

OPERATING INSTRUCTIONS

FLEXALINE

PRE Models – 60 / 125 / 285 / 380 / 490

LRE Models – 60 / 125 / 285 / 380 / 490

LFE Models – 60 / 125 / 285 / 380 / 490

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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 FLEXALINE 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.

If you would like to obtain further information about this unit and possible accessories, please visit our website www.arctiko.com where downloads are available for 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 low temperature.

ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|--------|----------------|
| A | Ampere |
| W | Watts |
| V | Voltage |
| °C | Degree Celsius |
| h | Hours |
| min | Minutes |
| cm | Centimeters |
| kg | Kilogram |
| N/A | Not applicable |

SAFETY

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

FLEXALINE units are designed for storage of products at a constant temperature in clinical, pharmaceutical, research and laboratory fields. PRE & LRE are refrigerator models, LFE is a freezer model. This unit can be used by children aged from 8 years and infirm persons when they have been adequately supervised by a responsible person to ensure that they can use the unit safely and are familiar with hazards.

The PRE & LRE units are designed to operate within a temperature range of 2°C to 8°C, and the LFE freezer operates at a temperature of -25°C to -10°C. All models can be used at 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 for use with an input voltage ~230V 50/60Hz. Depending of the model and size the electrical current is between 1,0 to 2.5 A.



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 FLEXALINE Refrigerator or 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 LFE model. The temperature of operation is such that direct contact with the cold contents inside the unit can burn unprotected skin.
- Always assure good cleaning practices 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.
- Low temperature freezing conditions, frostbite hazard. Do use Arctiko Cryo gloves, to prevent from frostbite in the cooling chamber.



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.



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 intended 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.



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.



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.



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.



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.



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.

List of critical components at disposal:

- Refrigerant
- Compressor and compressor oil
- Battery
- Electronics



High pressure cooling system.



Please dispose of all waste packaging appropriately and in accordance with all local recycling laws.

INSTALLATION

PREPARING THE UNIT

- **Unpack the unit:** Remove all packaging materials, protective film, plastic bags and straps from all surfaces.
- **Shelf supports:** Fit the shelf support clips onto the shelf support strips, making sure that the clips for each shelf are of the same height and that they are securely engaged on the support strip.
- **Shelf installation:** Unwrap each shelf carefully, to prevent damaging their protective coating or surface finish. Position the shelves onto the clips.
- **Storing the key:** The key for the door is packed together with the user manual 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:

- **Handle with care:** Position the unit carefully being careful not to bump it.
- **Firm and levelled floor:** Installing the unit on a firm and flat floor reduces the risk of excessive noise and vibration, as well as to allow proper drainage from the evaporator tray, to prevent any overflow. If necessary, adjust the screw feet of the appliance to make it level.
- **Door opening space:** Ensure adequate space for fully open door is possible and to allow the door to shut and seal correctly.
- **Away from any heat source:** 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 2 cm free space to each side and behind the unit. Do not block the front grille and/or rear air entry.

- **Main power plug:** The power supply flex exits the unit at the bottom lefthand side (as viewed from the back). For ease of access, the flex should be retrieved prior to positioning the Medical Refrigerator in its final location.
- **Main power plug:** The main power plug must be easily accessible, while the unit is turned on.



Warning

Failure to provide the minimum ventilation space will harm the performance of your unit, could cause fire and will invalidate the warranty.



Warning

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



Warning

If the unit has not been stored or moved in an upright position, let it stand upright for approximately 12 hours before operation.



WARNING

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



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 consider 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 an insulation damage, the unit must be grounded.
- **Electrical fuse:** The installation must always be secured with a minimum 10A fuse.
- **Installing multiple units:** If you have more than one unit, each unit 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-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.

Never share same circuit with other appliances. Before plugging in your fridge/freezer for the first time make sure the power cable is free from damage and check that your voltage corresponds to that on the serial plate.

