

Accessories

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A stacking kit is available as an accessory for the LKU(ex)v and LGUex under-worktop models. This enables, for instance, laboratory refrigerators and freezers with independent temperatures to be combined on a small footprint. Roller sets can be retrofitted to the under-worktop Mediline appliances, and 150 mm legs can be retrofitted to the freestanding appliances to allow for cleaning.

A retrofit evaporator cover is available as an optional accessory for storing extremely temperature-sensitive products.

Climate rating definitions

Climate rating **SN**

= Ambient temperatures from +10 °C to 32 °C

Climate rating **N**

= Ambient temperatures from +16 °C to 32 °C

Climate rating **ST**

= Ambient temperatures from +16 °C to 38 °C

Climate rating **T**

= Ambient temperatures from +16 °C to 43 °C

Customer service

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

Liebherr laboratory refrigerators do not conform to DIN 58345 relevant to storing pharmaceuticals nor to DIN 58371 relevant to storing conserved blood. Liebherr laboratory freezers do not conform to DIN 58375 relevant to storing blood plasma. All laboratory refrigerators and freezers conform to the EC Directives 2004/108/EC and 2006/95/EC.



Laboratory refrigerators and freezers

Subject to modification. Printed in Germany by Rafi, Dr.-Nr. 6479/3.6/05.09

LIEBHERR

Innovative expertise and drive in the laboratory sector

The demands made on refrigerators 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 operation of our appliances for the professional sector. The most stringent reliability

and safety standards apply to appliances in the laboratory sector. Therefore Liebherr offers appliances in different temperature ranges for numerous applications. Liebherr's Mediline appliances offer many advantages. High-grade materials, high-performance components and accurate workmanship right down to the last detail ensure the high quality of the appliances.



The laboratory refrigerators and freezers with Profi electronic control system

The Profi electronic controller

The Profi electronic control system with text display and integrated real-time clock meets the most exacting requirements. It is equipped with a volt-free contact for connection to a remote warning system, an infrared interface and an RS 485 serial interface, enabling networking with central monitoring systems. The interior temperature can be set to 1/10 °C accuracy and is indicated accordingly in the display. Altogether 30 alarm events, including time and date, are stored to memory. A visual and audible temperature alarm alerts the user to any unwanted rise in temperature. To satisfy laboratory hygiene requirements, the electronic control system has an easy-clean membrane keypad. In case of power failure, a powerful 12 V battery automatically cuts in and the appliance continues to monitor and register the interior temperature continuously for 72 hours.

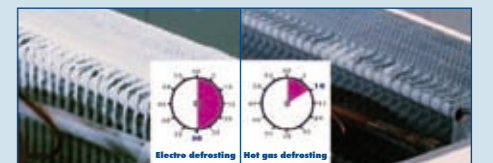
Professional refrigeration

The refrigeration units in conjunction with dynamic cooling and precision electronic control are designed to meet the most demanding requirements. The internal air-ducts have been specially designed to assure optimal temperature distribution throughout the cabinet. The high-performance cooling system with forced air and double ventilation ensures maximum temperature stability, even if the door is opened frequently. The fan cut switch stops the forced-air system when the door is opened, keeping the cold air in the cabinet and saving valuable energy. The refrigeration components are integrated in the ceiling area, giving additional valuable storage space inside the cabinet. The compressor compartment panel can be raised for cleaning or servicing purposes. The Profi electronic defrosts the cabinet automatically only when required, thus saving energy. Thanks to the hot gas defrost system, the defrost cycle is very short and, as a result, the temperature in the interior remains almost constant.

The interior liners of the laboratory appliances with Profi electronic controller are made entirely of stainless steel. The integrated U-shaped trayslides provide stability, enable rearrangement and easy cleaning, and guarantee versatile use of the interior. They provide guidance for the stable grid shelves, making them non-tilting. The trayslides are height-adjustable and permit flexible use of the inside space. The smooth interior liner is exceptionally easy to clean. There is provision for an independent temperature sensor allowing, for instance, a PT 100 probe to be positioned in the interior. The door seals are replaceable. The doors remain open at 90° and are self-closing at less than 60°. The integrated lock is exceedingly sturdy and protects against unauthorised access. The doors can be reversed to suit site requirements.

Castors

Hygiene is an important factor in laboratories. That is why the appliances come complete with castors to allow easy and convenient cleaning underneath.



