

**1**


9.699 310

### Ultra low temperature freezer, ULUF, up to -90 °C

Arctiko

- Low energy consumption
- Low noise level, low heat dissipation
- Insulated inner doors
- Castors
- Lock on door
- Ergonomic loading
- Heated door frame, heated vacuum valve
- 100 % HCFC/CFC free
- Premade porthole for external temperature probes (diam. 11 mm)
- Single-compressor (ULUF 15, 65, 125, 450, 550) or two compressor systems (ULUF 750) as security in case of failure of a compressor.

#### Controller features

- Temperature graph
- Micro processor controller with digital display
- Approx. 72 hours battery back up for alarms, loggings and temperature display in case of power cut
- Visual and acoustic alarm, adjustable high/low temperature alarm, power failure alarm, probe failure alarm, instrument failure alarm, open door alarm, contact for remote alarm, prepared for GSM alarm
- Prepared for connection of 2 additional probes
- Integrated data logger (software included)
- RS485/232 Interface
- Computer USB data read out
- Direct download/upload on/from USB memory stick
- Auto cycle if probe failure
- Ambient temperature display
- Shows all alarms as text (no codes)
- 3-level password protected
- Battery level indication
- Integrated memory
- Display text available in different languages

Accessories (optional on request): Racks and boxes, CO<sub>2</sub> backup system, GSM alarm module, cryo gloves, water cooled condensers.

5 year warranty on the compressor.

**2**


9.699 311

Type	Capacity	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range	Weight kg	PK	Cat. No.
	Litres			max. °C			
ULUF 15	7	400 x 630 x 665	150 x 143 x 310	-90 ... -40	55	1	6.264 066
ULUF 65	55	600 x 700 x 810	360 x 468 x 320	-86 ... -40	80	1	9.699 310 <b>1</b>
ULUF 125	115	950 x 725 x 810	360 x 493 x 530	-86 ... -40	100	1	9.699 311 <b>2</b>
ULUF 450-2M	393	720 x 885 x 1990	480 x 608 x 1345	-86 ... -40	175	1	6.266 243
ULUF 550-2M	556	920 x 885 x 1990	680 x 608 x 1345	-86 ... -40	203	1	7.983 050
ULUF 750-2M*	646	1030 x 885 x 1989	790 x 680 x 1345	-86 ... -40	254	1	6.290 902

\*Dual Cooling System: Increased safety due to 2 separate cooling systems.

**3**


### 3 Ultra-low temperature freezer, UFV series up to -90 °C

**NEW**

BINDER

The ultra-low freezers are suitable for the stable long-term storage of sensitive samples and guarantee a constant low temperature. The ultra-low freezers are designed for -90 °C, but can be used in a temperature range from -40 °C to -90 °C.

- Climate-neutral refrigerants R-290 and R-170
- Interior completely made of stainless steel
- Powerful cascade compression refrigeration machine
- Efficient thermal insulation through vacuum insulation panels
- Removable interior doors made of stainless steel
- 3 flexibly positionable shelves made of stainless steel
- Water cooling (depending on variant)
- Optical and acoustic alarms

#### Specifications

Temperature range:	-90 ... -40 °C
Port hole:	2 x Ø 28 mm, rear
Interface:	Ethernet
Power supply:	230 V/50 Hz
Warranty:	5 years

Type	Description	Capacity	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
		Litres				
UFV500	Standard	477	826 x 938 x 1966	606 x 605 x 1300	1	4.668 590
UFV700	Standard	700	1110 x 938 x 1966	890 x 605 x 1300	1	4.664 563
UFV500	With water cooling	477	826 x 938 x 1966	606 x 605 x 1300	1	4.668 591
UFV700	With water cooling	700	1110 x 938 x 1966	890 x 605 x 1300	1	6.275 022

### Ultra low temperature Upright Freezers, ULT Series, up to -86 °C



1

Supreme stability, reliability, user-friendliness and small dimensions make these freezers the perfect choice for use inside the lab. For temporary to long term storage. Low power consumption, natural refrigerant, cyclopentane insulation combined with recyclable materials, makes these freezers very environmental friendly. The unit is easy to install. Due to the small footprint, transport through all standard sized doors is possible. In combination with a low weight, it is also easy to move around. The material is galvanized and pre-coated steel on the outside and stainless steel on the inside.

Nordiclub ApS



4.672 429

- Temperature logger with USB port
- Data logging 35.000 Entries
- Battery Backup for min. 48 h
- Digital controller with display
- High/low temperature alarm
- Door alarm
- Contact for remote alarm
- Porthole for external probe & CO<sub>2</sub> backup Ø12 mm
- Eco-friendly, HCFC-free Nature R refrigerant

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

**Racks must be ordered separately.**

#### Specifications

Adjustable shelves, stainless steel:	2 (5 for U250)
Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	57 dB (64 dB for U250)
Power consumption 24/h:	6.2 kWh (12.8 kWh for U250)
Power supply:	230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
	Litres						
ULT U100, under bench	91	430 x 425 x 625	595 x 630 x 830	60	-86 ... -60	1	<b>4.672 428</b>
ULT U250	221	435 x 370 x 1420	600 x 630 x 2055	122	-86 ... -60	1	<b>4.672 429</b>

### Ultra low temperature Chest Freezers, ULT Series, up to -86 °C



2

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. Low power consumption, natural refrigerant, cyclopentane insulation combined with recyclable materials, makes these freezers very environmental friendly. The unit is easy to install. Due to the small footprint, transport through all standard sized doors is possible. The freezer also has four castors, which makes it very mobile. The material is galvanized and pre-coated steel on the outside and precoated white steel on the inside.

Nordiclub ApS



4.672 427

- Digital controller with display
- Audible and visual alarm
- High/low temperature alarm
- Contact for remote alarm
- Battery Backup 48 h
- Porthole for external probe & CO<sub>2</sub> backup Ø12 mm
- Eco-friendly, HCFC-free Nature R refrigerant

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives new unit.

