. This permits compensation between the set temperature and the actual internal temperature. Positive or negative changes to the correction value can be made in steps of 0.1 K.

72
hours

Mains-independent power supply of the electronic controller.
In case of power failure, the electronic controller is powered by a battery. The memory continues to log the internal temperature 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.

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/
No temperature spikes.**
Defrost less often and faster: the controller calculates the optimum defrost cycles based on the compressor run-time. Then the fridges 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.

Heavy-duty professional stable door.
Quick access, minimal cold loss, maintaining of product quality. Half-door appliances are ideal particularly with the frequent door opening which occurs in the pharmaceutical industry or the laboratory. Samples and compounds used more frequently are stored in the upper area for quick access while below there is plenty of space for materials and raw materials which are needed less frequently. Thanks to the stable doors with their self-closing mechanism, only a small amount of cold air escapes on opening and this helps to maintain temperature stability and therefore the quality of the goods stored over the long term.

Heavy-duty fridges	LKPv 1423 MediLine	LED	LKPv 1420 MediLine
Gross capacity	1397 litre		1366 litre
Exterior dimensions in mm (w/d/h)	1430/830/2160		1430/830/2160
Interior dimensions in mm (w/d/h)	1236/650/1500		1236/650/1550
Energy consumption in 365 days [1]	820 kWh		714 kWh
Ambient temperature range	+10°C to +40°C		+10°C to +40°C
Refrigerant	R 290		R 290
Sound power level	58 dB(A)		58 dB(A)
Voltage/Connection rating	220–240V~/4.0 A		220–240V~/4.0 A
Cooling system	forced-air		forced-air
Defrost	Automatic hot gas		automatic hot gas
Temperature range	0°C to +16°C		−2°C to +16°C
Gradient [2]/max. fluctuation [3]	3.8°C/3.9°C		3.6°C/2.9°C
External cabinet finish	steel/white		steel/white
Door material	glass door		steel
Internal liner material	304-grade stainless steel		304-grade stainless steel
Type of control	electronic controller		electronic controller
Temperature display	external digital		external digital
Power failure alarm	immediately upon power failure for 72 hrs		immediately upon power failure for 72 hrs
Fault: warning signal	visual and audible		visual and audible
Interface/Volt-free alarm contact	RS 485/yes		RS 485/yes
Interior light	LED lighting, with separate switch		
Adjustable shelves	8		8
Usable shelf area in mm (w/d)	1236/640		1236/640
Shelf material	wire shelves plastic-coated		wire shelves plastic-coated
Shelf loading	60 kg		60 kg
Castors	castors with brake at the front, castors at the rear		castors with brake at the front, castors at the rear
Handle	full-length integrated handle		full-length integrated handle
Lock	fitted		fitted
Self-closing door	yes		yes
Door hinges	left hand/right hand		left hand/right hand
Gross/net weight	267/224 kg		249/206 kg
Accessories			
Shelf, plastic-coated	YL7112393		YL7112393
U-shaped trayslide, right	YL9001761		YL9001761
U-shaped trayslide, left	YL9001757		YL9001757
Foot pedal opener	YL9590639		YL9590639
Product temperature sensor	YL9590407		YL9590407

1 Measured at +25°C ambient temperature and +5°C set temperature for fridges and -20°C for freezers

	LKPv 6523	LED	LKPv 6520
	MediLine		MediLine
	617 litre		602 litre
	700 / 830 / 2160		700 / 830 / 2160
	533 / 650 / 1500		533 / 650 / 1550
	571 kWh		497 kWh
	+10 °C to +40 °C		+10 °C to +40 °C
	R 290		R 290
	58 dB(A)		58 dB(A)
	220 – 240V~ / 4.0 A		220 – 240V~ / 4.0 A
	forced-air		forced-air
	automatic hot gas		automatic hot gas
	0 °C to +16 °C		−2 °C to +16 °C
	2.0 °C / 1.6 °C		1.8 °C / 1.0 °C
	steel / white		steel / white
	glass door		steel
	304-grade stainless steel		304-grade stainless steel
	electronic controller		electronic controller
	external digital		external digital
	immediately upon power failure		immediately upon power failure
	for 72 hrs		for 72 hrs
	visual and audible		visual and audible
	RS 485 / yes		RS 485 / yes
	LED lighting, with separate switch		
	4		4
	533 / 650		533 / 650
	wire shelves plastic-coated		wire shelves plastic-coated
	60 kg		60 kg
	castors with brake at the front,		castors with brake at the front,
	fixed castors at the rear		fixed castors at the rear
	full-length integrated handle		full-length integrated handle
	fitted		fitted
	yes		yes
	right, reversible on site		right, reversible on site
	164 / 138 kg		154 / 128 kg
	YL7112393		YL7112393
	YL9001761		YL9001761
	YL9001757		YL9001757
	YL9590659		YL9590659
	YL9590407		YL9590407

2 Gradient as defined in EN 60068-3: the difference between the warmest and coldest average measurements, increased by their expanded uncertainty, throughout the duration.
3 Max. fluctuation as per EN 60068-3: greatest fluctuation value determined throughout the duration of measurements.

