ARCTIKO
true cooling specialists

OPERATING INSTRUCTIONS

Integraline Compact MV

ULUF P10MV / P50MV / P90MV

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INTRODUCTION

Please take a few minutes to read and become familiar with the advantages of your unit. To meet the high quality demands required by the medical and pharmaceutical industry, all Integraline Compact units that leave Arctiko are carefully checked and tested to ensure high performance and quality. If the operating and installation instructions describe different models, any differences will be pointed out at the relevant points in the text. Read these operating and installation instructions before switching on the unit.

If you would like to obtain further information about this unit and possible accesserories, please visit our website **www.arctiko.com** where downloads are available on the page of each specific product.

SYMBOLS

WARNING

Performing this action can cause injury.

CAUTION

Risk of personal or material injury. Consult the instructions before attempting to use this equipment.

Prohibition

Action is strictly prohibited.

Follow procedures

Keep the instructions handy for convenient reference.

OFF

Disconnect from power outlet before operation.

WARNING Flammable material

This unit contains flammable refrigerants.

Grounding

Be aware that the unit is grounded.

Fragile

Handle with care. Indicates a device that can be damaged or broken if not handled with care.

Follow procedures

Touching surfaces may cost frostbite due to ultra low temperature.

ABBREVIATIONS

SYMBOL	DESCRIPTION
A	Ampere
W	Watts
V	Voltage
°C	Degrees Celcius
H	Hours
Min	Minutes
Cm	Centimetres
Kg	Kilograms
N/A	Not applicable

SAFETY

Arctiko is obligated as a supplier to ensure the users safety when operating one of our units. To prevent personal and material injury or damage, please follow the instructions in this manual.

INTENDED USE

Ultra-low temperature units are designed for storage of biomedical products at a constant temperature in clinical, pharmaceutical, research and laboratory fields. This unit is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the unit safely. Young children should be supervised to ensure that they do not play with the unit.

The units are designed to operate within a temperature range of -86°C to -25°C, at an ambient temperature +16°C to 32°C and a humidity between 55-80% (65% recommended). For safe and optimal performance of the unit, it should only be placed indoors, in a well ventilated room and in elevations below 2000m. The unit should only be operated by instructed personnel.

Voltage variation should not be more than +/- 10 percent of the nominated voltage supply. The unit is designed according to overvoltage category II and pollution category 2.

The unit is designed for use with a voltage between 110V-230V. Depending of the used voltage the current can be between 3-6 Ampere.

CAUTION

This unit is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Follow procedures

Only qualified engineers or service personnel should install the unit. The installation by unqualified personnel may cause electrical shock or fire.

PERSONAL SAFETY

When operating an ultra-low temperature freezer, you are exposed to a variation of possible dangerous events.

- Read and understand this manual. If in doubt, contact your local Arctiko distributor.
- Use freezer gloves at all times when loading or unloading the unit. The temperature of operation is such that direct contact with the cold contents or inside the unit can burn unprotected skin.
- Assure good cleaning practices at all times by keeping the unit and the adjacent areas clean, dry and uncluttered.
- Should any malfunctions occur or be suspected, immediately call a qualified service engineer to investigate.
- Do not insert screwdrivers or other pointed objects between guards or moving parts of the unit.
- Crushing of hands hazard, while operating the door and door lock mechanism.
- Low temperature freezing conditions, frostbite hazard. Do use Arctiko Cryo gloves, to prevent from frostbite in the cooling chamb.

Prohibition

Do not insert metal objects such as pins or wires into any vent, gap or outlet on the unit. This may cause electric shock or injury by accidental contact with moving parts.

Crushing of hands hazard

Crushing of hands hazard while using the door and door lock mechanism.

Frostbite hazard

Extreme low temperatures can be reached in the cooling chamber. Do always use Arctiko Cryo gloves.

OFF

When removing the power plug from the outlet, pull on the plug, not the cord. Pulling the power cord may result in electric shock or fire by short circuit.

Follow procedures

If the unit is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

The manufacture declines any responsibility in case of improper use of the unit deviating from the reasonably construed intented use and for all operations carried out that are not in compliance with the instructions reported in the manual.

HANDLING & TRANSPORTATION

MOVING THE UNIT

Lifting, moving and transporting the unit without suitable equipment may cause personal injury or material damage. Always use suitable lifting equipment to load, unload and move the unit.

Attention

Disconnect from the power outlet before moving the unit. Make sure not to damage the power cord. A damaged power cord may cause electric shock or fire.

Attention

Be careful not to tip over the unit during transport to prevent damage or injuries. Instructions on how to tip the unit are placed on the unit itself. Please follow these instructions carefully.

PACKAGING

- Do not expose the package to rain.
- Always keep the package upright. DO NOT BRING THE PACKAGE TO A HORIZONTAL POSITION.
- Do not expose the package to bumps and shocks.
- Package contents are fragile.

UNPACKING

1. Inspect the packaging carefully for any damage that may have occurred during shipping. If damage is observed, report to the shipping company and your local Arctiko distributor.

2. Remove all packaging material, plastic and straps. All packing materials are entirely recyclable. For more information on where to dispose of waste, contact your local authority or recycling station.

WARNING

Plastic bags pose a suffocation risk.
Keep away from children.

INACTIVITY FOR EXTENDED PERIOD

If the unit must be switched off for a longer period and stored away, take the following precautions:

- Clean the unit both inside and outside.
- Ventilate the unit and make sure it is completely dry.
- Disconnect from the power outlet.
- Leave the door slightly open in order to prevent rot and mold.

Attention

Disconnect the unit from the power outlet when it is not in use for a longer period.
Keeping the unit plugged in may cause electric shock, current leakage or fire due to the deterioration of insulation.

WARNING

If the unit is to be stored unused in an unsupervised area for an extended period, **ensure that children do not have access and that doors cannot be closed completely.**

DISPOSAL

In the event of disposal of the unit, observe relevant legal regulations to prevent harmful environmental effects.

Within the European community, EU directives regulate disposal of electrical devices.

This unit is marked in compliance with the 2002/96/CE European Directive, WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE).

List of critical components at disposal:

- Refrigerant
- Compressor and compressor oil
- Battery
- Electronics

WARNING

High pressure cooling system.

INSTALLATION

PREPARING THE UNIT

- **Unpack the unit:** Remove all packaging materials, plastic bags and straps.
- **Storing the key:** The key for the door is packed together with the usermanual inside the unit. Keep the key in a safe place.
- **Read the Quick Start Guide:** The Quick Start Guide is provided with the unit.
- **Ventilate the unit:** Open the door for at least 20 min, in order to ventilate the unit before first use. The unit may contain odors from manufacturing.
- **Clean the unit**: Clean the unit on the inside and outside with a soft cloth/sponge using a solution of water and light detergent. After cleaning all surfaces of the unit, wipe the inside with a dry rag.
- **Remote alarm contact:** The terminals for the remote alarm contact are located on the backside of the unit (*see Cabinet description*). The contact design is a maximum load of 2A. The remote alarm contacts work in synchronization with the buzzer alarm on the unit. When an alarm is accepted on the display the remote alarm relay will return to normal. The remote alarm can be set as normally open (NO) or normally closed (NC).
- **Warning Flammable material:** Do not damage the refrigerant circuit
- **Warning Flammable material:** To reduce flammability hazards, the installation of this unit, shall only be carried out by a suitably qualified person.

REFRIGERANT

Please see the serial plate affixed to the unit, to obtain information about the refrigerant.

WARNING Flammable material

Keep clear of obstruction all ventilation openings in the unit enclosure or in the structure for building-in.

WARNING Flammable material

Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

WARNING Flammable material

Do not use electrical appliances inside the storage compartments of the unit, unless they are of the type recommended by the manufacturer.

LOCATION

Place the unit in a location that complies with the following conditions in order to achieve optimal operating results:

- **Firm and levelled floor:** Installing the unit on a firm and flat floor reduces the risk of excessive noise and vibration.
- **Away from any heat sources:** Avoid placing the unit near any heat dissipating devices such as a gas burner/stove, radiator, oven or other source of heat. Exposing the unit to heat will lower the performance.
- **Place the unit away from direct sunlight:** Placing the unit in direct sunlight may cause reduced performance and shorten the life expectancy.
- **Dry area**: Avoid placing the unit near damp areas such as water faucets and sinks.
- **Clean area:** Placing the unit in a clean environment will reduce risk of function failure. Avoid installing the unit in or near chemicals and materials that might have outgassing property to avoid corrosion.
- **Well ventilated:** There must be sufficient space around the unit to ensure air ventilation. Lack of such space will reduce the cooling capability of the unit. Place the unit with at least 10 cm free space to each side and 15 cm behind the unit.
- **Main Power plug:** The main power plug must be easy accessable, while the unit is turned on.
- **Do not place any objects on top of the unit.**

WARNING

An electrical power plug with a ground connection must be used to power the unit. This is to prevent electrical shock.

- Never install the unit where acid or corrosive gases are present as current leakage or electric shock may result due to corrosion.

WARNING

Do not use the unit outdoor. Current leakage or electric shock may result if the unit is exposed to rain.

WARNING

Never install the unit in a flammable or volatile location. This may cause explosion or fire.

Follow procedures

Install the unit on a sturdy floor and take an adequate precaution to prevent the unit from tipping.

ELECTRICAL CONNECTION

In order to ensure an economical and reliable installation that complies with the limits of temperature and voltage drop, it is necessary to determine maximum load of units connected to the installation. In determining the maximum load for an installation or for a part of it, it is vital to take into account contemporaneous factors.

For supply systems, the following must be determined:

- Power system (AC/DC): Data regarding voltage and absorbed power/current is given on the rating plate.
- Ground protection: To prevent the user of getting exposed to electrical shock, in the event of a insulation damage, the unit must be grounded.
- The installation must always be secured with a minimum 10A fuse.
- If you have more than one unit, each unit must be connected to an individual fuse group.
- Do only use OEM detachable main supply cords.

When installing the unit, make sure the protected earth is grounded. If the connection is a 3-pole connection, use a three-pin plug and connect the conductor with yellow/green insulation to ground. In order to maintain a stable operation of the unit, voltage variation cannot differ more than ±10% of the nominal voltage supply.

Always follow local regulations when preparing an installation. Contact your local authorities if in any doubt.

Follow procedures

Only qualified/authorized engineers or service personnel should install the unit. Installation by unqualified personnel may cause electric shock or fire.

Grounding

Always make sure the unit is grounded to protect the user from electrical shock.

Prohibition

Do not use the power cord if it is damaged. Such supply cord may cause fire or electric shock.

Prohibition

Never use a telephone line or lightning rod as ground protection. During lightning, there is a strong current present, which is extremely dangerous.

Prohibition

Do not use water pipes as ground protection. Modern water pipe systems are non-conductors such as PVC.

Follow procedures

Replacing the power cord may only be done by authorized personnel.

Prohibition

Never use gas lines as the ground protection for the unit. This can cause an explosion.

Follow procedures

Disconnect the power cord if there is something wrong with the unit. Continued abnormal operation may cause electric shock or fire.