**Racks must be ordered separately.**

#### Specifications

Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	55 dB
Power consumption 24/h (kWh):	5.1 (C75), 5.3 (C200), 8.1 (C300), 9.1 (C400)
Power supply:	230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
	Litres						
ULT C75	71	390 x 390 x 465	555 x 580 x 930	45	-86 ... -60	1	<b>4.672 424</b>
ULT C200	189	550 x 440 x 635	920 x 630 x 890	65	-86 ... -60	1	<b>4.672 425</b>
ULT C300	284	890 x 440 x 635	1265 x 630 x 890	71	-86 ... -60	1	<b>4.672 426</b>
ULT C400	368	1190 x 440 x 635	1560 x 630 x 890	80	-86 ... -60	1	<b>4.672 427</b>

➔ Accessories please see page 780.

### Ultra low temperature freezer, ULTF series, up to -86 °C

The ULTF range shows that high performance freezing with focus on low energy consumption is the future. The range has been updated with our advanced Arctiko controller which ensures that all alarm and data logging features are included as standard. The ULTF range is produced with the true and original single compressor technology which ensures the lowest noise level available.

*Arctiko*

- Single compressor
- Low energy consumption
- Low noise level
- Low heat dissipation
- 100% HCFC/CFC free
- Sub lids
- Castors and key lock
- Prepared porthole for external temperature probes

#### Controller features

- Temperature graph
- Micro processor controller with digital display
- Approx. 72 hours battery back up for alarms, loggings and temperature display in case of power cut
- Visual and acoustic alarm
- Adjustable high/low temperature alarm
- Power, probe and instrument failure alarm,
- Open door alarm
- Contact for remote alarm
- Prepared for GSM Alarm
- Prepared for connection of 2 additional probes
- Integrated data logger
- RS485/232 Interface
- Direct upload of new software via USB memory stick
- Direct download of logged data on USB memory stick
- Auto cycle in case of probe failure
- Ambient temperature display
- Shows all alarms (displayed as text, no codes)
- 3-level password protected
- Battery level indication
- Integrated memory for 30 years
- Display text available in different languages

5 year warranty on the compressor.

Type	Capacity	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range	Weight	PK	Cat. No.
	Litres			max. °C	kg		
ULTF 80	71	552 x 648 x 850	390 x 390 x 450	-86 ... -40	53	1	<b>9.699 320</b>
ULTF 220	189	920 x 695 x 885	760 x 440 x 635	-86 ... -40	64	1	<b>9.699 321</b>
ULTF 320	284	1262 x 698 x 885	1100 x 440 x 630	-86 ... -40	76	1	<b>9.699 322</b>
ULTF 420	368	1562 x 698 x 885	1400 x 440 x 630	-86 ... -40	88	1	<b>9.699 323</b>

**1**


9.699 320

**2**


9.699 323

### Freezer boxes B35-50/B35-85, up to -85 °C

The cold boxes are small benchtop units for cooling and freezing in all laboratories. Due in particular to its compact space-saving design and the low-noise cooling unit, the cold box is suitable for direct use in the workplace.

*Fryka-Kältetechnik*

- Vacuum-Insulation: large interior space with small external dimensions and low power consumption
- Extremely low noise refrigeration unit
- Models with temperature range -85 °C with two-stage cascade refrigeration system
- with natural refrigerants (R-290, R-170)
- Interior made of high quality stainless steel
- Interior without fittings allows easy cleaning and disinfection
- Side air vent, so suitable for installation directly on walls
- Bushing (diameter 10 mm), e.g. for temperature monitoring with external sensors
- Maximum safety, due to mains-independent alarm, battery lasting approx. 72 hours
- Visual and audible signal
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- Potential-free contact for connection to an external alarm system
- RS485 interface
- 100 mV/K-output for connection to a temperature recording system
- Lockable insulating door with door frame heating and double magnetic seal with additional sealing surface
- Stackable unit, max. 2 units

#### Cold boxes B35 //logg:

- Touchscreen control with color display and integrated data logger for full traceability
- User-friendly menu structure, remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

**Stainless steel shelf B 35-RS:** 5 drawers, each for 6 standard cryoboxes (135 x 135 x 52 mm).  
Extra gaps for optimal, uniform and rapid cooling of the entire frozen product (please order separately).

#### Specifications

Control accuracy: ±1 K  
 Ambient temperature: +12 to +30 °C  
 Power supply: 230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
B 35-50	Litres 35	425 x 300 x 280	580 x 765 x 540	65	-50 ... -10	1	6.284 402
B 35-50 //logg	35	425 x 300 x 280	580 x 765 x 580	65	-50 ... -10	1	6.284 403
B 35-85	35	425 x 300 x 280	580 x 765 x 540	81	-85 ... -50	1	7.982 609
B 35-85 //logg	35	425 x 300 x 280	580 x 765 x 580	81	-85 ... -50	1	6.284 404
Shelf B 35-RS						1	6.284 406

1



7.982 609

2



6.284 406

3



6.284 406

# FRYKA

# COOLING AND FREEZING UP TO

# -85°C



**MADE  
IN  
GERMANY**

## Cooling and freezing of gases, liquids and solids

Robust and durable technology, sophisticated functions as well as a particularly simple handling: All that makes FRYKA recirculating chillers and freezers the first choice in many segments of modern research and industry.

[www.fryka.de](http://www.fryka.de)

### Underbench freezers TUS 50-100/TUS 80-100, up to -80 °C

The freezers have a usable space of 100 litres and can be used for cooling and freezing in industrial and scientific laboratories. Particularly due its compact, space-saving design with low-noise cooling unit, the underbench freezer is suitable for use directly under or even on the desk at work.

Fryka-Kältetechnik

- Vacuum-Insulation: large interior space with small external dimensions and low power consumption
- Extremely low noise refrigeration unit
- Models with temperature range -80 °C: with two-stage cascade refrigeration system
- With natural refrigerants (R-290, R-170)
- Interior made of high quality stainless steel
- Bushing (diameter 19 mm), e.g. for temperature monitoring with external sensors
- Maximum safety, due to mains-independent alarm, battery lasting approx. 72 hours
- Visual and audible signal
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- Potential-free contact for connection to an external alarm system
- RS485 interface
- 100 mV/K-output for connection to a temperature recording system
- Lockable insulating door with door frame heating and double magnetic seal with additional sealing surface
- One Inlaid grille included
- Optionally available: Four fixed rollers, two with a brake, H: 805 mm.  
Stainless steel shelf TS 100-RS (alternative to Inlaid grille): For 81 standard cryoboxes.  
Nine drawers, each for nine standard cryoboxes. Extra gaps for optimum, uniform and rapid cooling of all the refrigerated items.