Heavy-duty freezers

LGPv 1420 MediLine

No Frost

Gross capacity	1366 litre
Exterior dimensions in mm (w/d/h)	1430/830/2160
Interior dimensions in mm (w/d/h)	1236/650/1550
Energy consumption in 365 days [1]	2654 kWh
Ambient temperature range	+10 °C to +40 °C
Refrigerant	R 290
Sound power level	60 dB(A)
Voltage/Connection rating	220–240V~/4.0 A
Cooling system	forced-air
Defrost	automatic hot gas
Temperature range[2]	−9 °C to −26 °C
Gradient [3]/max. fluctuation [4]	4.3 °C/6.7 °C
External cabinet finish	steel/white
Door material	steel
Internal liner material	304-grade stainless steel
Type of control	electronic controller
Temperature display	external digital
Power failure alarm	immediately upon power failure for 72 hrs
Fault: warning signal	visual and audible
Interface/Volt-free alarm contact	RS 485/yes
Adjustable shelves	8
Usable shelf area in mm (w/d)	1236/640
Shelf material	wire shelves plastic-coated
Shelf loading	60 kg
Castors	castors with brake at the front, castors at the rear
Handle	full-length integrated handle
Lock	fitted
Self-closing door	yes
Door hinges	left hand/right hand
Gross/net weight	248/205 kg
Accessories	
Shelf, plastic-coated	YL7112393
U-shaped trayslide, right	YL9001761
U-shaped trayslide, left	YL9001757
Foot pedal opener	YL9590639
Product temperature sensor	YL9590407

1 Measured at +25°C ambient temperature and +5°C set temperature for fridges and -20°C for freezers
2 The temperature range is valid at a maximum ambient temperature of +30°C

LGPv 6520 MediLine

No Frost

602 litre
700 / 830 / 2160
533 / 650 / 1550
1367 kWh
+10 °C to +40 °C
R 290
60 dB(A)
220 – 240V~ / 4.0 A
forced-air
automatic hot gas
−9 °C to −35 °C ²
2.9 °C / 3.6 °C
steel / white
steel
304-grade stainless steel
electronic controller
external digital
immediately upon power failure for 72 hrs
visual and audible
RS 485 / yes
4
533 / 650
wire shelves plastic-coated
60 kg
castors with brake at the front, fixed castors at the rear
full-length integrated handle
fitted
yes
right, reversible on site
162 / 136 kg


YL7112393
YL9001761
YL9001757
YL9590659
YL9590407

3 Gradient as defined in EN 60068-3: the difference between the warmest and coldest average measurements, increased by their expanded uncertainty, throughout the duration.
4 Max. fluctuation as per EN 60068-3: greatest fluctuation value determined throughout the duration of measurements.

The advantages at a glance

Volt-free contact for forwarding alarms to an **external remote warning system**.
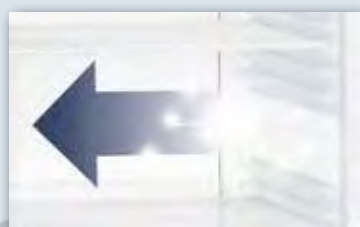
The **commercial-grade moulded polystyrol inner liner** is exceptionally easy to clean and enables **optimum hygiene.**

The sturdy, **plastic-coated grid shelves** have a **loading capacity of up to 45 kg**, are easily adjustable in height and can be removed at a door opening angle of 90°.

Access port for integration of the optionally available **temperature sensor** or **independent temperature sensor PT 100** or similar measuring instruments.

In laboratory fridge-freezer LCv 4010, the **drawers** can be removed easily using the **recessed grips** integrated on the sides. The drawers have a transparent front to provide a clear view of the goods.
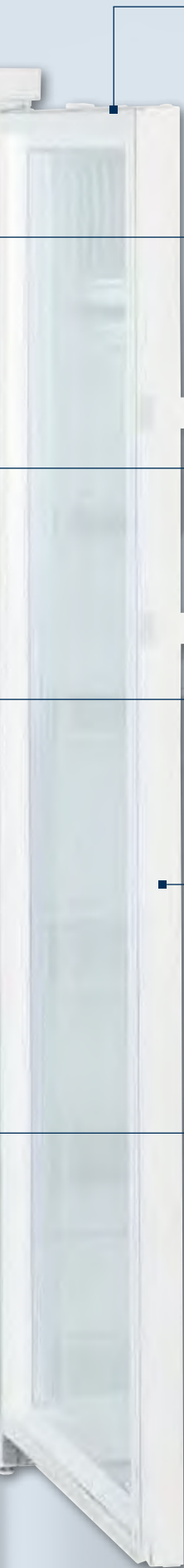
The **integrated lock** is exceedingly sturdy and protects the stored products against unauthorised access.

The **precise electronic controller** with digital temperature display allows accurate temperature setting to 1/10°C. An **integrated data memory** logs 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.

Laboratory fridges LKv 3913 and LKUv 1613 with a **glass door** feature and **efficient LED interior light** with a separate switch.

1-point calibration for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature.

Self-closing doors prevent cold loss and contribute to the **temperature stability** of the appliances. The integrated lock is very sturdy and protects the samples and products against unauthorised access.

The **dynamic cooling system** in conjunction with the **precise electronic controller** ensures maximum temperature stability and high temperature consistency in the interior.

No more defrosting thanks to **NoFrost technology** (only for LGv appliances). Recirculated air cooling binds humidity to the evaporator, while short cyclical defrosting phases ensure that it is conducted out of the interior. And the advantage of this? Unlike with manual defrosting, the tedious task of moving sensitive cooled goods around is no longer necessary – for convenient, safe and ice-free storage.

No Frost

LKv 3913

Quality right down to the smallest detail

Liebherr MediLine laboratory fridges the ideal solution for a small footprint or for under-worktop integration. The range comprises two freestanding and under-worktop fridges with a glass door or a solid door. The precise electronic controller enables temperatures to be set accurately. The dynamic cooling system ensures high temperature consistency. Integrated alarm systems guarantee safe storage.