GETTING STARTED

During the initial startup and continuous usage of the unit, the following procedures shall be followed:

1. Plug the power socket in a dedicated outlet. For correct voltage requirement, follow the information on the rating plate. When started, let the unit cool for 24 hours before placing any products in it.

2. Turn battery ON from the backside of the unit.

3. When the unit initially starts up, the buzzer alarm may sound. This is normal. You can accept the alarm on the display.

4. This unit has been set to operate at -80°C from the factory.

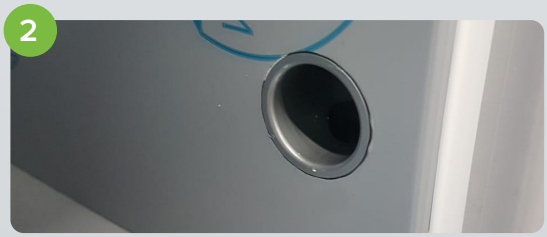
5. Once a thorough inspection of the unit is completed, products can be loaded into the unit. Products should be pre-frozen when inserted into the unit, otherwise this can affect the cooling performance of the unit.

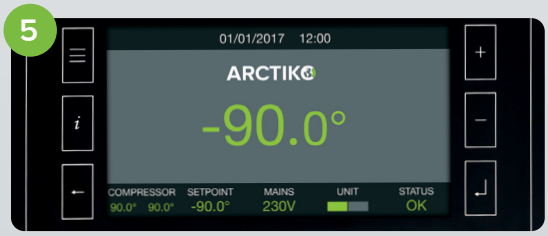
PRODUCT DESCRIPTION

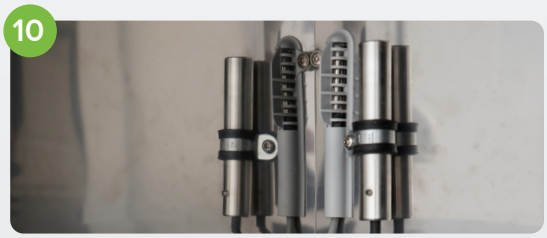
The Integraline range offers the best ultra-low temperature freezing with high performance and stability. Standard features are VIP panels, filter-less construction for less maintenance, noise reduction technology, low energy consumption, low heat dissipation and excellent temperature stability. All units are equipped with a vacuum valve and a key lock on the door.

CABINET OVERVIEW

CABINET DETAILS







CABINET DESCRIPTION

NO.	AREA	DESCRIPTION
1	**Compressor compartment**	The compressor compartment is located in the bottom of the unit.
2	**Vacuum valve**	Equalizes the pressure in the unit.
3	**Door handle with lock**	For easy opening, closing and locking the door.
4	**Front panel**	Access for compressor compartment, fitted with control panel.
5	**Display**	See *Display.*
6	**Levelling feet (2 pcs.)**	Feet for easy level ajustment of the unit.
7	**Rollers (2 pcs.)**	Rollers for easy movement of the unit.
8	**Door switch**	Monitors the door openings and controls the lights.
9	**Remote alarm connection**	For connection of additional alarm equipment.
10	**Probe**	See *Probes and access ports.*
11	**Access ports**	See *Probes and access ports.*

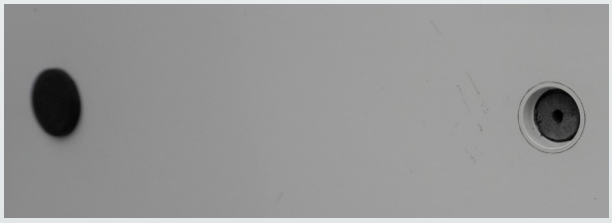
PROBE AND ACCESS PORTS

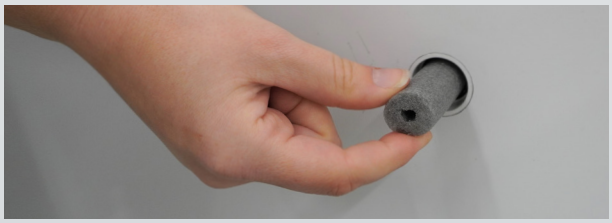
As standard, the unit is equipped with two temp. probes inside the chamber. One probe monitors the air temperature in the chamber and controls the operation of the compressors, while the other probe monitors the temperature of the stored elements, simulated through the aluminum block. The air probe controls the temperature alarms.

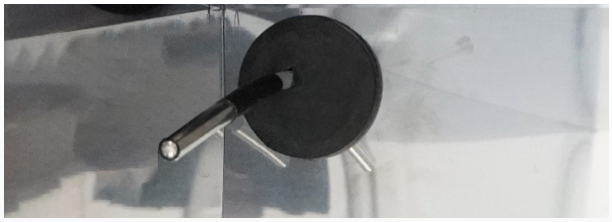
It is possible to connect two external probes to the unit in order to monitor the temperature in different places in the unit. You can change the settings on which probe is the main probe.

To install more probes, you can use the premade access ports on the back of the unit. Remove the black cover, and take out the isolation within the porthole. Make a small hole in the black cover just big enough for the probe to fit. Insert the probe into the cabinet and seal the access port with the back cover.

Always seal the holes with putty on both sides of the hole.







Follow procedures

Never install probes through the door as this will deteriorate the functionality of the door gasket, increase the ice build-up and affect the temperature inside the unit.

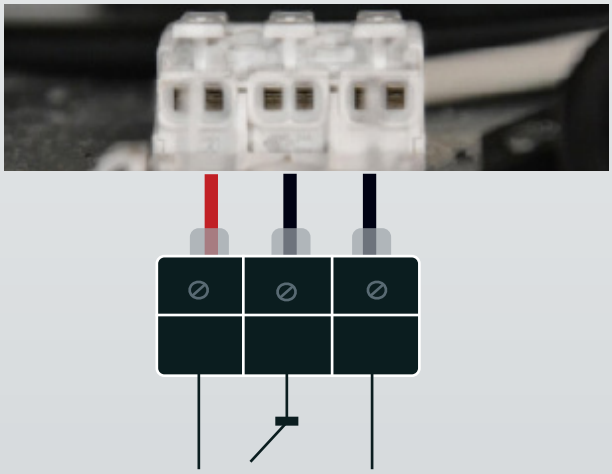
SINGLE COMPRESSOR TECHNOLOGY

The Arctiko Integraline range also comes with our single compressor technology. In contrast to the normal casade system, these appliances only need 1 compressor to reach the desired temperature.

Arctiko's single compressor system is designed as a filterless system, which prevents malfunctions caused by dust building up in the filter. This minimizes the maintenance of the cooling system and secures a more stable operation.

REMOTE ALARM CONTACT

The remote alarm contact is located on the backside of the unit.



VACUUM VALVE

The vacuum valve helps equalize the pressure inside the unit, which allows the user to open the door without waiting for hours.

DISPLAY

Easy and user-friendly control panel, with a 6-key resistive keyboard. You can access a variation of settings, in order to adjust your unit for your exact needs.

A 4GB microSD is provided as standard, installed internally for recording functional data every 30 seconds with a memory capacity of about 10 years.

In the single temperature configuration two types of Home Page are provided: EASY or SCIENTIFIC. The external ESCAPE key selects one mode or the other. The header shows the MACHINE_NAME (in the example LABORATORY) that can be edited from the SETTINGS MENU.

▶ KEYBOARD

SYMBOL	KEY	DESCRIPTION
≡	**MENU KEY**	Accesses the menu panel.
i	**INFO KEY**	Accesses the info pages from Home Page level.
←	**ESCAPE KEY**	Goes to previous level. Switch between *easy/scientfic Home Page.*
+	**UP KEY**	Increase value of selected parameter. Select multi-page menu.
–	**DOWN KEY**	Decrease value of selected parameter. Select multi-page menu.
↵	**ENTER KEY**	Store the selected value.

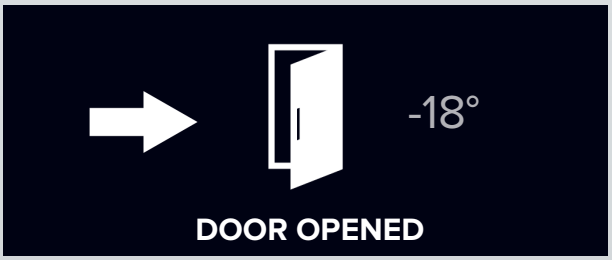
▶ ACTION ICONS

ICON	ACTION
no icon	PAUSE
	WAITING COOLING
	COOLING
	DEFROST
	DRIPPING
	HEATING
	WARM
	DRY
CO_2	CO2 BACKUP
	STOP ACTIONS

▶ INFO EVENTS

ICON	EVENTS
	ALARM ON
	FAILURE STATUS
	NOTIFY

▶ DOOR WARNING



The unit is equipped with a door contact to register whether the door is open or closed. If the door is not closed correctly or held open for a period, the visual and audible “Door open alarm” will be activated. The alarm will stop when the door is closed correctly.

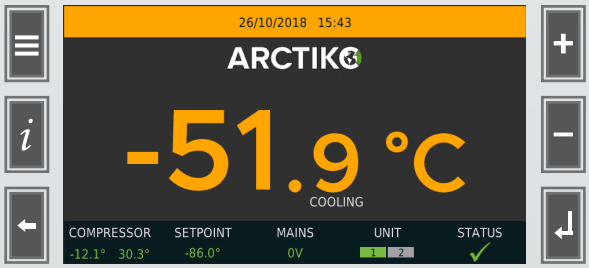
Please note that the alarm may be activated when moving products in or out of the units or, in other instances, where the door is held open for extended periods.

CAUTION

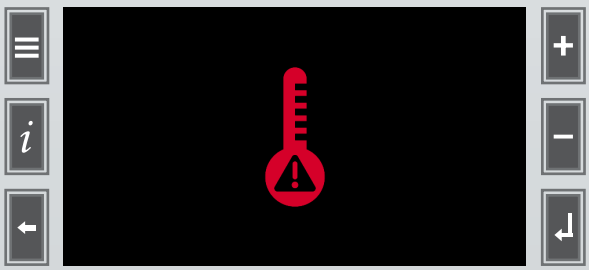
The factory setting for door alarm activation is 40 seconds. To change this setting, contact the distributor/seller of the unit.

▶ TEMPERATURE ALARMS

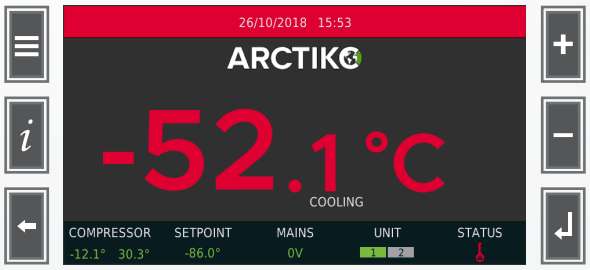
LOW/HIGH TEMPERATURE PREALARM



ALARM OCCURRED

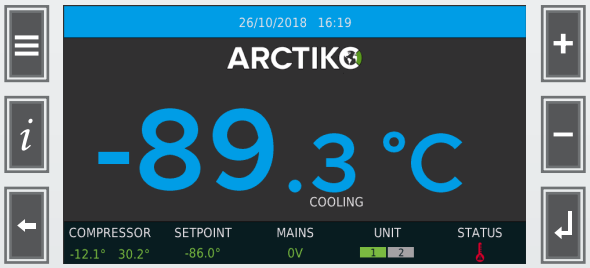


HIGH TEMPERATURE ALARM



If the temperature in the unit rises above the “High temp” setpoint longer than the “Alarm delay” setting defines, the high-temperature alarm will be activated. If products with a temperature above the “High temp” setting are placed in the unit near the temperature probe, it may also trigger the high-temperature alarm.

