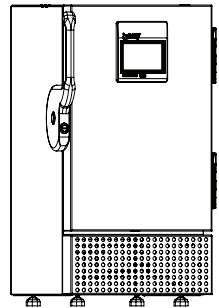
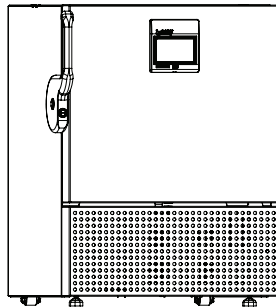
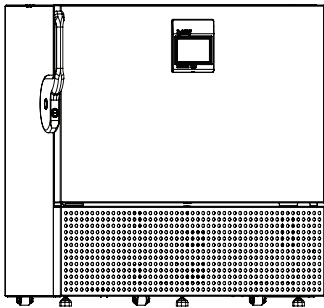


USER MANUAL - EN NOTICE D'UTILISATION - FR

MODEL - MV85-1 MV85-2 MV85-3



BIOMEDICAL SOLUTIONS
FREEZERS
CONGÉLATEURS

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WARNING

WARNING:

Keep ventilation openings in the appliance's cabinet or in the built-in structure clear of obstruction.

WARNING:

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

WARNING:

Do not damage the refrigerant system.

WARNING:

Do not use electrical appliances inside the refrigerated storage compartment, unless they are of a type recommended by the manufacturer.

WARNING:

When positioning the appliance, ensure the power cord is not trapped or damaged.

WARNING:

Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.

WARNING:

The cable must be replaced with an approved cable.



WARNING: Danger: risk of fire or explosion flammable refrigerant are used. To be repaired only by trained personnel. Danger of electric shock.



WARNING: Turn off power before accessing remote alarm connection.



CAUTION: Possibility of electric shock.



WARNING: Crushing of hands and risk of hand injuries



CAUTION: Cold surface: avoid contact. Temperature may cause frostbite or injury. Wear protective gloves.



CAUTION: Do not to position the equipment so that it is difficult to operate the disconnecting device.

WARNING:

The appliance must be connected to power minimum 12 hours before using it for storage of medicine.

- Always keep the keys in a separate place and out of reach of children.
- Children should be supervised to ensure that they do not play with the appliance.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- The product is not intended to be used in wet locations.
- Before servicing or cleaning the appliance, unplug the appliance from the mains or disconnect the electrical power supply.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
- Frost formation on the interior evaporator wall and upper parts is a natural phenomenon. Therefore, the appliance should be defrosted during normal cleaning or maintenance.
- Please note that changes to the appliance construction will cancel all warranty and product liability.
- Do not store explosives, such as aerosol cans with flammable propellants in the unit.
- This device is intended to be used exclusively for medical products.
- If medicine is spilled in the appliance or the defrost water canal is has to be cleaned immediately to avoid the medicine to evaporate to the surroundings.
- If the instructions is lost please contact your supplier of the appliance to have a new instruction for use.
- If service needed to this device, please be aware of only using service personnel with education in handling medical devices.
- Turn off power when replacing battery.

Flammable Material Storage Freezer

Sparkfree interior to reduce the risk of internal explosion.

Interior temperature range: +1°C to 15°C

The interior comprise this safety marking:



CE  II 3G nA IIB T6

NOTE:

- Combustible materials may be stored inside cabinet. but the cabinet is not approved for potential explosive areas.
- Combustible materials shall be stored in approved containers.
- Danger of sparks due to electrostatic discharge. Do not use a dry cloth to clean plastic parts. Clean plastic parts with a damp cloth only!

PRODUCT DESCRIPTION

Before use

This user manual is intended for the following product models:

| Units |
|--------|
| MV85-1 |
| MV85-2 |
| MV85-3 |

We recommend that you read this user manual before using the unit for the first time. So-Low does not guarantee safe operation if the unit is used for anything other than its intended use. Contents of the user manual can be subject to change without notice.

This manual should be considered an integral part of the unit and should be stored close to the unit and be easy to access.

For current versions of the manual, please visit <https://www.so-low.com/manual/>

Before operating your new appliance, please read the following instructions carefully:

1. Check to ensure the appliance has not been damaged during transport. Transport damage should be reported to the transporter delivery.
2. The foil on the shelves must be removed before cleaning and using the unit.
3. Clean the inside of the cabinet using warm water with a mild detergent. Use a soft cloth and rinse with clean water and dry thoroughly.
4. Allow the freezer to stay at an upright position for at least one hour before switched on.
5. Allow the freezer to operate at the desired temperature for a minimum of 12 hours before loading.