External temperature and alarm documentation.
The laboratory appliances are equipped with a volt-free contact for alarm forwarding to an external remote warning system, as well as with a serial interface RS 485 which enables central documentation of temperature profiles and alarm events. LTM documentation software is optionally available.

Maximum temperature consistency.
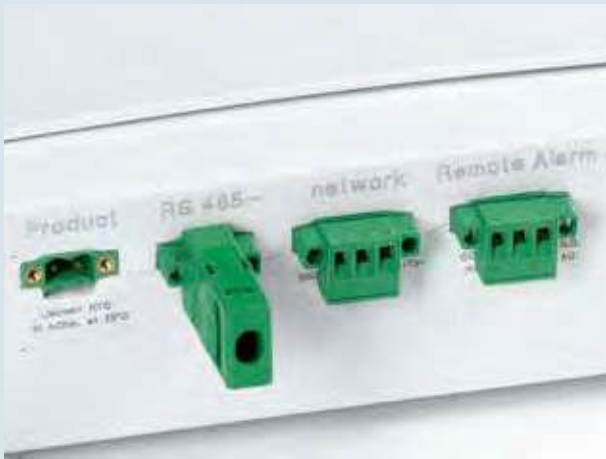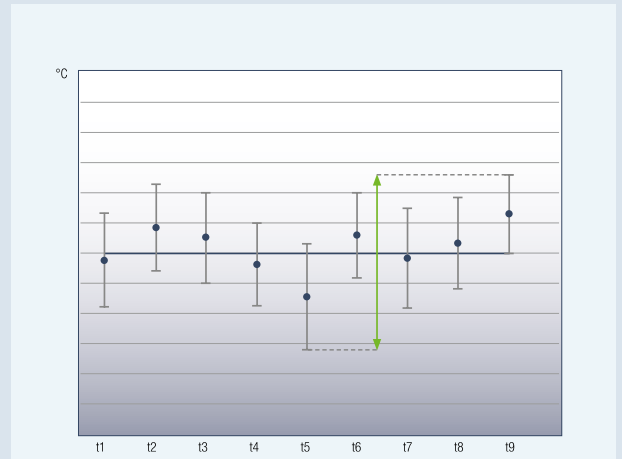The dynamic cooling system in conjunction with the precise electronic controller ensures maximum temperature stability. All laboratory appliances are designed according to the EN 60068-3 standard with regard to optimum temperature consistency.
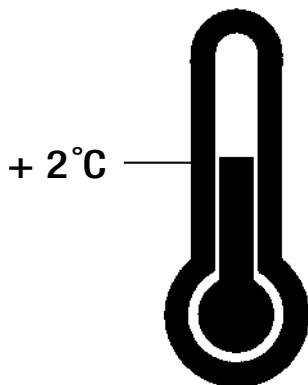
Safety thermostat.
The appliances with electronic controllers are equipped with an additional safety thermostat to prevent temperatures dropping below +2°C and to protect sensitive products in the event of a fault.

External temperature sensor.
The laboratory appliances have an access port (diameter 10 mm) on the rear which allows the temperature sensor to be positioned in the interior.

Laboratory fridges with electronic controls

Laboratory fridges with electronic controls	LKv 5710 MediLine	LKv 3913 MediLine	LKv 3910 MediLine
Total gross / net volume	583 / 540 litre	386 / 332 litre	361 / 333 litre
Exterior dimensions in mm (w / d / h)	751 / 750 / 1844	601 / 618 / 1840	601 / 618 / 1840
Interior dimensions in mm (w / d / h)	634 / 538 / 1500	440 / 435 / 1635	440 / 435 / 1635
Energy consumption in 365 days [1]	438 kWh	480 kWh	309 kWh
Ambient temperature range	+10 °C to +35 °C	+10 °C to +35 °C	+10 °C to +35 °C
Refrigerant	R 600a	R 600a	R 600a
Sound power level	52 dB(A)	48 dB(A)	48 dB(A)
Voltage / Connection rating	220 – 240V~ / 1.5 A	220 – 240V~ / 1.5 A	220 – 240V~ / 1.5 A
Cooling system	forced-air	forced-air	forced-air
Defrost	automatic	automatic	automatic
Temperature range	+3 °C to +16 °C	+3 °C to +16 °C	+3 °C to +16 °C
Gradient [2] / max. fluctuation [3]	3.8 °C / 3.1 °C	5.6 °C / 4.7 °C	4.1 °C / 3.6 °C
External cabinet finish	steel / white	steel / white	steel / white
Door material	steel	glass door	steel
Internal liner material	commercial grade moulded polystyrol	commercial grade moulded polystyrol	commercial grade moulded polystyrol
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
Fault: warning signal	visual and audible	visual and audible	visual and audible
Interface / Volt-free alarm contact	RS 485 / yes	RS 485 / yes	RS 485 / yes
Interior light		LED lighting, with separate switch	
Adjustable shelves	5	9	9
Usable shelf area in mm (w / d)	634 / 518	440 / 420	440 / 420
Shelf material	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated
Shelf loading	60 kg	45 kg	45 kg
Castors	castors with brake at the front, fixed castors at the rear		
Handle	slimline handle with integrated opening mechanism	slimline handle with integrated opening mechanism	slimline handle with integrated opening mechanism
Lock	fitted	fitted	fitted
Self-closing door	yes	yes	yes
Door hinges	right, reversible on site	right, reversible on site	right, reversible on site
Gross / net weight	99 / 89 kg	88 / 82 kg	70 / 65 kg
Accessories			
Shelf, plastic-coated	YL7113485	YL7113333	YL7113333
Adjustable legs		YL9590231	YL9590231
Additional lock barrels (up to 10)		on request	on request
Roller bars		YL9590380	YL9590380

LED

1 Measured at +25°C ambient temperature and +5°C set temperature for fridges and -20°C for freezers

2 Gradient as defined in EN 60068-3: the difference between the warmest and coldest average measurements, increased by their expanded uncertainty, throughout the duration.