Once plugged in the display will show the temperature inside the unit and the compressor will run late on (the indicator light

of cooling will be on at the same time). This temperature is the actual temperature recorded by the probes inside the unit and as the unit cools to the set point (factory set at 39°F for fridge; set at -13°F for freezer) so the number on the display will descend accordingly. If power is cut off, wait for at least 5 minutes before plugging the unit in again to avoid damaging the compressor.



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 procedure

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. Place the unit on a solid levelled floor. Make sure the room is ventilated, dry and the ambient temperature is between 16°C & 32°C. Ensure air circulation around the unit and protect it against direct sunlight.
2. Remove the protection foil from the interior as well as the bag with spares, keys, and user manual. Keep the user manual, spares and keys for later use. Place the small shelf at the interior bottom.
3. Plug the power socket in a dedicated outlet. For correct voltage requirement, follow the information on the rating plate. When started, let the refrigerator unit cool for at least 2h and the freezer unit for at least 6 hours before placing any products in them.
4. Turn ON the battery back-up of the unit.

PRODUCT DESCRIPTION

CABINET OVERVIEW

LFE - Laboratory Freezer



CABINET OVERVIEW

LRE - Laboratory Refrigerator

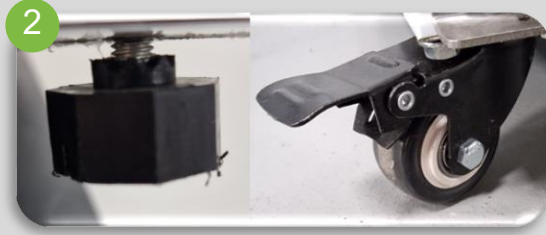


CABINET OVERVIEW

PRE - Pharmaceutical Refrigerator



CABINET DETAILS



CABINET DESCRIPTION

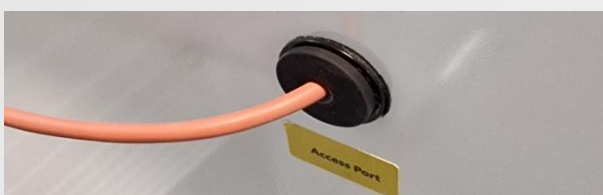
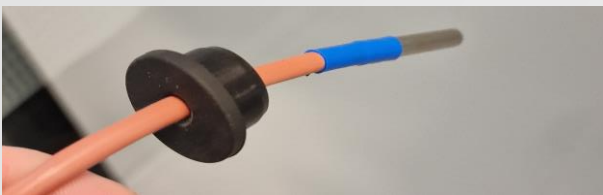
| No. | AREA | DESCRIPTION |
|-----|-------------------------|--|
| 1 | Front Panel | Access to bottom condenser. |
| 2 | Levelling feet / roller | 60L, 125L & 285 model equipped with levelling feet, 380L & 490L model equipped with rollers. |
| 3 | Compressor compartment | The compressor compartment is located in the bottom of the unit. |
| 4 | Shelves | The units are equipped with adjustable shelves. |
| 5 | Access port | See probes and access ports. |
| 6 | Fan | Cooling chamber air circulation fan. |
| 7 | Probe | See probes and access ports. |
| 8 | Remote alarm connection | For connection of additional extern alarm equipment. |
| 9 | Door switches | Door switches for light, fan & door open alarm control. |
| 10 | Backup battery switch | To turn OFF the backup battery when unit is not in use. |
| 11 | Key lock | To lock the door and protect from unauthorized opening. |
| 12 | Control panel | See display / controller |
| 13 | Light switch | To choose between light-on when door open or always light-on . |
| 14 | USB port | USB 2.0 for download of temperature report. |
| 15 | Load limit line | The unit should only be max. Loaded to the load limit line. |
| 16 | Glass door | 3-layer glass door 490l model, other models 2-layer glass door. |
| 17 | Solid door | Insulated solid door. |
| 18 | Defrost marking | Indicator for required defrosting, beside service period. |

PROBE AND ACCESS PORTS

As standard, FLEXALINE freezer & fridges are equipped with two temp. probe 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.