#### Underbench freezers TUS 50-100/TUS 80-100 //logg:

- Touchscreen control with color display and integrated data logger for full traceability
- User-friendly menu structure, remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

#### Specifications

Control accuracy:	±1 K
Ambient temperature:	+12 to +30 °C
Power supply:	230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
	Litres						
TUS 50-100	100	450 x 450 x 500	950 x 730 x 750	120	-50 ... -10	1	6.284 408
TUS 50-100 //logg	100	450 x 450 x 500	950 x 730 x 750	120	-50 ... -10	1	6.284 409
TUS 80-100	100	450 x 450 x 500	950 x 730 x 750	120	-80 ... -50	1	6.284 410
TUS 80-100 //logg	100	450 x 450 x 500	950 x 730 x 750	120	-80 ... -50	1	6.284 411
Shelf TS 100-RS						1	6.284 416
Inlaid grille (additional)						1	6.284 419

1



6.284 410

2



6.284 411

3



6.284 416

### Chest freezers TT 50-90/TT 85-90, up to -85 °C

**NEW**

Fryka-Kältetechnik

The chest freezers are used successfully in the laboratory as well as in industry due to their compact design, their technical properties and their reliability. The use of vacuum insulation panels (VIP), enables a extensive interior space with compact external dimensions. The interior is made of high-grade stainless steel. Models with temperature range -85 °C have a two-stage cascade refrigeration system for high performance and high safety. A bushing (diameter 19 mm) enables temperature monitoring with external sensors.

- Extremely quiet cooling unit, with natural refrigerants (R-290, R-170)
- Visual and acoustic alarm signal
- Lockable cover latch with lever action
- Microprocessor-controlled adjustment with membrane keyboard and LED display
- Independant alarm system, with battery capacity for approx. 72 hours
- Interface (RS485)

#### TT 50-90 logg/TT 85-90 logg:

- Touchscreen control with color display and integrated data logger
- Remote access via network/internet
- Real-time display of the temperature profile and further values
- Recording the temperature profiles and alarm events
- Integrated memory with up to 12 years memory capacity
- Data for transfer to PC can be read out via USB interface
- Ethernet interface (RJ45)

#### Specifications

Ambient temperature:	12 ... 30 °C
Control accuracy:	±0.5 K
Power supply:	230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
	Litres						
TT 50-90	90	590 x 430 x 370	760 x 710 x 880	92	-50 ... -10	1	6.284 420
TT 50-90 logg	90	590 x 430 x 370	760 x 710 x 880	92	-50 ... -10	1	6.284 421
TT 85-90	90	590 x 430 x 370	760 x 710 x 880	110	-85 ... -50	1	6.284 422
TT 85-90 logg	90	590 x 430 x 370	760 x 710 x 880	110	-85 ... -50	1	6.284 423

### 2 TT 90-RC stainless steel shelf for TT 50-90/TT 85-90

**NEW**

Fryka-Kältetechnik

Extra gaps ensure optimal, uniform and rapid cooling of all the refrigerated items.

- For storage of 6 standard cryoboxes (135 x 135 x 52 mm) per shelf
- 12 shelves possible per chest

Type	PK	Cat. No.
Stainless steel shelf TT 90-RC	1	6.284 424

**1**


6.284 423

**2**


## 7. Heating and cooling technology

### Cooling/Low and Ultra low temperature freezers

#### Ultra low temperature freezers HDE/TDE series, to -86 °C

**NEW**

1

Environmentally friendly, energy-saving freezers with a temperature range from -50 to -86 °C.

Thermo Scientific

- Maximum 24 minutes temperature recovery time after door opening
- Ergonomic design
- Very quiet operation below 53 dB (A)
- Compatible with most racking systems
- Natural refrigerants based on hydrocarbons
- Water-blown foam insulation: avoids harmful emissions and reduces long-term propellant outgassing
- Capacity for 300-600 boxes depending on model
- Intuitive touch-screen operation with display of all relevant data
- Data logger function with secure cloud storage option and smartphone connection

**Herafreeze™ HDE models with 5 interior doors and 5 compartments for inserts < 24 cm height**  
**TDE models with 4 interior doors and 4 compartments for units < 30 cm height**



6.311 315

2



4.668 940

Type	For	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
		Litres				
HDE 30086 FV	300 x 5 cm boxes	422	452 x 719 x 1301	584 x 977 x 1981	1	<b>6.311 317</b>
HDE 40086 FV	400 x 5 cm boxes	549	588 x 719 x 1301	719 x 977 x 1981	1	<b>4.668 935</b>
HDE 50086 FV	500 x 5 cm boxes	682	730 x 719 x 1301	864 x 977 x 1981	1	<b>6.311 315</b>
HDE 60086 FV	600 x 5 cm boxes	816	873 x 719 x 1301	1006 x 977 x 1981	1	<b>4.668 936</b>
TDE 30086 FV	300 x 5 cm boxes	422	452 x 719 x 1301	584 x 977 x 1981	1	<b>4.668 937</b>
TDE 40086 FV	400 x 5 cm boxes	549	588 x 719 x 1301	719 x 977 x 1981	1	<b>4.668 938</b>
TDE 50086 FV	500 x 5 cm boxes	682	730 x 719 x 1301	864 x 977 x 1981	1	<b>4.668 939</b>
TDE 60086 FV	600 x 5 cm boxes	816	873 x 719 x 1301	1006 x 977 x 1981	1	<b>4.668 940</b>

#### Upright Freezers LT/XLT Series, up to -65 °C

**NEW**

3

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. The unit is easy to install. Due to the small footprint, transport through all standard sized doors is possible. The freezer also has four castors with brakes, which makes it very mobile. The material is galvanized and pre-coated steel on the outside, stainless steel on the inside and cyclopentane for efficient insulation.

