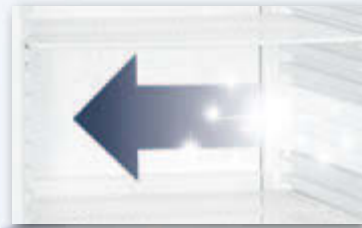


# The advantages at a glance



The **volt-free contact** for forwarding alarms to an **external remote warning system**.

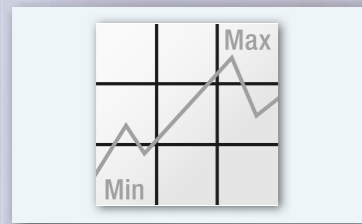


The **commercial-grade moulded polystyrol inner liner** is exceptionally easy to clean and enables **optimum hygiene**.



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 NTC temperature sensor or independent temperature sensor PT 100 or similar measuring instruments.



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



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



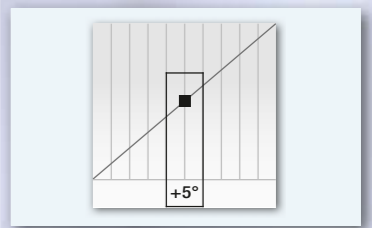
The **precise electronic controller** with digital temperature display allows accurate temperature setting to 1/10°C. An **integrated data memory** logs the last three temperature alarms and power failures, together with the time, date and duration of the alarm. The respective data can be recalled using the AlarmLog function and read on the display panel.



Laboratory refrigerators LKv 3913 and LKUv 1613 with a **glass door** feature an **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.

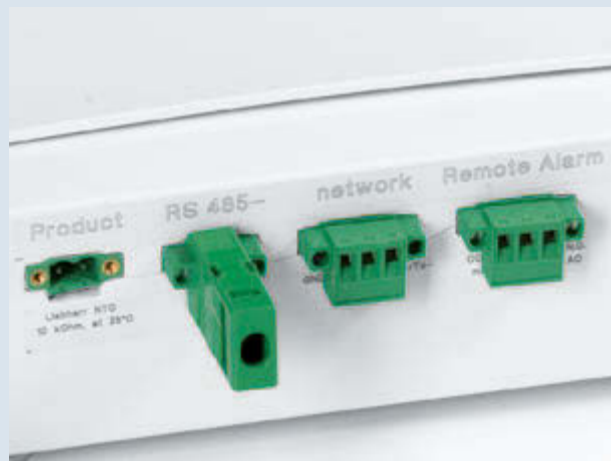
**Reversible door hinges** in the LKv, LKUv, LGv and LCV models enable individual adaption to space conditions. The **door seals** can also be easily **replaced** as required.



LKv 3913

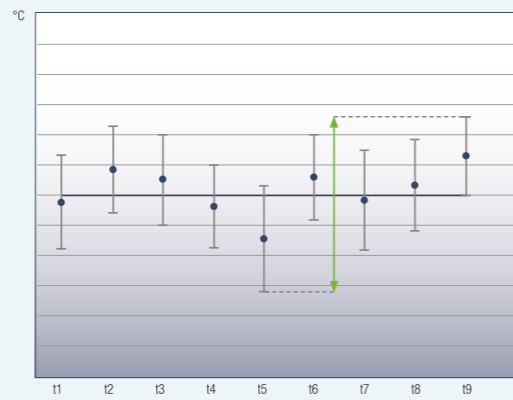
# Quality right down to the smallest detail

Liebherr MediLine laboratory refrigerators the ideal solution for a small footprint or for under-worktop integration. The range comprises two freestanding and under-worktop refrigerators 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.



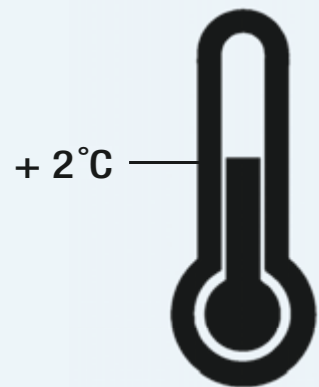
### External temperature and alarm documentation.