To install more probes, you can use the premade access port at the left side of the appliance. Remove the black rubber cover on the outside and make a small hole in it 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

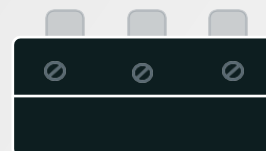
Never install probes through the door as this will deteriorate the functionality of the door gasket, increase the ice build-up, and affect the temperature inside the unit.

SINGLE COMPRESSOR TECHNOLOGY

The Arctiko FLEXALINE 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.

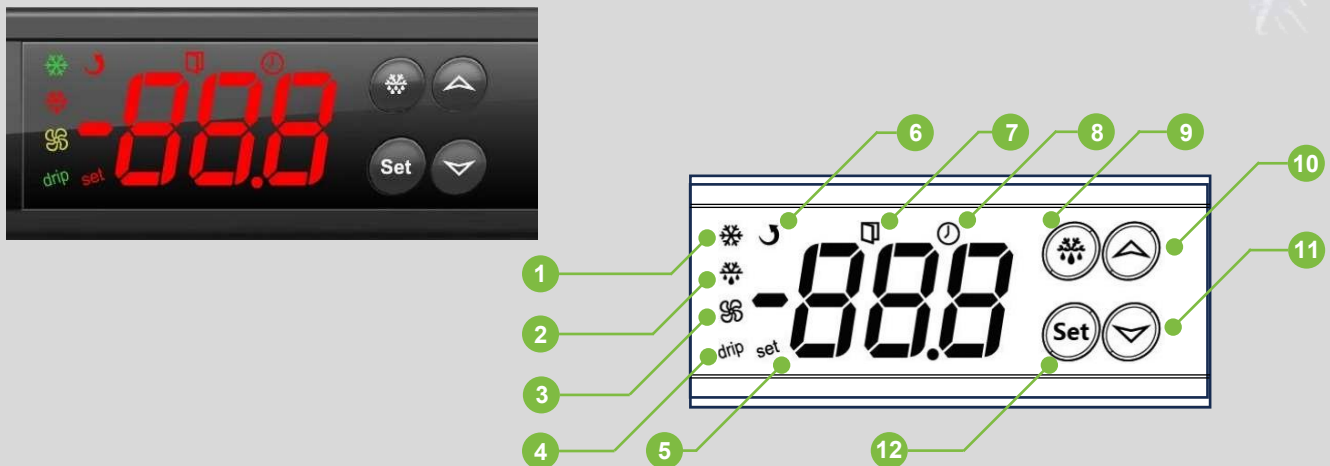
REMOTE ALARM CONTACT

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



DISPLAY / CONTROLLER

Easy to use control panel with 4-key resistive keyboard. You can access a variation of settings, in order to adjust your unit for your exact needs.



CONTROLLER OVERVIEW

| No. | KEY | DESCRIPTION |
|-----|------------------------|--|
| 1 | Compressor indicator | Lights constant when compressor is working, Flashes when compressor start is delayed. |
| 2 | Defrost indicator | Lights up when the defrost is working and goes out the rest of the time. |
| 3 | Fan indicator | Lights up when the fan is working and goes out the rest of the time. |
| 4 | Drip indicator | Lights up when dripping and goes off the rest of the time. |
| 5 | Set indicator | Lights up when the shutdown temperature or other parameters are set. |
| 6 | Reserved indicator | n/a |
| 7 | Door switch indicator | Lights up when the door is open and goes off when the door is closed. |
| 8 | Stand-by indicator | n/a |
| 9 | Enter / Defrost Button | <ul style="list-style-type: none"> - Pressing SET button for 3s to display the value of set point. - Switch menu and display interface. - Press and hold the setting interface for 3 seconds to enter the recorder time setting interface |
| 10 | Up button | <ul style="list-style-type: none"> - Scrolls through menu items and increases values. - Transfer the data from the controller to copy key; |
| 11 | Down button | <ul style="list-style-type: none"> - Scrolls through menu items and decreases values. - Transfer the date from the copy key to the controller |
| 12 | Set button | <ul style="list-style-type: none"> - Check the temperature of evaporator sensor (If enabled); - Save the parameters and exit the parameter setting interface. - Pressing the key for 3 seconds to start manual defrost, or manually Terminate - defrost/defrost drip state |

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 display will turn off. The unit is equipped with a backup battery, which can, when turned ON, maintain the controllers logging feature for approx. 25 h.

