



OPERATING INSTRUCTIONS

INTEGRALINE RANGE

ULUF P10/P50/P90

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Introduction

Please take a few minutes to read and become familiar with the advantages of your appliance. To meet the high quality demands required by the medical and pharmaceutical industry, at least 10 % of all appliances that leaves 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 appliance.

If you would like to obtain further information about this appliance, please visit our website www.ARCTIKO.com where downloads are available on the page of each specific product and also the user manual.

Integraline ULUF P10, ULUF P50 ULUF P90 are designed for storage of bi-omomedical products at a constant temperature in clinical, pharmaceutical, research and laboratory fields.

Symbols using in manual



WARNING

Performing this action can cause personal 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 power supply before operation.



Grounding

Be aware that the appliance is grounded.



Fragile - Handle with with care

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

Abbreviations

A Ampere

V Volt

W Watt

C Degree Celcius

Kg Kilogram

MM Milimeter

Min Minutes

H Hour

N/A Not applicable

ULT Ultra-low temperature

Safety

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

Intended use

Ultra-low temperature appliances are designed for storage of biomedical products at a constant temperature in clinical, pharmaceutical, research and laboratory fields. This appliance 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 appliance safely.

Young children should be supervised to ensure that they do not play with the appliance. The appliances are designed to operate within a temperature range of -40°C to -86°C at a maximum ambient temperature of $+25^{\circ}\text{C}$, climate class 3. For safe and optimal performance of the appliance, it should only be placed indoors, in a well ventilated room and in elevations below 2000 m. The noise level of the equipment is below 52dB.

The appliance should only be operated by instructed personnel.


Personal safety


When operating an ultra-low temperature freezer your body is 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 equipment. The temperature of operation is such that direct contact with the cold contents or inside the equipment can burn unprotected skin.
- Assure good cleaning practices at all times by keeping the equipment 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 metal objects such as a pin or a wire into any vent, gap or any outlet on the unit. This may cause electric shock or injury by accidental contact with moving parts.

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

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


 **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.


Handling and transport



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

 **Be careful not to tip the unit over** during transport to prevent damage or injury.

Inactivity for extended period

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





 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.**



-  Do not store explosive substances such as aerosol cans with flammable propellant inside the appliance
-  Do not use electrical appliances inside the storage compartment of the appliance.

Refrigerant







-  **The appliance contains a flammable refrigerant and do not damaged the refrigerant circuit**


Location


-  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.**
-  **An electrical power plug with a ground prong must be used to power the unit.** This is to prevent electrical shock.
-  Keep clean of obstruction all ventilation opening in the appliance enclosure or in the structure for building
-  **Do not use the unit outdoors.** Current leakage or electric shock may result if the unit is exposed to rain.

-  **Never install the unit in a flammable or volatile location.** This may cause explosion or fire.
-  **Install the unit on a sturdy floor and take an adequate precaution to prevent the unit from tipping.**


Electrical connection

-  **Only qualified/authorized engineers or service personnel should install the unit.** Installation by unqualified personnel may cause electric shock or fire.
-  Always make sure the unit is grounded to protect the user from electrical shock.
-  Do not use the power supply cord if it is damaged. Such supply cord may cause fire or electric shock.
-  Never use a telephone line or lightning rod as ground protection.
During lightening, there is a strong current present, which is extremely dangerous.
-  Do not use water pipes as ground protection. Modern water pipe systems are non-conductors such as PVC.
-  Replacing the power cord may only be done by authorized personal.


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

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

Maintenance

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

 Before performing maintenance or cleaning the unit, **disconnect the electrical power supply.**

 **Ensure that you do not inhale or consume medication or aerosols** from the unit at the time of maintenance. These may be harmful to your health.


 **Never splash water directly onto the unit** as this may cause electric shock or short circuit.

General maintenance



Before any inspection or maintenance work is performed, the power plug of the unit should be disconnected from the power supply socket. 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.

Cleaning

 **Do not use sharp object to remove ice as these may damaged the inside of the equipment. Do not use mechanical, electrical or chemical processes to speed up the defrosting process**



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

Handling & Transportation

Moving the appliance

Lifting, moving and transportation of the appliance without suitable equipment may cause personal or material damage. Always use suitable lifting equipment to load, unload and move the appliance.

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 or shock.
- 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 materials, 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.

Inactivity for extended period

If the appliance must be switched off for a longer period and stored away, please take following precautions.

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

Disposal

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

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

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

Installation

Preparing the appliance

- **Unpack the appliance:** Remove all packaging material, plastic bags and straps.
- **Storing the key:** The key for the door lock is strapped to the backside of the appliance. Remove the key from the cable carefully without causing damage to the cable. Keep the key in a safe place.
- **Read the Quick start guide:** The quick guide is provided with the appliance.
- **Ventilate the appliance:** Open the door for at least 20min in order to ventilate the appliance before first use. The appliance may contain odors from manufacturing.
- **Clean the appliance:** Clean the appliance on the inside and outside with a soft cloth/sponge using a solution of water and light detergent. After cleaning all surfaces of the appliance, wipe the inside with a dry rag.
- **Remote alarm contact:** The terminals for the remote alarm contact are located in the compressor compartment (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 appliance. When an alarm is accepted on the display the remote alarm relay will return to normal. However, in case of a power outage, the remote alarm contacts cannot be controlled by the buzzer alarm. The remote alarm can be set as normally open (NO) or normally closed (NC).

Refrigerant

Please see the rating plate affixed to the appliance to obtain information about the refrigerant.



WARNING: Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in

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

WARNING: Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer

Location

Place the appliance in a location that satisfies the following conditions in order to achieve optimal operating results:

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

Electrical connection

In order to ensure a reliable installation that complies with the limits of temperature and voltage drop, it is necessary to determine maximum load of appliances 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 appliance must be grounded
- The installation must always be secured with a minimum 10 A fuse.
- If more than one appliance needs to be installed, each appliance must be connected to an individual fuse group.

When installing the unit, make sure the protected earth is grounded. If the connection is a 3-prong 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 percent of the nominal voltage supply.

Always follow local regulations when preparing an installation. If in doubt always contact your local authorities.

Getting started

During the initial startup and continuous usage of the appliance, the following procedures shall be followed.

1. Plug the power socket into a dedicated outlet. For correct voltage requirement, follow the information on the rating plate.