LOW TEMPERATURE ALARM



If the temperature in the unit falls below the “Low temp. alarm”-limit for a period longer than the “Alarm delay”, the low-temperature alarm is activated.
In addition, if products with a lower temperature than the low-temperature alarm setting are placed against or close to the temperature probe inside the unit, it may also trigger the low-temperature alarm.

▶ POWER FAILURE

The unit needs power to operate the cooling system. In case of power loss, the controller will go into power failure mode, and the screen will go black. The unit is equipped with a backup battery, which can maintain the controllers logging feature and visual, audible, and remote alarm features for a minimum of 72 hours.

CAUTION

Please note that the cooling system will not be operational during a power failure!

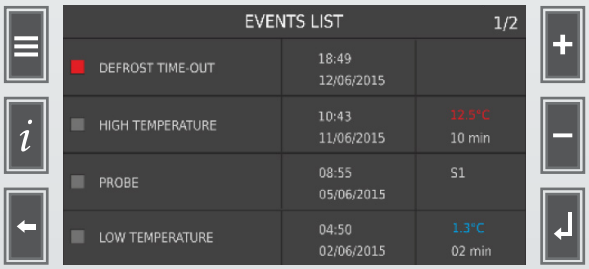
When the power returns, the unit will return to normal function. We highly recommend NOT opening the door during a power failure, except for moving the products to another unit or location. An open door will increase the temperature inside the chamber.

▶ FAILURE EVENTS

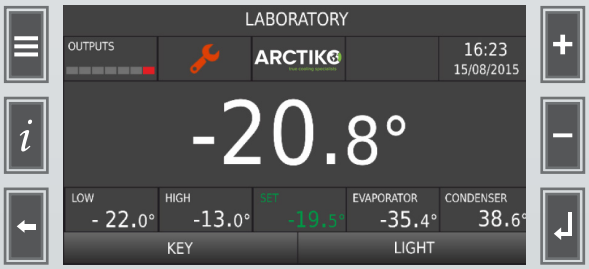
FAIL OCCURRED

1. To accept a failure, press the center of the screen.

2. Jump to EVENT LIST to check the failure.



3. In case of an unresolved failure, the icon FAIL UNRESOLVED will be shown on the screen.



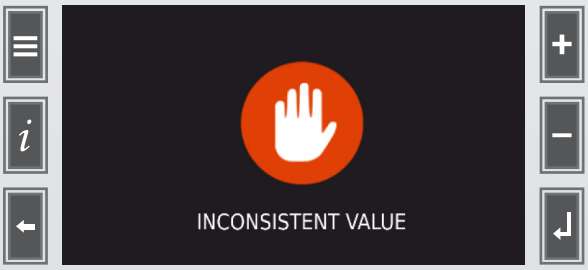
4. If any alarm has occurred, the icon NOTIFICATION OF PREVIOUS ALARM will appear on the screen.

▶ OUTCOME FRAMES

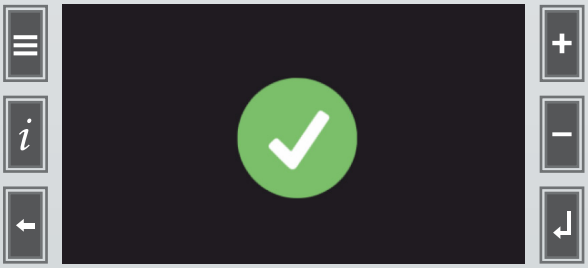
The outcome frames will be accompanied by a long beep.

ERROR

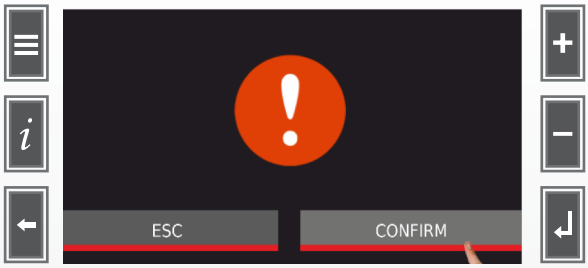
INVALID VALUE



CONFIRMED

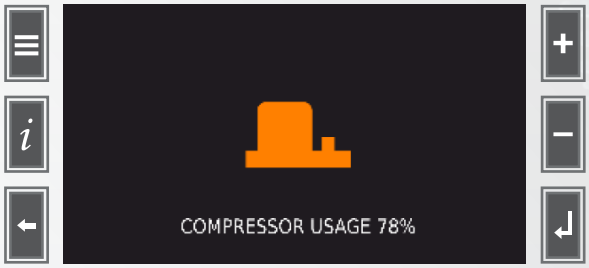


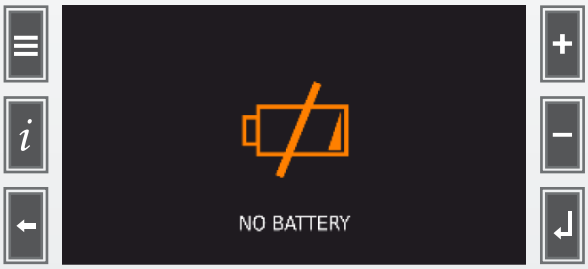
ESC/CONFIRM

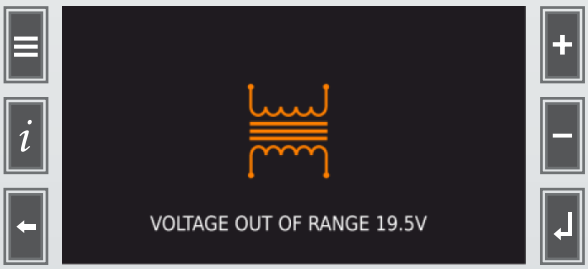


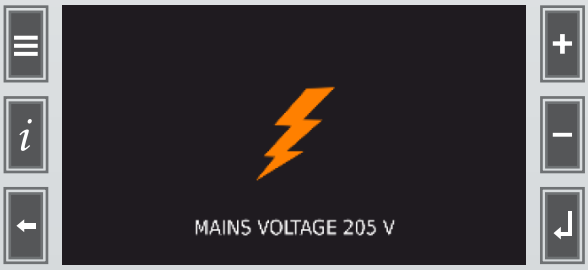
▶ WARNINGS

To accept a warning press **ENTER**.





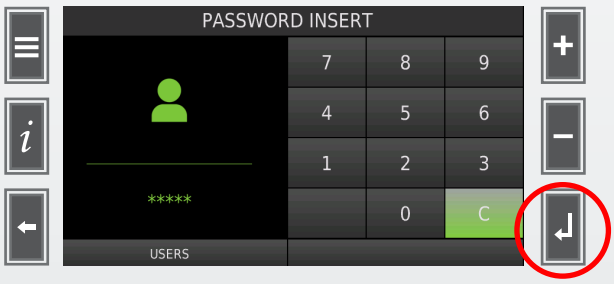




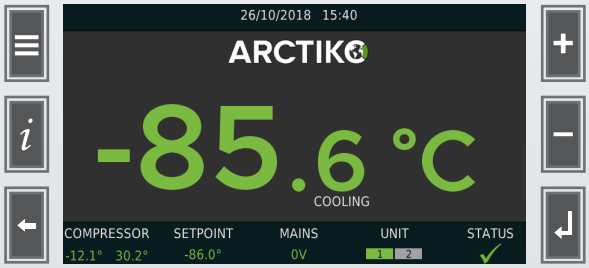
▶ HOW TO TURN ON THE DEVICE

1. Press on the **screen** and hold, to turn on the device.

2. If password protection is enabled, type password and press **ENTER**.

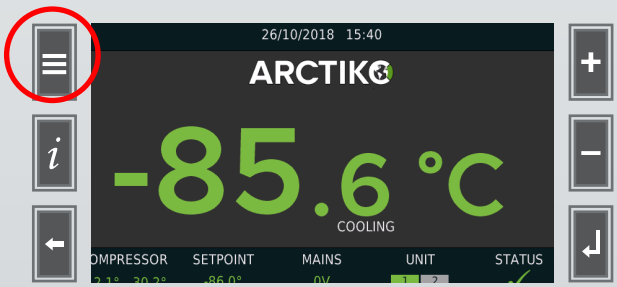


3. The main screen should appear.

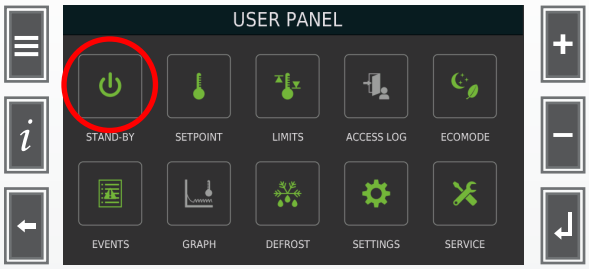


▶ HOW TO TURN OFF THE DEVICE

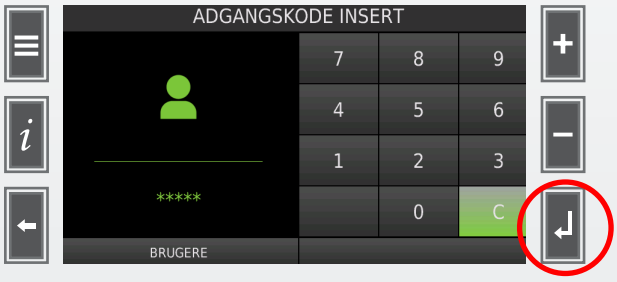
1. Press **MENU** to access the USER MENU.



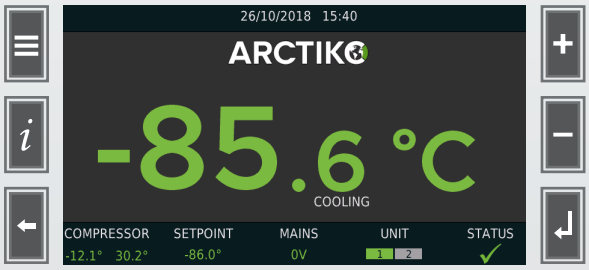
2. Press and hold **STANDBY** to turn off the device (put in standby mode).