3 Max. fluctuation as per EN 60068-3: greatest fluctuation value determined throughout the duration of measurements.

Laboratory fridges and freezers with electronic controls	LKUv 1613 MediLine `LED`	LKUv 1610 MediLine	LGv 5010 MediLine `No Frost`
Total gross / net volume	152 / 132 litre	142 / 133 litre	478 / 337 litre
Exterior dimensions in mm (w / d / h)	601 / 618 / 820	601 / 618 / 820	751 / 750 / 1844
Interior dimensions in mm (w / d / h)	440 / 435 / 670	440 / 435 / 670	602 / 520 / 1224
Energy consumption in 365 days [1]	369 kWh	273 kWh	1245 kWh
Ambient temperature range	+10 °C to +35 °C	+10 °C to +35 °C	+16 °C to +35 °C
Refrigerant	R 600a	R 600a	R 290
Sound power level	47 dB(A)	47 dB(A)	55 dB(A)
Voltage / Connection rating	220 – 240 V~ / 1.0 A	220 – 240 V~ / 1.0 A	220 – 240 V~ / 3.0 A
Cooling system / Defrost	forced-air / automatic	forced-air / automatic	forced-air / automatic hot gas
Temperature range	+3 °C to +16 °C	+3 °C to +16 °C	−9 °C to −35 °C
Gradient [2] / max. fluctuation [3]	5.1 °C / 4.9 °C	4.3 °C / 4.6 °C	5.8 °C / 4.9 °C
External cabinet finish	steel / white	steel / white	steel / white
Door material	glass door	steel	steel
Internal liner material	commercial grade moulded polystyrol	commercial grade moulded polystyrol	commercial grade moulded polystyrol
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
Fault: warning signal	visual and audible	visual and audible	visual and audible
Interface / Volt-free alarm contact	RS 485 / yes	RS 485 / yes	RS 485 / yes
Interior light	LED lighting, with separate switch		
Adjustable shelves	3	3	
Usable shelf area in mm (w / d)	440 / 420	440 / 420	602 / 485
Shelf material	wire shelves plastic-coated	wire shelves plastic-coated	wire shelves plastic-coated
Shelf loading	45 kg	45 kg	60 kg
Castors			castors with brake at the front, fixed castors at the rear
Drawers / Number of baskets			8 / 2
Handle	slimline handle with integrated opening mechanism	slimline handle with integrated opening mechanism	slimline handle with integrated opening mechanism
Lock	fitted	fitted	fitted
Self-closing door	yes	yes	yes
Door hinges	right, reversible on site	right, reversible on site	right, reversible on site
Gross / net weight	45 / 43 kg	40 / 37 kg	124 / 114 kg
Accessories			
Shelf, plastic-coated	YL7113333	YL7113333	YL7113475
Roller bars	YL9590521	YL9590521	
Product temperature sensor	YL9590145	YL9590145	YL9591493
Additional lock barrels (up to 10)	on request	on request	

Laboratory fridge-freezer combination with electronic controls

Laboratory fridge-freezer combination with electronic controls		LCv 4010 MediLine
Total gross / net volume	fridge compartment	254 / 240 litre
Total gross / net volume	freezer compartment	107 / 105 litre
Exterior dimensions in mm (w/d/h)		601 / 618 / 2003
Interior dimensions in mm (w/d/h)	fridge compartment	440 / 441 / 1105
Interior dimensions in mm (w/d/h)	freezer compartment	433 / 433 / 597
Energy consumption in 365 days [1]		657 kWh
Ambient temperature range		+10 °C to +35 °C
Refrigerant		R 600a
Sound power level		52 dB(A)
Voltage / Connection rating		220 – 240 V~ / 1.5 A
Cooling system	fridge / freezer comp.	forced-air / static
Defrost	fridge / freezer comp.	automatic / manual
Temperature range	fridge / freezer comp.	+3 °C to +16 °C / −9 °C to −30 °C
Gradient [2]	fridge / freezer comp.	5.2 °C / 7.9 °C
Max. fluctuation [3]	fridge / freezer comp.	5.7 °C / 5.5 °C
External cabinet finish		steel / white
Door material		steel
Internal liner material		commercial grade moulded polystyrol
Type of control		electronic controller
Temperature display		external digital
Power failure alarm		when mains power return
Fault: warning signal		visual and audible
Interface / Volt-free alarm contact		RS 485 / yes
Adjustable shelves	fridge compartment	4
Usable shelf area in mm (w/d)	fridge compartment	440 / 409
Shelf material	fridge / freezer comp.	wire shelves plastic-coated / glass
Shelf loading	fridge / freezer comp.	45 kg / 24 kg
Drawers	freezer compartment	3
Handle		slimline handle with integrated opening mechanism
Lock		fitted
Self-closing door		yes
Door hinges		right, reversible on site
Gross / net weight		88 / 83 kg
Accessories		
Shelf, plastic-coated, for	fridge compartment	YL7113333
Product temperature sensor		YL9590407
Roller bars		YL9592756
Additional lock barrels (up to 10)		on request

Smart Frost

The advantages at a glance

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

Access port for integration of an **independent temperature sensor** (e.g. an optionally available temperature sensor or similar measuring instruments) in laboratory appliances.