When started, let the appliance cool for 24 hours before placing any products into it.

2. When the appliance initially starts up, the buzzer alarm may sound. This is normal. You can accept the alarm on the display.
3. This appliance has been set to operate at -80°C from the factory.
4. Once a thorough inspection of the appliance is completed, products can be loaded into the appliance. Products should be pre-frozen when inserted into the appliance, otherwise this can affect the cooling performance of the appliance.

Product description

The Integraline range offers the best ultra-low temperature freezing with high performance and stability. Standard features are VIP panel, filter-less construction for less maintenance, low noise level, low energy consumption, low heat dissipation and excellent temperature stability.

All appliances are equipped with a vacuum valve and a key lock on the door.

Cabinet description



Cabinet description

1. Door handle with lock	For easy opening, closing and locking the door.	7. Rollers	Rollers for easy movement of the appliance.
2. Vacuum valve	Equalizes the pressure in the appliance.	8. Remote alarm connection	For connecton of additional alarm equipment.
3. Display	See "Display".	9. Probe	See "Probes and access ports".
4. Front panel	Access for compressor compartment, fitted with control panel.	10. Access ports	See "Probes and access ports".
5. Door switch	Monitors the door openings and controls the lights.	11. Compressor compartment	The compressor compartment is located in the bottom of the appliance.
6. Levelling feet	Feet for easy level adjustment of the appliance.		

Probes and access ports

As standard, the appliance is equipped with a temperature probe inside the chamber. The probe monitors the temperature in the chamber and controls the operation of the compressor.

The main probe also controls temperature alarms. It is possible to connect two different probes to the unit in order to monitor the temperature different places in the appliance. You can change the settings on which probe is the main probe in the display.

To install more probes, you can use the premade access port on the back of the appliance. Carefully push a screwdriver or drill through the holes. Always seal the holes with putty or similar on both sides of the hole.



The images shown may differ from your appliance .

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 appliance.

Single compressor technology

The Arctiko Integraline range also comes with our single compressor technology.

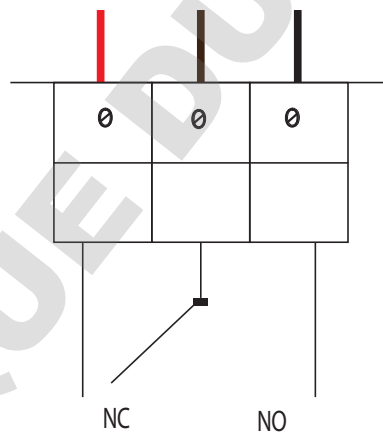
In contrast to the normal cascade system, these appliances only need 1 compressor to reach the desired temperature.

Filterless construction

Arctiko's single compressor system is designed as a filter-less 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 back in the compressor compartment on the bottom of the appliance.

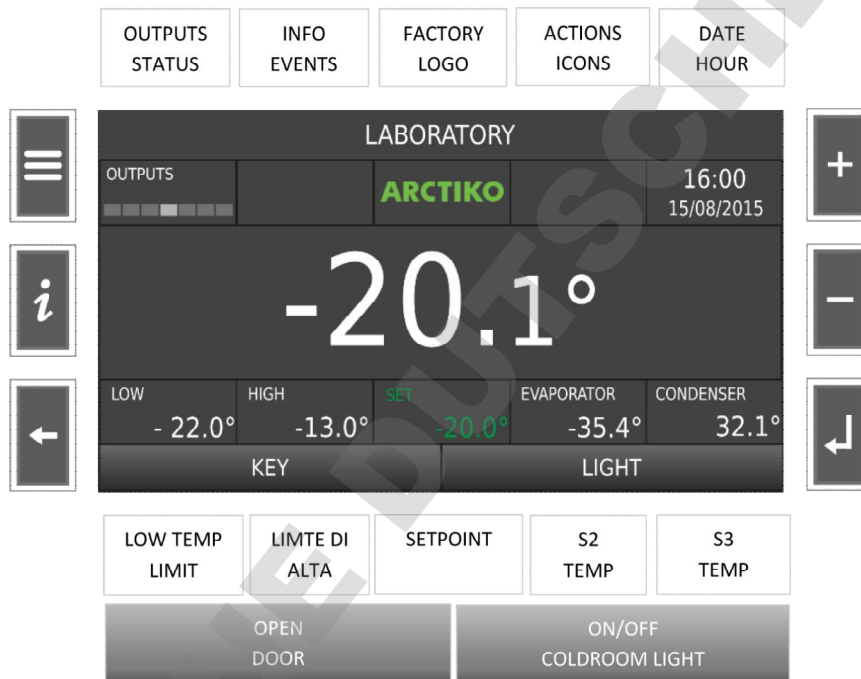


Vacuum valve

The vacuum valve helps equalizing the pressure inside the appliance, 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



MENU KEY
accesses the menu panel



INFO KEY
accesses the info pages from Home Page level



ESCAPE KEY
goes to previous level
switch between *easy/scientific 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

PAUSE	WAITING COOLING	COOLING	DEFROST	DRIPPING
<i>no icons</i>				
HEATING	WARM	DRY	CO2 BACKUP	STOP ACTIONS
				

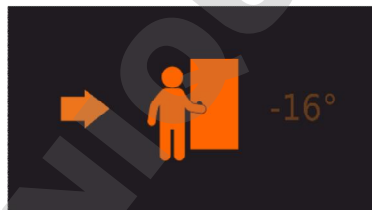
Info events

ALARM ON	FAILURE STATUS	NOTIFY
		

Door Warning



DOOR OPENED



DOOR ALARM

Temperature alarms

LOW/HIGH TEMPERATURE PREALARM

COMPRESSOR	SETPOINT	MAINS	UNIT	STATUS
-12.1°	30.3°	-86.0°	0V	✓

ALARM OCCURRED

JUMP TO EVENT LIST

HIGH TEMPERATURE ALARM

COMPRESSOR	SETPOINT	MAINS	UNIT	STATUS
-12.1°	30.3°	-86.0°	0V	⚠

LOW TEMPERATURE ALARM

COMPRESSOR	SETPOINT	MAINS	UNIT	STATUS
-12.1°	30.2°	-86.0°	0V	⚠

Failure events

FAIL OCCURRED



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

JUMP TO EVENT LIST

FAIL UNRESOLVED



EVENTS LIST		1/2
DEFROST TIME-OUT	18:49 12/06/2015	
HIGH TEMPERATURE	10:43 11/06/2015	12.5°C 10 min
PROBE	08:55 05/06/2015	S1
LOW TEMPERATURE	04:50 02/06/2015	1.3°C 02 min