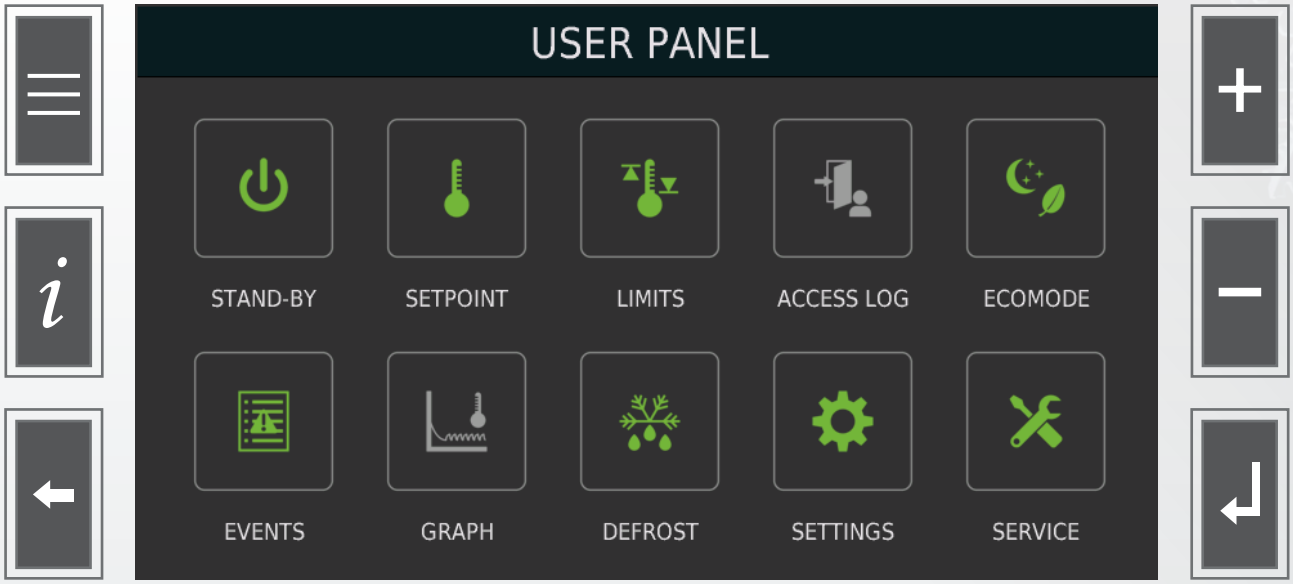
3. If password protection is enabled type password and press **ENTER**.



4. The main screen should appear.



▶ MENU USER

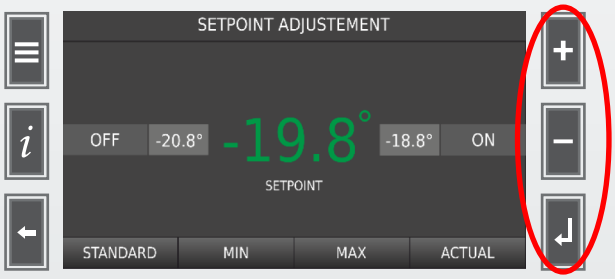


ICONS	DESCRIPTION
STAND-BY	Press and hold to turn off the controller.
SETPOINT	Change the temperature setpoint.
LIMITS	Set the high/low temperature limits and alarm delay.
ACCESS LIST	Access log.
ECOMODE	Set the ECOMODE parameters.
EVENTS	Displays the alarms and failures recorded.
GRAPH	Displays the daily temperature graph from calendar.
DEFROST	Start the defrost and displays temperature and time phase (defrost function not available on Integra range).
SETTINGS	Access to MENU SETTINGS.
SERVICE	Access to MENU SERVICE.

How to change the setpoint

1. Press **SETPOINT** to enter the setpoint adjustement.

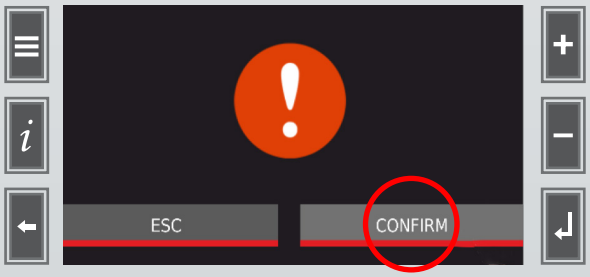
2. Press the **UP** to increase the temperature or the **DOWN** to decrease the temperature. Once the temperature has been set press **ENTER** to save the new value and exit.



3. In case you wish to recall values, press one of the following keys on the screen:

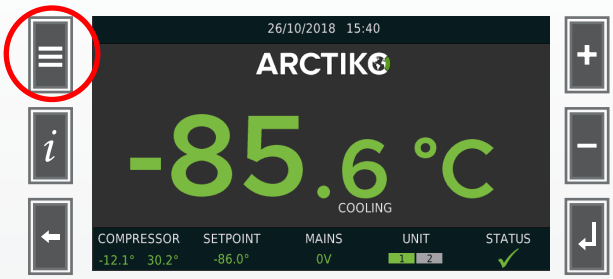
KEY	FUNCTION
STANDARD	Recall standard value
MIN	Recall minimum value
MAX	Recall maximum value
ACTUAL	Recall running value

4. Press confirm to accept the new values.



How to change the alarm limits

1. Press **MENU** to access the user menu.



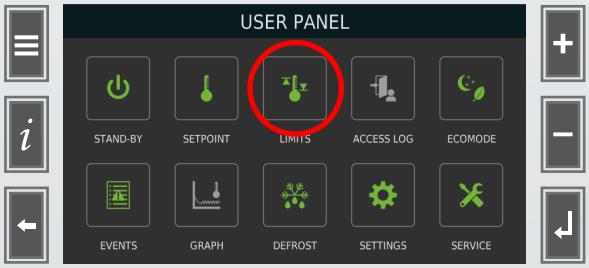
CAUTION

Remember to keep the unit setpoint in mind when changing the high-temperature setting. If the “high temp.” is set lower than the unit setpoint, the alarm will be activated.

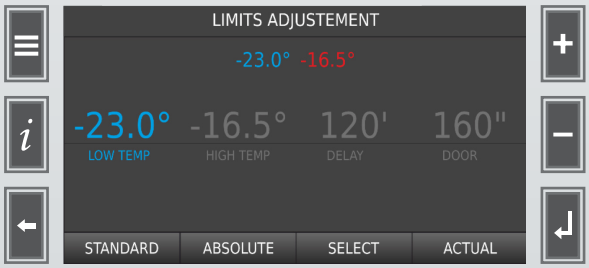
CAUTION

Remember to keep the unit setpoint in mind when changing the low-temperature setting. If the “low temp.” is set higher than the unit setpoint, the alarm will be activated.

2. Press **LIMITS** in the user menu.



3. Key functions.

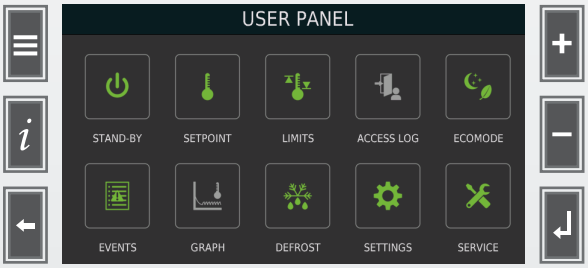


- **UP/DW** increases/decreases the value selected with the **SELECT** key.
- **STANDARD** sets the default value.

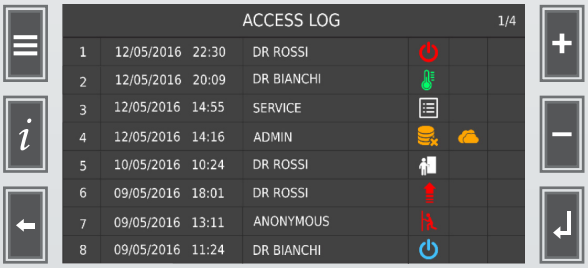
- **ABSOLUTE** sets in rotation the type of limit setting; the high and low temp. limits in the control board are always absolute. The calculated value of the limits is displayed under the panel title.
- **SELECT** enables in rotation the value to be set.
- **ACTUAL** retrieves the value in progress/preset.
- **ESCAPE** returns to the user menu without saving the map of values with confirm request.
- **ENTER** returns to the user menu saving the map of values with confirm request.

Access log

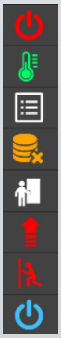
1. Press **ACCESS LOG** from user menu to access the display of the list of the last 32 events accesses.



2. If you wish to consult previous logons make a BACK-UP data and open the contents of USB through the application THERMO CONVERTER where in the last 4 fields to the right are the records accesses with the description by means of the actions carried icons.



Description of the icons used in the access log:



POWER OFF

CHANGED SETPOINT

CHANGED PARAMETER

FORMATTED CARD

DOOR OPENED

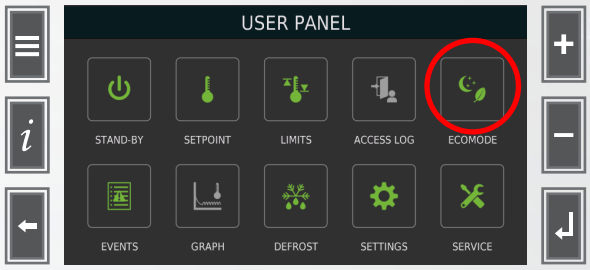
CHANGED HIGH LIMIT TEMPERATURE

BURGLARY

POWER-ON

Ecomode setting

Press **ECOMODE** icon to display the setting panel of the hourly or automatic temperature profile.

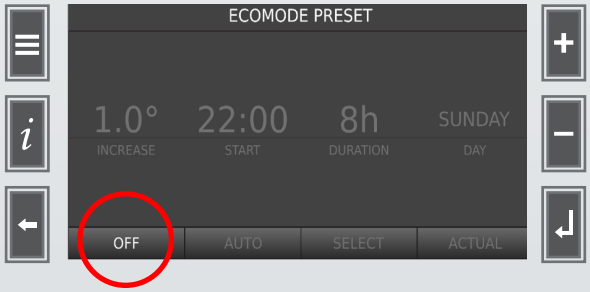


With USER password different from zero, it is requested to access the setting of the new configuration. The password is edited via the numerical keypad and confirmed by pressing **ENTER**. If the password was correctly set the ECOMODE frame is accessed, otherwise the ERROR frame appears and the display goes back to the USER MENU.

Press **UP/DW** to increase/decrease the value selected. The map of values is saved by pressing the external **ENTER** key with request to confirm.

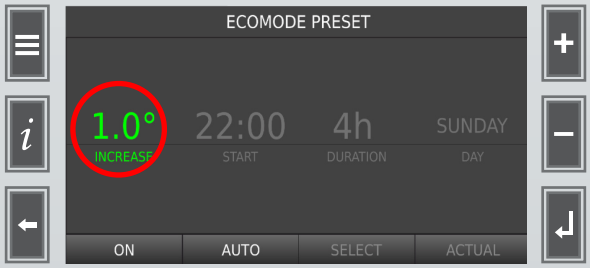
ECOMODE OFF

Press **ON/OFF** to disables/enables ECOMODE; if the key is at OFF the other keys are disabled.