Heavy-duty laboratory refrigerators and freezers with Profi controller



Heavy-duty laboratory refrigerators and freezers with Profi controller	LKpV 1422 Mediline	LKpV 6522 Mediline	LKpV 1420 Mediline	LKpV 6520 Mediline	LGPV 1420 Mediline	LGPV 6520 Mediline
Gross capacity	1427 l	601 l	1427 l	601 l	1427 l	601 l
Exterior dimensions in mm (w/d/h)	1430/830/2150	700/830/2150	1430/830/2150	700/830/2150	1430/830/2150	700/830/2150
Interior dimensions in mm (w/d/h)	1263/650/1550	533/650/1550	1263/650/1550	533/650/1550	1263/650/1550	533/650/1550
Energy consumption in 24h*	5.0 kWh	3.8 kWh	3.4 kWh	2.3 kWh	9.7 kWh	4.9 kWh
General						
Cooling system	forced-air	forced-air	forced-air	forced-air	forced-air	dynamic
Defrosting method	automatic	automatic	automatic	automatic	automatic	automatic
Temperature range	0 °C to +16 °C	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
Housing material/colour	steel/white	steel/white	steel/white	steel/white	steel/white	steel/white
Door/lid material	glass doors	glass door	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	chromium-nickel steel
Type of control	„programmable electronic controller with data logger and text display“	„programmable electronic controller with data logger and text display“	„programmable electronic controller with data logger and text display“	„programmable electronic controller with data logger and text display“	„programmable electronic controller with data logger and text display“	„electronic control system with real-time display“
Temperature display	external digital	external digital	external digital	external digital	external digital	external digital
Status display	•	•	•	•	•	•
Temperature alarm	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible
Door opening alarm	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible	visual and audible
Interface/volt-free contact	RS 485/•	RS 485/•	RS 485/•	RS 485/•	RS 485/•	RS 485/•
Interior light	ceiling lighting, with separate switch	ceiling lighting, with separate switch	–	–	–	–
Adjustable storage shelves	8	4	8	4	8	4
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, 2 with brake	castors, 2 with brake	castors, 2 with brake	castors, 2 with brake	castors, 2 with brake	castors with brake
Handle	ergonomic handle	ergonomic handle	ergonomic handle	ergonomic handle	ergonomic handle	ergonomic handle
Lock	•	•	•	•	•	•
Self-closing door	•	•	•	•	•	•
Door hinges	–	right hand, reversible	–	right hand, reversible	–	right hand, reversible
Insulation	83 - 60 mm	83 - 60 mm	83 - 60 mm	83 - 60 mm	83 - 60 mm	83 - 60 mm
Gross/net weight	274/230 kg	172/145 kg	259/213 kg	164/134 kg	267/220 kg	173/144 kg
Climate rating	N	N	T	T	T	T
Refrigerant	R 134a	R 134a	R 134a	R 134a	R 404a	R 404a
Accessories						
Grid shelf, epoxy resin-coated	7112393	7112393	7112393	7112393	7112393	7112393
U-shaped trayslide, right	9000906	9000906	9000906	9000906	9000906	9000906
U-shaped trayslide, left	9000907	9000907	9000907	9000907	9000907	9000907
Pedal opener	9590639	9590659	9590639	9590659	9590639	9590659
Infrared key (incl. software)	9590555	9590555	9590555	9590555	9590555	9590555
RS 485 to RS 232 converter incl. software	9590557	9590557	9590557	9590557	9590557	9590557

* According to NFx 15-140 test procedure

Laboratory refrigerators in compact format

The new Mediline laboratory refrigerators with Comfort controller provide maximum storage space on a 60 cm footprint. The under-worktop models are 820 mm high and will fit almost any site. These appliances meet the exacting demands made of laboratory appliances. The range comprises two upright and two

under-worktop 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 accurate electronic controller system ensures high temperature consistency and uniform temperature distribution in the interior.

The Comfort electronic controller

The accurate, Comfort electronic control system of the new Mediline laboratory refrigerators enables temperatures to be set with an accuracy of 1/10 °C. The digital display indicates the exact temperature and the operating status at all times. In addition, the controller saves the maximum and minimum interior temperatures that have occurred, the last three temperature alarms and power failures, together with the time, date and duration of the alarm. To ensure perfect hygienic conditions and for easy cleaning, the Compact electronic controller has a membrane keypad.



Alarm and safety features

These appliances offer an array of alarm functions to ensure compliance with the high safety standards in the laboratory sector. They feature both an audible and a visual door-open and temperature alarm. The parameters of the temperature alarm can be individually set. For connection to an external alarm system, the appliances have a volt-free contact and an RS 485 serial bus interface for central temperature monitoring and alarm documentation. The appliances are equipped with a safety thermostat to prevent temperatures below 2 °C.