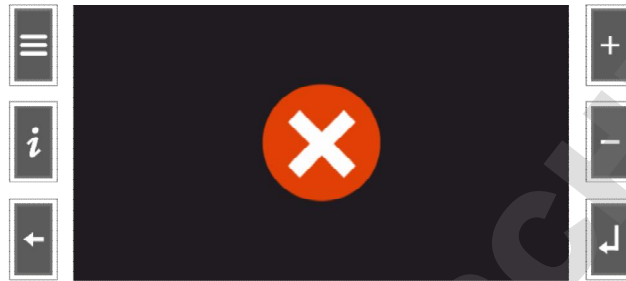
NOTIFICATION OF PREVIOUS ALARM



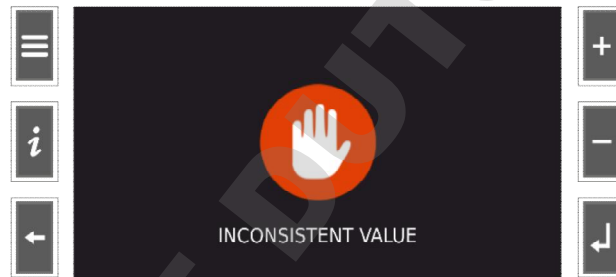
Outcome frames

The outcome frames will be accompanied by a long beep.

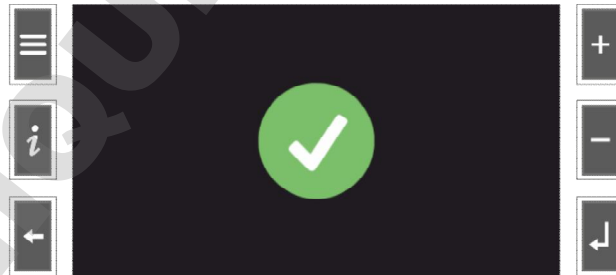
ERROR



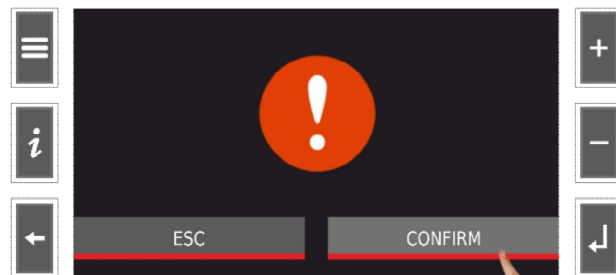
INVALID VALUE



CONFIRMED

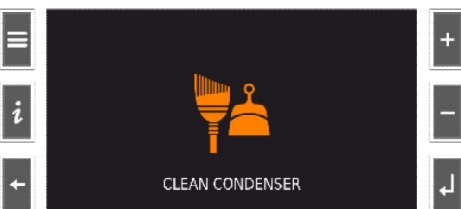
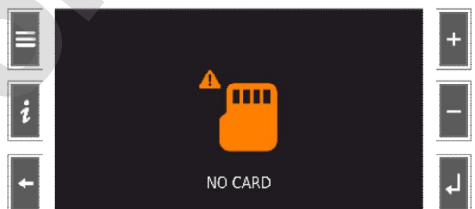
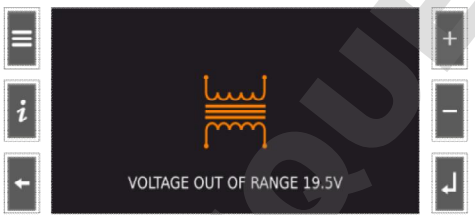
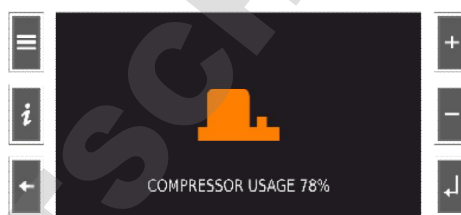
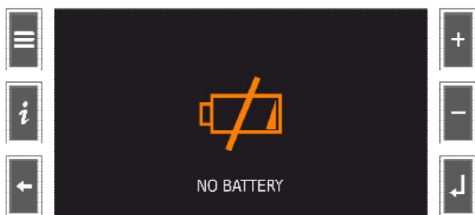
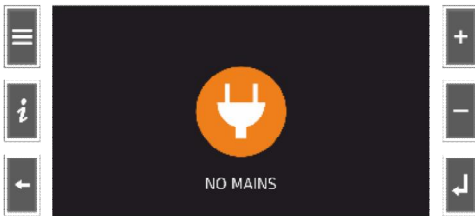


ESC/CONFIRM



Warnings

To accept a warning, press “”.



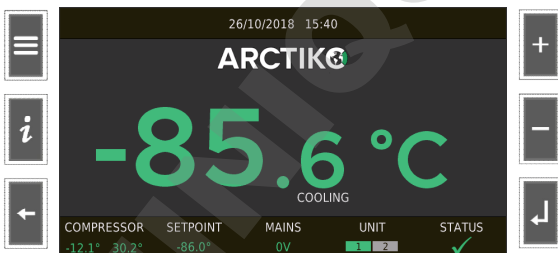
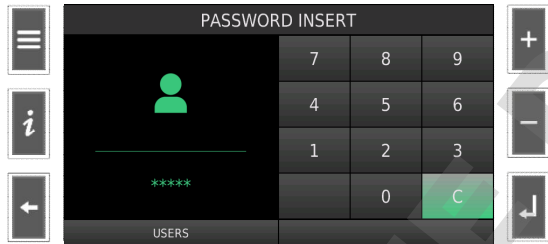
How to turn on the device



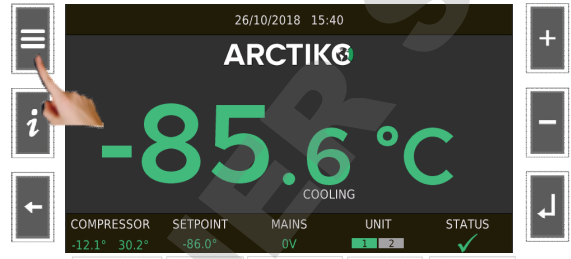
Press on the screen and hold, to turn on the device.