A-weighted emission sound pressure level is below 70 dB(A)

Electrical connection

Wiring and connections in power supply systems must be all applicable (local and national) electrical codes. Consult these codes lengths and sizes prior to cabinet installation.

This device complies with relevant EU directives including Low Voltage Directive 2014/35/EU and Electromagnetic Compatibility Directive 2014/30/EU

The socket should be freely accessible.

Connect the appliance only to 100-240V 50-60 Hz alternating current via a correctly installed earthed socket.

The socket must be fused with a 10A or 13A fuse.

If the appliance is to be operated in a non-European country, check on the rating plate whether the indicated voltage and current correspond to the values of your mains supply.

Data regarding voltage and absorbed power / current are given on the rating plate.

The power cord may be replaced by a technician only.

The rating plate provides various technical information as well as type and serial number.

SO-LOW
ENVIRONMENTAL EQUIPMENT COMPANY

Made in Denmark
A/S Vestfrost, Falkevej 12., 6705 Esbjerg Ø

Gross volume I
100-240V~ 50/60Hz
Refrigerant: (R600/R1150/R50)
Design Pressure

Type : 
ULTF

MV85

Serial No.:000019

 Conforms to
UL 61010-2:2011
UL 61010-1
Certified to CSA star
Intertek
C22.206.0105-011
CN.3073459 C22.206.0105-1

Prod nr.:

↑
Product number

Intended use

Biomedical freezers are designed to provide reliable temperature stability and precision and ensure an ideal cold temperature storage for sensitive items is achieved. The products are designed for the following operating ranges:

| Models | MV85-1 | MV85-2 | MV85-3 |
|---------------------|----------------|----------------|----------------|
| Temperature range | -20°C to -86°C | -20°C to -86°C | -20°C to -86°C |
| Factory Set Point | -82°C | -82°C | -82°C |
| Ambient Temperature | +16°C to +30°C | +16°C to +30°C | +16°C to +30°C |
| Indoor use | Yes | Yes | Yes |

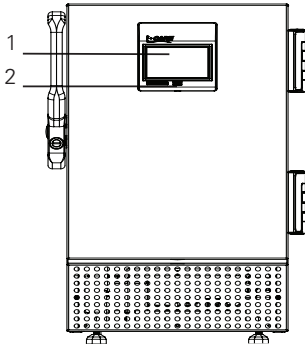


WARNING: This unit is not a “rapid-freeze” device. Freezing large quantities of liquid, or high-water content items, will temporarily increase the chamber temperature and will cause the compressors to operate for a prolonged time period. Avoid opening the door for extended time periods since chamber temperature air will escape rapidly. Also, keep the inner doors closed as much as possible. When room air, which is higher in humidity, replaces chamber air, frost may develop in the chamber more rapidly.

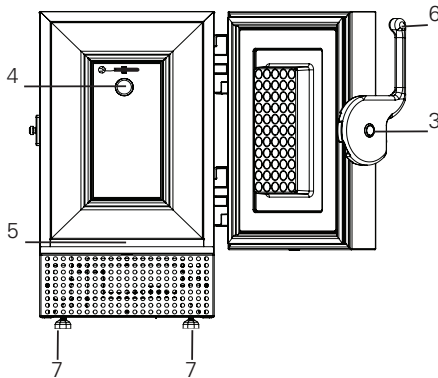
| | MV85-1 | MV85-2 | MV85-3 |
|--------------------------------|-----------|-----------|-----------|
| Room climate class | 3 | 3 | 3 |
| Max room temperature °C | 25 | 25 | 25 |
| Relative humidity % | 60% | 60% | 60% |
| Altitude | 2000m | 2000m | 2000m |
| Mains supply | 100-240V | 100-240V | 100-240V |
| Frequency range | 50/60 Hz | 50/60 Hz | 50/60 Hz |
| Power | 325W | 400W | 400W |
| BBU for controller | 12V 7.2Ah | 12V 7.2Ah | 12V 7.2Ah |
| Alarm signal rating | 60V 3A | 60V 3A | 60V 3A |
| Pollution degree | 2 | 2 | 2 |
| Voltage Fluctuations | ±10% | ±10% | ±10% |
| Overvoltage category | II | II | II |

