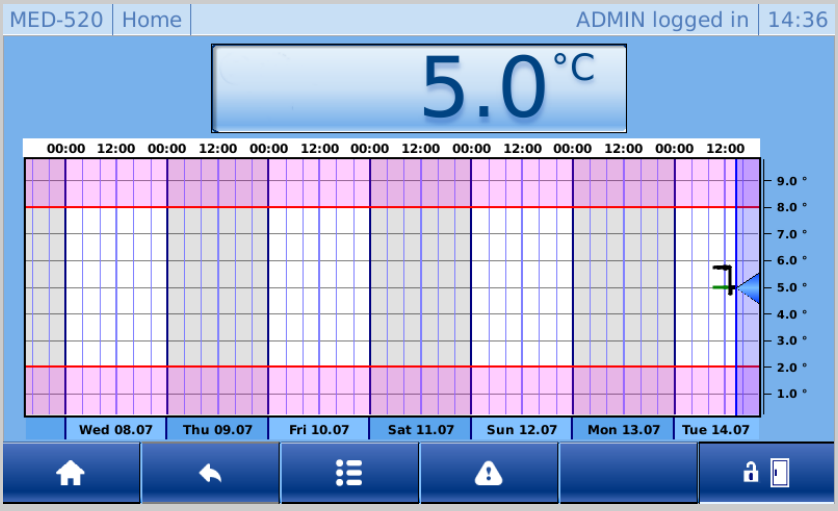
Additional instructions ULTIMATE to the operating instructions for BL/LABO/LABEX/MED



Kirsch
Made in Germany. Since 1865.

Philipp KIRSCH GmbH
Im Lossenfeld 14
77731 Willstätt-Sand GERMANY
Telephon: +49 781 9227-0
Fax: +49 781 9227-200
Email: info@KIRSCH-medical.de
Internet: www.KIRSCH-medical.de

Additional instructions ULTIMATE to the operating instructions for BL/LABO/LABEX/MED Version 1.0 2020,ENG_GB

About this instruction manual

These instruction has been created as a supplement for the "ULTIMATE" product line and describe solely specific functions and properties of the “ULTIMATE user interface”. For all other functions, please refer to the respective, enclosed operating instructions of the device.

Persons who work with the unit must carefully read and understand this instruction manual before any work begins. To ensure safe working conditions, all specified safety warnings and instructions in this instruction manual must be respected.

In addition, special owner obligations may apply.

Keeping the manual

This instruction manual makes it possible to handle the unit safely and efficiently. This instruction manual is part of the unit; it must be kept in the immediate vicinity of the unit and be accessible to staff at all times.

Target audiences

This instruction manual is designed to provide information to the following target audiences:

- Owner of the unit
- Users of the unit

For the technical customer service (reffered to as “Service”) a separate service manual is available

Models

This additional manual is valid for the following units:

Model	Factory number from
BL 300 ULTIMATE	280 73 25000 / 280 83 25000
BL 520 ULTIMATE	500 72 25000 / 500 82 25000
BL 720 ULTIMATE	700 72 25000 / 700 82 25000
FROSTER BL 330 ULTIMATE	320 82 25000
FROSTER BL 530 ULTIMATE	500 86 25000
FROSTER BL 730 ULTIMATE	700 86 25000
LABEX 288 ULTIMATE	280 72 25000 / 280 82 25000
LABEX 340 ULTIMATE	340 72 25000 / 340 82 25000
LABEX 468 ULTIMATE	460 72 25000 / 460 82 25000
LABEX 520 ULTIMATE	500 73 25000 / 500 83 25000
LABEX 720 ULTIMATE	700 73 25000 / 700 83 25000
FROSTER LABEX 330 ULTIMATE	320 81 25000
FROSTER LABEX 530 ULTIMATE	500 85 25000
FROSTER LABEX 730 ULTIMATE	700 85 25000
LABO 288 ULTIMATE	280 70 25000 / 280 80 25000
LABO 340 ULTIMATE	340 70 25000 / 340 80 25000

Model	Factory number from
LABO 468 ULTIMATE	460 70 25000 / 460 80 25000
LABO 520 ULTIMATE	500 70 25000 / 500 80 25000
LABO 720 ULTIMATE	700 70 25000 / 700 80 25000
LABO 720 CHROMAT ULTIMATE	700 74 25000 / 700 87 25000
FROSTER LABO 330 ULTIMATE	320 80 25000
FROSTER LABO 530 ULTIMATE	500 84 25000
FROSTER LABO-730 ULTIMATE	700 84 25000
MED-288 ULTIMATE	280 71 25000 / 280 81 25000
MED-340 ULTIMATE	330 71 25000 / 330 81 25000
MED-468 ULTIMATE	460 71 25000 / 460 81 25000
MED-520 ULTIMATE	500 71 25000 / 500 81 25000
MED-720 ULTIMATE	700 71 25000 / 700 81 25000

Illustrations

Illustrations in this manual are designed as an aid to basic comprehension and may deviate from the version at hand.

Manufacturer's address

Manufacturer	Philipp Kirsch GmbH
Address	Im Lossenfeld 14
	77731 Willstätt-Sand
	GERMANY
Telephone	+49 781 9227-0
Fax	+49 781 9227-200
Email	info@kirsch-medical.de
Internet	www.kirsch-medical.de

Geschäftszeiten:

- Monday to Thursday: 8:00 am to 12:15 pm, 1:15 pm to 4:30 pm
- Friday: 8:00 am to 12:00 pm, 1:00 pm to 4:00 pm

Service contact

Service department	Philipp Kirsch GmbH
Address	Im Lossenfeld 14
	77731 Willstätt-Sand
	GERMANY
Telephone	+49 781 9227-777
Fax	+49 781 9227-200
Email	support@kirsch-medical.de
Internet	www.kirsch-medical.de

Orders are accepted during business hours.

More information

If you have questions or comments regarding this instruction manual or the unit, please contact your authorised regional specialist dealer or contact KIRSCH directly.

Table of contents

1 Product description

1.1 Unit overview

(example))

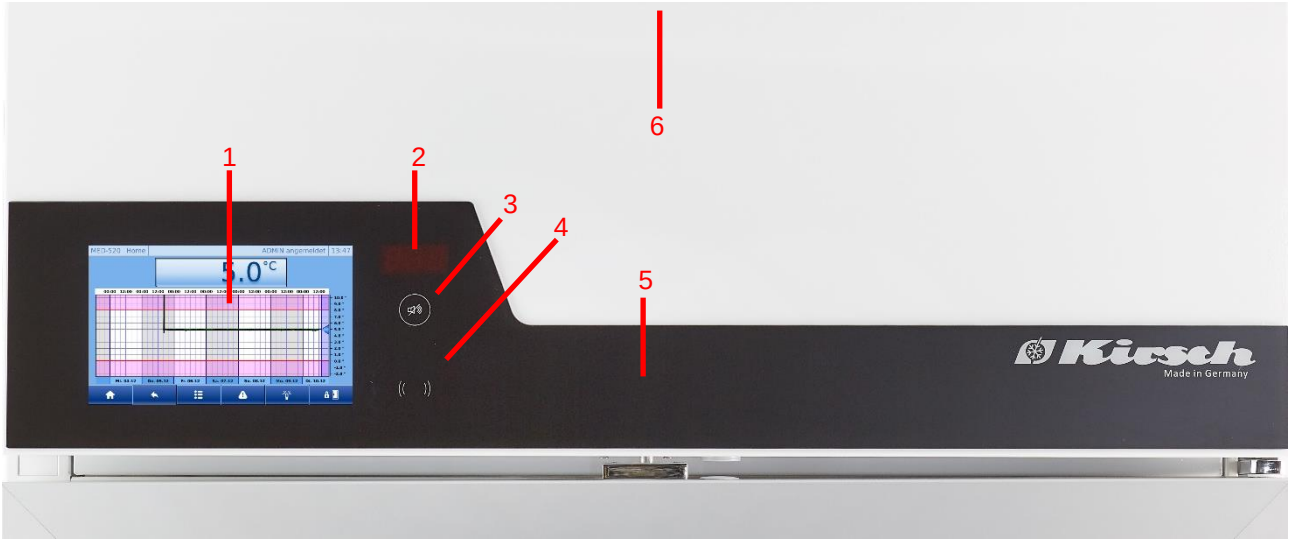


Illustration 1: ULTIMATE control unit

1. ULTIMATE user interface
2. Segment display
3. RESET- button
4. RFID sensor
5. Electronic door lock
6. USB- interface

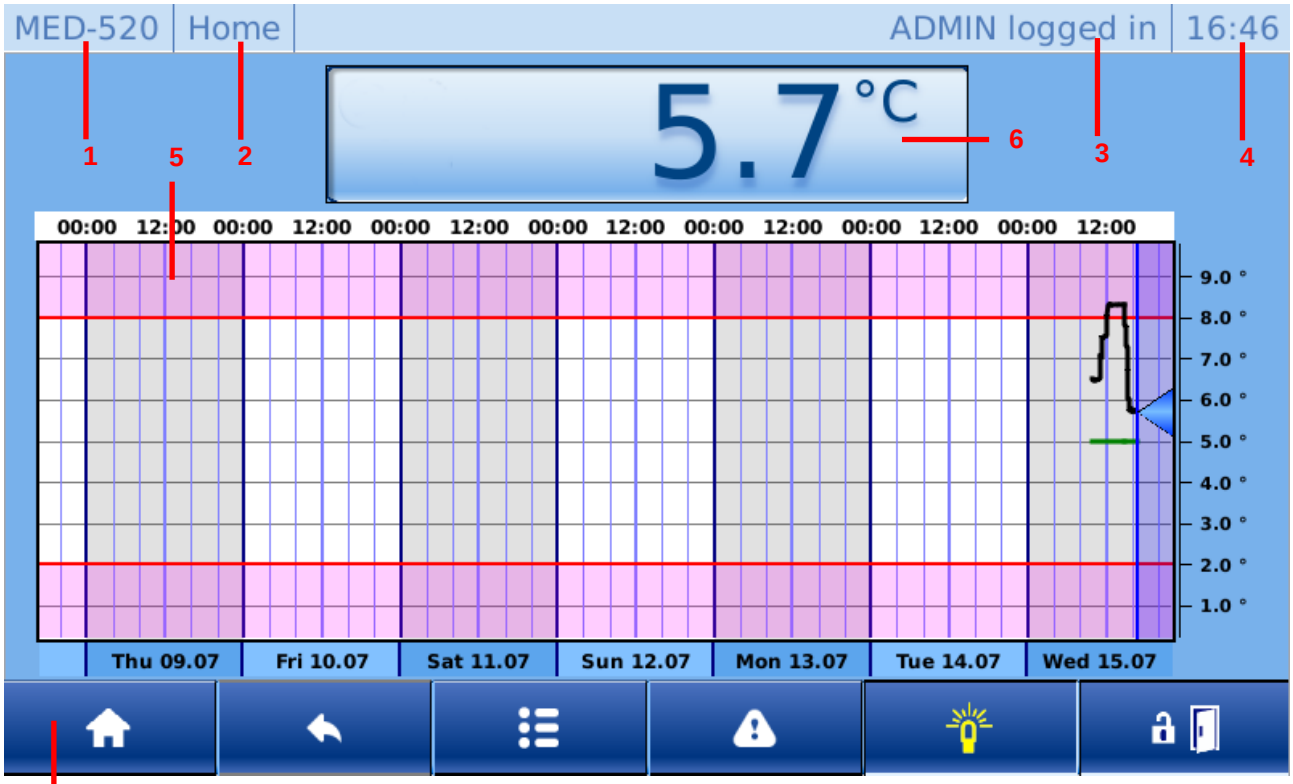
➔ 280 to 460 litres at the rear of the attachment