The **commercial-grade moulded polystyrol inner liner** is exceptionally easy to clean and enables **optimum hygiene.**

The **glass shelves** of the laboratory fridges with spark-free interior are **height adjustable** and can easily be removed at a door opening angle of 90°.

The **drawers** in the LCexv laboratory fridge-freezer can easily be removed by the handles recessed in the sides. The drawers have a transparent front providing a **clear view of the products stored inside.**

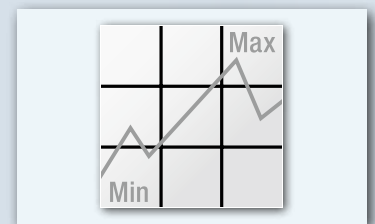The **electronic controller** with digital temperature display allows **accurate temperature setting to 1/10°C.** The large display allows improved temperature visibility at a glance.

All laboratory fridges and freezers with **spark-free interior** are tested according to the 2014/34/EU (ATEX) Directive.

The **precise electronic controller** has an **integrated data memory.** It logs e.g. the maximum and minimum internal temperatures.

Laboratory appliances with a **electronic controller** provide **1-point calibration** for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature.

The **self-closing door** prevents unnecessary cold loss and contributes to the temperature stability of the appliances. The **integrated lock** is very sturdy and protects the samples and products against unauthorised access.

Door seals can be **replaced.**

LCexv 4010

Quality right down to the smallest detail

Liebherr provides fridges and freezers with spark-free interior especially for storing explosive and highly flammable substances in labs and in the chemical industry. The inner liners meet the safety requirements of the EU Directive 2014/34/EU (ATEX) and have been tested according to the EN 1127-1, IEC 60079-0 and IEC 60079-15 standards by elecosuisse –


Certified according to ATEX.
All appliances with spark-free interior are tested according to the 2014/34/EU (ATEX) Directive. Rated as II 3G Ex nA II T6, these appliances are suitable for storing explosive and highly flammable substances in sealed containers.

The electronic controller.
The precise electronic controller with digital temperature display enables temperatures to be set accurately to 1/10°C. Symbols indicate the operating status of the appliance. The electronic controller is flush-mounted and equipped with a membrane keyboard for perfect hygiene. The large display allows improved temperature visibility at a glance.
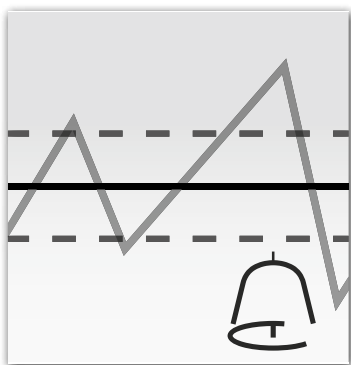

Integrated alarm systems.
Visual and audible alarm systems alert the user to undesired temperature deviations or when the door is open. All alarm parameters can be individually set. For example, the door-open alarm delay can be adjusted between 1 and 5 minutes. Furthermore, the laboratory appliances with electronic controls have a visual power failure alarm and a sensor defect alarm.

Integrated data memory.
The electronic controller is equipped with an integrated data memory which logs the maximum and minimum internal temperatures as well as the last three temperature alarms and power failures, together with the time, date and duration. These data can be read out on the display.

SEV (Swiss Association for Electrical Engineering, Power and Information Technologies), an approved ATEX conformity evaluation organisation.
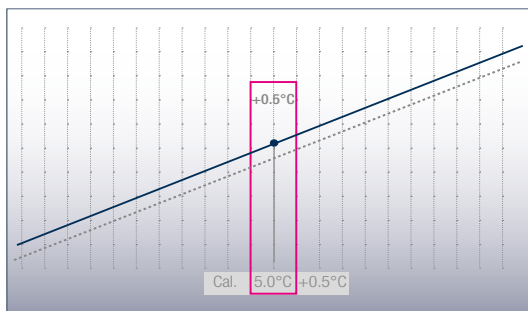
Accurate 1-point calibration.
The laboratory appliances with electronic controls have a 1-point calibration function for accurate temperature control. This permits compensation between the set temperature and the actual internal temperature. Positive or negative changes to the correction value can be made in steps of 0.1 K.

External temperature and alarm documentation.
The laboratory appliances are equipped with a volt-free contact for alarm forwarding to an external remote warning system, as well as with a serial interface RS 485 which enables central documentation of temperature profiles and alarm events. LTM monitoring software is optionally available.
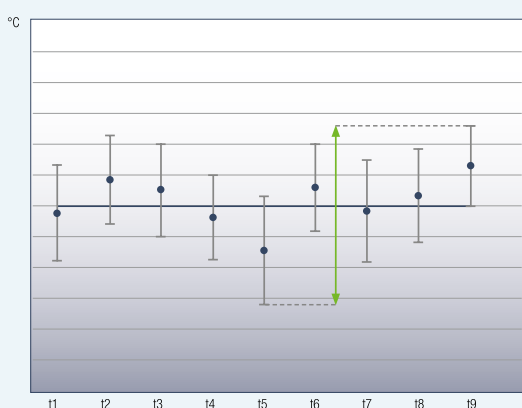
Maximum temperature consistency.
Maximum temperature stability is ensured by the cooling systems of the laboratory fridges and freezers in conjunction with the electronic controller. The fridges are equipped with a safety thermostat to prevent temperatures below +2°C in case of a fault. All laboratory appliances with electronic controls are designed according to the EN 60068-3 standard with regard to maximum temperature stability and consistency.