Nordiclab ApS

- Temperature logger with USB port
- Data logging 35.000 Entries
- Battery Backup 48 h
- Digital controller with display
- High/low temperature alarm
- Door alarm
- Contact for remote alarm
- Porthole for external probe & CO<sub>2</sub> backup Ø12 mm
- Integrated lock
- Eco-friendly, HCFC-free Nature R refrigerant (MLT U250 with HCFC-free R290 refrigerant)
- ISO 9001, 14001 & 18001 OHSAS Certified

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

**Racks must be ordered separately.**

**Specifications**

Adjustable shelves, stainless steel:	5
Internal humidity:	<5 %
Temperature probes:	1/PT 1000
Noise level:	60 dB (57 dB for MLT U250)
Power consumption 24/h:	6.25 kWh (5.3kWh for LT U250)
Power supply:	230 V/50 Hz



4.672 436

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight	Temp. range	PK	Cat. No.
	Litres			kg	max. °C		
MLT U250	236	440 x 430 x 1439	600 x 690 x 2055	115	-30 ... -15	1	<b>4.672 443</b>
LT U250	236	420 x 370 x 1420	600 x 690 x 2055	115	-45 ... -10	1	<b>4.672 442</b>
XLT U250	221	420 x 370 x 1420	600 x 690 x 2055	120	-65 ... -30	1	<b>4.672 436</b>



**1**


4.672 437

### Chest Freezers LT/XLT Series, up to -65 °C

**NEW**

Nordiclub ApS

Freezer for temporary to longer term storage or daily use. Ideal where space is limited, but the user still needs a regular storage capacity. The unit is easy to install.

Due to the small footprint, transport through all standard sized doors is possible. The freezer also has four castors (XLT C75 without castors, with legs), which makes it very mobile. The material is galvanized and pre-coated steel on the outside, precoated white steel on the inside and cyclopentane for efficient insulation.

- Digital controller with display
- Audible and visual alarm
- High/low temperature alarm
- Porthole for external probe & CO<sub>2</sub> backup Ø12 mm
- Integrated lock
- Eco-friendly, HCFC-free Nature R refrigerant at -65 °C and HCFC-free R290 refrigerant at -45 °C
- ISO 9001, 14001 & 18001 OHSAS Certified

Extended exchange warranty - in warranty cases which cannot be quickly solved onsite the client receives a new unit.

**Racks must be ordered separately.**

#### Specifications

Baskets:	1 (3 for LT C500 and XLT C300/C500/4 for XLT C400)
Internal humidity:	<5 %
Temperature probes:	1/PTC at -45 °C/1/PT 1000 at -65 °C
Noise level:	55 dB
Power supply:	230 V/50 Hz

Type	Capacity	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Temp. range max. °C	PK	Cat. No.
	Litres						
LT C150	133	350 x 440 x 635	720 x 630 x 890	51	-45 ... -10	1	<b>4.672 437</b>
LT C200	189	550 x 440 x 635	920 x 630 x 890	65	-45 ... -10	1	<b>4.672 438</b>
LT C300	284	890 x 440 x 635	1260 x 630 x 890	71	-45 ... -10	1	<b>4.672 439</b>
LT C400	368	1190 x 440 x 635	1560 x 630 x 890	80	-45 ... -10	1	<b>4.672 440</b>
LT C500	476	1290 x 500 x 640	1660 x 690 x 890	108	-45 ... -10	1	<b>4.672 441</b>
XLT C75	71	390 x 390 x 465	555 x 580 x 900	48	-65 ... -30	1	<b>4.672 430</b>
XLT C150	133	350 x 440 x 635	720 x 630 x 890	56	-65 ... -30	1	<b>4.672 431</b>
XLT C200	189	550 x 440 x 635	920 x 630 x 890	65	-65 ... -30	1	<b>4.672 432</b>
XLT C300	284	890 x 440 x 635	1260 x 630 x 890	71	-65 ... -30	1	<b>4.672 433</b>
XLT C400	268	1190 x 440 x 635	1560 x 630 x 890	80	-65 ... -30	1	<b>4.672 434</b>
XLT C500	476	1290 x 500 x 640	1660 x 690 x 890	108	-65 ... -30	1	<b>4.672 435</b>

### Racks for Upright and Chest Freezers and Ultra low temperature Freezers, LT/XLT/ULT Series

**NEW**

Nordiclub ApS

Type	Dimensions (W x D x H)	No. of racks	Boxes/ Racks	Height Box mm	PK	Cat. No.
	mm					
XLT C75, ULT C75	140 x 140 x 445	5	8	50	1	<b>4.672 445</b>
XLT C75, ULT C75	140 x 140 x 406	5	5	75	1	<b>4.672 448</b>
XLT C75, ULT C75	140 x 140 x 425	5	4	100	1	<b>4.672 451</b>
ULT U100	420 x 416 x 590	1	74	50	1	<b>4.672 458</b>
ULT U100	420 x 416 x 590	1	45	75	1	<b>4.672 461</b>
ULT U100	420 x 416 x 590	1	33	100	1	<b>4.672 463</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 335	3	6	50	1	<b>4.672 444</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 610	6	11	50	1	<b>4.672 446</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 326	3	4	75	1	<b>4.672 447</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 629	6	8	75	1	<b>4.672 449</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 320	3	3	100	1	<b>4.672 450</b>
LT C150-500, XLT C150-500, ULT C200-400	140 x 140 x 530	6	5	100	1	<b>4.672 452</b>
LT U250, XLT U250, ULT U250	135 x 280 x 225	3	8	50	1	<b>4.672 453</b>
LT U250, XLT U250, ULT U250	135 x 280 x 275	12	10	50	1	<b>4.672 457</b>
LT U250, XLT U250, ULT U250	135 x 280 x 160	3	4	75	1	<b>4.672 459</b>
LT U250, XLT U250, ULT U250	135 x 280 x 240	12	6	75	1	<b>4.672 460</b>
LT U250, XLT U250, ULT U250	135 x 280 x 210	15	4	100	1	<b>4.672 462</b>

### 1 Mini-Freezer KBT 08-51, up to -50 °C

The mini-freezers are the ideal solution for chilling material samples directly at the workplace.