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.



Caution

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

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 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 60 seconds. To change this setting, contact the distributor/seller of the unit.

TEMPERATURE ALARMS

If the temperature in the unit rises above the "High temp" setpoint or below the "Low temp" setpoint, longer than the "Alarm delay" setting defines, the temperature alarm will be activated. The display will show:

- "rH" during a high temperature alarm event.
- "rL" during a low temperature alarm event.

If products with a temperature above the "high temp" setting or below the "low temp" setting, are placed in the unit near the temperature probe, it may also trigger the temperature alarm.



Caution

The factory setting for high temperature alarm activation is -15°C (5°F) for freezers, and 9°C (48°F) for refrigerators.



Caution

The factory setting for low temperature alarm activation is -30°C (-22°F) for freezers, and 1°C (34°F) for refrigerators.



Caution

When the set temperature will be changed, there must kept in mind to also adjust the high and low temperature alarm.

ADJUST THE HIGH TEMP. ALARM

1. Keep long pressing **SET** key for more than 3 seconds. Then the screen displays code 5t
2. Press the up button, the display will change to Po
3. Press the **SET** button once, the display will change to 00
4. Press **up/down** keys to change value to "55". Then press **SET** button, to confirm the password. The display will change to Po

ADMINISTRATION ACCESS



5. Press **up/down** keys to find parameter "A6" and press the **SET** button once.
6. Press **up/down** keys to adjust the limit per your needs.
7. Confirm and save the change by pressing the **enter/defrost** button once.

The display will change back to display the current temperature.





ADJUST THE LOW TEMP. ALARM

To adjust the low temperature alarm value, please follow steps 1 – 7 from "ADJUST THE HIGH TEMP. ALARM". In step 5.) please use parameter "A5", for the low temp. value, instead of "A6".

ADJUST THE SET TEMPERATURE

1. Keep long pressing **SET** key for more than 3 sec. Then the screen displays code 
2. Press the **SET** button once, the display will show the current setpoint, for example 
3. Press **up/down** keys to adjust the temperature per your needs.
4. Confirm and save the change by pressing the **enter/defrost** button once.

CALIBRATION OF DISPLAY TEMP.

1. Keep long pressing **SET** key for more than 3 seconds. Then the screen displays code 
2. Press the **up** button, the display will change to 
3. Press the **SET** button once, the display will change to 
4. Press **up/down** keys to change value to "55". Then press **SET** button, to confirm the password. The display will change to 
5. Press **up/down** keys to find parameter "C4" and press the **SET** button once.
6. Press **up/down** keys to adjust the limit per your needs.
7. Confirm and save the change by pressing the **enter/defrost** button once.

EXPORT DATA TO USB FLASH

Make sure the used USB flash drive is formatted in FAT32, before starting the download.

1. Insert the USB flash drive into the USB port.
2. The unit will confirm with acoustic "Beep" sound. Export of data will then start.
3. During the export process, the display will show the percentage value of exported data 0-100%. Additionally a short beep sound will occur every few seconds.

4. The successful download will be confirmed by long beep sound, and the display writes "OK".
5. Unplug the USB flash drive.
The data can now be used with excel and a PC.



Caution

Before export of data, make sure the power supply is stable and the unit is turned ON.

ERASING OF RECORDED DATA

The recorded data can at any time be erased from the internal flash drive.

1. Erased data cannot be recovered, make sure relevant data are exported from the internal drive before continuing.
2. Press both the **up** & **down** keys for 5 seconds.
3. The display will show "cFg", and all recorded data are erased from the internal drive. Additionally, the recorder will be reconfigured according to current parameters.
4. All new data will automatically be recorded again.