➔ from 500 litres in the attachment on the front side

1.2 Display and operating elements

1.2.1 Structure of the display and control unit

Illustration 2: ULTIMATE user interface



1. Device type
2. Screen name
3. Current user
4. Current time
5. Temperature curve
6. Temperature and status display
7. Control panel

1.2.2 Functions of the temperature and status display

Table 1: Different modes of operation

Status display	Definition	Description
	Standby mode	Device in standby mode. To switch off the unit completely, pull the mains plug.
	Cooling machine on	Status is displayed when function is active in the unit.
	Air convection on	
	Defrost on	
	Superfrost on	
	Actual value of the device	Current temperature of the unit.
	Error/warning display ↳ *Chapter 8.1 „Alarm functions“ on page 62.*	Appears when there is a malfunction/warning alternating with the current temperature.
	Min-Max Temperature Overview ↳ *Chapter 4.3 „ Calling up the min-max display “ “ on page 38.*	Display of the last temperature above or below the current temperature.

1.2.3 Menu structure

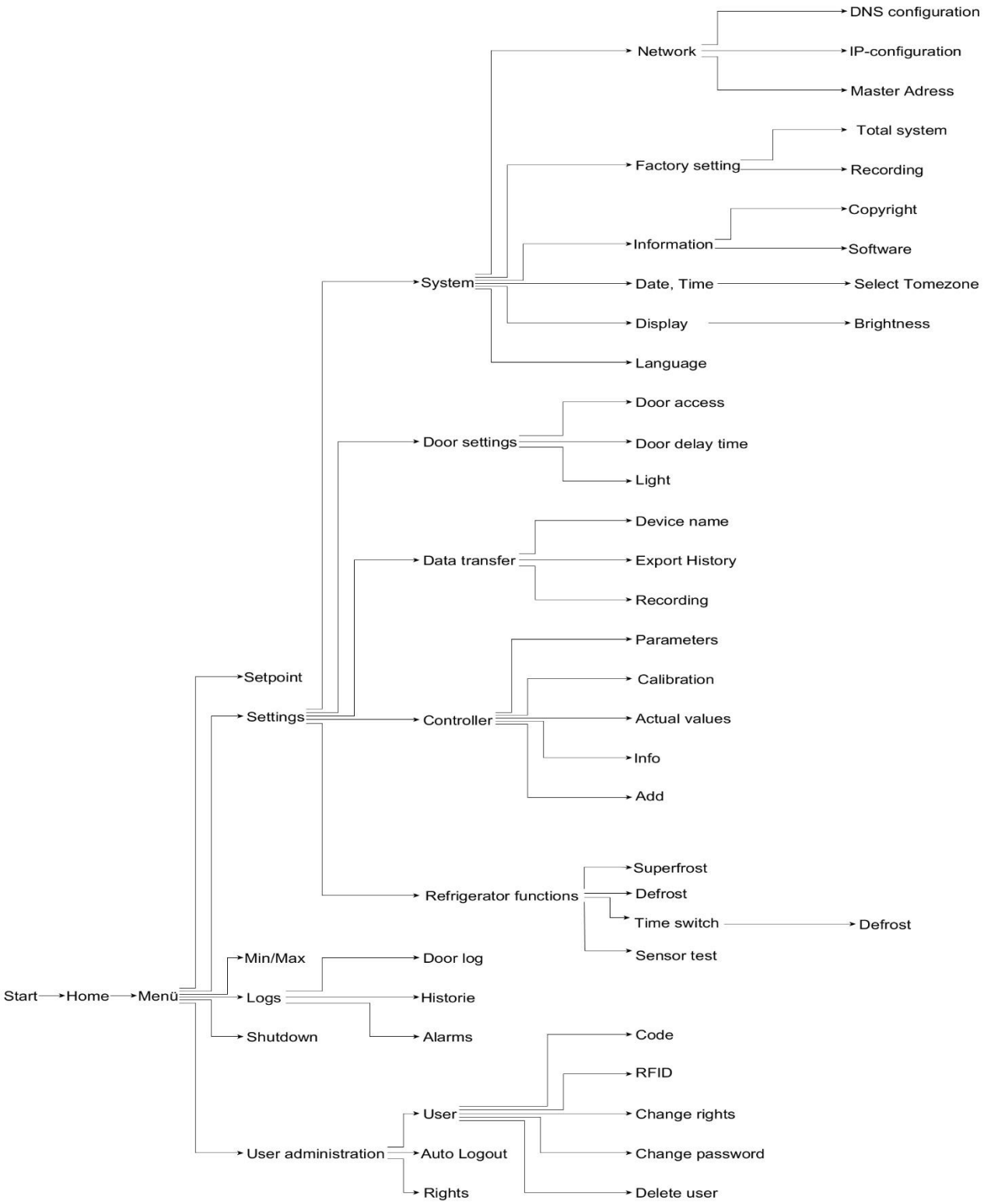


Illustration 3: Menüstruktur

1.2.4 Functions Control bar

Table 2: All buttons for the ULTIMATE user interface

Button	Definition	Function
	Home	Calls up home screen.
	Back	Goes back one screen.
	Acknowledgement	Deactivates buzzer.
	Log out	Log off the active user.
	Basic rights	Lists the rights when no user is logged in.
	Guest rights	Listing of the authorizations when logging in with guest rights.
	User rights	Listing of the authorizations when logging in with user rights.
	Admin rights	Listing of the permissions when logging in with admin rights.
	Delete/Cancel	Combo button: Depending on the dialog box, the key stands for delete or cancel.
	Menu	Call the main menu.
	Start	Start probe test process.
	Stop	Stop probe test process.
	List Up	Navigate list upwards.
	Alarm	Call up the current alarm.
	Add	Add user or defrost timer depending on the dialog box.
	Liste Down	Move list downwards.

Button	Definition	Function
	Right	Navigate right.
	Left	Navigate left.
	End of list	Navigate to the end of the list.
	Start of list	Navigate to the top of the list.
	Light on	Combo button: Display light switched off. Switch light on.
	Light off	Combo button: Light on indicator. Switch off light.
	Confirm	Confirm change.
	Current alarm	Call up current alarm.
	Alarm History	Call up alarm history.
	Time zone	Set Time Zone.
	Door open	Combo button: Door closed indicator. Door open. ↳ *Chapter 4.6 „Door open“ on page 39.*
	Door close	Door open indicator.

1.3 Scope of delivery

Lockable unit door

The unit is fitted with a lockable unit door.

Keys included in delivery

Depending on the unit components, the following keys are included in delivery:

- 2 x RFID transponder (for lockable unit door)

1.4 Interfaces

The unit is equipped with the following interface for connecting additional units (hereafter referred to as “modules”) for monitoring and documenting the temperature:

Table 3: Interfaces

Interface	Module
LAN interface	PC-KIT-NET
USB port	Service interface
Potential-free alarm contact	Remote warning system (for example GSM-MODUL or connection to building control system (see circuit diagram on unit)

Connect only compatible USB flash drives!

Connect only modules with the following properties to the USB port:

- *Maximum memory capacity of 32 GB*
- *Formatted in FAT-32 format*

Remove USB flash drive after use!

The USB flash drive must not remain permanently in the unit.

- *Remove USB flash drive after the data transfer is completed*

1.5 Unit functions

1.5.1 Defrosting

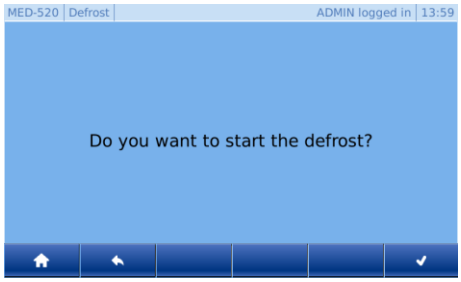
1.5.1.1 Automatic defrosting

The unit defrosts automatically every 12 hours.

Automatic defrosting is time and temperature-controlled.

During automatic defrosting, the system ensures that the unit maintains the target temperature value. When defrosting is active, the defrost symbol is shown in the temperature and function display.

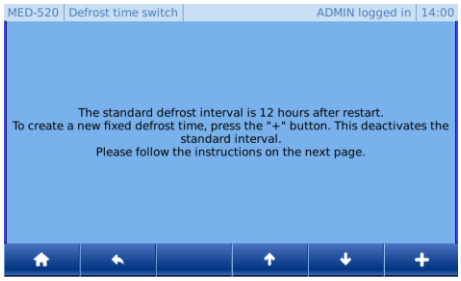
1.5.1.2 Additional defrosting



In addition to automatic defrosting, it is possible to start the defrosting process manually.

To start manual defrost, please follow the instructions in ↳ Chapter 4.11.1 „Activate manual defrost“ on page 49.

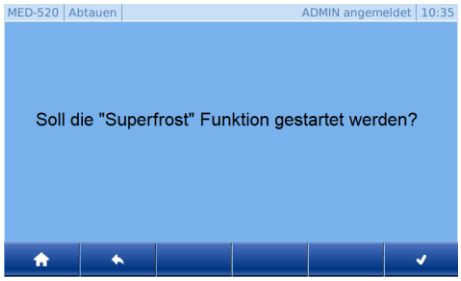
1.5.1.3 Defrost timer



Automatic defrost can be set by the user to specific days and times. The function Defrost timer is used for this. When the user chooses to use this function, automatic defrosting (every 12 hours) will be disabled.

To start the defrost timer, please follow ↳ Chapter 4.11.2 „Defrost timer" on page 49.

1.5.2 Superfrost



By activating the "Superfrost" function, the refrigerator reaches the lowest possible temperature inside.

The "Superfrost" function can only be activated with FROSTER ULTIMATE.

To start the Superfrost function, please follow ↳Chapter 4.11.3 „Superfrost activation" on page 50.