*Fryka-Kältetechnik*

1



- Electronic temperature control with LED display, 2 controls available
- Refrigeration unit: low noise, air-cooled, low maintenance
- with natural refrigerant R-1270
- Housing parts made of high quality stainless steel
- Insulated stainless steel hinges and hinged lid with magnetic seal
- Ram protection ring going over and under

#### ST71 control

- Electronic temperature control with LED display
- Optical and acoustic alarm

#### ST100 control

- Microprocessor-controlled, with membrane keyboard and easy-to-read LED display
- Protection against unintentional activation
- Alarm system that is separate from the mains, with battery capacity for approx. 72 hours
- Display of the maximum temperature reached in the interior area during the fault
- RS485 interface, potential-free contact for connection to an external alarm system and 100 mV/K output
- Optical and acoustic alarm

#### Specifications

Temperature range:	-50 ... -30 °C
Control accuracy:	±1 K
Capacity:	8 l
Ambient temperature:	12 ... 30 °C
Dimensions, internal (W x D x H):	150 x 300 x 200 mm
Dimensions, external (W x D x H):	360 x 490 x 570 mm
Weight:	36 kg
Power supply:	230 V/50 Hz

Type	PK	Cat. No.
Mini-Freezer KBT 08-51 with ST71 control	1	6.284 427
Mini-Freezer KBT 08-51 with ST100 control	1	4.671 415
Mini-Freezer KBT 08-51 with ST100 control and convection	1	4.671 416

### 2 Laboratory refrigerators and freezers LKPv/LGPv with professional electronic controller, up to -2 °C/-35 °C

The laboratory appliances incorporating Profi electronic controllers offer many advantages. High-grade materials, high-performance components and accurate workmanship right down to the last detail ensure the high quality of the Liebherr appliances. Wherever huge storing capacity is required the large-scale laboratory appliances with Profi electronic controller are the ideal solution.

*Liebherr*

2



- Dynamic cooling system
- Profi electronic controller with integrated real-time clock
- Castors, thereof two with brake
- Integrated, ergonomic handle
- Plastic-coated grid shelves and CNS inner liner
- Glass door (..23) with ceiling light (seperately switchable)
- Hot-gas defrost system for very short defrost cycles

#### Security package:

- Integrated data memory (Alarm events and temperature profile)
- Visual and audible temperature and door alarm
- Mains-independent power supply of the electronic controller
- Infrared and RS 485 interface enabling external documentation
- Volt-free contact for alarm forwarding to an external remote warning system
- Maximum temperature stability and consistency according to IEC 60068-3
- 3-point calibration
- Access port for an external temperature sensor
- Lock

Type	Capacity	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	PK	Cat. No.
	Litres						
LKPv 6523	597	700 x 830 x 2160	533 x 650 x 1500	1.564	0 ... 16	1	9.698 395
LKPv 1423	1361	1430 x 830 x 2160	1236 x 650 x 1500	2.246	0 ... 16	1	6.264 055
LKPv 6520	597	700 x 830 x 2160	533 x 650 x 1550	1.361	-2 ... 16	1	9.698 686
LKPv 8420	856	790 x 980 x 2160	620 x 850 x 1550	1.652	-2 ... 16	1	9.698 697
LKPv 1420	1361	1430 x 830 x 2160	1236 x 650 x 1550	1.956	-2 ... 16	1	9.698 688
LGPv 1420	1361	1430 x 830 x 2160	1236 x 650 x 1550	7.271	-26 ... -9	1	9.698 693
LGPv 6520	697	700 x 830 x 2160	533 x 650 x 1550	3.745	-35 ... -9	1	9.698 692
LGPv 8420	856	790 x 980 x 2160	620 x 850 x 1550	4.761	-35 ... -9	1	9.698 698

**1**

**1 Laboratory refrigerators and freezers ES series, up to +1 °C/-30 °C**
*Thermo Scientific*

Designed for routine sample protection where laboratory space is limited.  
Our new ES Series lab refrigerators, freezers and combination refrigerator/freezer are the ideal choice when there is limited space in the laboratory.  
All ES Series models deliver the sample protection, performance, security and quality you have come to depend on from us:

- with EU plug and UK adapter
- Integrated controller
- Digital temperature display
- High and low temperature alarms
- Standard door locks, lockable
- Low energy consumption
- Access ports
- Defrost type automatic for temperature range +1 to +10 °C and manual for temperature range -19 to -21 °C

**Equipment**

98F-AEV-TS:	3 drawers
232F-AEV-TS:	2 shelves, 3 baskets
288R-AEV-TS:	5 shelves, 1 basket
263C-AEV-TS/263C-AXV-TS:	3 shelves, 2 half baskets (R) / 1 shelf 2 baskets (F)

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range °C	PK	Cat. No.
98F-AEV-TS	98	599 x 658 x 850	420 x 440 x 650	0.4	-18 ... -25	1	<b>6.315 197</b>
232F-AEV-TS	232	595 x 640 x 1570	440 x 430 x 1300	1.0	-18 ... -25	1	<b>9.536 239</b>
288R-AEV-TS	288	595 x 634 x 1570	480 x 445 x 1382	0.5	1 ... 11	1	<b>9.536 213</b>
263C-AEV-TS	159 (R) / 109 (F)	545 x 600 x 1680	457 x 450 x 725 (R) / 408 x 415 x 670 (F)	0.9	1 ... 11 / -10 ... -30	1	<b>9.536 219</b>
263C-AXV-TS	159 (R) / 109 (F)	545 x 600 x 1680	457 x 450 x 725 (R) / 408 x 415 x 670 (F)	0.9	1 ... 11 / -12 ... -20	1	<b>6.265 834</b>

(R) refrigerated area, (F) freeze area

**2**

**2 Biomedical freezers FLEXA LFE, up to -25 °C**
**NEW**
*Arctiko*

Freezers with flexible interior, adjustable shelves and high temperature stability.  
Ideal for storing biological and medical samples.

- With natural refrigerant R-290
- Static cooling
- Digital controller
- LED display with touch operation
- Visual/acoustic alarm when door is open
- Alarm at over/under temperature and temperature sensor failure
- Lockable door
- Selectable door stop

**Scope of supply LFE 110:** Freezer, 3 adjustable shelves (2 x regular size, 1 x small), 1 basket

**Scope of supply LFE 360:** Freezer, 5 adjustable shelves (regular size), 1 basket

**Specifications**

Temperature range:	-15 ... -25 °C
Power supply:	230 V, 50/60 Hz

Type	Capacity l	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Energy consumption kWh (24 h)	PK	Cat. No.
LFE 110*	107	460 x 410/230* x 680	600 x 600 x 835	45	1.1	1	<b>4.667 926</b>
LFE 360*	356	440 x 500/311* x 1690	600 x 700 x 1865	97	3.2	1	<b>4.667 927</b>

\* Depth at bottom of device

➔ Accessories - please see page 785.