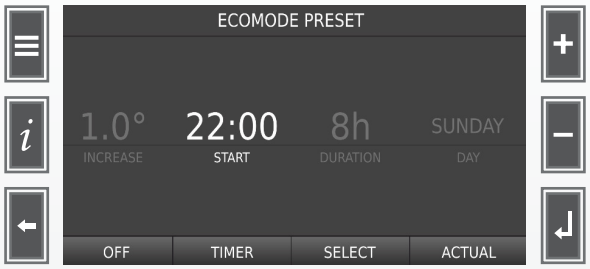
ECOMODE AUTO

Press **AUTO/TIMER** to set in rotation the ECOMODE TIMER/AUTO function; in TIMER mode the **SELECT** key is disabled and only the variable INCREASE is selected.



ECOMODE TIMER

Press **SELECT,** in TIMER mode, to enable the values to be set in rotation.



ACTUAL KEY

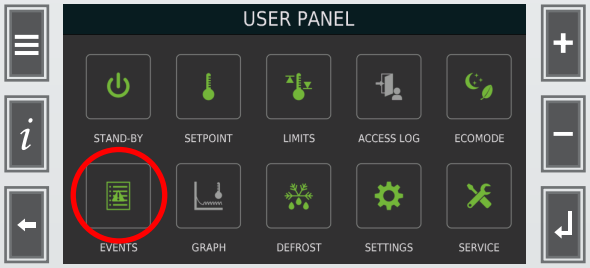
Press **ACTUAL/MODIFIED** to retrieve the value in progress/preset.

ESCAPE

Press external **ESCAPE** key to return to the USER MENU without saving with exit/confirm request.

Event list

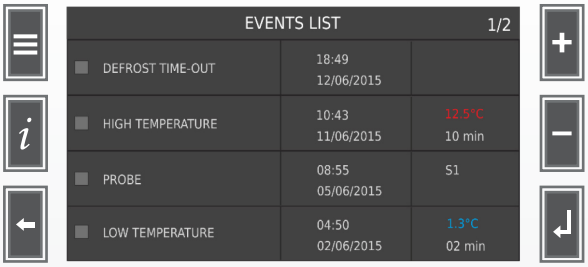
The set of recorded alarms and faults are recorded and displayed in the EVENT LIST. Press **EVENTS** or the INFO key during an alarm/fault/notification status leads to the reading of the EVENT LIST.



EVENT IN PROGRESS

Shows number of pages with events. Press the external **UP/DW** keys to change page.

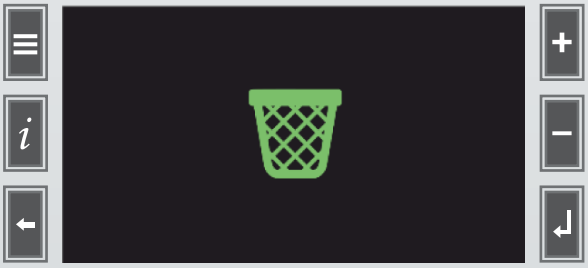
EVENTS RECORDED



EVENTS LIST (ALARMS & DEFAULTS)
HIGH TEMPERATURE
LOW TEMPERATURE
DOOR OPEN
BLACK-OUT
MAINS FAULT
SX PROBE
UNIT FAULT
LOAD FAULT
RELAY FAULT
LOW EVAPORATION
HIGH CONDENSATION
HIGH PRESSURE
DEFROSTING TIME
FAULTY BATTERY
DOOR SWITCH
U1 RELAY FAULT
U2 RELAY FAULT

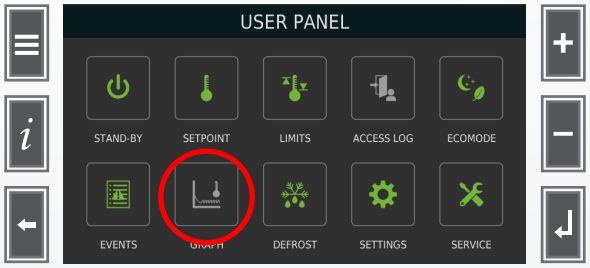
EMPTY LIST

If the event list is empty, the following icon will be shown.



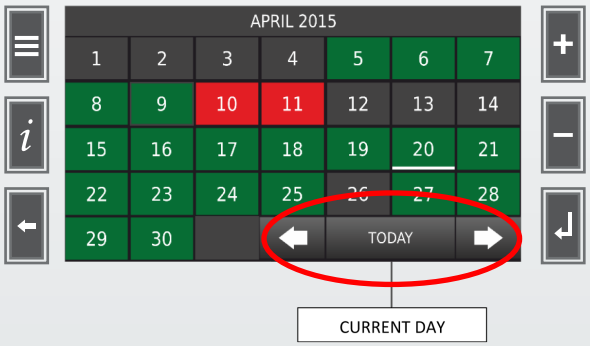
Graphs

Press **GRAPH** to access the select menu of the historical graph.



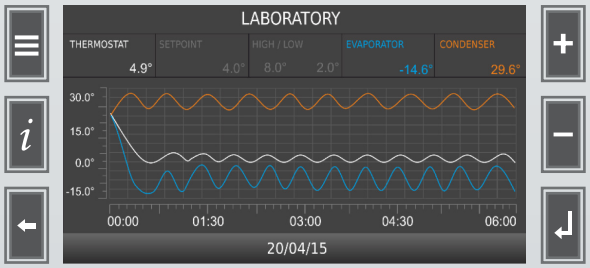
When the CALENDAR page opens, the selected day is the current one and it is highlighted by a white bar. Press **UP** to scroll the months forward and DW to scroll them back. Press **TODAY** to go back to the current day.

REPRESENTATION CRITERIA



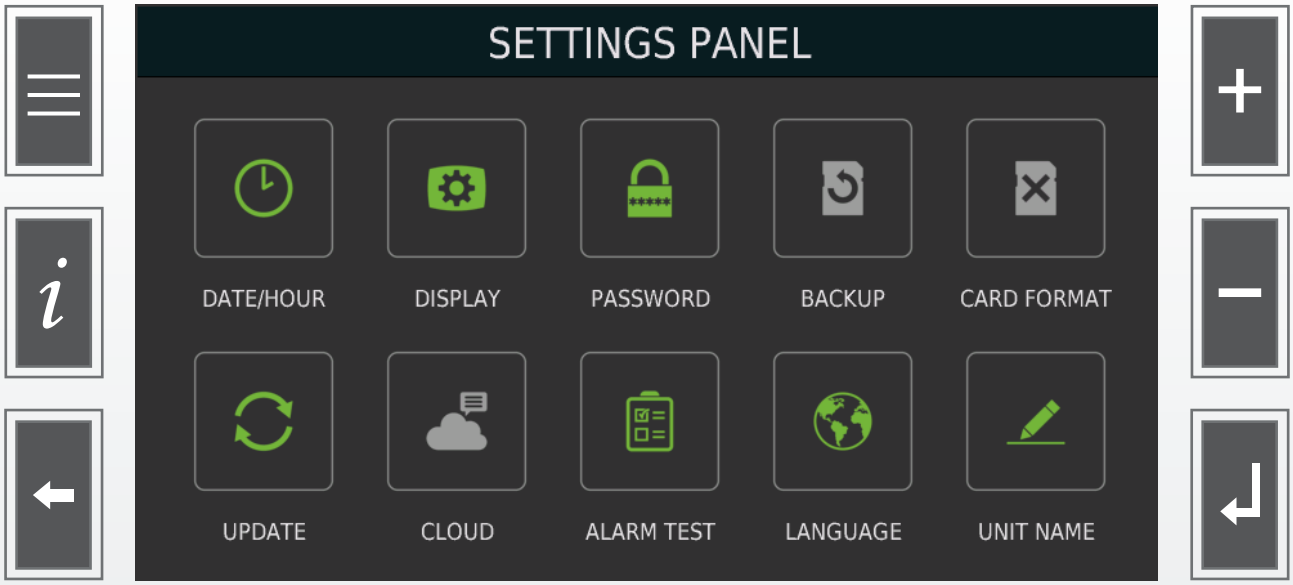
The grey boxes indicate the lack of data, the green boxes the presence of data, the red boxes the presence of a discrepancy. Press the key of the requested day to access the display frame of the daily graph.

SCROLLING THE GRAPH & ENABLING THE TRACES



- The graph opens with start at 00:00 hours and ends at 06:00 hours.
- Pressing the external **UP/DW** keys - the time axis with 6-hour time slots - are scrolled forward/back.
- To select a different day, go back to the calendar by pressing **ESCAPE**.
- The temperature of the respective probes are traced enabling with a click the corresponding box; each square shows the average temperature values calculated in the 24 hours of the current day. The boxes from left allow the cyclic selection of the relative probes.

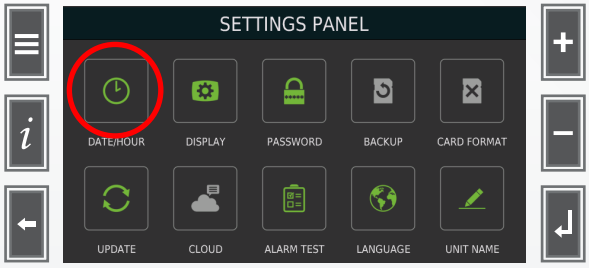
▶ MENU SETTINGS



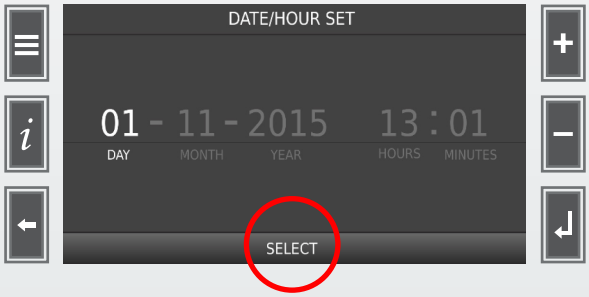
ICONS	DESCRIPTION
DATE/HOUR	Set the clock device.
DISPLAY	Set the configuration of panel display.
PASSWORD	Set the 3 levels of passwords: ADMINISTRATOR / USER / SERVICE
BACKUP	Start download data through USB port.
CARD FORMAT	Erase the data recorded.
UPDATE	Read and send setup files.
CLOUD	Set the LAN configuration.
SMS SETUP	Edit the telephone numbers where to send the alert messages.
LANGUAGE	Set the language of user interface.
MACHINE NAME	Edit machine name by alphanumeric keyboard.

How to set date/hour

1. Press **DATE/HOUR** to display the setting panel for the system date and time.



2. Press **SELECT** to move the highlight and use **UP/DW** to increase/decrease the value selected. The new date/time is saved by pressing the **ENTER** key with request to confirm.

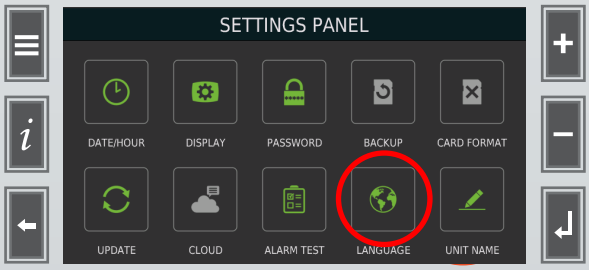


IMPORTANT!