Sturdy glass shelves.
The sturdy glass shelves are easily adjustable in height and can conveniently be removed at a door opening angle of 90°. They ensure secure positioning of the refrigerated or frozen products and have a loading capacity of up to 40 kg in the refrigerator compartment and up to 24 kg in the freezer compartment.

External temperature sensor.
The laboratory appliances with electronic controls have an access port (diameter 10 mm) on the rear which allows the temperature sensor to be positioned in the interior.

Laboratory fridge-freezer combination with electronic controls and spark-free interior

Laboratory fridge-freezer combination with electronic controls and spark-free interior		LCexv 4010 MediLine	Laboratory fridges and freezers with electronic controls and spark-free interior
Total gross/net volume	fridge compartment	254/240 litre	Total gross/net volume
Total gross/net volume	freezer compartment	107/105 litre	Exterior dimensions in mm (w/d/h)
Exterior dimensions in mm (w/d/h)		601/618/2003	Interior dimensions in mm (w/d/h)
Interior dimensions in mm (w/d/h)	fridge compartment	440/441/1105	Energy consumption in 365 days [1]
Interior dimensions in mm (w/d/h)	freezer compartment	433/433/597	Ambient temperature range
Energy consumption in 365 days [1]		657 kWh	Refrigerant
Ambient temperature range		+10°C to +35°C	Sound power level
Refrigerant		R 600a	Voltage/Connection rating
Sound power level		52 dB(A)	Cooling system/Defrost
Voltage/Connection rating		220–240V~/1.5 A	Temperature range
Cooling system	fridge/freezer comp.	forced-air/static	Gradient [2]/max. fluctuation [3]
Defrost	fridge/freezer comp.	automatic/manual	External cabinet finish
Temperature range	fridge/freezer comp.	+3°C to +16°C / –9°C to –30°C	Door material
Gradient [2]	fridge/freezer comp.	4.0°C/7.9°C	Internal liner material
Max. fluctuation [3]	fridge/freezer comp.	3.9°C/5.5°C	Type of control
External cabinet finish		steel/white	Temperature display
Door material		steel	Power failure alarm
Internal liner material		commercial grade moulded polystyrol	Fault: warning signal
Type of control		electronic controller	Interface/Volt-free alarm contact
Temperature display		external digital	Adjustable shelves
Power failure alarm		when mains power return	Usable shelf area in mm (w/d)
Fault: warning signal		visual and audible	Shelf material
Interface/Volt-free alarm contact		RS 485/yes	Shelf loading
Adjustable shelves	fridge compartment	4	Drawers
Usable shelf area in mm (w/d)	fridge compartment	440/409	Number of baskets
Shelf material	fridge/freezer comp.	glass/glass	Compartment height in mm
Shelf loading	fridge/freezer comp.	40 kg/24 kg	Handle
Drawers	freezer compartment	3	
Handle		slimline handle with integrated opening mechanism	Lock
Lock		fitted	Self-closing door
Self-closing door		yes	Door hinges
Door hinges		right, reversible on site	Gross/net weight
Gross/net weight		91/85 kg	
Accessories			**Accessories**
Glass shelf		YL9293629	Glass shelf
Product temperature sensor		YL9590145	Stacking kit, white
Roller bars		YL9592756	Roller bars
Additional lock barrels (up to 10)		on request	Adjustable legs
			Product temperature sensor
			Additional lock barrels (up to 10)

[1] Measured at +25°C ambient temperature and +5°C set temperature for fridges and -20°C for freezers

Laboratory fridges and freezers with electronic controls and spark-free interior

Laboratory

| LKexv 3910 MediLine	LKUexv 1610 MediLine	LGex 3410 MediLine	LGUex 1500 MediLine
360/344 litre	141/130 litre	310/284 litre	139/129 litre
601/618/1840	601/618/820	601/618/1840	601/618/820
440/435/1635	440/435/670	420/400/1587	454/450/663
316 kWh	315 kWh	478 kWh	294 kWh
+10°C to +35°C	+10°C to +35°C	+10°C to +35°C	+10°C to +35°C
R 600a	R 600a	R 600a	R 600a
48 dB(A)	47 dB(A)	45 dB(A)	45 dB(A)
220–240V~/1.5 A	220–240V~/1.0 A	220–240V~/1.5 A	220–240V~/1.0 A
forced-air/automatic	forced-air/automatic	static/manual	static/manual
+3°C to +16°C	+3°C to +16°C	−9°C to −30°C	−9°C to −26°C
5.5°C/5.1°C	3.9°C/4.8°C	6.9°C/4.2°C	6.6°C/3.3°C
steel/white	steel/white	steel/white	steel/white
steel	steel	steel	steel
commercial grade moulded polystyrol	commercial grade moulded polystyrol	commercial grade moulded polystyrol	commercial grade moulded polystyrol
electronic controller	electronic controller	electronic controller	electronic controller
external digital	external digital	external digital	external digital
when mains power return	when mains power return	when mains power return	when mains power return
visual and audible	visual and audible	visual and audible	visual and audible
RS 485/yes	RS 485/yes	RS 485/yes	RS 485/yes
5	3		
440/420	440/420	420/400	454/450
glass	glass	evaporator plates	evaporator plates
40 kg	40 kg	24 kg	24 kg
		8	3
			1
		185	149
slimline handle with integrated opening	slimline handle with integrated opening	slimline handle with integrated opening	slimline handle with integrated opening
mechanism	mechanism	mechanism	mechanism
fitted	fitted	fitted	fitted
yes	yes	yes	yes
right, reversible on site	right, reversible on site	right, reversible on site	right, reversible on site
75/68 kg	41/38 kg	91/86 kg	43/42 kg
YL9293629	YL9293629		
	YL9592697		YL9592697
YL9590380	YL9590521	YL9592756	YL9590521
YL9590231		YL9590231	
		YL9590145	YL9590145
on request	on request	on request	on request