### 1 Cold box B 30-20, up to -20 °C

Compact desktop cold box for cooling and freezing for all laboratories. Due to the low-noise cooling unit, the cold box can be used directly in the workplace. The space-saving box has an insulating glass pane in the door, so that the cooling material can be observed during freezing.

Fryka-Kältetechnik

- Extremely low noise refrigeration unit
- Microprocessor-controlled with membrane keyboard and easy-to-read LED display
- with natural refrigerant R-1270
- Interior made of high quality stainless steel
- Interior without fittings allows easy cleaning and disinfection
- Bushing (diameter 10 mm), e.g. for temperature monitoring with external sensors
- Lockable door with insulating glass, door frame heating and double magnetic seal with additional lip
- Stackable unit, max. 3 boxes



**Stainless steel shelf B 30-RS:** 4 drawers, each for 4 standard cryoboxes. Drawer size (W x D x H): 300 x 280 x 52 mm. Extra gaps for optimal, uniform and rapid cooling of the entire frozen product (please order separately).

**Specifications**

Temperature range:	-20 to +10 °C
Control accuracy:	±1 K
Capacity:	30 l
Ambient temperature:	+12 to +30 °C
Dimensions, internal (W x D x H):	360 x 350 x 230 mm
Dimensions, external (W x D x H):	530 x 700 x 460 mm
Weight:	42 kg
Power supply:	230 V/50 Hz

Description	PK	Cat. No.
Cold box B 30-20	1	6.284 401
Shelf B 30-RS	1	6.284 405

### High-Performance refrigerators and freezers TSX series

The TSX Series high performance refrigerators and freezers are designed for the storage of media, reagents and other laboratory products. V-drive increases compressor speed to quickly restore temperature after door openings.

Thermo Scientific

- Whisper quiet with a sound level of 52 dBA
- Natural refrigerants (R290)
- Compatible with wireless monitoring systems and remote alarm contacts
- Audible and optical alarm
- GMP Clean Room Class A/ISO 6 (ISO EN 14644-1) compatible with appropriate pre-install preparation
- Four 2" casters, the front two are lockable
- Self-closing door with 90° stop
- Optional chart recorders available

### High performance freezers TSX Series, up to -35 °C

- TSX 5030 FV is equipped with 2 doors
- With auto defrost

Thermo Scientific

**Specifications**

Temperature range:	-35 ... -15 °C
Power supply:	230 V, 50 Hz

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	No. of shelves	PK	Cat. No.
TSX 1230 FV	326	619 x 790 x 1854	508 x 554 x 1331	4	1	4.671 810
TSX 2330 FV	650	711 x 962 x 1994	610 x 723 x 1473	4	1	4.672 628
TSX 3030 FV	827	864 x 962 x 1994	762 x 723 x 1473	4	1	6.312 076
TSX 5030 FV	1447	1435 x 962 x 1994	1334 x 723 x 1473	8	1	4.672 629



4.672 629

**1**


4.672 644

### High-Performance plasma freezers TSX series, up to -35 °C

**NEW**

- With auto defrost
- Meets AABB and FDA requirements for the storage of plasma
- Fully extendable stainless steel drawers
- Standard factory-installed chart recorder

Thermo Scientific

**Specifications**

 Temperaturrange: -35 ... -15 °C  
 Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
TSX 1230 LV	1 door and 7 drawers	326	619 x 790 x 1854	508 x 554 x 1331	1	4.672 643
TSX 2330 LV	1 door and 7 drawers	650	711 x 962 x 1994	610 x 723 x 1473	1	4.672 644
TSX 3030 LV	1 door and 7 drawers	827	864 x 962 x 1994	762 x 723 x 1473	1	4.672 645
TSX 5030 LV	2 doors and 14 drawers	1447	1435 x 962 x 1994	1334 x 724 x 1473	1	4.672 646

**2**


4.672 647

### High-Performance enzyme freezers TSX series, up to -25 °C

**NEW**

- Without auto defrost
- Cold wall convection cooling
- With enzyme bins

Thermo Scientific

**Specifications**

 Temperaturrange: -25 ... -15 °C  
 Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	PK	Cat. No.
TSX 2320 EV	9 shelves, 45 bins	650	711 x 990 x 1994	610 x 723 x 1473	1	4.672 647
TSX 3020 EV	9 shelves, 54 bins	827	864 x 990 x 1994	762 x 723 x 1473	1	4.672 648

**3**


4.672 631

### High-Performance lab refrigerators TSX Series, up to +2 °C

**NEW**

With glass door or solid door.

Thermo Scientific

- Bright, LED interior lighting
- Heat-free defrost for maximum temperature uniformity

**Specifications**

 Temperaturrange: 2 ... 8 °C  
 Power supply: 230 V, 50 Hz

Type	Description	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	No. of shelves	PK	Cat. No.
TSX 1205 GV	With glass door	326	619 x 775 x 1854	508 x 554 x 1331	4	1	4.672 630
TSX 2305 GV	With glass door	650	711 x 962 x 1994	610 x 723 x 1473	4	1	4.672 631
TSX 3005 GV	With glass door	827	864 x 947 x 1994	762 x 723 x 1473	4	1	4.672 632
TSX 4505 GV	With double sliding glass door	1297	1435 x 931 x 1994	1334 x 724 x 1473	8	1	4.672 633
TSX 5005 GV	With 2 glass doors	1447	1435 x 962 x 1994	1334 x 724 x 1473	8	1	4.672 634
TSX 1205 SV	With solid door	326	619 x 790 x 1854	508 x 554 x 1331	4	1	4.672 635
TSX 2305 SV	With solid door	650	711 x 962 x 1994	610 x 723 x 1473	4	1	4.672 636
TSX 3005 SV	With solid door	827	864 x 962 x 1994	762 x 723 x 1473	4	1	4.672 637
TSX 5005 SV	With 2 solid doors	1447	1435 x 962 x 1994	1334 x 724 x 1473	8	1	4.672 638

### 1 Laboratory refrigerators GPS series up to +1 °C

Medium and large capacities designed for routine sample protection. With capacities ranging from space-saving 400 L to spacious 1400 L, our new GPS Series lab refrigerators meet the demands of today's laboratory requirements. All models contain sample protection features designed for the rigorous demands of the laboratory environment.