FREEZER COMPONENTS MV85-1

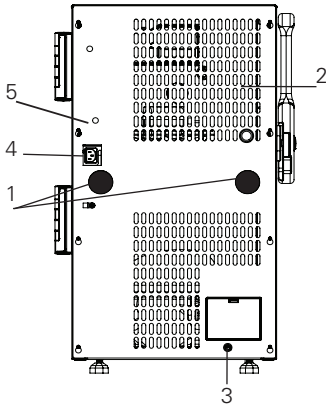
Front & internal view



1. Display – With integrated keyboard
2. USB port – Export historical data.
3. Lock – Push and turn lock. “Insert the key into the keyhole and push and turn the key 180 degrees clockwise”.
4. Porthole – Hole for external sensor and CO² backup.
5. Door contact – Can be both a magnetic or mechanical contact.
6. Door handle
7. Feet / Castors



Backview



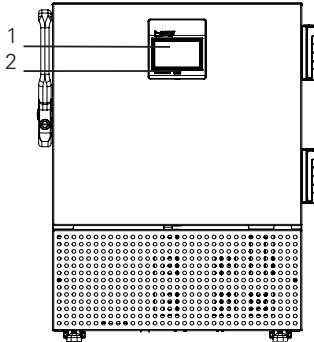
1. Ventilation guards.
See chapter Installation and Start-up.
2. Porthole – Hole for external sensor and CO2 backup.
3. Remote alarm connection
4. Power supply – IEC plug or hardwired.
5. On/Off battery

Note!

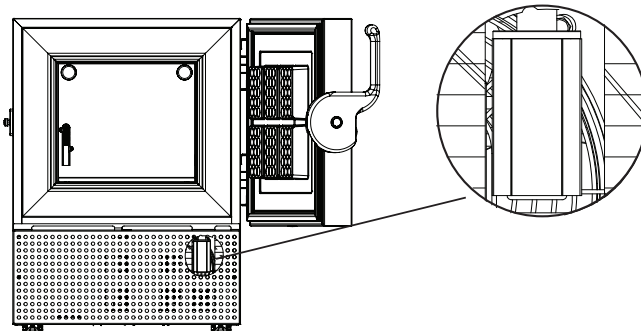
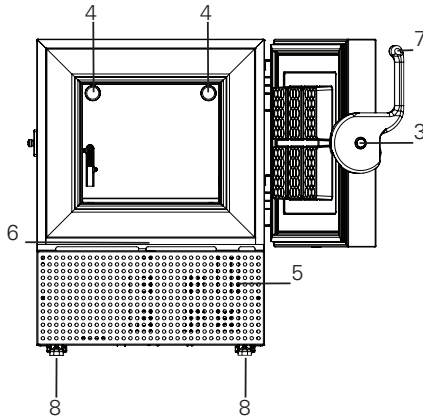
Rating plate is placed on the back. Be aware of the warning label.

FREEZER COMPONENTS MV85-2/MV85-3

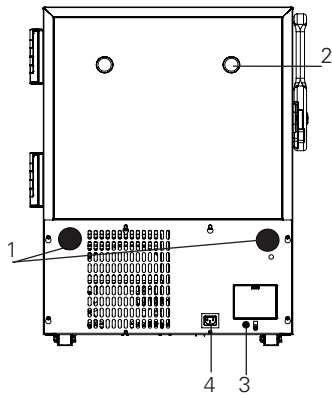
Front & internal view



1. Display – With integrated keyboard
2. USB port – Export historical data.
3. Lock – Push and turn lock. “Insert the key into the keyhole and push and turn the key 180 degrees clockwise”.
4. Porthole – Hole for external sensor and CO² backup.
5. Vacuum release – Ensure the door opens easily. **IMPORTANT** make sure its free of ice. See chapter Maintenance
6. Door contact
7. Door handle
8. Feet / Castors



Backview

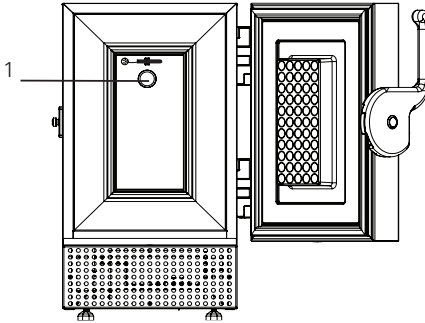


1. Ventilation guards.
See chapter Installation and Start-up.
2. Porthole – Hole for external sensor and CO2 backup.
3. Remote alarm connection
4. Power supply – IEC plug or hardwired.