1.5.3 Temperature and status display

1.5.3.1 Temperatur display

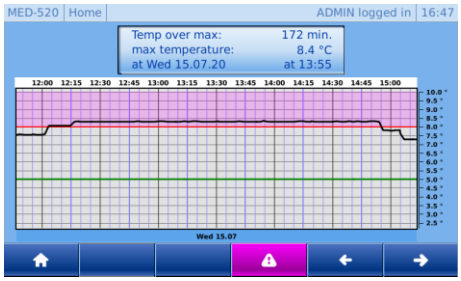
The temperature is shown on the display in the home screen of the ULTIMATE user interface.

The Display indicates the temperature of the chilled goods.

The temperature display does not indicate the current air temperature of the interior.

The alarm function and the temperature warning limits are based on the temperature of the chilled goods as shown on the Display.

1.5.3.2 Min-Max-display



The min-max display is intended to show the most important points for the user as quickly as possible in the event of an error.

- Above Max: Length of time the temperature exceeds the warning limit
- Max. Temperature: Highest/lowest temperature of the chilled goods
- Day, time: Time when warning limit was exceeded

The last time the warning limit was exceeded is always displayed. If there are several exceedances, you can navigate between them using the arrow keys.

To start the min-max display, please follow Chapter 4.3 „Activating the min-max display" on page 38.

1.5.4 Temperature memory

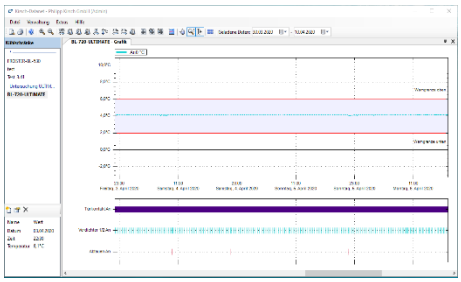
The temperature memory records the maximum and minimum temperature values reached during operation.

The temperature memory begins recording when the target temperature is reached or, at the latest, after two hours of operation.

Info: Function only available for admin or user with assigned authorization.↳ Chapter 4.10.1 „User Login“ on page 44.

The temperature memory can be retrieved and deleted manually see ↳ Chapter 4.4 "Retrieving the temperature memory" on page 38.

1.5.5 Temperature documentation



The temperature memory of the unit record the maximum and minimum temperature values and the behaviour of the refrigerator (door openings, faults...).

PC-KIT-NET is the easiest method of automatic temperature documentation.

The data transfer is performed via LAN. Even while the data are read out, the temperatures is constantly documented.

For constant temperature monitoring, the unit can be equipped with temperature documentation via the network ↳ Chapter 4.8 “ Data transfer PC-KIT-NET ” on page 41.

1.5.6 Battery

The battery powers the temperature monitoring for up to 30 hours in the event of a power failure.

Temperature monitoring ensures that the temperature curve is stored and the temperature alarm is triggered if necessary.

The battery charges during normal operation and is monitored by an automatic charging system.

Technical data for the battery:

- 6 V, 4 Ah

The battery does not supply the ULTIMATE user interface!

The battery only supplies power to the temperature monitoring system. The battery does not guarantee the operation of the ULTIMATE user interface or the maintenance of the interior temperature.

The temperature curve of the user interface is updated after the power failure has been rectified.

1.5.7 Interior lighting

Interior lighting (optional)

The unit is optionally equipped with interior lighting.

The interior lighting automatically switches on when the door is opened and switches off when the door is closed.

In units with a glass door, the interior lighting can be permanently switched on or off with the *[Light on]* button.

1.5.8 Access control

The following options exist for access control:

- Access control via RFID
- Access control by numerical code

1.5.8.1 Access control via RFID

The unit is equipped with RFID access control as standard.

To use the function, the user must be assigned an RFID transponder.

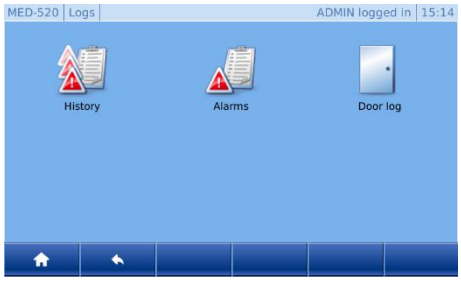
Chapter 4.10.7 „Adding RFID to USER“ on page 46.

1.5.8.2 Access control by code

The device is equipped with a code access control as standard.

*To use this function, the user must be assigned a numerical code.**Chapter 4.10.9 "Creating a user code" on page 47.*

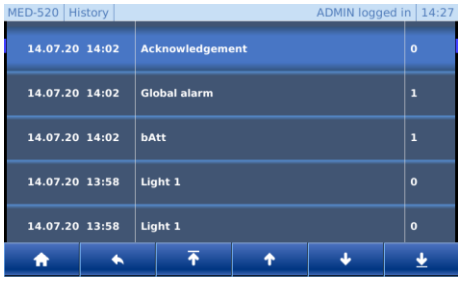
1.5.9 Logs



The device is equipped as standard with logging of the following points:

- History
- Alarms
- Door log

1.5.9.1 History



All states and changes of the device and the ULTIMATE user interface are logged here.

To access the status history, please follow *Chapter 4.9.1 " Opening History" on page 43!*

1.5.9.2 Alarms

All alarms are logged here, with a distinction being made between current and historical alarms.

As long as the cause of the alarm has not been eliminated, the alarm remains in the current memory.

Only when the current alarm has been eliminated and is no longer present will it be moved to the history.

Alarm description

An alarm description is stored with each alarm, allowing the user to quickly see the most important points at a glance:

A solution to the error is always offered.

The points of the alarm description include:

- Cause
- Date
- Alarm duration
- Maximum temperature
- Current temperature
- Solution

To access the alarm history, please follow ↳ Chapter 4.9.2 " Opening alarms" on page 43.

1.5.9.3 Door Log

The door log records the user, date of opening and the duration of door opening.

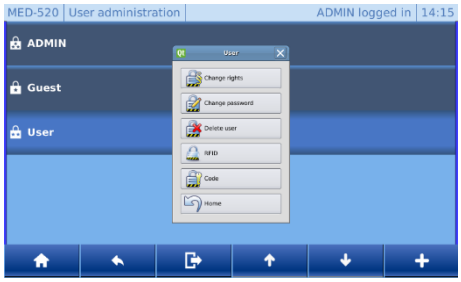
To be able to log the door openings, the users must be assigned code / RFID.

For the assignment, please ↳ Chapter 4.10.7 „Adding RFID to USER“ on page 46.

To view the door logs, please follow ↳ Chapter 4.9.3 "Opening door logs" on page 43.

1.5.10 User administration

1.5.10.1 User



Notice!

User / rights and Auto-Logout can only be created/changed by the admin or users with admin authorization!

If no user is logged in, this menu is used exclusively for logging in an existing user. Other functions are deactivated.

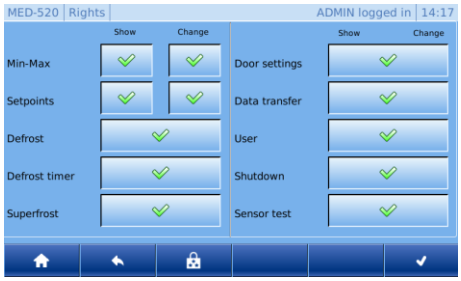
It is possible to create several users and assign them different rights/functions.

To use the user administration functions, please follow ↳ Chapter 4.10. "User Administration" on page 44.

The functions are:

- Create user
- Delete user
- Edit User
- Change user rights
- Change user password
- Add RFID transponder to a user
- Delete a user's RFID transponder
- Add Code to a User
- Delete a user's code

1.5.10.2 Rights



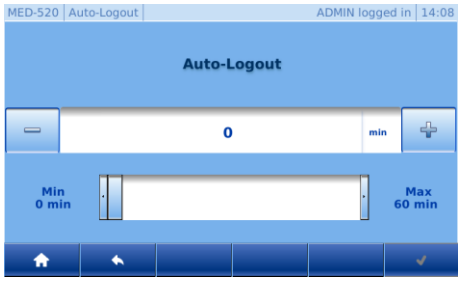
For each user group, authorizations are stored by default. These can be individualised for the respective user groups on request.

Please note that in case of wrong assignment of rights, unauthorized persons can also make important settings/changes to the device.

To change the rights of the users, please follow ↳ Chapter 4.10.11 " Changing Rights Management" on page 48.

Symbols	Description
	Listing of permissions when no user is logged in.
	Listing of the permissions when logging in with guest rights.
	Listing of the permissions when logging in with user rights.
	Listing of the permissions when logging in with admin rights.

1.5.10.3 Auto-Logout



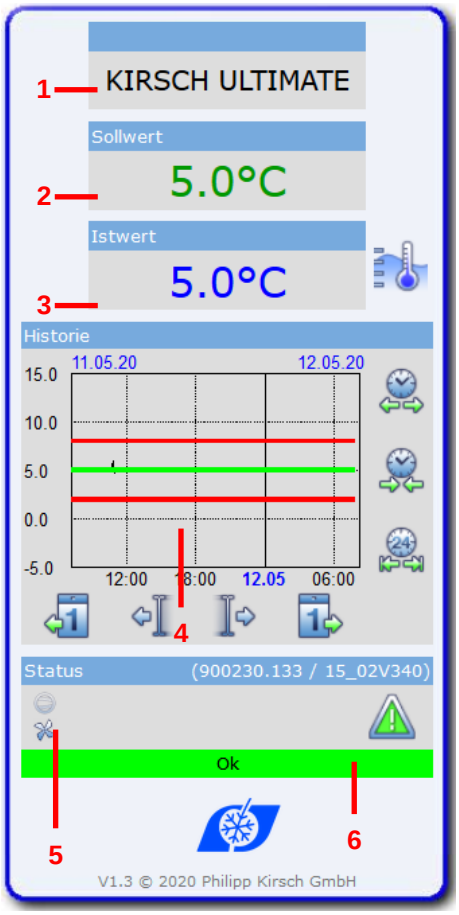
Auto-Logout defines the time after which the user interface returns to the home screen without interaction and then logs off the user.

Factory setting: 5 minutes

With the setting 0 minutes, the Auto-Logout function is deactivated and the home screen must be called up manually after each interaction.

To change the Auto-Logout time, please follow the instructions in Chapter 4.10.12 "Changing the Auto-Logout Time" on page 49.

1.5.11 Web interface



The unit has the function to retrieve the following device data web-based:

1. Unit name
2. Nominal temperature
3. Current temperature
4. Temperature graph
5. Status display refrigerator
6. Status refrigerator

2 Safety

This section provides an overview of all important safety aspects relating to the ULTIMATE user interface.

Further safety aspects for optimum protection of patients and personnel as well as for safe and trouble-free use of the device can be found in the respective enclosed operating instructions for the unit.

Non-observance of the handling instructions and safety instructions listed in these additional instructions can lead to considerable hazards.

2.1 Symbols in this instruction manual

Safety instructions

Safety instructions are marked with symbols in this instruction manual. Safety instructions are initiated by signal words that express the degree of risk.

In order to avoid accidents, injury and damage and ensure maximum patient safety, always comply with safety instructions and act with care.