Thermo Scientific

- With EU plug and UK adapter
- Integrated controller
- Digital temperature display
- High and low temperature alarms
- Standard door locks, lockable
- Standard casters
- Choice of glass or solid door
- Automatic defrost
- Access ports

**Equipment**

R400/R700: 3 shelves  
 R14X: 6 shelves



Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	doors	PK	Cat. No.
R400-SAEV-TS	400	600 x 600 x 1900	480 x 500 x 1150	3.1	1 ... 11	solid	1	9.536 221
R400-GAEV-TS	400	600 x 600 x 1900	480 x 500 x 1150	3.6	1 ... 11	glass	1	9.536 223
R700-SAEV-TS	700	790 x 860 x 1980	600 x 660 x 1300	3.4	1 ... 11	solid	1	9.536 225
R700-GAEV-TS	700	790 x 860 x 1980	600 x 660 x 1300	5.3	1 ... 11	glass	1	9.536 227
R14X-SAEV-TS	1400	1400 x 800 x 1980	1300 x 660 x 1300	2.6	1 ... 11	solid	1	9.536 229
R14X-GAEV-TS	1400	1400 x 800 x 1980	1300 x 660 x 1300	7.7	1 ... 11	glass	1	9.536 231

### 2 Biomedical refrigerators FLEXA LRE/PRE, up to 2 °C

Refrigerators with flexible interior, adjustable shelves and high temperature stability. Ideal for storing biological and medical samples.

Arctiko

- Environmentally friendly refrigerant
- Convection cooling
- Digital controller
- LED display with touch operation
- Visual/acoustic alarm when door is open
- Alarm at over/under temperature and temperature sensor failure
- Lockable door
- Selectable door stop

**LRE models:** With LED interior lighting

**PRE models:** With LED interior lighting and glass doors

**Scope of supply LRE/PRE 120:** Refrigerator, 3 adjustable shelves (2 x regular size, 1 x small), 1 basket

**Scope of supply LRE/PRE 440:** Refrigerator, 5 adjustable shelves (regular size), 1 basket

**Specifications**

Temperature range: 2 ... 8 °C  
 Power supply: 230 V, 50/60 Hz



Type	Capacity l	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Weight kg	Energy consumption kWh (24 h)	PK	Cat. No.
LRE 120*	117	480 x 410/240* x 690	600 x 600 x 835	51	0.9	1	4.667 920
LRE 440*	437	475 x 500/341* x 1723	600 x 700 x 1865	93	1.9	1	4.667 921
PRE 120*	117	480 x 410/240* x 690	600 x 600 x 835	51	1.2	1	4.667 924
PRE 440*	437	475 x 500/365* x 1723	600 x 700 x 1865	105	2.3	1	4.667 925

\* Depth at bottom of device

### Accessories for laboratory refrigerators and freezers LR/LF series

Arctiko

Type	PK	Cat. No.
Stainless steel grid for LF 660-2/700/1400, incl. carrier	1	6.270 299
Plastic grid for LR/LF/LFF/PR/PF 660/700/1400 incl. carrier	1	7.971 172
Plastic grid for LF 300, incl. carrier	1	7.971 324

### Laboratory refrigerators LKv/LKUv and laboratory fridge-freezer LCv, up to 3 °C/-30 °C

Wherever floor space is limited or under-worktop installation is planned, the laboratory refrigerators with Comfort electronic controllers are the ideal solution. The range comprises two freestanding (LKv) and two underworktop (LKUv) laboratory refrigerators, in each case with glass door and solid door versions. The temperature can be set from +3 °C to +8 °C. The forced-air cooling system in conjunction with the precision electronic controller ensures temperature consistency and uniform temperature distribution in the interior. The LCv 4010 laboratory fridge-freezer, which has two separately cooling circuits, further extends the range of compact laboratory appliances.

Liebherr

- Dynamic cooling system
- Precision electronic controller with digital temperature display
- Glass door (..13) with ceiling light (separately switchable)
- Convenient, clear view drawers (LCv 4010)
- Self-closing door with integrated lock

#### Security package:

- Visual and audible temperature and door alarm
- Visual power failure alarm when mains power returns
- Integrated data memory with min/max temperatures
- Volt-free contact for alarm forwarding to an external remote warning system
- RS 485 interface enabling external documentation
- Access port for an external temperature sensor
- Maximum temperature stability and consistency according to IEC 60068-3

Type	Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range max. °C	PK Cat. No.	
						PK	Cat. No.
LKv 3913*	386	601 x 618 x 1840	440 x 435 x 1635	1.315	3 ... 16	1	7.940 344 <b>1</b>
LKv 3910	361	601 x 618 x 1840	440 x 435 x 1635	0.846	3 ... 16	1	6.313 863
LKUv 1613*	152	601 x 618 x 820	440 x 435 x 670	1.010	3 ... 16	1	9.698 699 <b>2</b>
LKUv 1610	142	601 x 618 x 820	440 x 435 x 670	0.747	3 ... 16	1	9.698 680 <b>3</b>
LCv 4010	254/107	601 x 618 x 2000	440 x 441 x 1105 / 433 x 435 x 597	1.8	3 ... 16 / -30 ... -9	1	7.627 795 <b>4</b>

\*Glass door

**1**


7.940 344

**2**


9.698 699

**3**


9.698 680

**4**


7.627 795

**5**


### 5 Refrigerator drawers AluCool® including dividers

H+H System

High quality aluminium drawers including frame on smooth-running wheels with pull-out stop. Includes flexible dividing system with card pockets. Depending on the specific need, the dividing system allows the storage of drugs, blood and plasma with a space saving of up to 30%. With a few simple steps, the flexible dividers are taken out and the drawer can be cleaned easily and hygienically.

#### Typ A:

FKS 1800/1802/2600 /2602/3600/3602; FKU 1800/1805; UKS 1800/1801/2600/2602/3600/3602/3650; FKEx 1800/2600/3600

#### Typ B:

FKUv 1610/1612/1660/1662; LKexv 3910; LKv 3910/3912; LKUexv 1610; LKUv 1610/1612

The AluCool® drawers can be retrofitted at any refrigerator - to save and optimise valuable space.

**Tool-free assembly without damaging the refrigerator interior.**

**Division:** 3 channels with 12 universal dividers. Width of the channels can be changed in 1 cm steps.

Type	Refrigerator internal dimensions (W x D) mm	PK	Cat. No.
A	441 x 513	1	9.698 980
B	435 x 440	1	9.698 981

**1 Pharmacy refrigerators MK, up to +2 °C**

Liebherr pharmaceutical refrigerators compliant with DIN 58345 safely store high-quality preparations and sensitive medications at all times. This is achieved by a combination of precise electronic controls, highly effective insulation, an optimised forced-air cooling system, and premium-quality workmanship.