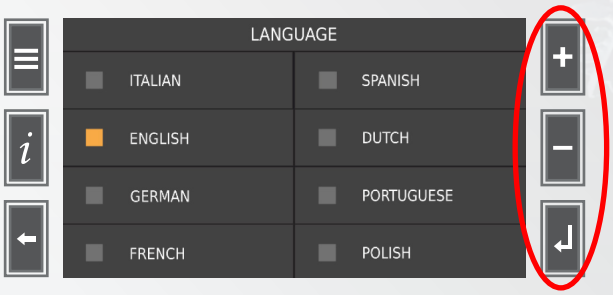
- The system clock does not automatically manage the Summer time.
- The connection towards the Cloud refers to the transparent UTC at the nation time conventions.
- The navigation on the VELEX Cloud refers to the zone time conventions if the device used foresees its automatic management.

How to set language

Press the LANGUAGE icon to display the frame for selecting the text languages.

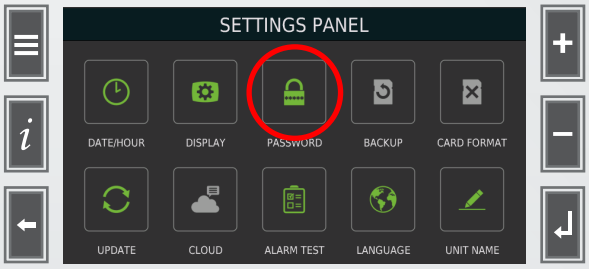


The language is selected in a mutually exclusive manner by clicking on the select box, which changes from grey to orange. Press **UP/DW** to browse the language setting page and save by pressing **ENTER** with request to confirm.



Password settings

1. Press **PASSWORD** to access the password settings.



The passwords are used for limiting access to certain areas in the menus. There are 3 levels of access:

User(s): For setting basic parameters and turning the unit on or off.
By default there is no password set.

Admin: For setting more advanced parameters and for managing users.
The default password is “111”.

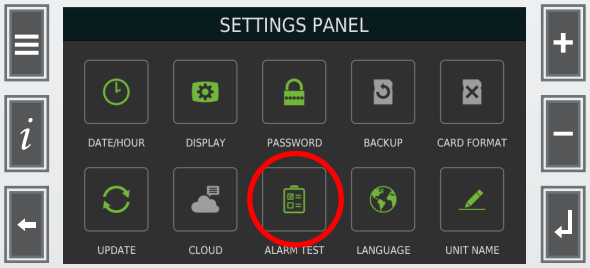
Service: For accessing the service menu.
The service settings are reserved for qualified Arctiko service personnel.

2. By entering the admin password both the admin and user passwords can be changed. The passwords can be deactivated by setting them to “000”.

By entering the multiuser menu, multiple user accounts can be setup. This is useful for tracking which user changes parameters or turns the unit on or off. These individual user accounts can be named to easily differentiate between them.

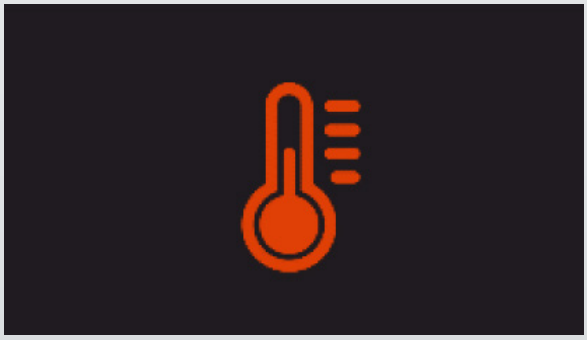
Alarm test

1. Press **ALARM TEST** to start the alarm test.



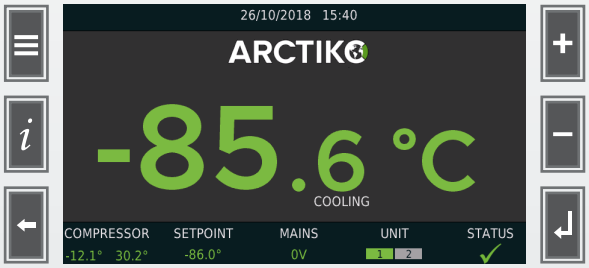
The icon pressure TEST starts the alarm test WITH the following sequences:

1. 3 seconds alarm icon with buzzer on



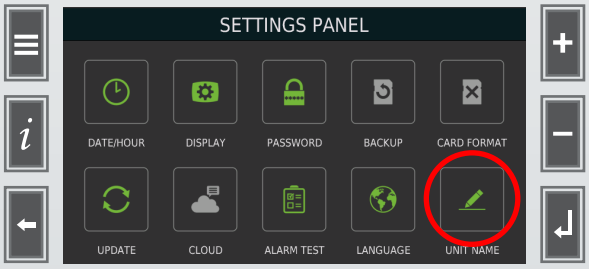
2. Activate the alarm relay for 3 seconds according to these sequences OFF / ON / OFF

3. Back to Home Page



Machine name

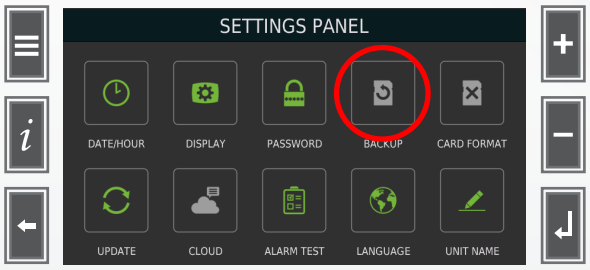
1. Press **UNIT NAME** to display the editing frame of the machine name that is shown in the Home Page Header.



2. Fill out the desired name of max 24 characters and press **ENTER** to confirm.

DATA DOWNLOAD

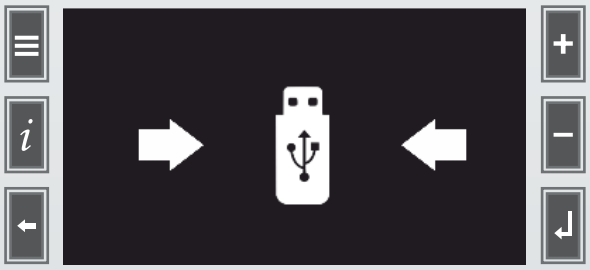
1. Press **BACKUP** to transfer the thermoregulation data on the USB pen.



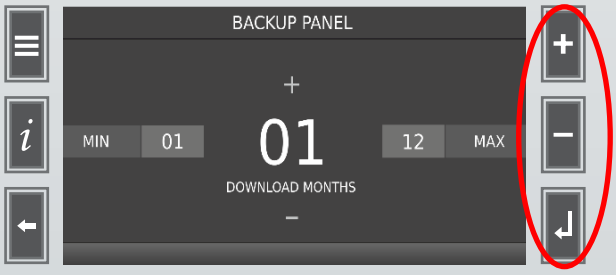
Follow procedures

ATTENTION! Do not remove the USB drive while transferring data. Wait for the ✓ icon to show before removing the drive. It may take 10+ hours to transfer data. While transferring data to the USB drive, no data is logged.

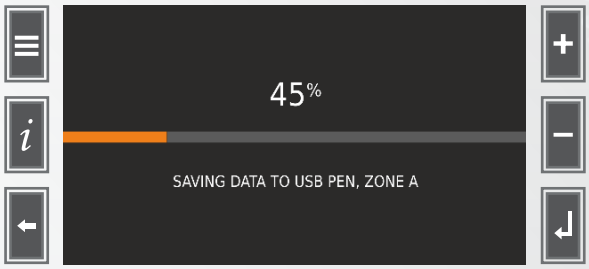
2. Pressing **BACKUP** shows the USB pen insertion request frame with 20 second time-out. If the USB pen has been recognised, the setting page of the months to download is displayed, otherwise the display goes back to SETTINGS MENU.



3. Press **UP/DW** to increase/decrease the number of months to transfer; press **ENTER** to start the data download.



4. A progress bar will appear, wait for the download to complete or press **ESCAPE** to return to the setting menu without transferring the data.



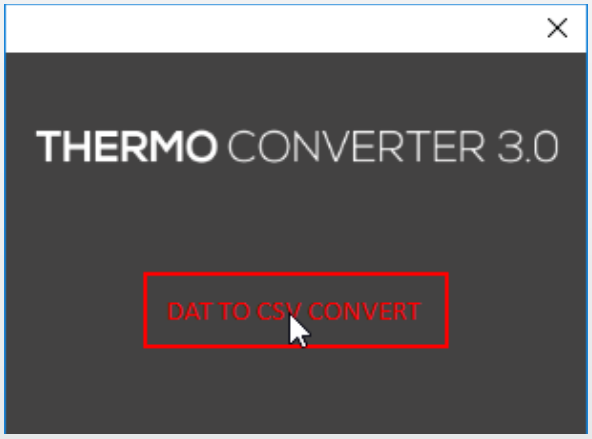
5. Once the data is downloaded the following sign will appear and the screen will return to setting menu.

OPEN AND PROCESS DATA ON A COMPUTER

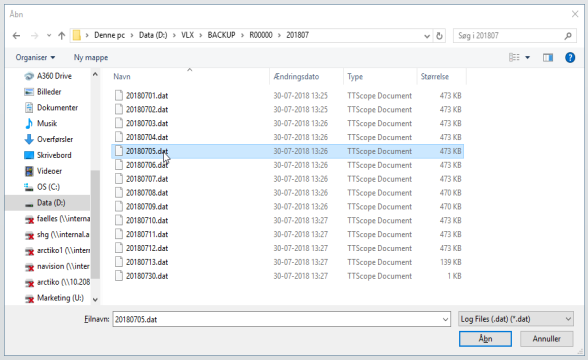
You can transfer the data to a computer in order to analyze, process or forward information.
The program **THERMO CONVERTER** is needed to transfer the data. The program can be obtained by contacting your Arctiko distributor.

1. Insert the USB drive with the loaded data in a computer.

2. To convert the data, open the program **THERMO CONVERTER.** To convert the file press the **DAT TO CSV CONVERT** button.