If password protection is enabled type password and press "Enter"

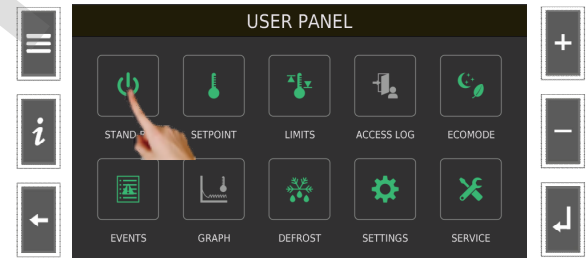


How to turn off the device

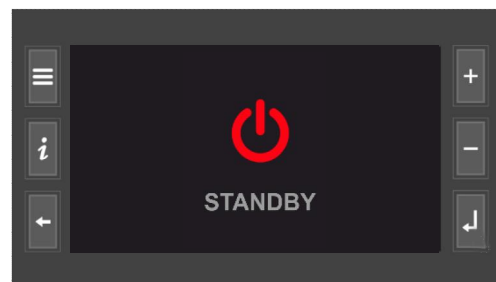
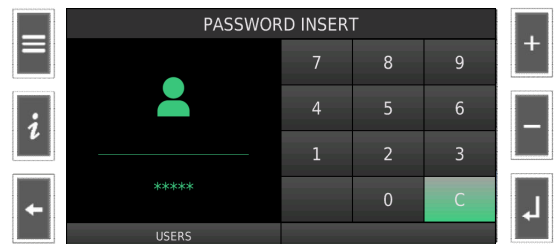


Press "Menu key" to access "Menu user".

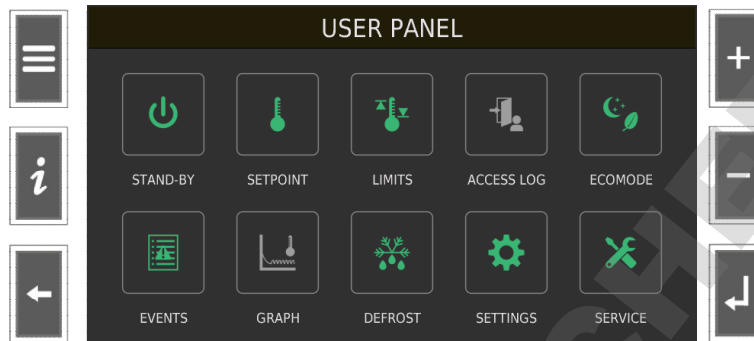
Press and hold "Standby" to turn off the device (put in standby mode).



If password protection is enabled type password and press "Enter"

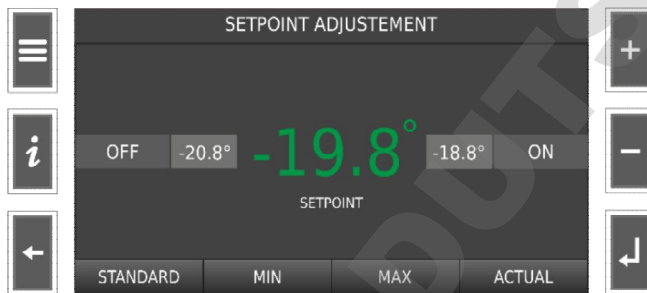


Menu user



- **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
- **GRAPHICS** displays the daily temperature graph from calendar
- **DEFROST** start the defrost and displays temperature and time phase
(defrost function not available on Integraline range)
- **SETTINGS** access to MENU SETTINGS
- **SERVICE** access to MENU SERVICE

How to change the setpoint



+

INCREASE TEMPERATURE

-

DECREASE TEMPERATURE

↵

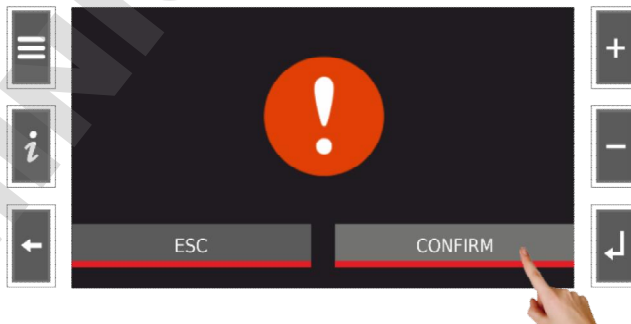
SAVE NEW VALUE AND EXIT

STANDARD *RECALL STANDARD VALUE*

MIN *RECALL MINIMUM VALUE*

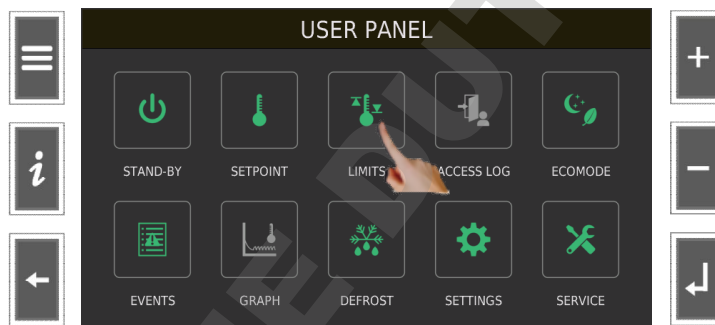
MAX *RECALL MAXIMUM VALUE*

ACTUAL *RECALL RUNNING VALUE*

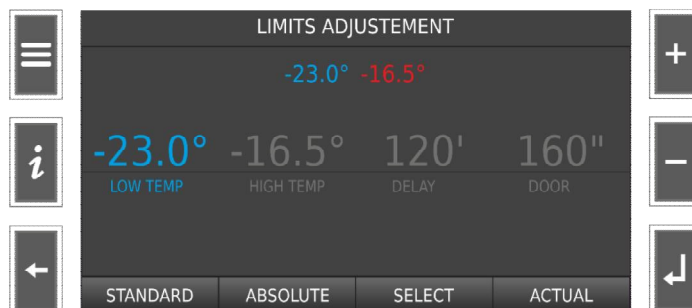


How to change the alarm limits

Press the “Menu key”  to access the menu.