Caution

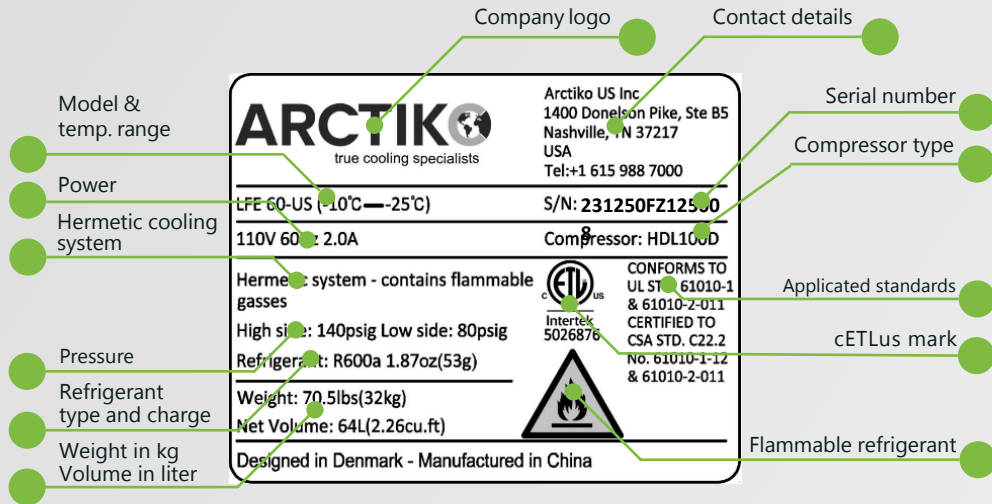
Erased data are lost and cannot be recovered again.

LED LIGHTNING

- For all models (PRE, LRE, LFE) the light will turn on when door is opened.
- For pharmaceutical refrigerators (PRE) the light can be switched OFF, by using the mechanical switch next to the USB port.

RATING PLATE

The rating plate is placed on the unit's right side, upper left corner.



CODE DESCRIPTION

When the appliance is in use following status/alarm messages can be shown on the display.

| DISPLAY CODE | DESCRIPTION |
|--------------|---|
| E1 | Control sensor failure |
| E4 | Cabinet temperature sensor failure |
| EE | Recorder communication failure |
| FF | The recording function is enabled, but the recording is not working |
| rH | Cabinet high temperature alarm |
| rL | Cabinet low temperature alarm |
| Er | Copy card programming failure |
| EP | Inconsistent data between copy card and controller, programming failure |
| cFg | Clear recorded data, reconfiguration recorder parameters. Start of new recording period |

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 its 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 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 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 damage the inside of the unit. Do not use mechanical, electrical or chemical processes to speed up the defrosting 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.

LONG TERM STORAGE

If the unit is set out of service for a longer period, the following precautions must be made before storing the appliance.

1. Export the logged records for later use.
2. Turn off the battery back-up switch.
3. Cut off the power supply.
4. Clean the appliance according to "CLEANING" guidelines on page 21.
5. Lubricate hinges and gaskets. Wipe of all excess lubricant.
6. Leave the door slight open for final drying and to prevent odor.

To not affect the service life, ARCTIKO recommends to not leave the appliance unused for a longer period.

DEFROSTING

The FLEXALINE refrigerators PRE & LRE are equipped with automatic defrost, and do not require any intervention for the defrosting.

The FLEXALINE freezers LFE are recommended to be defrosted twice a year and when the ice reaches the marking inside the appliance. For defrosting the LFE models, 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.
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).



WARNING Flammable

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

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.