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 ISO 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 refrigerators with electronic controls

	LKv 5710 MediLine	LKv 3913 MediLine	LED	LKv 3910 MediLine
<b>Total gross / net capacity</b>	583 / 437 litre	360 / 344 litre		360 / 344 litre
<b>Exterior dimensions in mm (w/d/h)</b>	747 / 750 / 1844	597 / 615 / 1840		597 / 615 / 1840
<b>Interior dimensions in mm (w/d/h)</b>	634 / 538 / 1500	440 / 435 / 1635		440 / 435 / 1635
Energy consumption in 365 days <sup>1</sup>	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 – / 1.0 A	220 – 240V – / 1.5 A		220 – 240V – / 1.5 A
Cooling system	forced-air	forced-air		forced-air
Defrost	automatic	automatic		automatic
Set temperature range	+3°C to +16°C	+3°C to +16°C		+3°C to +16°C
Gradient* / max. fluctuation**	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 / lid 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	5		5
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
Handle	ergonomic slimline handle	ergonomic slimline handle		ergonomic slimline handle
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	98 / 91 kg	88 / 82 kg		70 / 65 kg
<b>Accessories</b>				
Shelf, plastic-coated	7113485	7112313		7112313
Evaporator cover, white		9590241		9590241
Adjustable legs		9590231		9590231
RS 485 / RS 232 adapter, data log software	9590387	9590387		9590387
Additional lock barrels (up to 10)		on request		on request
Foot pedal opener	9094579			
Roller bars		9590380		9590380

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

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

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

## Laboratory refrigerators and freezers with electronic controls



## Laboratory fridge-freezer combination with electronic controls



### Laboratory refrigerators and freezers with electronic controls

	<b>LKUv 1613</b> MediLine	<b>LKUv 1610</b> MediLine	<b>LGv 5010</b> MediLine
<b>Total gross/net capacity</b>	141/130 litre	141/130 litre	478/337 litre
<b>Exterior dimensions in mm (w/d/h)</b>	597/615/825	597/615/825	747/750/1844
<b>Interior dimensions in mm (w/d/h)</b>	440/435/670	440/435/670	602/520/1224
Energy consumption in 365 days <sup>1</sup>	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	220–240V~/1.0 A	220–240V~/1.0 A	220–240V~/3.0 A
Cooling system	forced-air	forced-air	forced-air
Defrost	automatic	automatic	automatic
Set temperature range	+3°C to +16°C	+3°C to +16°C	–9°C to –35°C
Gradient*/max. fluctuation**	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/lid 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
Handle	ergonomic slimline handle	ergonomic slimline handle	ergonomic slimline handle
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	46/43 kg	39/36 kg	120/113 kg
<b>Accessories</b>			
Shelf, plastic-coated	7112313	7112313	7112059
Stacking kit, white	9876687	9876687	
Roller bars	9590521	9590521	
Evaporator cover, white	9590523	9590523	
NTC product temperature sensor			9591493
RS 485/RS 232 adapter, data log software	9590387	9590387	9590387
Foot pedal opener			9094579
Additional lock barrels (up to 10)	on request	on request	

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

### Laboratory fridge-freezer combination with electronic controls

	<b>LCv 4010</b> MediLine
<b>Total gross/net capacity</b>	254/240 litre
<b>Total gross/net capacity</b>	107/105 litre
<b>Exterior dimensions in mm (w/d/h)</b>	597/615/2003
<b>Interior dimensions in mm (w/d/h)</b>	440/441/1105
<b>Interior dimensions in mm (w/d/h)</b>	431/435/597
Energy consumption in 365 days <sup>1</sup>	657 kWh
Ambient temperature range	+10°C to +35°C
Refrigerant	R 600a
Sound power level	52 dB(A)
Voltage/Connection rating	220–240V~/1.5 A
Cooling system	forced-air/static
Defrost	automatic/manual
Set temperature range	+3°C to +16°C / –9°C to –30°C
Gradient*	5.2°C/7.9°C
Max. fluctuation**	5.7°C/5.5°C
External cabinet finish	steel/white
Door/lid 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	4
Usable shelf area in mm (w/d)	440/409
Shelf material	wire shelves plastic-coated/glass
Shelf loading	45 kg/24 kg
Drawers	3
Handle	ergonomic slimline handle
Lock	fitted
Self-closing door	yes
Door hinges	right, reversible on site
Gross/net weight	90/84 kg
<b>Accessories</b>	
Shelf, plastic-coated, for	7112313
Evaporator cover, white, for	9590391
NTC product temperature sensor	9590407
RS 485/RS 232 adapter, data log software	9590387
Roller bars	9590380
Additional lock barrels (up to 10)	on request

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



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