- The external **UP/DW** keys increase/decrease the value selected with the **SELECT** key.
- The **STANDARD** key sets the default value
- The **ABSOLUTE/RELATIVE** key sets in rotation the type of limit setting; the high and low temperature limits in the control board are always absolute. The calculated value of the limits is displayed under the panel title.
- The **SELECT** key enables in rotation the value to be set.
- The **CURRENT/MODIFIED** key retrieves the value in progress/preset
- The **ESCAPE** key returns to the USER MENU without saving the map of values with confirm request
- The **ENTER** key returns to the USER MENU saving the map of values with confirm request



Access list

The icon pressure from LOG ACCESS from USER MENU leads to the display of the list of the last 32 events accesses . If you wish to consult previous logons make a BACK- UP data and open the contents of uSD 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 .

USER PANEL

STAND-BY SETPOINT LIMITS ACCESS LOG ECOMODE

EVENTS GRAPH DEFROST SETTINGS SERVICE

ACCESS LOG 1/4

1	12/05/2016	22:30	DR ROSSI		
2	12/05/2016	20:09	DR BIANCHI		
3	12/05/2016	14:55	SFRVICE		
4	12/05/2016	14:16	ADMIN		
5	10/05/2016	10:24	DR ROSSI		
6	09/05/2016	18:01	DR ROSSI		
7	09/05/2016	13:11	ANONYMOUS		
8	09/05/2016	11:24	DR BIANCHI		

+ POWER OFF
 - CHANGED SETPOINT
 ↙ CHANGED PARAMETER
 ↘ FORMATTED CARD/ CHANGED SETTINGS CLOUD
 ↖ DOOR OPENED
 ↗ CHANGED HIGH LIMIT TEMPERATURE
 ↙ BURGLARY
 ↘ POWER-ON

Ecomode setting

The ECOMODE function is a power saving feature integrated in the controller. It works by raising the setpoint temperature temporarily in times of low cooling demand (e.g. during weekends or closing hours).

By raising the setpoint temperature the power consumption is lowered as a result of the lower load on the cooling system.

There are 2 operating modes; Automatic and manual.

In automatic mode the temperature is raised by the set amount automatically after a period of low cooling demand. The temperature is automatically lowered again if the cooling demand is raised. The cooling demand is effected by door openings or by inserting products into the appliance.

In manual mode the temperature is raised in a set time interval, defined by a starting time and a duration.

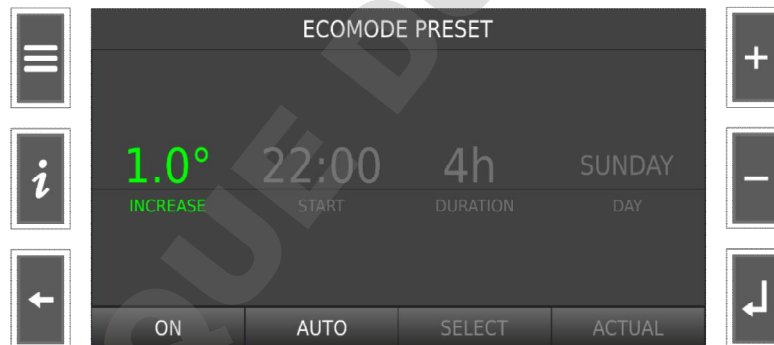
Please make sure not to raise the temperature setpoint higher than the required maximum storage temperature of the products being stored in the appliance.

Pressing the **ECOMODE** icon displays 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.

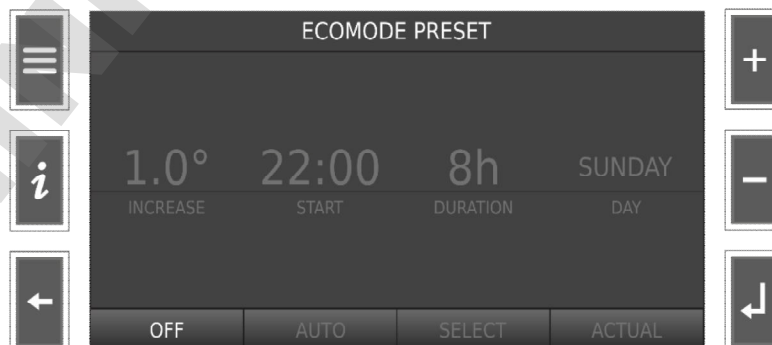
The external **UP/DW** keys increase/decrease the value selected. The map of values is saved by pressing the external **ENTER** key with request to confirm.

- The **ON/OFF** keys disables/enables ECOMODE; if the key is at **OFF** the other keys are disabled.
- The **AUTO/TIMER** key sets in rotation the ECOMODE TIMER/AUTO function; in TIMER mode the SELECT key is disabled and only the variable INCREASE is selected.
- The **SELECT** key, in TIMER mode, enables in rotation the values to be set.
- The **CURRENT/MODIFIED** key retrieves the value in progress/preset
- The external **ESCAPE** key returns to the USER MENU without saving with exit/confirm request

ECOMODE AUTO



ECOMODE OFF



Event list

EVENT IN PROGRESS

EVENTS LIST			1/2
■	DEFROST TIME-OUT	18:49 12/06/2015	
■	HIGH TEMPERATURE	10:43 11/06/2015	12.5°C 10 min
■	PROBE	08:55 05/06/2015	S1
■	LOW TEMPERATURE	04:50 02/06/2015	1.3°C 02 min

Shows number of pages with events. Press **+** or **-** to change page.