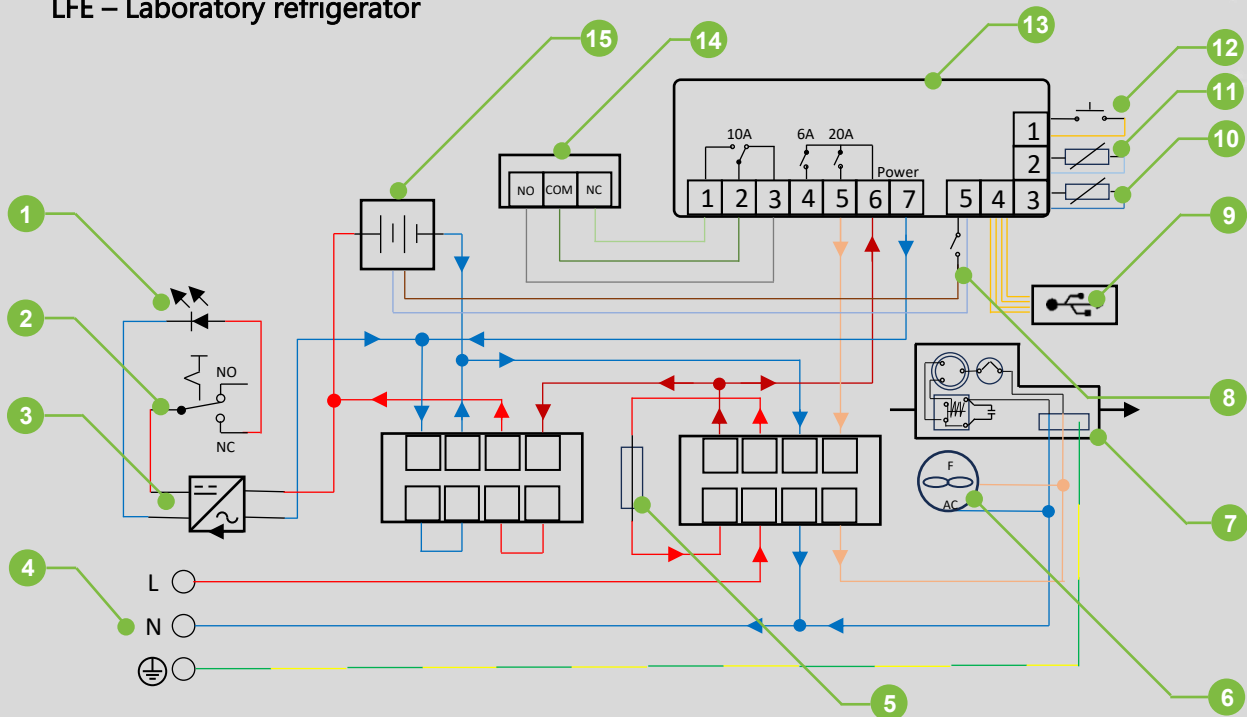
The manufacture declines any responsibility for jobs carried out by unauthorized personnel or the use of non-original spare parts.

WARRANTY

For warranty information, Arctiko refers to your distributor's terms and conditions.