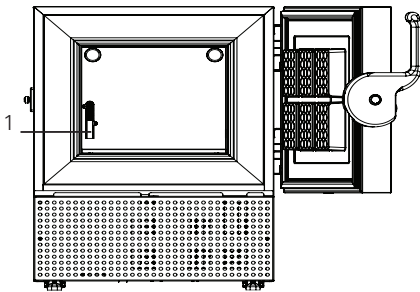
Note!

Rating plate is placed on the back. Be aware of the warnings label.

Sensor placement



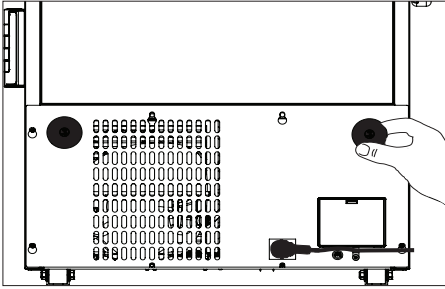
1. Main Probe LCPRTD1
(Regulating probe. MV85-1)



1. Main Probe LCPRTD1
(Regulating probe. MV85-2, MV85-3)

INSTALLATION AND START-UP

Ventilation guards

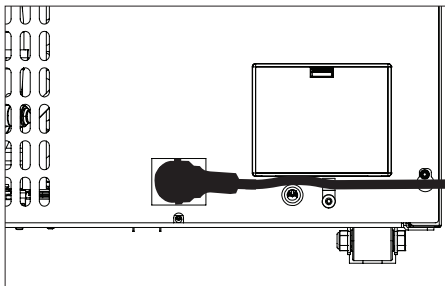


The two ventilation guards are mounted before moving the appliance to its final placement. The guards function is to secure an absolute minimum of ventilation, if the appliance is pushed too close up against a wall.

Steps:

1. Mount the ventilation guards in the holes on the backcover.

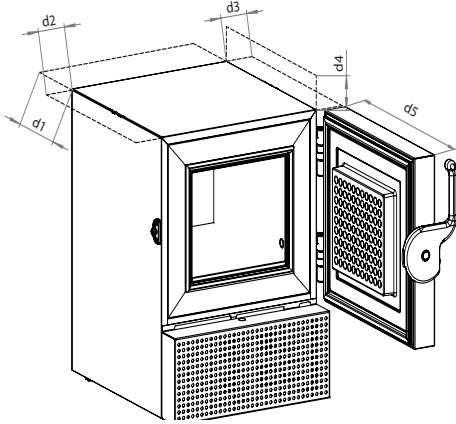
Fix power cord



1. "Secure power cord with cable clamp to prevent accidental interruption of power to unit"

See bag for clip (2 version) and screw!

Location and ventilation



This unit must be installed according to the below condition:

If the unit is installed in a location against the below conditions, its specified performance may not be achieved or malfunction and accident may occur.

1. A location not exposed to direct sunlight
2. A location where the unit is not exposed to rain
3. In a dry, well ventilated room
According to the described in Intended use
4. Away from sources of heat
5. In a location with minimal variations in temperature
6. Ensure access to operate the disconnected device

Secure ventilation, above, below and around the appliance. See illustrations.

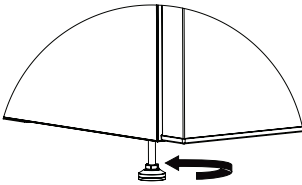
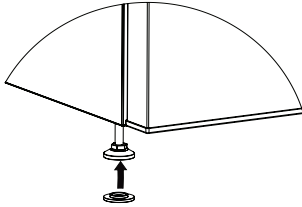
(All dimensions are in millimeter (mm).)

Note!

There need to be space for the door to open in at least 90 degrees.

| | MV85-1 | MV85-2 | MV85-3 |
|-----------|--------|--------|--------|
| d1 | 100 | 100 | 100 |
| d2 | 60 | 60 | 60 |
| d3 | 60 | 60 | 60 |
| d4 | 60 | 60 | 60 |
| d5 | 390 | 600 | 880 |

Levelling the appliance



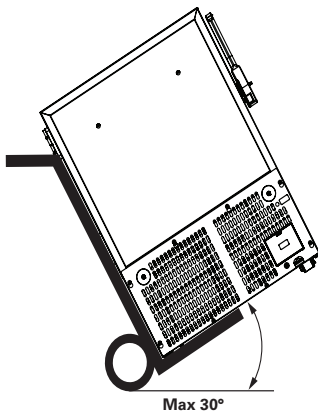
Make sure the appliance is level. It can be levelled by rotating the adjustable feet of the appliance.