EVENTS RECORDED

EVENTS LIST			1/2
■	DEFROST TIME-OUT	18:49 12/06/2015	
■	HIGH TEMPERATURE	10:43 11/06/2015	12.5°C 10 min
■	PROBE	08:55 05/06/2015	S1
■	LOW TEMPERATURE	04:50 02/06/2015	1.3°C 02 min

EVENT LIST (alarms and faults)

- HIGH TEMPERATURE
- LOW TEMPERATURE
- DOOR OPEN
- BLACK-OUT
- MAINS FAULT
- Sx PROBE
- LOW EVAPORATION
- HIGH CONDENSATION
- HIGH PRESSURE
- DEFROSTING TIME
- FAULTY BATTERY
- DOOR SWITCH
- UNIT FAULT
- LOAD FAULT
- U1 RELAY FAULT
- U2 RELAY FAULT
- RELAY FAULT

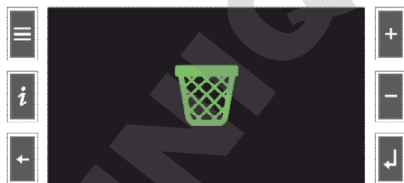


Fig.1

Empty List

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

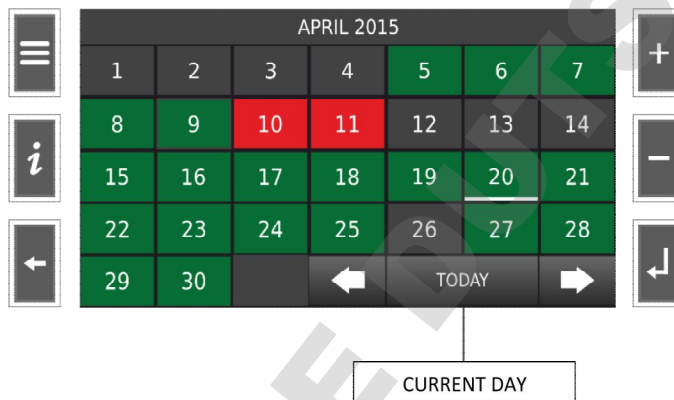
Graphs

Pressing the **GRAPH** icon accesses 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 the **TODAY** key to go back to the current day.

REPRESENTATION CRITERIA

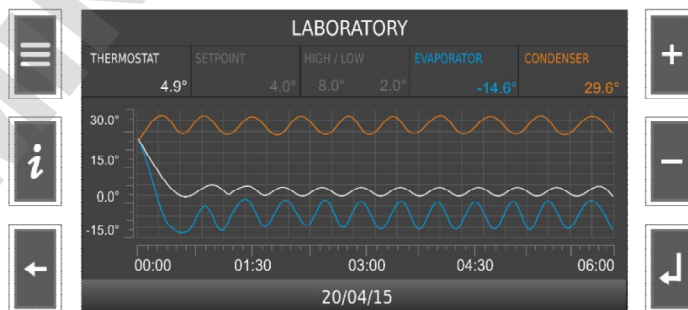
The grey boxes indicate the lack of data, the green boxes the presence of data, the red boxes the presence of a discrepancy. Press the key of the requested day to access the display frame of the daily graph.

CALENDAR

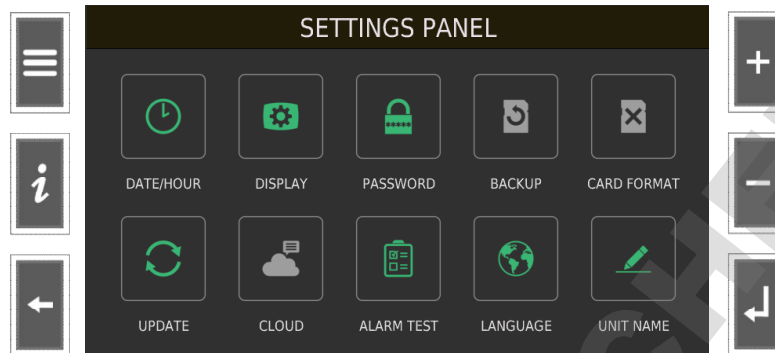


SCROLLING THE FRAPH AND ENABLING THE TRACES

The graph opens with start at 00:00 hours and end 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 the **ESCAPE** key. 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.



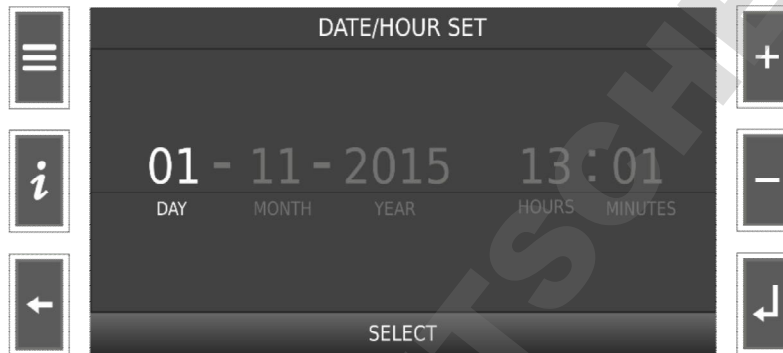
Menu settings



- **DATE/HOUR** set the clock device
- **DISPLAY** set the configuration of panel display
- **PASSWORD** set the three 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

Set clock

Press select to move the highlight and +/- to change the value. To confirm press "Enter"



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.

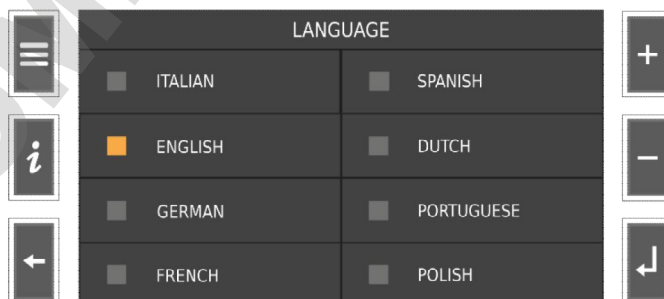
The navigation on the Cloud refers to the zone time conventions if the device used foresees its automatic management.

Language

Pressing the **LANGUAGE** icon shows 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.

KEY FUNCTIONS

- The **UP/DW** keys browse the language setting pages, if enabled
- The **ESCAPE** key leads to the SETTINGS MENU without changing the language
- The **ENTER** key, *after confirmation*, sets the selected language.



Pasword 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 appliance 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".

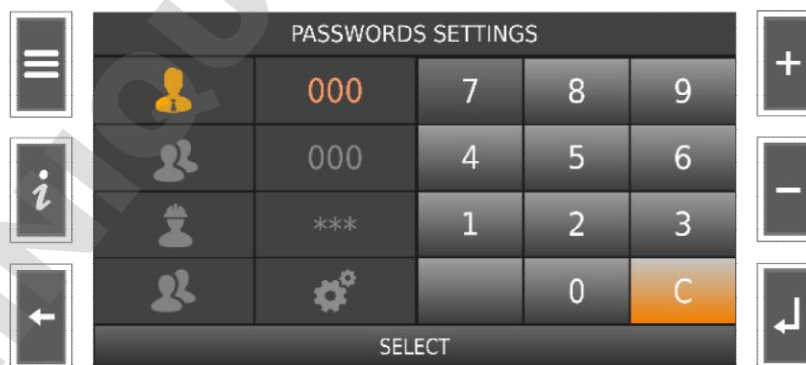
Service: For accessing the service menu. The service settings are reserved for qualified Arctiko service personnel.