2 Gradient as defined in EN 60068-3: the difference between the warmest and coldest average measurements, increased by their expanded uncertainty, throughout the duration.
3 Max. fluctuation as per EN 60068-3: greatest fluctuation value determined throughout the duration of measurements.

43

The advantages at a glance
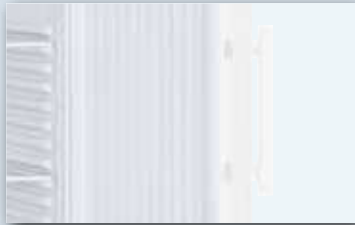
Convenient **opening of the door** requiring little force: The ergonomic-ally designed **lever handle** enables smooth opening of the door with less shaking of the appliance.
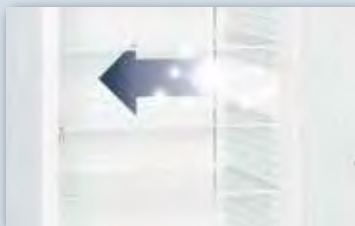
The **moulded polystyrol inner liner** with large corner radii is exceptionally easy to clean and enables **optimum hygiene.**

The **sturdy glass shelves** are easily adjustable in height and can conveniently be removed at a door opening angle of 90°. They ensure secure storage and have a **loading capacity of up to 40 kg.**

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

Sealed defrost water drain in the laboratory appliances with spark-free interior for compliance with the ATEX Directive 2014/34/EU.

Reversible door hinges in the LKexv models enable individual adaption to space conditions. The door seals can also be easily replaced as required.

Quality right down to the smallest detail

Certified according to ATEX.
The LKexv models are labelled clearly and permanently on the outer housing in accordance with the ATEX Directive 2014/34/EU, 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 commercial-grade moulded polystyrol inner liner is exceptionally easy to clean and enables optimum hygiene. 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 2014/34/EU. The defrost water obtained during the automatic defrost cycle is collected in a tray which has to be emptied manually at regular intervals.

LKexv 5400

Laboratory fridges with analogue controls and spark-free interior

Laboratory fridges with mechanical control and spark-free interior	**LKexv 5400** MediLine	**LKexv 3600** MediLine
Total gross / net volume	554 / 520 litre	333 / 307 litre
Exterior dimensions in mm (w / d / h)	750 / 729 / 1640	600 / 610 / 1641
Interior dimensions in mm (w / d / h)	600 / 560 / 1452	470 / 440 / 1452
Energy consumption in 365 days [1]	359 kWh	346 kWh
Ambient temperature range	+10 °C to +40 °C	+10 °C to +40 °C
Refrigerant	R 600a	R 600a
Sound power level	48 dB(A)	48 dB(A)
Voltage / Connection rating	220 – 240V~ / 1.5 A	220 – 240V~ / 1.5 A
Cooling system	forced-air	forced-air
Defrost	automatic	automatic
Temperature range	+1 °C to +15 °C	+1 °C to +15 °C
Gradient [2] / max. fluctuation [3]	6.9 °C / 5.8 °C	4.8 °C / 3.0 °C
External cabinet finish	steel / white	steel / white
Door material	steel	steel
Internal liner material	commercial grade moulded polystyrol	commercial grade moulded polystyrol
Type of control	analogue control	analogue control
Temperature display	external digital	external digital
Adjustable shelves	5	5
Usable shelf area in mm (w / d)	600 / 550	470 / 425
Shelf material	glass	glass
Shelf loading	40 kg	40 kg
Handle	slimline handle with integrated opening mechanism	slimline handle with integrated opening mechanism
Lock	fitted	fitted
Door hinges	right, reversible on site	right, reversible on site
Gross / net weight	84 / 77 kg	64 / 59 kg
Accessories		
Glass shelf	YL9293613	YL9293615
Castor base	YL9086365	
Adjustable legs	YL9590229	YL9590231
Additional lock barrels (up to 10)	on request	on request

1 Measured at +25°C ambient temperature and +5°C set temperature

LKexv 2600 MediLine

240 / 221 litre
600 / 610 / 1250
470 / 440 / 1062
287 kWh
+10 °C to +40 °C
R 600a
48 dB(A)
220 – 240V~ / 1.0 A
forced-air
automatic
+1 °C to +15 °C
6.4 °C / 5.5 °C
steel / white
steel
commercial grade moulded polystyrol
analogue control
external digital
4
470 / 425
glass
40 kg
slimline handle with integrated opening mechanism
fitted
right, reversible on site
53 / 49 kg

YL9293615

YL9590231
on request

2 Gradient as defined in EN 60068-3: the difference between the warmest and coldest average measurements, increased by their expanded uncertainty, throughout the duration.
3 Max. fluctuation as per EN 60068-3: greatest fluctuation value determined throughout the duration of measurements.