Liebherr

1



6.283 866

- Maintenance of an operating temperature from +2 °C to +8 °C, visual and audible warning installation for high and low temperature
- Can be used in ambient temperatures from +10 °C to +35 °C
- Noise emission less than 48 dB(A)
- Visual and audible power failure alarm for at least 12 h
- Safety thermostat to avoid temperatures below +2 °C
- Mechanical resistance of internal fittings at least 100 kg/m<sup>2</sup>
- Lockable door optionally made of steel or insulating glass

Type	Capacity	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	Temp. range °C	Weight kg	PK	Cat. No.
MKUv 1610-21	109/142	601 x 618 x 820	440 x 435 x 670	0.747	5	39	1	6.283 386
MKUv 1613-20*	109/152	601 x 618 x 820	440 x 435 x 670	1.010	5	45	1	6.283 865
MKv 3910-21	280/361	601 x 618 x 1840	440 x 435 x 1635	0.846	5	68	1	6.283 694
MKv 3913-20*	278/386	601 x 618 x 1840	440 x 435 x 1635	1.315	5	85	1	6.283 866

\*with insulating glass door with switchable LED illumination

**2 LLG-Laboratory Power Failure Detector**

- Immediate visual and acoustic alarm
- Alarm can sound for short power outages, or for larger periods of at least 12 hours (can be switched off manually).
- Plug safety cover offers protection against accidental disconnection of plug
- Maximum total power of connected devices. 3500W power supply 230V 50Hz
- Suitable for European plugs
- Max. Rating 16 A
- With built-in battery

**Scope of supply:**

- 1 x power failure detector
- 2 x plug safety caps
- 2 x screws

2



Type	PK	Cat. No.
LLG-Laboratory Power Failure Detector	1	6.255 819

**3 4 Spark-free laboratory refrigerators, up to +1 °C**

The German guidelines "Working Safely in Laboratories BG-I 850-0" stipulates that interior space must be explosion-protected where hazardous, explosive atmospheres can develop (for example, due to the presence of flammable liquids). Such explosive atmospheres can be created by stored flammable liquids, for example. The laboratory refrigerators by Lovibond® meet these requirements. The interiors are free from sparking sources and are therefore explosion-proof. With glass shelves. Variable temperature control from +1 °C to 15 °C. Temperature is continuously controlled by thermostat. The digital temperature display enables the interior temperature to be easily read.

Lovibond®

- Spark-free according to BG-I 850-0
- Dynamic cooling system
- 1 °C to 15 °C, continuously adjustable
- Digital temperature display
- High energy efficiency
- Robust materials
- Lockable

3



4

Capacity l	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Weight kg	PK	Cat. No.
160	600 x 600 x 860	513 x 441 x 702	+1 ... +15	41	1	9.699 005
220	600 x 610 x 1250	470 x 440 x 1062*	+1 ... +15	53	1	9.699 006
300	600 x 610 x 1640	470 x 440 x 1452*	+1 ... +15	64	1	9.699 007
490	750 x 730 x 1640	600 x 460 1452*	+1 ... +15	84	1	9.699 008

\* with "fan stop" function, which switches the fan off when the door is opened.





### 1 Spark-free laboratory refrigerators LKexv, up to +1 °C

Laboratory refrigerators with dynamic cooling and spark-free interior. Designed especially for storing explosive and highly flammable substances. The interiors of the LKexv models meet all the safety requirements of the EU Directive 94/9EC (ATEX 95). The appliances excel with a large capacity and rugged design. The cooling temperature is continuously adjustable from +1 °C to +15 °C with the aid of the thermostat integrated in the control panel. Certified according to ATEX 95.

Liebherr



**Features:** Flexible, hygienic interior, Glass shelves, Water tray, Lock, Reversible door hinges.

Type	Capacity Litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Energy consumption kWh (24 h)	PK	Cat. No.
LKexv 2600	240	600 x 610 x 1250	470 x 440 x 1062	0.786	1	6.264 468
LKexv 3600	333	600 x 610 x 1641	470 x 440 x 1452	0.947	1	7.671 880
LKexv 5400	554	750 x 729 x 1640	600 x 560 x 1452	0.983	1	6.262 810

### 2 Spark-free laboratory refrigerators and freezers MediLine with comfort electronic controller, up to 3 °C/-30 °C

Refrigerators and freezers specially designed for the storage of explosive and highly flammable substances. With comfort electronics and spark-free interior. The interiors of the units meet the safety requirements of the EU Directive 94/9/EC (ATEX 95) and are tested by the ATEX conformity assessment body electro-suisse (SEV).

Liebherr



- Precision electronic controller with digital temperature display
- Self-closing door with integrated lock
- Visual and audible temperature and door alarm
- Visual power failure alarm as well as sensor defect alarm
- Integrated data memory with min/max temperatures
- Alarm forwarding to an external remote warning system
- RS 485 Interface for external documentation
- 1-point calibration
- Maximum temperature stability and consistency according to IEC 60068-3
- Access port for an external temperature sensor

#### Cooling units LKexv/LKUexv

- With dynamic cooling system
- Flexible, height-adjustable glass shelves

#### Freezers LGex/LGUex/LCexv

- With static cooling system
- Convenient and comfortable drawers
- Model LCexv 4010 equipped with 2 doors

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Temp. range max. °C	Plug type	PK	Cat. No.
LKexv 3910	601 x 618 x 1840	440 x 435 x 1635	3 ... 16	EU	1	9.698 685 <b>2</b>
LKUexv 1610	601 x 618 x 820	440 x 435 x 670	3 ... 16	EU	1	9.698 682
LGex 3410	601 x 618 x 1840	420 x 400 x 1587	-30 ... -9	EU	1	9.698 691
LGUex 1500	601 x 618 x 820	454 x 450 x 663	-26 ... -9	EU	1	9.698 690
LCexv 4010	601 x 618 x 2003	440 x 441 x 1105 / 433 x 433 x 597	3 ... 16 / -30 ... -9	EU	1	9.698 677

1



2



9.698 685