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 appliance on or off.

These individual user accounts can be named to easily differentiate between them.



Alarm test

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

1. 3 seconds alarm icon with buzzer on
2. Activate the alarm relay for 3 seconds according these sequences OFF / ON / OFF
3. Back to Home Page



Machine name

Pressing the **TITLE** icon shows the editing frame of the machine name that is displayed in the Home Page header. To confirm the text [max 24 characters] press **ENTER**.

The external **ESCAPE** key takes the display back to the SETTINGS MENU without saving the edited text.



Data download

The backup menu transfers the thermoregulation data on usb pen. Pressing the backup icon 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 the SETTINGS MENU.

The up/dw keys increase/decrease the number of months to transfer; pressing the enter key starts the data download with the progress bar; at the end, it goes back to the setting menu. The escape key leads to the settings menu without transferring the data.



Attention!

Do not remove the USB drive while transferring data. Wait for the “V” icon to show before removing the drive.

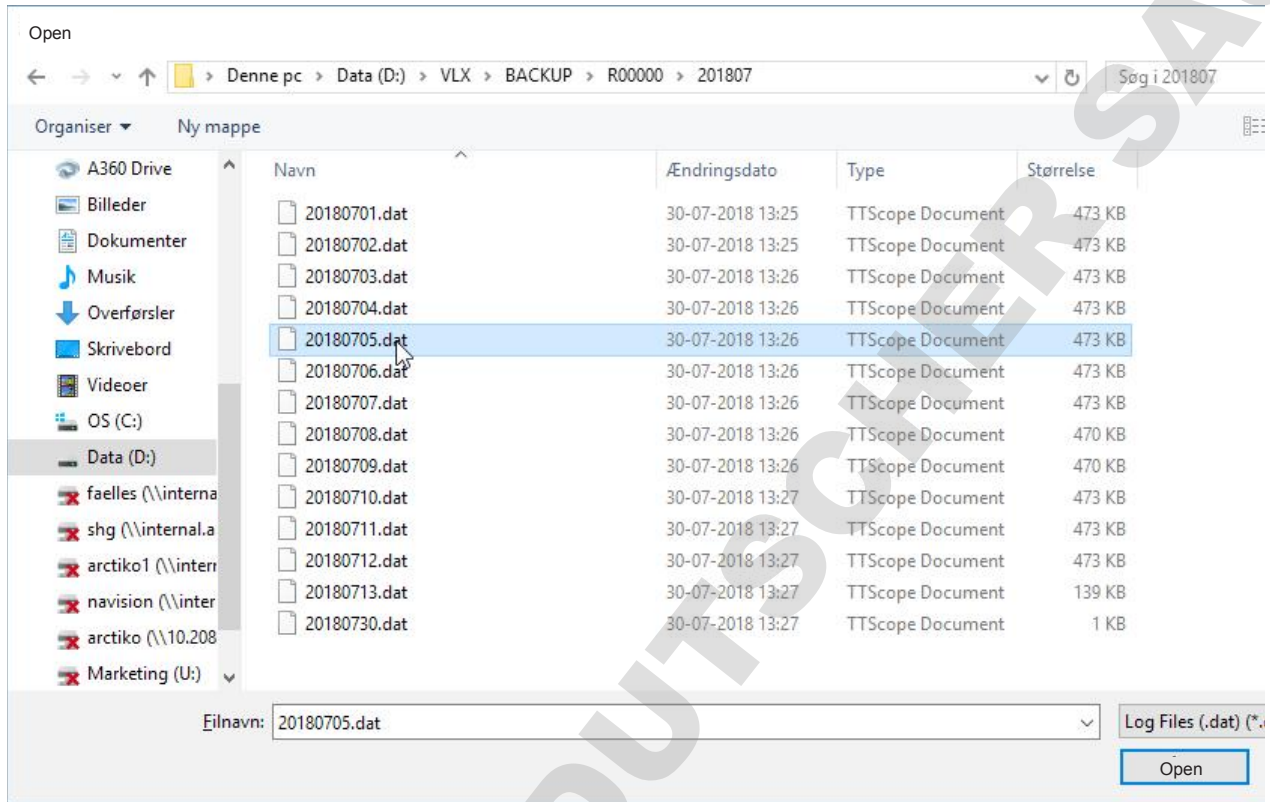
Open and process data on a computer

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.

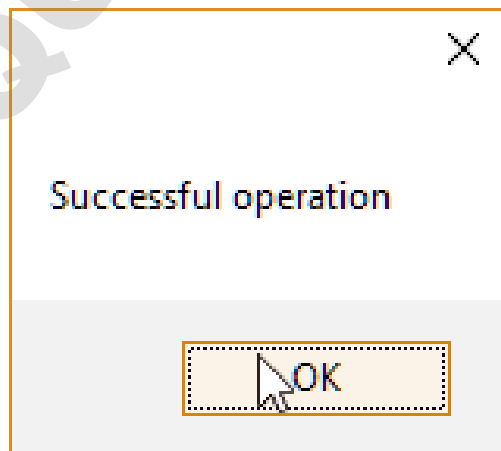


2. To convert the data, open the program “Thermo Converter”. To convert the file press the “ DAT TO CSV CONVERT” button.



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

Choose the desired file and press "Open".



4. When the conversion is complete, a window with the message "Successful operation" will appear. Press "OK" to continue.