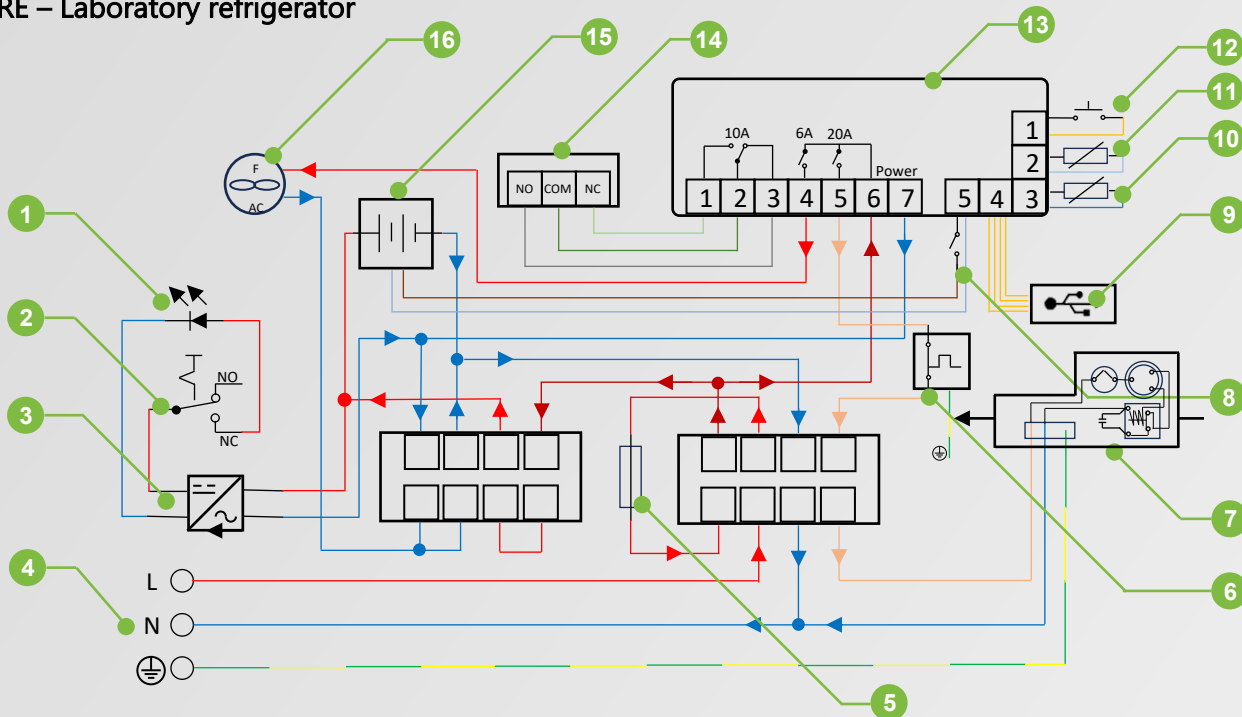
WIRING DIAGRAM

LFE – Laboratory refrigerator



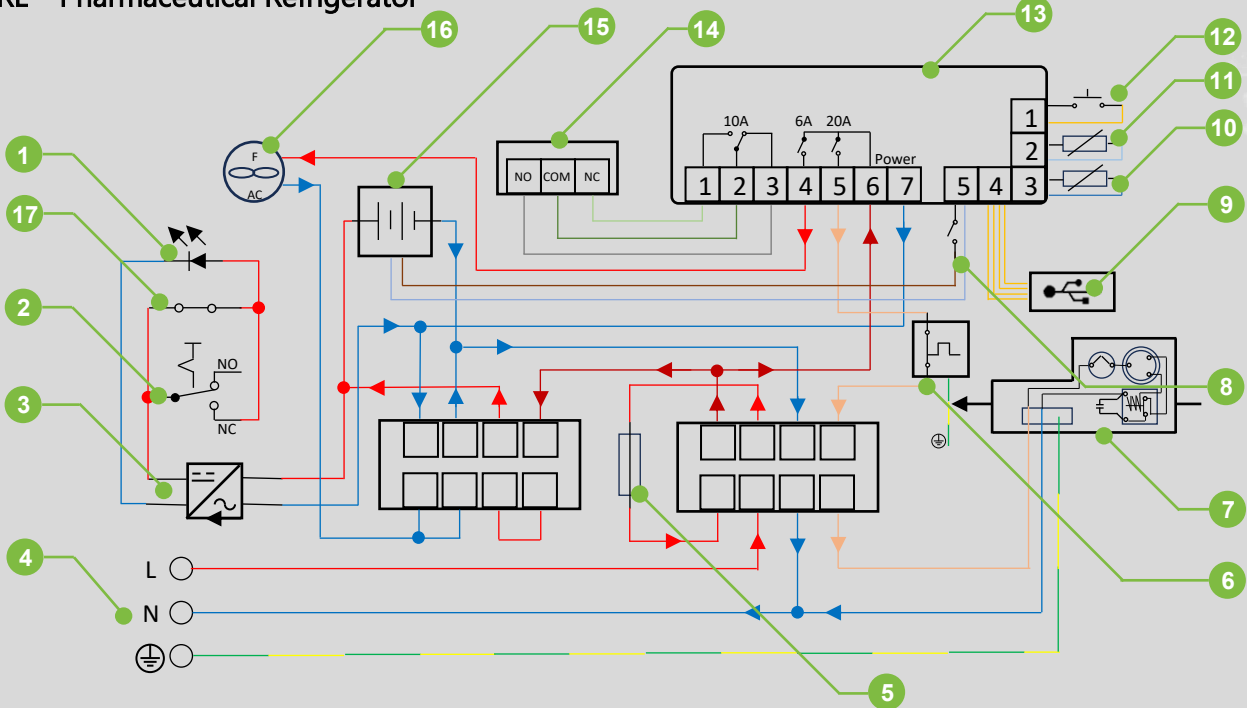
| No. | DESCRIPTION |
|-----|--|
| 1 | LED lightning |
| 2 | Door switch for LED lightning |
| 3 | Light driver AC to DC |
| 4 | Main power supply 3 prong; 110V (grounded) |
| 5 | Fuse |
| 6 | Compressor cooling fan |
| 7 | Refrigerant compressor |
| 8 | Backup battery switch |
| 9 | USB port 2.0 |
| 10 | Temperature probe cooling chamber (white) |
| 11 | Temperature probe aluminum block (black) |
| 12 | Door switch |
| 13 | MEC-183 Control unit |
| 14 | Remote alarm contact |
| 15 | Backup battery |