Hygienic interior liner



The grid shelves are height-adjustable and can be removed at a door opening angle of 90°, allowing versatile use of the interior. The trayslides prevent the grid shelves from tipping. The close-mesh shelves ensure secure storage even for small items. The lighting on the glass door models provides uniform illumination of the interior. A provision for an external temperature sensor is fitted near the compressor compartment. The seamless plastic interior liner is exceptionally easy to clean.

Laboratory refrigerators with Comfort electronic controller

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	
Status display	
Temperature alarm	
Door opening alarm	
Interface/potential-free contact	
Interior light	
Adjustable storage shelves	
Shelf material	
Shelf loading	
Handle	
Lock	
Self-closing door	
Door hinges	
Insulation	
Gross/net weight	
Climate rating	
Refrigerant	
Accessories	
Stacking kit, white	
Roller set	
Evaporator cover, white	
Legs, height-adjustable from 115 to 170 mm	



LKv 3912 Mediline	LKv 3910 Mediline	LKuv 1612 Mediline	LKuv 1610 Mediline
360/344 l	360/344 l	141/130 l	141/130 l
600/615/1840	600/615/1840	600/615/820	600/615/820
455/435/1650	455/435/1650	455/435/669	455/435/669
2.0 kWh	0.8 kWh	1.2 kWh	0.7 kWh
dynamic	dynamic	dynamic	dynamic
automatic	automatic	automatic	automatic
+3 °C to +8 °C	+3 °C to +8 °C	+3 °C to +8 °C	+3 °C to +8 °C
steel/white	steel/white	steel/white	steel/white
glass door	steel	glass door	steel
white commercial-grade polystyrol	white commercial-grade polystyrol	white commercial-grade polystyrol	white commercial-grade polystyrol
electronic controller	electronic controller	electronic controller	electronic controller
external digital	external digital	external digital	external digital
•	•	•	•
visual and audible	visual and audible	visual and audible	visual and audible
visual and audible	visual and audible	visual and audible	visual and audible
RS 485/•	RS 485/•	RS 485/•	RS 485/•
ceiling lighting, with separate switch		ceiling lighting, with separate switch	
5	5	3	3
grid shelves plastic-coated	grid shelves plastic-coated	grid shelves plastic-coated	grid shelves plastic-coated
60 kg	60 kg	60 kg	60 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
40 - 40 mm	40 - 40 mm	40 - 40 mm	40 - 40 mm
88/83 kg	68/63 kg	46/44 kg	40/37 kg
SN-ST	SN-ST	SN-ST	SN-ST
R 600a	R 600a	R 600a	R 600a
		9876687	9876687
		9590521	9590521
9590525	9590525	9590523	9590523
9590737	9590737		

Storage of explosive and highly flammable substances

The range of laboratory appliances with Comfort controller comprises 2 refrigerators and 2 freezers with spark-free interior, especially for storing explosive and highly flammable substances – for instance in the chemical industry or in special laboratories. These models have been tested by electrosuisse – SEV (Swiss Association for Electrical Engineering, Power and Information Technologies), the ATEX conformity evaluation organisation, for compliance with the safety requirements of the EU Directive 94/9/EC (ATEX 95) according to the harmonised standards EN 1127-1, IEC 60079-0 and IEC 60079-15, and they provide all the other advantages of the Comfort electronic controller.



Certification

All Liebherr laboratory refrigerators and freezers with spark-free interior are tested according to the ATEX Directive. They have a Zone II nA interior for gases, taking into account the safety requirements of material category 3G. They are therefore suited for storing explosive and highly flammable substances.



Temperature consistency

In conjunction with the accurate Comfort controller, the forced-air cooling system of the LK(U)xv models and the static system of the freezers with no defrost fluctuation ensure a high level of temperature consistency and uniform temperature distribution in the interior.



Convenient, clear view storage

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

In order to comply with the ATEX requirements, the defrost water is collected in a tray which has to be emptied manually.

Laboratory refrigerators and freezers with Comfort 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 24 h
General
Cooling system
Defrosting method
Temperature range
Housing material/colour
Door/lid material
Liner material
Type of control
Temperature display
Status display
Temperature alarm
Door opening alarm
Interface/volt-free contact
Adjustable storage shelves
Number of drawers
Number of baskets
Shelf material
Shelf loading capacity
Shelf height in mm
Handle
Lock
Self-closing door
Door hinges
Insulation
Gross/net weight
Climate rating
Refrigerant
Accessories
Stacking kit, white
Roller set
Evaporator cover, white
Legs, height-adjustable from 115 to 170 mm