Accessories

U-shaped trayslides and plastic-coated shelves

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

|	
U-shaped trayslide, left - LKPv, LGPv	YL9001757
U-shaped trayslide, right - LKPv, LGPv	YL9001761
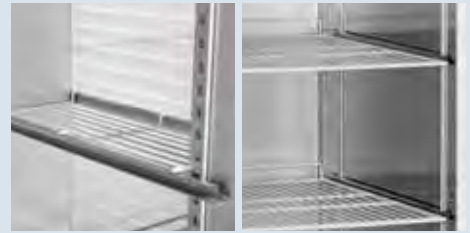
Product temperature sensor

A product temperature sensor for logging product temperatures is available as a retrofit kit for the laboratory appliances with electronic controller. 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.

NTC temperature sensor - LGPv, LKPv, LCv. LGT	YL9590407
NTC temperature sensor - LGv	YL9591493
NTC temperature sensor - Spark-free with Compact Controls	YL9590145

Additional lock barrels

Up to 10 additional lock barrels to protect the stored products against unauthorised access are available as accessories for the laboratory appliances with electronic controller. In case of multiple appliances, different locks can be installed to ensure that the respective appliance can only be accessed by the staff members responsible for it.
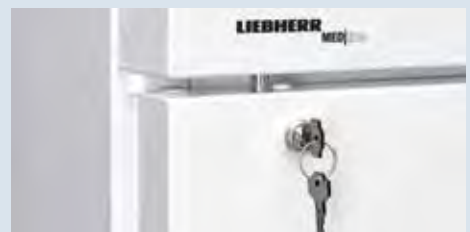
Foot-pedal door opener

The optional foot-pedal opener is useful when you don't have a hand free.

Foot pedal opener - LKPv65, LGPv65	YL9590659

Roller bars

In order to guarantee optimum stability, roller sets must not be fitted to appliances which are installed using a connecting frame. This is only permitted for individual appliances.

Roller set - LKUv, LKUexv, LGUex	YL9590521
Roller set - LKv, LKexv39, LGex	YL9590380
Roller set - LCv, LCexv	YL9592756

Adjustable legs

30 mm high roller sets can be retrofitted to the under-worktop LKUv models and height-adjustable legs can be retrofitted to the upright LKv models. The legs are adjustable between 115 mm and 170 mm in height.

Adjustable Legs Set - LKexv5400	YL9590229
Adjustable legs set - LKexv26/36, LKexv3910, LGex, LKv	YL9590231

Shelves plastic-coated

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

Shelf, White-coated - LKv 5710	YL7113485
Shelf, White-coated - LGv5010	YL7113475
Shelf, White-coated - LKv, LKUv, LCv	YL7113333
Shelf, White-coated - LKPv, LGPv	YL7112393

Glass shelves

Additional glass shelves can be retrofitted to the LKexv models as required to provide extra storage options. The glass shelves made of toughened safety glass meet the standards for spark-free fridges in accordance with ATEX and have a loading capacity of up to 40 kg.

Shelf, Glass - LCexv, LKexv39, LKUexv	YL9293629
Shelf, Glass - LKexv 5400	YL9293613
Shelf, Glass - LKexv3600/2600	YL9293615

Castor base

A castor base is available as an accessory for the LKexv 5400, 3600 and 2600 models to allow flexible use of the appliances in different rooms.

Castor base	YL9086365

Optional accessories provided by Andi-Co

Logtag data logger

The UTRIX-16 stores real-time temperature readings over a measurement range of -30°C to +70°C (-22°F to +158°F), displays user-configurable alerts, and comes with an integrated, long-life USB connector.

LogTag USB Data Logger	XUTRIX-16

Clever Logger

Innovative datalogger that provides an accurate "live" log of temperatures to any internet device (computer, tablet, phone) anywhere in the world.
The Clever Logger website also provides immediate alerts about problems and automatic reports to your email inbox.
A gateway is required to be paired with a temperature logger in order to receive information from the sensor.
Multiple temperature loggers can be paired with the one gateway.

Clever Logger Starter Kit (XCLG-01 & XCLT-01)	XCLKIT-01
Clever Logger Gateway	XCLG-01
Clever Logger Temperature Logger	XCLT-01

Single drawer alucool, perforated base

H+H System offers a unique space-saving, flexible and installation ready drawer systems to store refrigerated medicines, vaccines and samples. A place for everything, everything at its place. The flexible divider concept allows simple and rapid changes to react to the daily changing need for costly space.

AluCool Drawer, Alumin Sides - LKv3913/10, LKUv1613/10	7306120
AluCool Drawer, Clear Sides - LKv3913/10, LKUv1613/10	7306502
AluCool Drawer, Alumin Sides - LGPv, LKPv	7305066N
AluCool Drawer, Clear Sides - LGPv, LKPv	7305512

Our catalog program

Liebherr commercial appliances can be found at
specialist retailers where providing first-class service
and expert advice is their top priority.

You will find an overview of other Liebherr appliances in our
catalogue of fridges and freezers for professional use.
Available in stores or on home.liebherr.com.au

BIM data available with immediate effect
The cooperation between Liebherr-Hausgeräte and
Specifi® gives planners and dealers worldwide
access to a digital Liebherr-Hausgeräte library
with BIM models for the Food Service and Scientific
areas. Compatible with AutoCAD® and Revit.
home.liebherr.com/bimdata

Andi-Co Australia

Head Office
1 Stamford Road, Oakleigh Victoria 3166
E-mail: sales@andico.com.au | Tel: 1800 685 899

home.liebherr.com.au