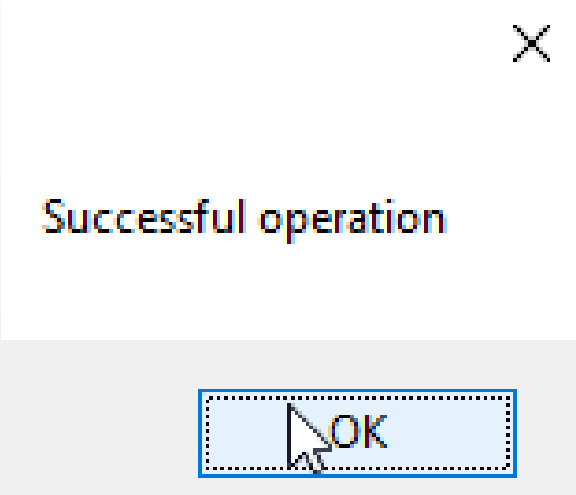


3. Open the file by following the path: VLX > BACKUP > R00000 (serial number of the unit) > 201807 (year and month).

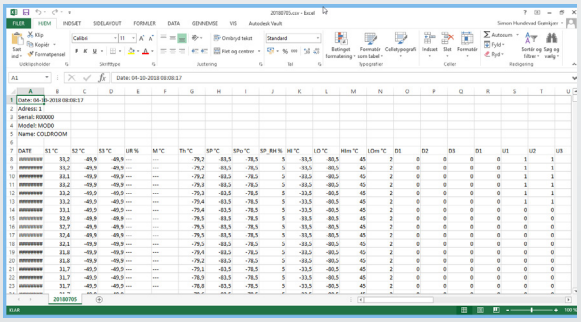


Choose the desired file and press **Open.**

4. When the convertion is complete, a window with the message “Succesful operation” will appear. Press **OK** to continue.

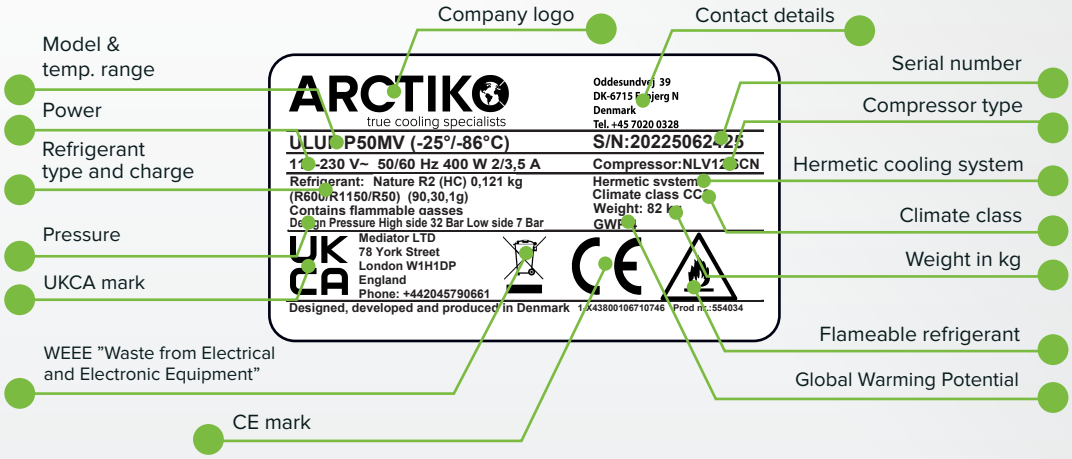


5. The file will now open in Excel or your equivalent program.



RATING PLATE

The rating plate is placed on the front right corner of the compressor department.



DESCRIPTION OF DATA POINTS

DATA POINTS	DESCRIPTION
SR	Refrigerator Serial Number
MR	Refrigerator Model
NM	Refrigerator Name
S1°C	NTC thermostat probe
S2°C	NTC evaporator probe
S3°C	NTC condenser probe
RH%	Humidity %
MONITOR °C	PT100M monitor probe
THERMO °C	PT100 thermostat probe
SET °C	Setpoint
SETo °C	Operational setpoint
SET_RH %	Humidity setpoint
HI TEMP °C	High temperature limit
LO TEMP °C	Low temperature limit
HI TEMPm °C	Monitor high temp. limit
LO TEMPm °C	Monitor low temp. limit
D1	D1 Digital input status
D2	D2 Digital input status
D3	D3 Digital input status
D1	Monitor D1 digital input status
RELAIS U1	U1 Relay status
RELAIS U2	U2 Relay status
RELAIS U3	U3 Relay status
RELAIS U4	U4 Relay status
RELAIS U5	U5 Relay status
RELAIS U6	U6 Relay status
LED BAR	LED output status
PCB °C	Technical compartment probe
Vin V	V board power supply

DATA POINTS	DESCRIPTION
MAINS Vac	Mains voltage
BATT %	Battery charge %
TEST BATT V	Battery voltage
DOOR STATUS	Door status
ACTIONS	Action in progress
ALARMS	Alarm in progress
ALARMS_m	Alarm in progress (monitor)
FAULTS	Fault in progress
FAULTS_m	Fault in progress (monitor)
WARNING	Warning in progress
WARNING_m	Warning in progress (monitor)
U1 %	U1 Relay use percentage
U2 %	U2 Relay use percentage
U3 %	U3 Relay use percentage
U4 %	U4 Relay use percentage
U5 %	U5 Relay use percentage
U6 %	U6 Relay use percentage
U7 %	U7 Relay use percentage
EH °C	Max evaporator calibration
EL °C	Min evaporator calibration
DELTA T °C	Thermal exchange
COMP 1h %	Compressor operation % (1h)
COMP 24h %	Compressor operation % (24h)
COMP ON	Time on compressor
COMP OFF	Time off compressor
COMP LIFE	Compressor total hours
VA	Power absorbed by loads
PASSWORD	User password
ACTION	Last user action

MAINTENANCE

Frequent and correctly executed maintenance is essential to ensure high performance and functionality of the unit. Arctiko recommends a thorough examination twice a year and cleaning at least once a month.

GENERAL MAINTENANCE

Perform the following at least twice a year:

- Lubricate hinges and gaskets. Wipe off all excess lubricant.
- Make sure the unit is levelled. If necessary, adjust castors/feet.
- Inspect all seals and gaskets. Make sure they are still soft and flexible.

WARNING

Before any inspection or maintenance work is performed, the power cord of the unit should be disconnected from the power outlet. This is to prevent any potential electrical shock or injury. During the maintenance work, do not breathe the dust and aerosols near the unit, they might be harmful to your health.

Prohibition

Never disassemble, repair, or modify the unit yourself. Any such work carried out by an unauthorized person may result in fire, electric shock, or injury due to a malfunction.

WARNING

Do not touch any electrical parts or operate switches with a wet hand. This may cause electric shock.

Prohibition

Do not use flame to check for gas leak.

CLEANING

Perform the following instructions at least once a month:

- Always keep the unit free of ice. Use a soft cloth or brush to remove loose ice. Never use sharp tools and be cautious not to damage the gaskets. Keeping the unit free of ice will extend it's lifespan.
- Clean the outside and inside of the unit using a dry, soft cloth or brush or a soft cloth with a solution of water and mild detergent. If a thorough cleaning or desinfection is required, we recommend using ethanol.
- Clean all gaskets using a damp cloth and, if necessary, a mild detergent. Remove dirt and wipe with a dry cloth afterwards. Do not pour water directly into the unit. By doing so, the water can damage the insulation materials and electrical components.
- Dust off the inside of the compressor compartment using only a dry brush or a vacuum cleaner. Parts of the refrigeration system of this unit are completely sealed. These do not require any lubrication.

Follow procedures

Do not use sharp objects to remove ice as these may damaged the inside of the unit. Do not use mechanical, electrical or chemical processes to speed up the defrostning process.

ATTENTION

Do not use abrasive nor chlorine-containing products to clean the unit.

ATTENTION

Never splash water directly onto the unit, as this may cause electrical shock or short circuits.

DEFROSTING

It is recommended to defrost this unit twice a year. This unit does not have automatic defrost, therefore you have to perform defrosting by following these instructions:

1. If the unit is loaded with products, move these to another unit to maintain the temperature of the products.
2. Turn off the unit on the display by pressing the STANDBY button.
3. Unplug the power cord from the power outlet.
4. Open the door of the unit.
5. Place cloths or towels in the bottom of the unit to collect and limit defrost water.
6. Leave the unit open for a minimum of 24 hours allowing the ice to melt.
7. When the defrosting is completed, thoroughly clean the unit inside. Wipe off all remaining water and leave the door open until the cabinet is completely dry.
8. Connect the power cord to the power outlet and switch on the unit on the display by pressing the ON/OFF button.
9. Reload the unit after reaching the set temperature (pull down).

SERVICE

Arctiko recommends that service is performed by authorized service personnel at least once a year. Contact your Arctiko distributor for contact information. Always have the serial number of the unit and model ready for the distributor.

SPARE PARTS

For requirements of spare parts, contact your Arctiko distributor. Please inform the serial number of the unit and model when contacting the distributor.

Arctiko strive for day-to-day delivery of spare parts. However, some special parts may take longer due to production time. Arctiko guarantees availability of spare parts for all units for at least 10 years after the delivery.

The manufacture declines any responsibility for jobs carried out by unauthorized personnel or the use of non-original spare parts.

AFTER-SALES

If you would like more information about your device or you would like to purchase spare parts or additional equipment, please contact your local distributor. Always have serial number of the unit and model handy when contacting the distributor.

WARRANTY

For warranty information, Arctiko refers to your distributors terms and conditions.

SÉCURITÉ EN FRANÇAIS

Arctiko est tenu, en tant que fournisseur, d'assurer la sécurité des utilisateurs lorsqu'ils utilisent nos appareils. Pour éviter les blessures ou dommages personnels et matériels, veuillez suivre les instructions du présent manuel.

UTILISATION PRÉVUE

Les appareils à ultra-basse température sont conçus pour le stockage de produits biomédicaux à température constante dans les domaines cliniques, pharmaceutiques, la recherche et les laboratoires. Cet appareil n'est pas destiné à être utilisé par de jeunes enfants ou des personnes handicapées, à moins qu'ils ne soient surveillés de manière adéquate par une personne responsable pour s'assurer qu'ils l'utilisent en toute sécurité. Les jeunes enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec l'appareil.

Les appareils sont conçus pour maintenir une plage de température comprise entre -86 °C à -25 °C, à une température ambiante comprise entre +16 °C à 32 °C et une humidité relative comprise entre 55 et 80 % (65 % recommandé). Pour une performance sûre et optimale de l'appareil, il ne doit être installé qu'à l'intérieur, dans une pièce bien ventilée et à une altitude inférieure à 2 000 m. L'appareil ne doit être utilisé que par du personnel qualifié.

La variation de tension ne doit pas dépasser +/- 10 % de la tension d'alimentation nominale. L'appareil est conçu conformément à la catégorie de surtension II et la catégorie de pollution 2.

L'appareil est conçu pour être utilisé à une tension comprise entre 110 V et 230 V. Selon la tension utilisée, le courant peut être compris entre 3 et 6 ampères.

MISE EN GARDE

Cet appareil n'est pas destiné à être utilisé dans des environnements résidentiels et peut ne pas fournir une protection adéquate contre la réception radio dans de tels environnements.

Suivez les procédures

Seuls les ingénieurs et le personnel de service qualifié sont autorisés à installer l'appareil. L'installation par du personnel non qualifié peut provoquer un choc électrique ou un incendie.

SÉCURITÉ PERSONNELLE

Lorsque vous utilisez un congélateur à ultra-basse température, vous vous exposez à divers événements dangereux possibles.