DANGER!

This combination of symbol and signal word indicatesan immediately hazardous situation that will
lead to death or serious injury unless avoided.

WARNING!

This combination of symbol and signal word indicates a potentially hazardous situation that can lead to death or serious injury unless avoided.

CAUTION!

This combination of symbol and signal word indicates a potentially hazardous situation that can lead to minor or slight injury unless avoided.

NOTICE!

This combination of symbol and signal word indicates a potentially hazardous situation that can lead to property damage or environmental damage unless avoided.

Hints and recommendations

This symbol highlights useful hints and recommendations as well as information for efficient and trouble-free use of the unit.

Other markings

Mark	Explanation
1.	Step-by-step instructions
⇨	Results of actions
	References to sections in this instruction manual
■	Lists without a specified order
	References to the instruction manuals for accessories and optional parts

2.2 Residual risks

2.2.1 Plugged USB stick

WARNING!

Danger from permanently inserted USB stick!

If a USB stick is permanently inserted, malfunctions or even a functional failure of the device may occur and the stored refrigerated goods may be damaged or destroyed.

- The USB stick may only be inserted for reading/exporting data and must be removed immediately afterwards.

2.2.2 Power failure

CAUTION!

Danger of material damage and personal injury due to missing power supply!

In the event of a power failure, the battery supplies power only to the warning device and the segment display.

The ULTIMATE user interface is not supplied with power. The cooling unit is switched off, which can damage or destroy the goods to be cooled.

- Ensure that the unit is protected against power failure (e.g. by an uninterruptible power supply).
- After a power failure, ensure that the refrigeration unit is supplied with power again.
- If necessary, transfer the refrigerated goods, Chapter 9.2 "Emergency unlocking" on page 67 and inform the service department.

2.3 Staff qualification

WARNING!

Danger of damage and injury due to commissioning by unqualified staff!

Incorrectly performed commissioning by unqualifiedstaff, can result in serious damage to the chilled goods ,which in turn can seriously harm the patients.

- All activities should only be carried out by qualified personnel.
- Keep unauthorized persons away from the work area.

Staff qualifications

Medical products may in principle be set up, operated, used and maintained only by persons who have the necessary training or skills and experience. Medical devices are all BL and FROSTER BL.

The refrigerators/freezers LABO/LABEX/MED are not medical products!

This manual specifies the staff qualifications for various fields of activity as listed below:

User

The user is the person who uses and operates the unit according to its intended purpose. The unit may only be used and operated by trained specialist staff.

The user has been instructed how to correctly (from the technical point of view) and safely use of the unit in accordance with the relevant laws and ordinances.

Unit officer

The unit officer is the person who is nominated for this task by the owner of the unit and has received instruction on their duties.

Enter the name of the unit officer and the date of instruction in the medical product book and confirm with your signature.

The unit officer meets the following requirements:

- The unit officer knows the intended purpose, the foreseeable misuse and the residual risks of the unit.
- The unit officer is familiar with the instruction manual and all other safety-related documents.
- The unit officer has been instructed in the technically correct and safe handling of the unit.

The unit officer performs the following tasks:

- The unit officer instructs users in how to handle the unit.

Inspector

The inspector is responsible for the safety inspection according to the Medical Devices Operator Ordinance.

They are allowed to perform these tasks only if they have the necessary qualifications and independence:

- They must have the training, skills and practical experience to ensure that the safety inspections are performed correctly.
- They must not be subject to any direction as regards the inspection activity.
- They must have suitable measuring and testing equipment.

Example of suitable Inspector: Trained medical technicians.

The inspector must provide proof of their qualification upon request by the responsible authority.

System/network administrator (recommended)

The system/network administrator has the training, IT skills and experience required to set up the system requirements and working environment, including all technical equipment, to enable the software to be used.

The system/network administrator performs the following duties:

- Installing KIRSCH-DATANET
- Integrating the unit in the network

The system/network administrator has been authorised by the owner to manage the users of the software and to make adjustments to the software settings.

General staff qualification requirements

Staff members must be persons who can be expected to perform their work reliably. Persons whose reactions are impaired, e.g. by drugs, alcohol or medication, are not permitted.

When choosing employees, the age- and occupation-specific regulations applicable at the place of use must be respected.

3 Commissioning

Personnel: ■ Unit officer

3.1 Activities during commissioning

Commissioning sequence

WARNING!

Danger of damage and injury due to commissioning by unqualified staff!

Incorrectly performed commissioning by unqualifiedstaff, can result in serious damage to the chilled goods,which in turn can seriously harm the patients.

- Have all tasks performed only by staff qualified for those tasks.
- Keep unauthorised persons away from the working area.

The commissioning of the "ULTIMATE" product line differs from other product lines in two points:

- First configuration
- Unit programming

For all other aspects of commissioning, please refer to the enclosed operating instructions of the device.

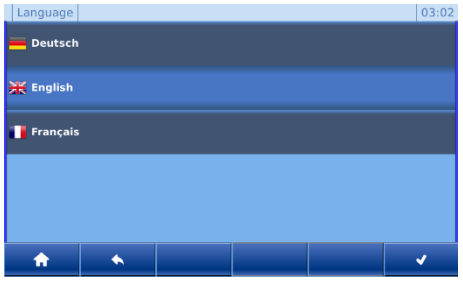
The commissioning of the "ULTIMATE" product line consists of the following activities:

1. Clean and disinfect the inside of the unit. ↳Chapter 8 "Cleaning and disinfection" in the enclosed instructions for use.
2. First configuration of the unit ↳ Chapter 3.2 "First configuration of the unit" on page 28.
3. Unit programming ↳Chapter 3.3 "Programming the unit" on page 31.
4. Wait until the target temperature is reached.
5. Stock the unit ↳ Chapter 7.5 "Stock the unit" in the enclosed Operating Instructions.
6. Instruct the unit officer (only for BL and FROSTER BL) ↳ Chapter 6.3 "Instruction and unit handover" in the enclosed Operating Instructions.

3.2 First configuration of the unit

In the first configuration the set values can be changed afterwards.

1. To start the initial configuration, press the *[Confirm]* button.

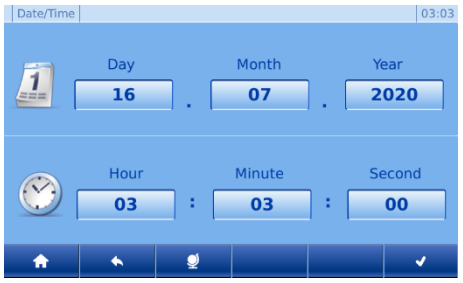


Default language is German and does not need to be selected explicitly.

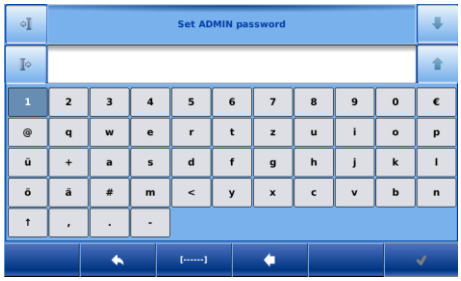
2. Select language and press *[Confirm]* button.

Default time zone Europe/Berlin is set and need not be selected explicitly.

3. Select time zone and press *[Confirm]* button.



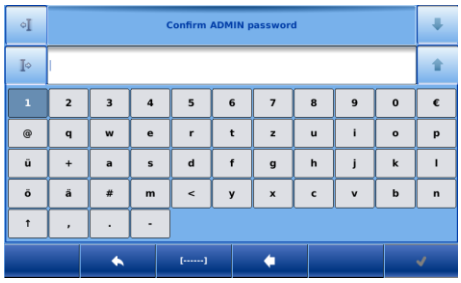
4. Select the date/time and press the *[Confirm]* button.



NOTICE!

Admin password cannot be recovered by KIRSCH. If the password is lost, the device can only be reset to the factory settings by KIRSCH. The device will then lose all stored data. Therefore please keep the admin password in a safe place.

5. Enter the Admin Password and press *[Confirm]* button.



6. Verify Admin Password and press *[Confirm]* button.

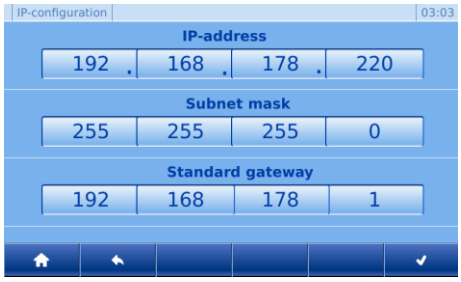


Tabelle 4: Factory settings TCP/IP

IP address unit	192.168.0.101
Subnet mask	255.255.255.0
IP address default gateway	192.168.0.200

If several devices are to be put into operation, the following applies:

Only connect one device at a time to the network and close the network connection at the PC.

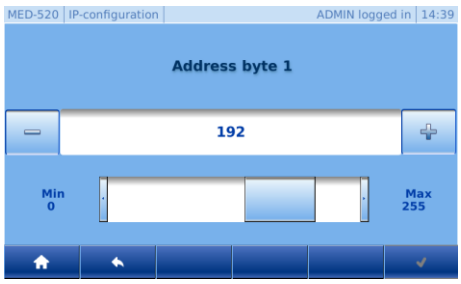
The IP address of the unit and the IP address of the default gateway must be configured in the same address range.

For temperature monitoring via the network, the KIRSCH-DATANET software (version 5.1 or higher) must be installed (complete installation and connection instructions are included with PC-KIT-NET).

Each device requires its own IP address, which is not yet used in your local network.

The factory default IP address is: 192.168.0.101

7. Default values can be changed by selecting the address value to be changed.

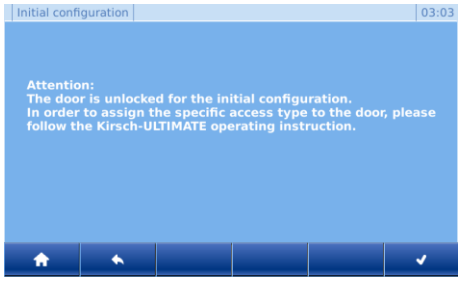


8. Value can be adjusted using the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment). (See figure on the left).

9. Press *[Confirm]* button.

10. Repeat steps 6 - 10 for all further changes.

11. Attention: Press *[Confirm]* button again to accept the changes. Otherwise, the changes will be lost.



12. To complete the first configuration, press the *[Confirm]* button.

Door access types ↳ Chapter 4.12.2 " Setting door access types" on page 51.

3.3 Programming the unit

Ensure only authorised personnel have access to the key

NOTICE!

Danger due to faulty programming!

The user password is used to access the programming functions of the unit. Programming that is not suitable for the goods to be cooled can lead to damage to the goods.

- Have programming performed by qualified employees.
- Logout from the ULTIMATE user interface after programming Chapter 4.10.2 " Logout user" on page 44.
- Never pass on third parties your password.
- Do not operate the device with a logged user.