LRE – Laboratory refrigerator



| No. | DESCRIPTION |
|-----|---|
| 1 | LED lightning |
| 2 | Door switch |
| 3 | Light driver AC to DC |
| 4 | Main power supply 3 prong; 110V 60Hz (grounded) |
| 5 | Fuse |
| 6 | Freeze guard thermal switch (2°C). |
| 7 | Refrigerant compressor |
| 8 | Backup battery switch |
| 9 | USB port 2.0 |
| 10 | Temperature probe cooling chamber (white) |
| 11 | Temperature probe aluminum block (black) |
| 12 | Door switch |
| 13 | MEC-183 Control unit |
| 14 | Remote alarm contact |
| 15 | Backup battery |
| 16 | Cooling chamber air-circulation fan |

PRE – Pharmaceutical Refrigerator



| No. | DESCRIPTION |
|-----|---|
| 1 | LED lightning |
| 2 | Door switch |
| 3 | Light driver AC to DC |
| 4 | Main power supply 3 prong; 110V 60Hz (grounded) |
| 5 | Fuse |
| 6 | Freeze guard thermal switch (2°C). |
| 7 | Refrigerant compressor |
| 8 | Backup battery switch |
| 9 | USB port 2.0 |
| 10 | Temperature probe cooling chamber (white) |
| 11 | Temperature probe aluminum block (black) |
| 12 | Door switch |
| 13 | MEC-183 Control unit |
| 14 | Remote alarm contact |
| 15 | Backup battery |
| 16 | Cooling chamber air-circulation fan |
| 17 | Manual light switch |

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 appliance is not working | The plug of the unit is not correctly put into the wall socket | Check the appliance is plugged in correctly |
| | Plug or lead is damaged | Call your distributor. |
| | Low voltage, or voltage instability | Power off and re-start when voltage is stable again. |
| | Internal wiring damage | Call your distributor. If need to replace fuses, a professional maintenance personnel are needed. |
| The appliance turns on, but the temperature is too high or too low | Filter or condenser blocked with dust | Clean filter or condenser |
| | Doors are not shut properly | Check door is shut and seals are not damaged |
| | Appliance is located near a heat source or air flow to the condenser is being interrupted | Move the appliance to a more suitable location |
| | Ambient temperature is too high | Increase ventilation or move appliance to a Refrigerator/Freezer position |
| | The fan is blocked. | Remove if any blockages to the fans. If no blockages, call your distributor. |
| | Appliance is overloaded | Reduce the amount stored in the appliance |
| | Factory default parameters adjusted | Call your distributor |
| The LED lights not working | LED light short leaded / damage | Call your distributor |
| The appliance is unusually loud | The appliance is touching a neighboring object | Check installation position and change if necessary |
| | The appliance has not been installed in a level or stable position | Check installation position and change if necessary |