- Lisez attentivement ce manuel et assurez-vous de comprenez son contenu. En cas de doute, contactez votre distributeur Arctiko local.
- Utilisez des gants de congélation en permanence lors du chargement ou du déchargement de l'appareil. La température de fonctionnement est telle que le contact direct avec le contenu froid ou l'intérieur de l'appareil peut brûler la peau si elle n'est pas protégée.
- Respectez toujours les bonnes pratiques de nettoyage et veillez à ce que l'appareil reste toujours propre, sec et dégagé.
- En cas de dysfonctionnement ou de suspicion de dysfonctionnement, appelez immédiatement un technicien qualifié pour qu'il procède à une analyse.
- N'insérez pas de tournevis ou d'autres objets pointus entre les protections ou les pièces mobiles de l'appareil.
- Risque d'écrasement des mains, lors de l'utilisation de la porte et du mécanisme de verrouillage de la porte.
- Congélation à basse température, risque d'engelures. Utilisez des gants Arctiko Cryo pour éviter les engelures dans la chambre de refroidissement.

Interdiction

N'insérez pas d'objets métalliques tels que des broches ou des fils dans les évents, les espaces ou les sorties de l'appareil. Cela risquerait de provoquer un choc électrique ou des blessures par contact accidentel avec des pièces mobiles.

Risque d'écrasement des mains

Risque d'écrasement des mains, lors de l'utilisation de la porte et du mécanisme de verrouillage de la porte.

Risque d'engelures

Les températures dans la chambre de refroidissement peuvent être extrêmement basses. Utilisez toujours des gants Arctiko Cryo.

OFF

Lorsque vous retirez la fiche d'alimentation de la prise, tirez sur la fiche, pas sur le cordon. Tirer sur le cordon d'alimentation peut provoquer un choc électrique ou un incendie par court-circuit.

Suivez les procédures

Si l'appareil est utilisé d'une manière non conforme aux instructions du fabricant, la protection fournie par l'équipement peut être compromise.

Le fabricant décline toute responsabilité en cas d'utilisation de l'appareil non conforme à l'usage raisonnablement prévu et pour toutes les opérations effectuées qui ne sont pas conformes aux instructions du présent manuel.

SYMBOLES EN FRANÇAIS

AVERTISSEMENT

Effectuer cette action peut causer des blessures.

MISE EN GARDE

Risque de blessure corporelle ou matérielle. Consultez les instructions avant d'essayer d'utiliser cet équipement.

Interdiction

Action strictement interdite.

Suivez les procédures

Conservez les instructions à portée de main pour vous y référer facilement.

OFF

Débranchez l'appareil de la prise de courant avant toute action.

AVERTISSEMENT Matières inflammables

Cet appareil contient des fluides frigorigènes inflammables.

Mise à la terre

L'appareil est mis à la terre.

Fragile

Manipulez avec soin. Indique un dispositif qui peut être endommagé ou cassé s'il n'est pas manipulé avec soin.

Suivez les procédures

Le contact avec les surfaces peut provoquer des engelures en raison de la température très basse.

Attention

Débranchez l'appareil de la prise de courant avant de le déplacer. Assurez-vous de ne pas endommager le cordon d'alimentation. Un cordon d'alimentation endommagé peut provoquer un choc électrique ou un incendie.

Attention

Veillez à ne pas renverser l'appareil pendant le transport pour éviter tout dommage ou blessure. Les instructions relatives au basculement de l'appareil sont placées directement sur l'appareil. Veuillez suivre attentivement ces instructions.

AVERTISSEMENT

Les sacs en plastique présentent un risque de suffocation. Maintenez-les hors de portée des enfants.

Attention

Débranchez l'appareil de la prise de courant si vous prévoyez de ne pas l'utiliser pendant une période prolongée. Le fait de laisser l'appareil branché peut provoquer un choc électrique, une fuite de courant ou un incendie en raison de la détérioration de l'isolation.

AVERTISSEMENT

Si vous entreposez l'appareil inutilisé dans une zone non surveillée pendant une période prolongée, **assurez-vous que les enfants n'y ont pas accès et que les portes ne peuvent pas être complètement fermées.**

AVERTISSEMENT

Système de refroidissement haute pression.

AVERTISSEMENT Matières inflammables

Veillez à ne pas obstruer les ouvertures de ventilation dans l'enceinte de l'appareil ou dans la structure d'encastrement.

AVERTISSEMENT Matières inflammables

N'utilisez pas de dispositifs mécaniques ou tous autres moyens (autres que ceux recommandés par le fabricant) pour accélérer le processus de dégivrage.

AVERTISSEMENT Matières inflammables

N'utilisez pas d'appareils électriques à l'intérieur des compartiments de stockage de l'appareil, sauf s'ils sont du type recommandé par le fabricant.

AVERTISSEMENT

Une prise d'alimentation électrique avec une prise de terre doit être utilisée pour alimenter l'appareil. Cela permet d'éviter les chocs électriques.

AVERTISSEMENT

N'utilisez pas l'appareil à l'extérieur. Une fuite de courant ou un choc électrique peut survenir si l'appareil est exposé à la pluie.

AVERTISSEMENT

N'installez jamais l'appareil dans un lieu instable ou exposé à des substances inflammables. Cela peut provoquer une explosion ou un incendie.

Suivez les procédures

Installez l'appareil sur un sol solide et prenez les précautions adéquates pour éviter que l'appareil ne bascule.

Suivez les procédures

Seuls les ingénieurs et le personnel de service qualifié/autorisé peuvent installer l'appareil. L'installation par du personnel non qualifié peut provoquer un choc électrique ou un incendie.

Mise à la terre

Assurez-vous toujours que l'appareil est mis à la terre pour protéger l'utilisateur contre les chocs électriques.

Interdiction

N'utilisez pas le cordon d'alimentation s'il est endommagé. Un cordon d'alimentation endommagé peut provoquer un incendie ou un choc électrique.

Interdiction

N'utilisez jamais une ligne téléphonique ou un paratonnerre comme protection de mise à la terre. En cas de foudre, un courant puissant survient, ce qui est extrêmement dangereux.

Interdiction

N'utilisez pas de conduites d'eau comme protection de mise à la terre. Les systèmes modernes de canalisations d'eau sont non-conducteurs tels que le PVC.

Suivez les procédures

Le remplacement du cordon d'alimentation ne peut être effectué que par du personnel autorisé.

Interdiction

N'utilisez jamais de conduites de gaz comme protection de mise à la terre pour l'appareil. Cela peut provoquer une explosion.

Suivez les procédures

Débranchez le cordon d'alimentation en cas de problème avec l'appareil. Un fonctionnement anormal continu peut provoquer un choc électrique ou un incendie.

Suivez les procédures

N'installez jamais de sondes dans la porte, car cela détériorerait la performance du joint de porte, augmenterait l'accumulation de glace et affecterait la température à l'intérieur de l'appareil.

MISE EN GARDE

Le réglage d'usine pour le déclenchement de l'alarme de porte est de 40 secondes. Pour modifier ce paramètre, contactez le distributeur/vendeur de l'appareil.

MISE EN GARDE

Veuillez noter que le système de refroidissement ne fonctionne pas en cas de panne de courant !

Lorsque le courant est rétabli, l'appareil reprend son fonctionnement normal. Nous vous recommandons fortement de NE PAS ouvrir la porte pendant une panne de courant, sauf pour déplacer les produits vers un autre appareil ou un autre emplacement. Le fait d'ouvrir la porte augmentera la température à l'intérieur de la chambre temperature inside the chamber.

MISE EN GARDE

N'oubliez pas de garder à l'esprit le point de consigne de l'appareil lorsque vous modifiez le réglage de la température élevée. Si la température élevée est réglée plus bas que le point de consigne de l'appareil, l'alarme se déclenchera.

MISE EN GARDE

N'oubliez pas de garder à l'esprit le point de consigne de l'appareil lorsque vous modifiez le réglage de la température basse. Si la « température basse » est réglée plus haut que le point de consigne de l'appareil, l'alarme sera activée.

Suivez les procédures

ATTENTION ! Ne retirez pas la clé USB pendant le transfert de données. Attendez que l'icône ✓ s'affiche avant de retirer la clé USB. Le transfert de données peut durer plus de 10 heures. Lors du transfert de données vers la clé USB, aucune donnée n'est consignée dans les journaux.

AVERTISSEMENT

Avant tout travail d'inspection ou d'entretien, le cordon d'alimentation de l'appareil doit être débranché de la prise de courant. Ceci permet d'éviter tout choc électrique ou toute blessure potentiels. Pendant les travaux d'entretien, ne respirez pas la poussière et les aérosols à proximité de l'appareil, ils pourraient être nocifs pour votre santé.

Interdiction

Ne démontez, réparez ou modifiez jamais l'appareil vous-même. Tout travail de ce type effectué par une personne non autorisée peut entraîner un incendie, un choc électrique ou des blessures dues à un mauvais fonctionnement.

AVERTISSEMENT

Lorsque vous avez les mains mouillées, ne touchez jamais les pièces électriques et n'actionnez jamais les interrupteurs. Cela peut provoquer un choc électrique.

Interdiction

N'utilisez jamais de flamme pour vérifier s'il y a une fuite de gaz.

Suivez les procédures

N'utilisez jamais d'objets tranchants pour enlever la glace, car ils pourraient endommager l'intérieur de l'appareil. N'utilisez jamais de procédés mécaniques, électriques ou chimiques pour accélérer le processus de dégivrage.

ATTENTION

N'utilisez jamais de produits abrasifs ou contenant du chlore pour nettoyer l'appareil.

ATTENTION

Ne projetez jamais de l'eau directement sur l'appareil, car cela pourrait provoquer un choc électrique ou des courts-circuits.

TROUBLESHOOTING

Most malfunctions arise in wrong use of the unit and can often be solved on the spot. In order to resolve some of the most common malfunctions please see the following troubleshooting scheme:

PROBLEM	CAUSE	ACTION
The refrigeration of the unit is not effective, temperature tends to operate out of range.	Overload or load of warm products may cause the temperature to rise.	Discharge warm or excess products.
	Products are packed too close in the unit, preventing air to flow.	Relocate the products. Make sure there is an air gap between products.
	Make sure the unit is not in direct sunlight or subject to any heat radiation.	Move the unit away from the sunlight or heat source.
	Frequent door openings may cause the temperature to rise.	Check if there has been frequent door openings. Leave the door closed until the temperature in the unit is stable.
	The ambient temperature is too high. The unit is most effective in an environment under 32°C.	Control the room temperature in the room where the unit is located.
The unit is too noisy.	The unit is not levelled.	Adjust the castors/feet.
	The unit is touching a wall or object.	Move the unit away from the wall or objects.
Alarm light flashes, audible alarm sounds.	Warm products are loaded into the unit. The alarm signal cancels when the temperature recovers to normal level.	Allow time for the temperature to recover. The alarm will stop when the temperature has recovered.
	Door is not shut properly. The Door alarm will sound if the door is even slightly opened.	Shut the door.
	Unstable power supply might cause the alarm to switch on.	Allow time for recovery.

NOTES

ARCTIKO
true cooling specialists

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Follow us on:

We reserve the right to change specifications without notice. Subject to confirmation, availability and errors.
Check our website for further technical information.

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