3.3.1 Target temperature

3.3.1.1 Function of the target temperature

The target temperature specifies the temperature at which the unit is operated to store the chilled goods in optimal conditions.

The target temperature of the unit is preset by KIRSCH.

NOTICE!

The following applies to BL units:

The preset value of the target temperature is in accordance with the unit-specific standards. Do not modify the target value.

Changes to the target value do not change the temperature warning limits. These are adjusted manually Chapter *3.3.1.2* “Displaying and changing the target temperature” on page 32.

3.3.1.2 Displaying and changing the target temperature

Changes must be performed by qualified employees

WARNING!

Danger of material damage and personal injury when commissioning by unqualified personnel!

Improper commissioning by unqualified personnel can cause considerable damage to the refrigerated goods, which can result in serious personal injury to the patient.

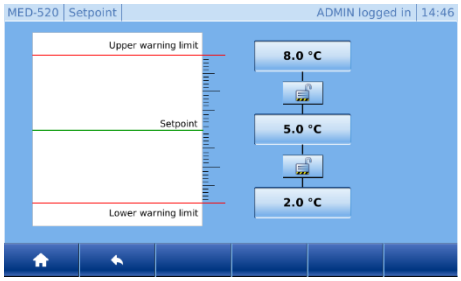
- All activities should only be carried out by qualified personnel.
- Keep unauthorized persons away from the work area

Displaying target temperature

1. Press *[Menu]* button.

2. Press *[Setpoint]* icon.

➔ The actual setpoint temperature is displayed.



Changing target temperatur

1. Login ↳ Chapter 4.10.2 „ User Login“ on page 44.

NOTICE!

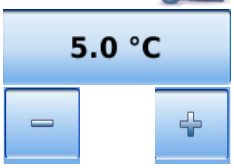
Danger due to faulty programming!

The user password is used to access the programming functions of the unit. Programming that is not suitable for the goods to be cooled can lead to damage to the goods.

- Have programming performed by qualified employees.
- Logout from the ULTIMATE user interface after programming ↳ Chapter 4.10.2 " Logout user" on page 44.
- Never pass on third parties your password.
- Do not operate the device with a logged user.

2. Press *[Menu]* button.

3. Press *[Setpoint]* icon.



4. *Press [Setpoint].*

5. Setpoint can be adjusted using the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment).

6. *Press [Confirm] button.*
   ➔ The unit regulates the temperature to the specified setpoint.

> ***Observe the temperature curve!***
>
> *The device does not reach the new setpoint immediately after the change.*
> *Observe the temperature curve on the display or via optional temperature documentation (e.g. KIRSCH-PC-KIT).*

7. Press *[Home]* button to exit.

8. Read the current temperature and observe the further temperature development until the set temperature is reached.

> ***Sequences of the changed target temperatur***
>
> *As soon as the set temperature is reached, the temperature warning limits must be set so that the set temperature is above or below the set temperature. Otherwise the temperature alarm is triggered ↳Chapter 6.2.2.2 "Displaying and changing temperature warning limits".*
>
> *on page 45.*
>
> *The set target temperature is saved automatically. The target temperature is retained after a power failure or when the unit is switched off.*

9. When the unit has reached the set temperature, charge the unit.

3.3.2 Temperature warning limits

3.3.2.1 Function of the temperature warning limits

The temperature warning limits define how much deviation the unit will tolerate between the actual temperature and the target temperature. The temperature warning limits are unit-specific. They can be adapted to the requirements of the chilled goods. The values for the temperature warning limits are set at the factory and comply with the valid DIN standards for the unit.

Recommended temperature warning limits

The temperature warning limits can not be the same as the target temperature.

For ULTIMATE blood bank refrigerators, set the temperature limits as follows (do not apply to the freezers):

- *Upper temperature warning limit: at least 2 °C higher than the target temperature*
- *Lower temperature warning limit: at least 2 °C lower than the target temperature*

For other ULTIMATE devices, set the temperature limits as follows (does not apply to FROSTER)

- *Upper temperature warning limit: at least 3 °C higher than the target temperature*
- *Lower temperature warning limit: at least 3 °C lower than the set temperature*

Table 1: Temperaturwarngrenzen aller ULTIMATE-Modelle

Model	Lower temperature warning limit	Target temperature	Upper temperature warning limit
BL 300 ULTIMATE	+ 2° C	+ 4° C	+ 6° C
BL 520 ULTIMATE			
BL 720 ULTIMATE			
FROSTER BL 330 ULTIMATE	- 55° C	- 32° C	- 27° C
FROSTER BL 530 ULTIMATE			
FROSTER BL 730 ULTIMATE			
LABEX 288 ULTIMATE	+ 2° C	+ 5° C	+ 8° C
LABEX 340 ULTIMATE			
LABEX 468 ULTIMATE			
LABEX 520 ULTIMATE			
LABEX 720 ULTIMATE			
FROSTER LABEX 330 ULTIMATE	- 55° C	- 25° C	- 15° C
FROSTER LABEX 530 ULTIMATE			
FROSTER LABEX 730 ULTIMATE			
LABO 288 ULTIMATE	+ 2° C	+ 5° C	+ 8° C
LABO 340 ULTIMATE			
LABO 468 ULTIMATE			
LABO 520 ULTIMATE			
LABO 720 ULTIMATE			
LABO 720 CHROMAT ULTIMATE			

Model	Lower temperature warning limit	Target temperature	Upper temperature warning limit
FROSTER LABO 330 ULTIMATE	- 55° C	- 25° C	- 15° C
FROSTER LABO 530 ULTIMATE			
FROSTER LABO 730 ULTIMATE			
FROSTER LABO 730 ULTIMATE			
MED 288 ULTIMATE	+ 2° C	+ 5° C	+ 8° C
MED 340 ULTIMATE			
MED 468 ULTIMATE			
MED 520 ULTIMATE			
MED 720 ULTIMATE			

3.3.2.2 Displaying and changing the temperature warning limits

Displaying the temperature warning limits

1. Press *[Menu]* button.

2. Press *[Setpoint]* icon.
   ➔ The set temperature warning limits are displayed.

3. Press *[Home]* button to exit.

Changing the temperature warning limits

Recommended temperature warning limits

The temperature warning limits can not be the same as the target temperature.

For ULTIMATE blood bank refrigerators, set the temperature limits as follows (do not apply to the-freezers):

- *Upper temperature warning limit: at least 2 °C higher than the target temperature*
- *Lower temperature warning limit: at least 2 °C lower than the target temperature*

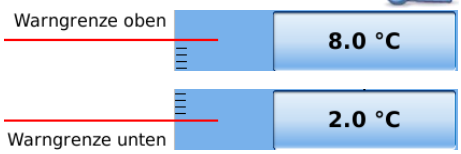
For other ULTIMATE devices, set the temperature limits as follows (does not apply to FROSTER)

- *Upper temperature warning limit: at least 3 °C higher than the target temperature*
- *Lower temperature warning limit: at least 3 °C lower than the set temperature*

1. Login ↳ Chapter 4.10.2 „ User Login“ on page 44.

2. Press *[Menu]* button.

3. Press *[Setpoint]* icon.



4. Press lower or upper temperature warning limits.

5. Temperature warning limit can be adjusted using the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment).

6. *Press [Confirm] button.*

7. Press *[Home]* button to exit.

The temperature warning limits are maintained after a power failure or when the unit is switched off.

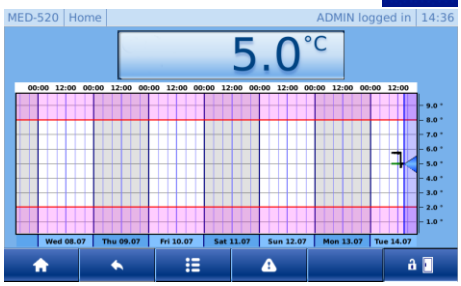
4 Operation

Personal: ■ Anwender

4.1 Switching on the unit

1. Press *[Switch on]* icon.
2. Enter switch-on code *[1865]*.

3. *Press [Confirm] button.*



4. ULTIMATE user interface is displayed.
5. Check target temperature and adjust if necessary ↳ *Chapter 4.3.1.2 [Displaying and changing the target temperature] on page 41*.

> ***Lead time of the temperature alarm!***
>
> *The temperature alarm is active at the earliest when the target temperature is reached, and at the latest after two hours of unit operation.*

6. Stock the unit when the target temperature is reached.

> ***The door is stiff when it is first opened***
>
> *Cooling creates a vacuum in the interior, so you may require additional force when opening the door for the first time.*

4.2 Switching off the unit

> **NOTICE!**
>
> The device can only be shut down by the admin and user groups with the "Shutdown" permission ↳ Chapter 4.10.11 "Changing Rights Management" on page 48.

> **NOTICE!**
>
> Door can only be opened via the emergency release when the system is switched off. Unlock the door before switching off, see ↳Chapter 4.12.2 "Define door access types" on page 51.

1. Log in (see Chapter 4.10.1 [User log in] on page 44.)

2. Press *[Menu]* button.

3. Press *[Shutdown]* icon.

4. Press *[Confirmation]* button.

5. The display shows the *[Power On]* icon.

Stocked unit can only be switched off for short periods!

To protect the chilled goods, only switch the stocked unit off for short periods.

To shut down the unit for a longer period, proceed as described in Chapter 5.1 „Final decommissioning of the unit“ on page 38.

4.3 Calling up the min-max display

1. Hold down *[Temperature display]* for at least 4 seconds.
2. Drop *[Temperature display]*.
3. Min-Max-display appears.

4. To exit, press the *[Home]* button.

4.4 Calling up the temperature memory

1. Press *[Menu]* button.

2. Press *[Min-Max]* icon.

3. Min-Max-display appears.

4. Press *[Home]* button to exit.

4.5 Deleting the temperature memory

1. Press *[Menu]* button.

2. Press *[Min-Max]* icon.

3. Min-Max-display appears.

4. Press [Delete] button.
5. Updated values are displayed.

6. Press *[Home]* button to exit.

4.6 Open door

Open door with Code

To open the door, please assign the code to the user first.

↳Chapter 4.10.10 "Creating a user code" on page 48.

1. In the Home screen, press the *[Door open]* button.

2. Please enter Code.

3. *Press [Confirm] button.*
   - ➔ Lock bolt moves up. User is welcomed by the device.
   - ➔ Door can be opened.

If the door is not opened, the lock bolt closes after the door delay time. This can be changed in ↳Chapter 4.12.3 "Changing the door delay time" on page 52.

A default door delay time of 5 seconds is set in the factory settings!

4. When the door is opened, the door opening symbol changes.

Open door with RFID

To open the door, please assign RFID transponder to the user first.

↳Chapter 4.10.7 "Creating an RFID user" on page 46.

1. Hold the RFID transponder to the RFID sensor.
   - ➔ Lock bolt moves up. User is welcomed by the device.
   - ➔ Door can be opened.