DATE	S1 °C	S2 °C	S3 °C	UR %	M °C	Th °C	SP °C	SPO °C	SP_RH %	HI °C	LO °C	Him °C	LOm °C	D1	D2	D3	D1	U1	U2	U3
#####	33,2	-49,9	-49,9	---	---	-79,2	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,2	-49,9	-49,9	---	---	-79,2	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,1	-49,9	-49,9	---	---	-79,2	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,2	-49,9	-49,9	---	---	-79,3	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,2	-49,9	-49,9	---	---	-79,3	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,2	-49,9	-49,9	---	---	-79,4	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	1	1
#####	33,1	-49,9	-49,9	---	---	-79,4	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	32,9	-49,9	-49,9	---	---	-79,5	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	32,7	-49,9	-49,9	---	---	-79,5	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	32,4	-49,9	-49,9	---	---	-79,5	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	32,1	-49,9	-49,9	---	---	-79,5	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	31,8	-49,9	-49,9	---	---	-79,4	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	31,8	-49,9	-49,9	---	---	-79,2	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	31,7	-49,9	-49,9	---	---	-79,1	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	31,7	-49,9	-49,9	---	---	-78,9	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0
#####	31,7	-49,9	-49,9	---	---	-78,8	-83,5	-78,5	5	-33,5	-80,5	45	2	0	0	0	0	0	0	0

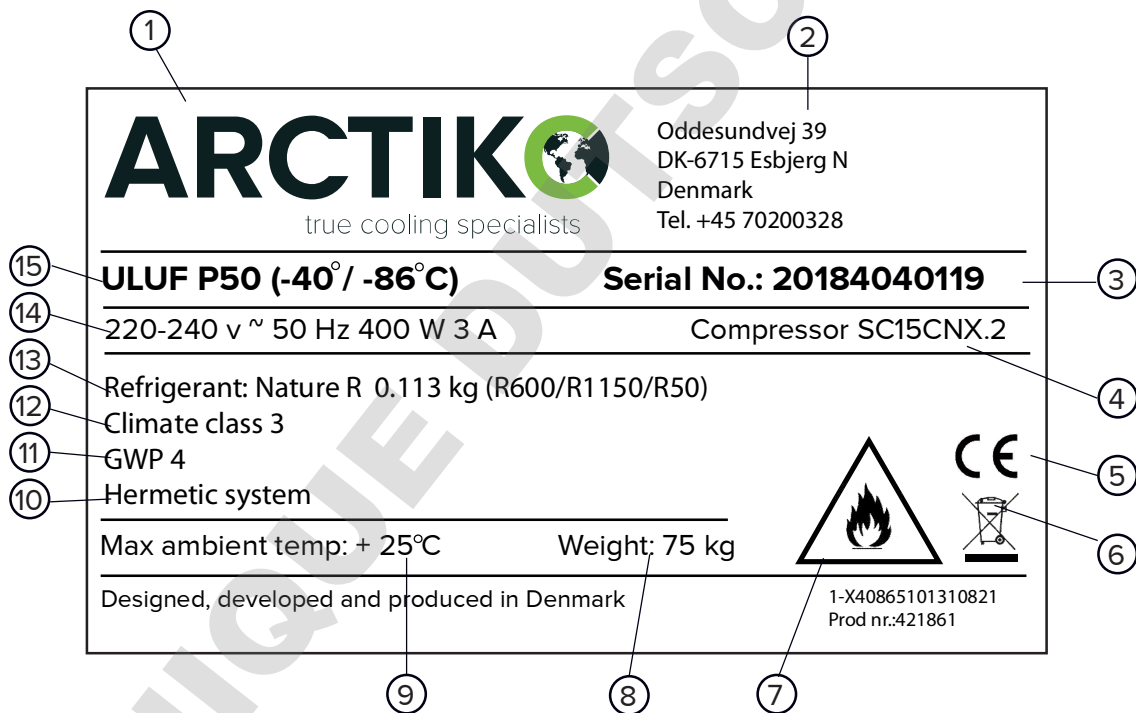
5. The file will now open in Excel or your equivalent program .

Filterless construction

Arctiko's single compressor system is designed as a filter-less 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.

Rating plate

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



The rating plate shown is an example and varies from model to model

- | | | |
|------------------------|--|---------------------------------|
| 1. Logo | 6. WEEE "Waste from Electrical and Electronic Equipment" | 11. Global warning potential |
| 2. Contact information | 7. Flameable refrigerant | 12. Climate class |
| 3. Serial no. | 8. Weight in Kg | 13. Refrigerant type and charge |
| 4. Compressor type | 9. Max ambient temperature | 14. Power |
| 5. CE | 10. Hermetic cooling system | 15. Model and temp. range |

Description of data points

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
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 appliance. Arctiko recommends a thorough examination twice a year and cleaning at least once a month.

General maintenance

Perform following at least twice a year:

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



WARNING!

Before any inspection or maintenance work is performed, the power plug on the appliance should be disconnected from the socket. This is to prevent any potential electrical shock or injury. During the maintenance work, do not breathe dust and aerosols as they might be harmful to your health.

Cleaning

Perform following instructions at least once a month:

- **Always keep the appliance 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 appliance free of ice will extend its lifespan.
- Clean the outside and inside of the appliance using a dry, soft cloth or a soft cloth with a solution of water and mild detergent. If a thorough cleaning or disinfection 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 into the appliance. 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 in the refrigeration system for this appliance are completely sealed. These do not require any lubrication.



ATTENTION!

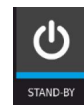
Do not use abrasive nor chlorine-containing products to clean the appliance.

Defrosting

This appliance does not have automatic defrost, therefore you have to perform defrosting by following these instructions:

Defrost the appliance at least twice a year.

1. If the appliance is loaded with samples or products, move these to another appliance to maintain the temperature of the products.
2. Turn off the appliance on the display by pressing the STANDBY button.
3. Unplug the main power cable from the power socket.
4. Open the door of the appliance.
5. Place cloths or towels in the bottom of the appliance to collect any defrost water.



6. Leave the appliance open for a minimum of 24 hours allowing the ice to melt.
7. When the defrosting is completed thoroughly clean the appliance inside. Wipe off all remaining water and leave the door open until the cabinet is completely dry.
8. Connect the main power cable to the power socket and switch on the appliance on the display.
9. Reload the appliance 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 appliance and model ready for the distributor.

Spare parts

For requirements of spare parts, contact your Arctiko distributor. Please inform the serial number of the appliance 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 appliances for at least 10 years after the delivery.

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 and model handy for the appliance you are referring to when contacting the distributor.

Warranty

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

Troubleshooting

Most malfunctions arise in wrong use of the appliance 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 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 25°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:

DOMINIQUE DUTSCHER SAS

DOMINIQUE DUTSCHER SAS

DOMINIQUE DUTSCHER SAS

DOMINIQUE DUTSCHER SAS



5080065-03-GB

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