LKxv 3910 Mediline	LKUxv 1610 Mediline	LGex 3410 Mediline	LGUex 1500 Mediline
360/344 l	141/130 l	310/284 l	139/129 l
600/615/1840	600/615/820	600/615/1840	600/615/820
455/435/1650	455/435/669	420/400/1587	454/450/663
0.8 kWh	0.7 kWh	1.0 kWh	0.8 kWh
forced-air	dynamic	static	static
automatic	automatic	manual	manual
+3 °C to +8 °C	+3 °C to +8 °C	-9 °C to -30 °C	-9 °C to -26 °C
steel/white	steel/white	steel/white	steel/white
steel	steel	steel	steel
white commercial-grade polystyrol	white commercial-grade polystyrol	white commercial-grade polystyrol	white commercial-grade polystyrol
electronic controller	electronic controller	electronic controller	electronic controller
external digital	external digital	external digital	external digital
•	•	•	•
visual and audible	visual and audible	visual and audible	visual and audible
visual and audible	visual and audible	visual and audible	visual and audible
RS 485/•	RS 485/•	RS 485/•	RS 485/•
5	3	8	3
			1
glass	glass	evaporator plates	evaporator plates
40 kg	40 kg	24 kg	24 kg
		185	149
ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle
•	•	•	•
•	•	•	•
right-hand, reversible	right-hand, reversible	right-hand, reversible	right-hand, reversible
40 - 40 mm	40 - 40 mm	70 - 70 mm	55 - 55 mm
70/66 kg	42/40 kg	89/82 kg	46/43 kg
SN-ST	SN-ST	SN-ST	SN-ST
R 600a	R 600a	R 600a	R 600a
	9876687		9876687
	9590521		9590521
9590525	9590523		
9590737		9590737	

Robust and spark-free

Liebherr's FKEX range of laboratory refrigerators with static cooling and spark-free interior are designed especially for storing explosive and highly flammable substances. They meet all the safety requirements of the EU Directive 94/9EC (ATEX 95). The appliances excel with a large capacity and rugged design. The appliances defrost automatically: in order to comply with the ATEX requirements the defrost water is collected in a tray which has to be emptied manually. The internal temperature is adjustable from +2°C to +10°C with the aid of the thermostat integrated in the control panel. For applications where uniform temperature distribution or alarm functions are required, the forced-air LKEXv & LKUex models are available.



Spark-free interior

The defrost water drain is sealed; as a result, there are no passages open to the outside, through which flammable vapours could escape. The appliances are labelled clearly and permanently in accordance with the ATEX Directive 94/9 EC, including information for cleaning.

Easy to clean

The seamless plastic liner and the appliance equipment are easy to clean. A castor base or height-adjustable feet are available as retrofit accessories for convenient cleaning underneath. Two recessed handles at the top back of the appliance facilitate transport.

Well-conceived convenience

The height-adjustable and non-tilting glass shelves provide secure storage for packages large and small, and enable versatile use of the interior. The doors are reversible on site and gaskets are replaceable. The sturdy lock protects against unauthorised access.



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 24 h

General

Cooling system

Defrosting method

Temperature range

Housing material/colour

Door/lid material

Liner material

Type of control

Adjustable storage shelves

Shelf material

Lock

Door hinges

Gross/net weight

Climate rating

Refrigerant

Accessories

Glass shelf

Castor base

Set of adjustable feet

FKEX 5000

Mediiline

500/433 l

752/710/1516

652/537/1338

0.9 kWh

static

automatic

+2°C to +10°C

steel/white

steel

white commercial-grade polystyrol

analogue controls

5

glass

•

right-hand hinge, reversible

78/73 kg

SN

R 600a

9293689

9086957

9590963

FKEX 3600

Mediiline

360/335 l

600/600/1590

513/441/1418

0.9 kWh

static

automatic

+2°C to +10°C

steel/white

steel

white commercial-grade polystyrol

analogue controls

5

glass

•

right-hand hinge, reversible

62/58 kg

SN

R 600a

9293691

9086959

9590965

FKEX 2600

Mediiline

260/247 l

600/600/1216

513/441/1047

0.8 kWh

static

automatic

+2°C to +10°C

steel/white

steel

white commercial-grade polystyrol

analogue controls

4

glass

•

right-hand hinge, reversible

48/45 kg

SN

R 600a

9293691

9086781

9590965

FKEX 1800

Mediiline

180/174 l

600/600/885

513/441/734

0.7 kWh

static

automatic

+2°C to +10°C

steel/white

steel

white commercial-grade polystyrol

analogue controls

3

glass

•

right-hand hinge, reversible

39/36 kg

SN

R 600a

9293691

9086781

9590965



WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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