If the door is not opened, the lock bolt closes after the door delay time. This can be changed in ↳Chapter 4.12.3 "Changing the door delay time" on page 52.

A default door delay time of 5 seconds is set in the factory settings!

2. When the door is opened, the door opening symbol changes.

4.7 Light on / off

1. Press the *[Light on]* button on the Home screen.

   ➔ Light switches on.

2. In the Home screen, the light is displayed by pressing the *[Light off]* key.
3. Press the *[Light off]* button on the Home screen.

   ➔ Light switched off.

4.8 Datentransfer PC-KIT-NET

This function is only available for admin or users with the appropriate rights.
Chapter 4.10.1 "Logging on Users" on page 44.

Setting must only be made if the IP configuration was skipped during the first configuration.

Table 5: Factory setting

IP adress unit	192.168.0.101
Subnet mask	255.255.255.0
IP adress default gateway	192.168.0.200

If several devices are to be put into operation, the following applies:

Only connect one device at a time to the network and close the network connection at the PC.

The IP address of the unit and the IP address of the default gateway must be configured in the same address range.

For temperature monitoring via the network, the KIRSCH-DATANET software (version 5.1 or higher) must be installed (complete installation and connection instructions are included with PC-KIT-NET).

Each device requires its own IP address, which is not yet used in your local network.

The factory default IP address is: 192.168.0.101

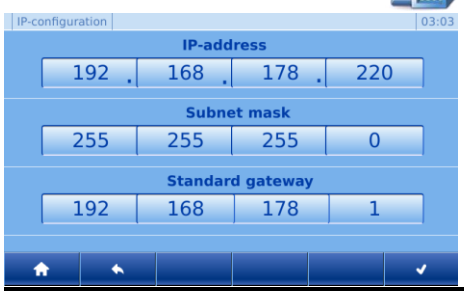
1. Press *[Menu]* button.

2. Press *[Settings]* icon.

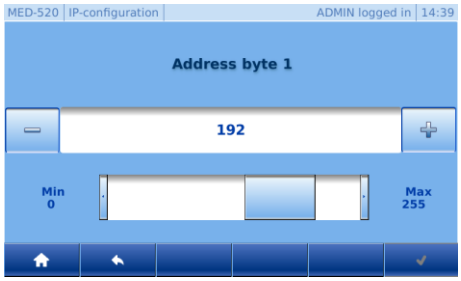
3. Press *[System]* icon.

4. Press *[Network]* icon.

5. Press *[IP configuration]* icon.



6. Preset values can be changed by selecting them. (See figure on the left).



7. Value can be adjusted using the *[Minus]* and *[Plus]* keys (fine adjustment) and scroll bar (coarse adjustment). (See figure on the left).

8. *Press [Confirm] button.*

9. Repeat steps 6 - 10 for all further changes.

10. Attention: Press *[Confirm]* button again to accept the changes. Otherwise, the changes will be lost.

11. Press *[Home]* button to exit.

4.9 Logs

4.9.1 Calling up history

All statuses and changes of the device and the ULTIMATE user interface are logged in the history.

1. Press *[Menu]* button.

2. Press *[Logs]* icon

3. Press *[History] icon*.

4. Press *[Home]* button to exit.

4.9.2 Calling up Alarms

All alarms are logged in the alarm history.

1. Press *[Menu]* button.

2. Press *[Logs]* icon

3. Press *[Alarms]* icon.

4. For an exact alarm description please click on the alarm.

5. Press *[Home]* button to exit.

4.9.3 Calling up Door log

1. Press *[Menu]* button.

2. Press *[Logs]* icon

3. Press *[Door log]* .

4. To exit, press the *[Home]* button.

4.10 User administration

4.10.1 Login user

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.
5. Enter password.

6. *Press [Confirm] button.*

7. Press *[Home]* button to exit.

4.10.2 Logout user

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Press *[Logout]* button.

5. To exit, press the *[Home]* button.

4.10.3 Add user

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Press *[Add]* button.

5. Define user name and press *[Confirm]* button.

6. Define a password for this user and press *[Confirm]* button.

7. Define user rights and press *[Confirm]* button.

If no definition is provided, guest rights are automatically selected.

8. Press *[Home]* button to exit.

4.10.4 Change user rights

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.

5. Press *[Change rights]* field.

6. Define user rights and press *[Confirm]* button.

If no definition is provided, guest rights are automatically selected.

7. Press *[Home]* button to exit.

4.10.5 Change user password

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.

5. Press *[Change password]* field.

6. Define a password for this user and press *[Confirm]* button.

7. Press *[Home]* button to exit.

NOTICE!

After the change, the password can no longer be viewed because it is stored in encrypted form on the device. Please remember the password well or create a new password in case of emergency.

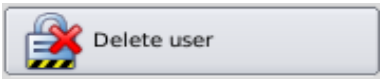
4.10.6 Delete user

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.



5. Press *[Delete user]* field.
6. User is deleted.

NOTICE!

The user and all associated settings are irrevocably deleted and cannot be restored.

7. Press *[Home]* button to exit.

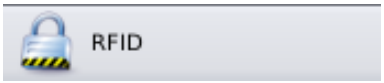
4.10.7 Create user RFID

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.



5. Feld *[RFID]* drücken.

6. Hold the RFID transponder in front of the RFID sensor until you hear the confirmation tone and the symbol on the screen lights up green. The number of the RFID transponder also appears.
7. *Press [Confirm] button.*

8. Press *[Home]* button to exit.

Only RFID transponders authorised by KIRSCH may be used.

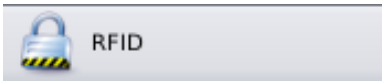
4.10.8 Delete user RFID

1. Press *[Menu]* button.

2. Press *[User management]* icon.

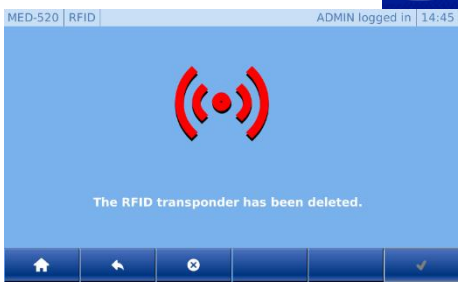
3. Press *[User]* icon.

4. Select preferred user.



5. Feld *[RFID]* drücken.

6. Press *[Delete/Cancel]* button.



7. The icon on the screen turns red and confirmation text appears.

8. Press *[Home]* button to exit.

4.10.9 Create user Code

1. Press *[Menu]* button.

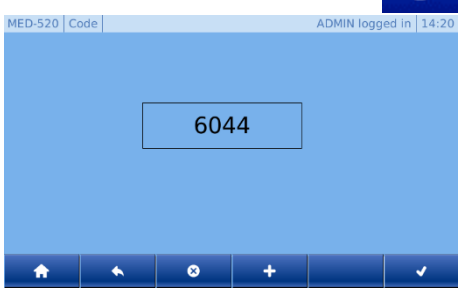
2. Press *[User management]* icon.

3. Press *[User]* icon.

4. Select preferred user.

5. Press [Code] field.

6. Press *[Add]* button.



7. Code generated automatically.

8. *Press [Confirm] button.*

9. Press *[Home]* button to exit.

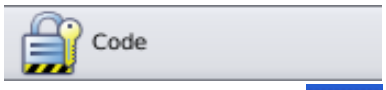
4.10.10 Delete user code

1. Press *[Menu]* button.

2. Press *[User management]* icon.

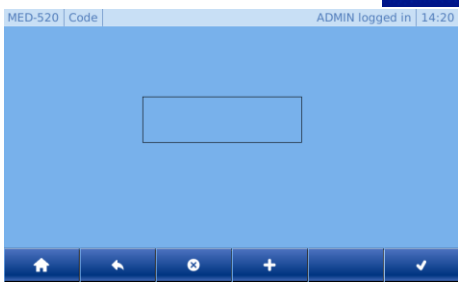
3. Press *[User]* icon.

4. Select preferred user.



5. Press *[Code]* field.

6. Press the Delete/Cancel button.



7. Field Code is cleared.

8. *Press [Confirm] button.*

9. Press *[Home]* button to exit.

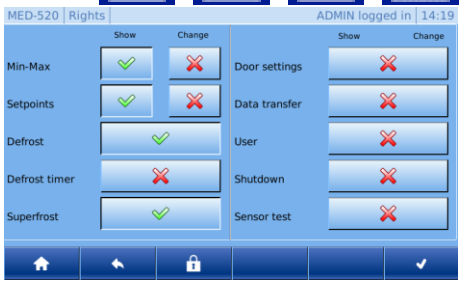
4.10.11 Change rights management

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[Right]* icon.

4. Select the desired user group in the control bar.



5. Rights for the selected user group are displayed.

6. To change the rights for the desired function, select or deselect Right.

7. *Press [Confirm] button.*

8. Press *[Home]* button to exit.

4.10.12 Change Auto-Logout time

1. Press *[Menu]* button.

2. Press *[User management]* icon.

3. Press *[Right]* icon.


4. Auto logout time can be adjusted with the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment).

> *Attention: With the setting 0 minutes the Auto-Logout function is deactivated and the home screen must be called up manually after each interaction.*

5. *Press [Confirm] button.*

6. Press *[Home]* button to exit.

4.11 Refrigerator functions

4.11.1 Activate manual defrost

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Refrigerator functions]* icon.

4. Press *[Defrost]* icon.

5. Confirm additional defrost by pressing the *[Confirm]* button.

6. Press *[Home]* button to exit.

4.11.2 Defrost timer

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Refrigerator functions]* icon.

4. Press [Time switch] icon.

5. Press *[Defrost]* icon.

6. Follow instructions on the screen.

7. Press *[Home]* button to exit.

4.11.3 Activate Superfrost

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Refrigerator functions]* icon.

4. Press *[Superfrost]* icon.

> *The "Superfrost" function can only be activated with FROSTER ULTIMATE (exception: FROSTER BL).*

5. Press *[Confirm]* button to activate Superfrost.

6. Press *[Home]* button to exit.

4.12 Door settings

4.12.1 Set light delay time (Option)

> *The light function defines how long the light remains switched on after the door is closed.*

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Door settings]* icon.

4. Press *[Light]* icon.


5. Light delay time can be adjusted using the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment).

6. Press *[Confirm]* button.

7. Press *[Home]* button to exit.

4.12.2 Select door access types

NOTICE!

The acces door type can only be changed by the admin and user groups with the authorisation for "Select door access type" Chapter 4.10.1 "Login User" on page 44.

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Door settings]* icon.

4. Press *[Door access]* icon.

5. Value can be adjusted using the *[Minus]* and *[Plus]* keys (fine adjustment) and scroll bar (coarse adjustment). You can choose between the various settings:
   - Always unlocked

NOTICE!

If the access "Always unlocked" is selected, the door is permanently open and the content of the device is unprotected.

   - Code
   - RFID
   - RFID+Code
   - Locked

NOTICE!

If the access "Locked" is selected, the door opening is switched off by Code or RFID. To switch the function back on, "Door access" must be set to Code, RFID or combination RFID+Code.

6. Press *[Confirm]* button.

7. Press *[Home]* button to exit.

4.12.3 Set door delay time

The door delay time defines the time after which the locking of the door is activated after closing.

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Door settings]* icon.

4. Press *[Door delay timet]* icon.

5. Door delay time can be adjusted with the *[Minus]* and *[Plus]* buttons (fine adjustment) and scroll bar (coarse adjustment).

6. Press *[Confirm]* button.

7. Press *[Home]* button to exit.

4.13 System settings

4.13.1 Network IP configuration

See ↳ *Chapter 4.8 "Data transfer PC-KIT-NET" on page 42.*

4.13.2 Factory settings

You can remove data from the ULTIMATE device by resetting it to the factory settings.

ATTENTION!

Resetting to factory settings will delete all settings and data from your device. The data cannot be restored later.

NOTICE!

If you want to reset a device in order to correct an error, we recommend to call the KIRSCH service first.

4.13.2.1 Factory settings total system

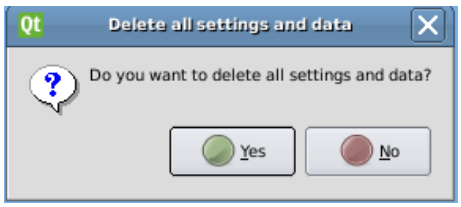
1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Factory settings]* icon.

5. Press *[Toatal System]* icon.



6. Confirm the screen instruction with *[Yes]*. (See figure on the left).
7. A message box appears indicating that the device must be restarted to reset to factory settings. Confirm this with [Ok].
8. Unit reboots. This process takes about 1-2 minutes.
9. A controller search must be carried out again to reinitialize the system.

10. *Press [Confirm] button.*
11. Controller search is carried out.

NOTICE!

There must always be 3 controllers (controller / door lock / RFID) found. Otherwise there is a malfunction in which case you should contact customer service immediately.

12. When 3 controllers have been found, press the *[Confirm]* button.

13. Note field appears. Press *[Confirmation]* button again.
14. Perform first configuration ↳ Chapter 3.2 " First configuration" on page 28.

4.13.2.2 Factory settings Recording

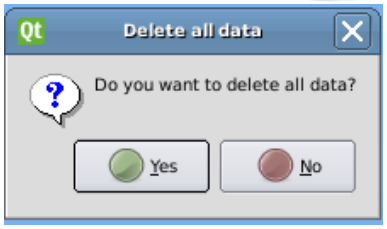
1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Factory settings]* icon.

5. Press *[Recording]* icon.



6. Confirm the screen instruction with *[Yes]*. (See figure on the left).
7. A message box appears indicating that the device must be restarted to reset the recordings. Confirm this with [Ok].

NOTICE!

The home screen takes about 2-3 minutes to completely reinitialize itself. Please do not interact during this time.

8. After restarting, the home screen appears again.

4.13.3 Change display brightness

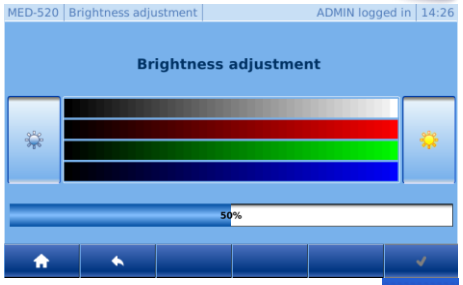
1. Press *[Menu]* button.

2. Press *[Settings]* icon

3. Press *[System]* icon.

4. Press *[Display]* icon.

5. Press *[Brightness]* icon.



6. The brightness can be decreased by pressing the *[Left]* button or increased by pressing the *[Right]* button.

   Factory settings: 50 %

7. Press the *[Confirm]* button to change the brightness.

8. Press *[Home]* button to exit.

4.13.4 Change time zone/date/time

4.13.4.1 Change time zone

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Date, Time]* icon.

5. Press *[Time zone]* button.

6. First, a rough geographical selection must be made on the left-hand side of the screen using the *[List Up]* and *[List Down]* buttons. In the right part of the *screen*, the list of all associated cities/islands is now automatically displayed.

7. Now press in the right part of the screen, and then use the *[List Up]* and *[List Down]* buttons to make the desired setting.

8. Press *[Confirm]* button.

9. Press *[Home]* button to exit.

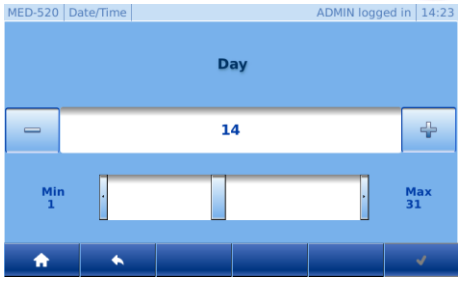
4.13.4.2 Change Date/Time

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press [Date, Time] icon.



5. Preset values can be changed by pressing e.g.: of the day.

6. Value can be adjusted using the *[Minus]* and *[Plus]* keys (fine adjustment) and scroll bar (coarse adjustment). (See figure on the left).

NOTICE!

If you change the date/time setting, the existing data acquisition is overwritten. This data cannot be restored by KIRSCH.

7. *Press [Confirm] button.*

8. Repeat steps 6 - 10 for all further changes.

NOTICE!

To accept the changes, press Confirm again. Otherwise, the changes will be lost.

9. Press *[Home]* button to exit.

4.13.5 Hardware and software information

4.13.5.1 Software

Information on the hardware and software of the ULTIMATE user interface:

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Information]* icon.

5. Press *[Software]* icon.

6. Information table appears:
   - ➔ Model (hardware model)
   - ➔ Identification number
   - ➔ Version (software version number)
   - ➔ Serial number (hardware serial number)
   - ➔ UUID (Universally Unique Identifier Identification)
   - ➔ Project

7. Press *[Home]* button to exit.

4.13.5.2 Copyright overview

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Information]* icon.

5. Press *[Copyright]* icon.

6. Copyright overview:

7. Press *[Home]* button to exit.

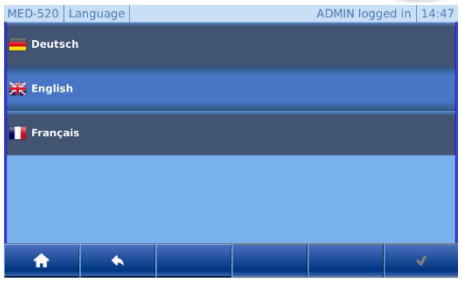
4.13.6 Change Language

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[System]* icon.

4. Press *[Language]* icon.



5. Select language:
   - ➔ German
   - ➔ English
   - ➔ French

6. *Press [Confirm] button.*

7. Press *[Home]* button to exit.

4.14 Controller settings

NOTICE!

The controller settings can only be changed by the admin.

NOTICE!

Changes to the controller settings can have a massive effect on the normal operation of the unit and may only be changed by trained personnel or with the help of the KIRSCH telephone service.

If changes are made by untrained personnel or without the help of KIRSCH's telephone service, the warranty for this unit expires.

The item "controller setting" is only described in the service manual, as it is not relevant for normal operation.

4.15 Web interface

4.15.1 Calling Web Interface

NOTICE!

This function can only be used if the device has been assigned an IP address.

The IP address must be within the internal IP address range of the local network.

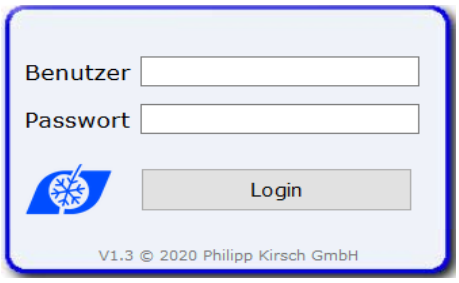
1. Please open your web browser.
2. Enter the IP address of the equipment in the address bar of the web browser, followed by "/mobile/".

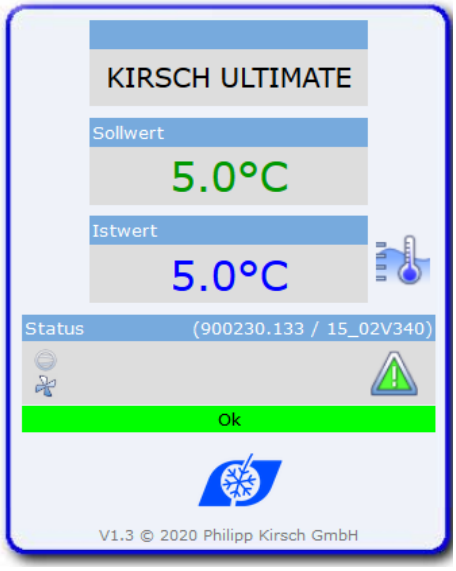
   For the standard IP address of the unit, the entry is as follows: 192.168.0.101/mobile/
3. Confirm entry.
4. The access is protected by a password. (See figure on the left).

   Enter user name and password

   ➔ Username: ADMIN

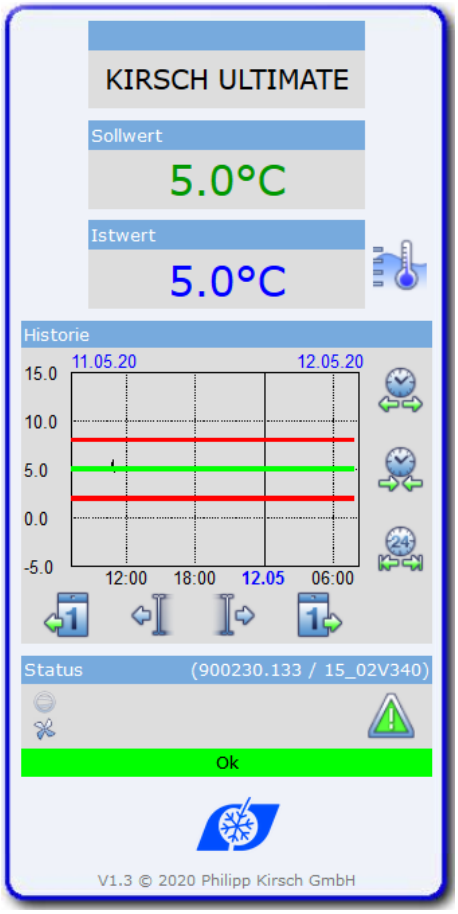
   ➔ Passwort: Assigned by the admin when the device is first put into operation.





5. After successful login the overview screen appears.

4.15.2 Web interface Functional description



NOTICE!

The web interface functions purely as a display. No settings can be changed on the device.

Icon	Description
	Status fan on (if icon is animated)
	Status compressor on (if icon animated)
	Status defrosting on (if icon animated)
	Status Superfrost on (if icon animated)
	Alarm active / inactive
	Door opened
	Open/close history
	1 day forward/backward
	Stepwise forward/backward
	Zooming out the X-axis
	Zooming in the X-axis
	Increment of the X-axis to 24h

5 Decommissioning

5.1 Final decommissioning of the unit

NOTICE!
Attention: The unit can only be shut down by the admin and user groups with the "Shut down" permission.

1. Login (see ↳ Chapter 4.10.1 [Login user] on page 44).
2. Leave the unit door open to prevent the formation of odours and mould. ↳ Chapter 4.6 "Door open" on page 39.

3. Press *[Menu]* button.

4. Press *[Shutdown]* icon.

5. Press *[Confirm]* button.
6. Unplug power plug.

5.2 Putting the unit back into operation

Clean and disinfect the unit before putting it back into operation ↳ Chapter 6 "Cleaning and disinfection" in the enclosed instructions for use.

1. Plug in power plug.

2. Press *[Switch on]* icon.
3. Enter code *[1865]*.

4. Press *[Confirmation]* button.
5. Check target temperature and adjust if necessary.

   ↳ *Chapter 3.3.1.2 „*Displaying and changing the target temperature*“ on page 32.*

Lead time of the temperature alarm!
The temperature alarm is active at the earliest when the target temperature is reached, and at the latest after two hours of unit operation.

6. When the unit has reached its target temperature, place the chilled goods in the unit.

6 Cleaning and disinfection

NOTICE!

This chapter deals exclusively with the cleaning and disinfection of the ULTIMATE user interface.

For cleaning and disinfecting the unit, please refer to the respective enclosed instructions for use.

NOTICE!

Cleaning and disinfection of the user interface can be carried out while the device is in operation. However, no user should be logged in to avoid unintentional changes.

Suitable disinfectants

The disinfectants listed in the following table have been tested by KIRSCH at the factory.

Adhere to the instruction manuals of the relevant manufacturers.

Disinfectants	Manufacturer
Incidin liquid	Ecolab Deutschland GmbH
Mikrozid AF liquid	Schülke & Mayr GmbH
Bacillol 30 Foam	Bode Chemie GmbH

NOTICE!

Using other disinfectants

If disinfectants other than those mentioned above are used, test them at an inconspicuous location before their first use.

Use only acid-free disinfectants.

If in doubt, contact KIRSCH.

7 Maintenance

NOTICE!

This chapter deals exclusively with the temperature alarm testing of devices with ULTIMATE user interface.

For maintenance of the device, please refer to the respective enclosed instructions for use.

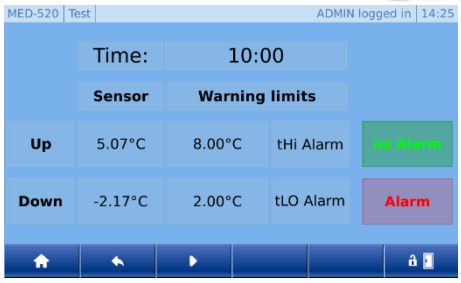
Testing the temperature alarm

1. Press *[Menu]* button.

2. Press *[Settings]* icon.

3. Press *[Refrigerator functions]* icon.

4. Press *[Sensor test]* icon.



5. The following screen is displayed:

6. Press *[Start]* button.

The test function starts, the electronic delay is deactivated for 10 minutes. The air temperature of the upper and lower temperature sensors is displayed.

7. If the door is closed, the door can be opened with a code and the *[Door open]* button. If available, the door can also be opened with an RFID transponder.
8. Warm up the monitoring sensor (for example with your fingers).
9. Wait until the warning limit is exceeded and the buzzer sounds.

The test function is automatically terminated after 10 minutes.

10. Press *[Home]* button to exit.

8 Alarms

8.1 Alarm functions

If a function of the unit is faulty or defective, an alarm is triggered. Every alarm is displayed visually as well as acoustically.

The display alternates between the visual alarm and the temperature.The message is displayed until the alarm is acknowledged. Acknowledging the alarm does not rectify the error. The acoustic alarm is output as an alarm sound (hereafter referred to as “buzzer”).

To obtain a description of the error, the Alarm button must be pressed. A tabular view of the errors appears. The most recent error is always listed above. Select the desired error to obtain a complete description of the error.

Tabelle 6: Alarm functions

Alarm function	Display	Buzzer	Cause	Measure
Temperature alarm		✓	■ The temperature is over the temperature warning limit. ■ The remote warning contact has been triggered.	■ Deactivate buzzer. ■ Display and change temperature warning limit Chapter 3.3.2.2 "Displaying and changing the temperature warning limit" on page 33. If necessary, correct the values of the temperature warning limits ■ Observe the temperature curve. ■ If there is no normalization, contact the service department. ■ Transfer refrigerated goods.
		✓	■ The temperature is below the temperature warning limit. ■ The remote warning contact has been triggered.	
Door-open alarm		✓	■ The door is open for more than 60 seconds. ■ The door open alarm is not forwarded via the remote warning contact.	■ Deactivate buzzer. ■ Close door.
Door-open alarm		✓	■ The door is open for more than 180 seconds. ■ The door open alarm is forwarded via the remote warning contact.	■ Deactivate buzzer. ■ Close door.
Power failure warning		✓	■ The power supply of the unit has failed.	■ Deactivate buzzer. ■ Determine and eliminate the cause of the power failure.

Alarm function	Display	Buzzer	Cause	Measure
			■ The remote warning contact has been triggered.	■ The monitoring unit remains in operation for approx 30 hours. ■ Acknowledge alarm.
Alarm in case of defective battery		✓	■ The power supply of the temperature documentation has failed. ■ The alarm function has failed.	■ Inform service. ■ Replace battery "Service contact" on page 4.

8.2 Handling alarms

Deactivating the buzzer

The buzzer sounds.

1. Press *[Reset]* button.

   ➔ The buzzer is deactivated

2. Determine cause of the alarm and rectify.

Otherwise the buzzer will sound again every 30 minutes.

Acknowledging the alarm

The buzzer is deactivated, the cause of the alarm is eliminated, the device automatically detects that the alarm is no longer present and acknowledges it itself.

9 Error messages

9.1 Error messages

Do not make repairs yourself

WARNING!

Danger due to incorrect repairs or changes!

Incorrect repairs or changes can cause serious injury (e.g. electric shocks) and damage (e.g. fire, damage to chilled goods).

- Have repairs performed by the service department.
- Use KIRSCH replacement parts.
- Do not make independent additions or changes to the unit.
- If in doubt, contact KIRSCH.

Transferring chilled goods

NOTICE!

Danger to chilled goods due to defective or faulty unit!

A defect or fault in the unit means that its cooling performance is no longer ensured. Reduced cooling performance can cause considerable damage to chilled goods.

- Select an alternative storage location for the chilled goods.
- Ensure operating and storage conditions.
- Transfer chilled goods to new location.

Occurrence of error messages

Error messages indicate a malfunction of the unit.

Error messages and the temperature display alternate on the display.

If there is more than one error, the errors are shown one after the other on the display.

In addition to the information on the display, the buzzer sounds to report the error.

The unit indicates the following errors visually and acoustically:

- Unit errors
- Software errors

When error messages occur, proceed as described below:

Procedure in case of error messages

1. Deactivate buzzer.
2. Evaluate error display according to the table below.
3. Perform the recommended measures.

For repairs, contact the service department:
The following company has been commissioned and authorised by KIRSCH to provide service for the unit:“Service contact” on page 4

CAUTION!

Danger of damage due to interrupted cooling chain during stock transfer!

If the cooling chain of the chilled goods is interrupted
by a stock transfer, the prescribed storage conditions are no longer met. This can damage the
chilled goods.

- Do not subject chilled goods to light during the stock transfer.
- Do not place chilled goods near radiators during the stock transfer.
- Make sure that chilled goods are stored in the replacement unit according to the specifications of the relevant manufacturer.

Meaning of “X” for error and status messages

X is not shown on the display.

- *Instead, the display shows a number that describes the relevant part.*

Display	Buzzer	Description	Measure
	✓	Sensor X: ■ Error or short circuit in the relevant sensor. ■ The cryostat is running in the emergency program.	■ Contact the service department.
	✓	Sensor X: ■ Error or break in the relevant sensor. ■ Cryostat is running in the emergency program.	■ Contact the service department.
	✓	Fan X: ■ Speed of the relevant fan too low. ■ The temperature of the chilled goods can fluctuate.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Fan X: ■ Speed of the relevant fan too high. ■ The temperature of the chilled goods	■ Transfer chilled goods to new location. ■ Contact the service department.

Display	Buzzer	Description	Measure
		can fluctuate.	
	✓	Fan: ■ Fan does not reach required minimum speed after an unit restart. ■ The temperature of the chilled goods can fluctuate.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Fan: ■ Fan does not reach required minimum speed after an unit restart. ■ The temperature of the chilled goods can fluctuate.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Relay X: ■ Defect in the relevant relay. ■ The temperature of the chilled goods can fluctuate.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Relay X: ■ Defect in the relevant relay. ■ The temperature of the chilled goods can fluctuate.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Synchronisation error: ■ Synchronisation error between control unit and monitoring circuit. ■ No secured function of the cooling controller.	■ Ultimate shutdown ↳ Chapter 4.1 "Switching off the unit" on page 37. ■ Unplug the mains plug and switch on again ↳ Chapter 4.1 "Switching on the unit" on page 37.
	✓	Connection problem: ■ Synchronisation error between control unit and monitoring circuit. ■ No secured function of the cooling controller.	■ Transfer chilled goods to new location. ■ Contact the service department.
	✓	Control error: ■ Error during self-test in the cooling controller. ■ The monitoring circuit takes over temperature control.	■ Transfer chilled goods to new location. ■ Contact the service department.
Door lock error	✓	Connection problem: ■ Power supply of the door lock is defective. ■ Door can only be opened with emergency unlock. ↳ Chapter 9.2 "Emergency unlock" on page 67.	■ Contact the service department.

9.2 Emergency unlock

The emergency release is located in the attachment of the unit in the area of the door lock.

Proceed as follows to operate it:

Units from 280 to 460 litres:

1. Loosen the screws on the cover plate at the back of the attachment.
2. Remove the cover plate.
3. Pull out the worktop to the rear.
4. The emergency release is freely accessible in the front area.
5. Pull the lever on the lock upwards and hold it up while opening the door.

Units from 520 litres upwards:

1. The emergency release is freely accessible in the front area.
2. Pull the lever on the lock upwards and hold it up, open the door at the same time.

10 Index

In über 100 Ländern im Einsatz

Kirsch
Made in Germany. Since 1865.

Philipp Kirsch GmbH
Im Lossenfeld 14
77731 Willstätt

Telefon: +49 (0) 781 9227-0
Telefax: +49 (0) 781 9227-200
info@kirsch-medical.de

www.kirsch-medical.de

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