Be certain to lock the breaks for units equipped with casters.

1. Some models have “anti slip base” for the feet. Grab them from the plastic bag and mount them.

2. Adjust the four feet until the unit is level.

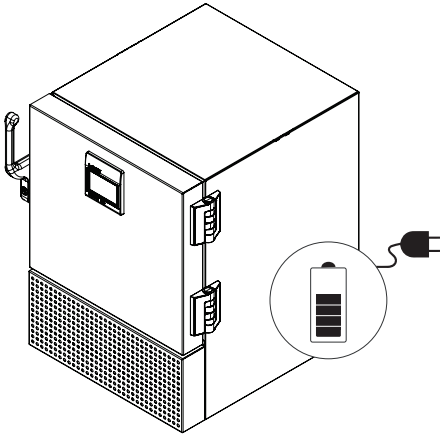
How to handle the unit



Make sure to handle the appliance as shown on the picture.

The label is placed on the side of the appliance.

Battery backup



The appliance is equipped with a battery back-up system, which supplies the controller with power at power failure. The backup system duration is 48 hours.

Note!

When starting up the appliance for the first time it is necessary to charge the battery for 10 days.

Note!

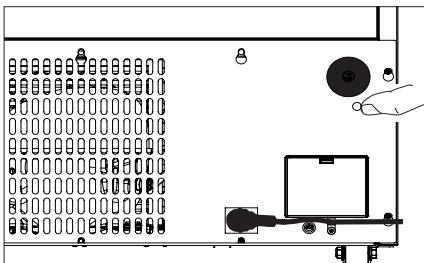
The battery backup system does not supply the cooling system with power. Battery is automatically turned on during first controller startup.

Note!

The battery for backup should be changed every third year to secure 48 hours of back up. Please put this change in the maintenance schedule for every third year.

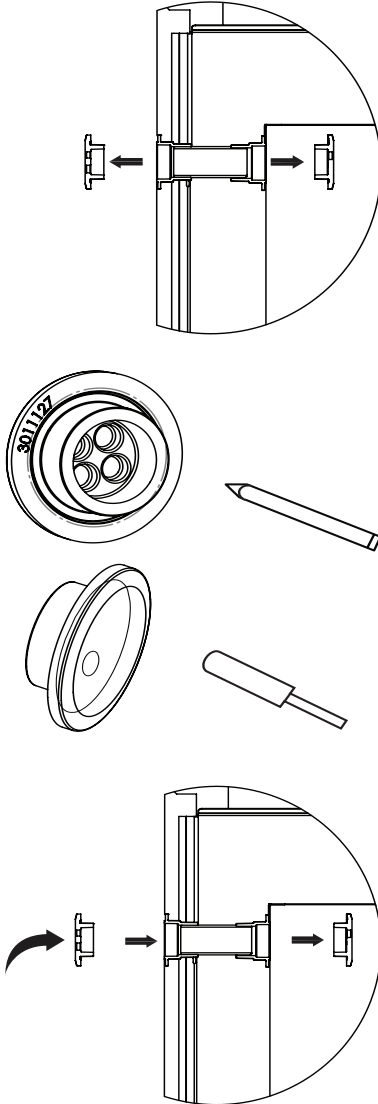
Note!

The battery for use 12V 7,2Ah



Turn off power when replacing battery

Porthole



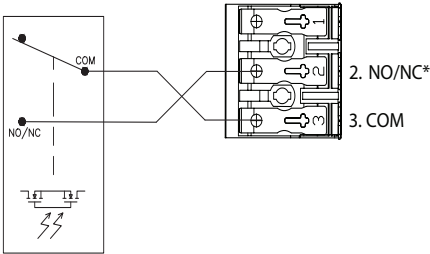
Porthole is used to pass the temperature probe or nozzle of a back-up system in the chamber.

Steps:

1. See chapter "Freezer components" for placement of porthole on your device.
2. Take out the two rubber plugs.
3. Press a pencil through the marks on the inside of the rubber plugs.
4. Put your external sensor through the porthole, in the same direction as the arrow seen on the illustrations to the left or as described below.
5. Put the sensor through the outer rubber plug.
6. Then through the foam cylinder inside the porthole.
7. Then through the inner rubber plug.
8. Use the cable tie to mount your sensor.

Remote alarm function

Fig. Internal controller with built-in alarm relay



*) Configured by settings menu

Your device is equipped with a remote alarm connection to send alarm signals to a building management system, a monitoring unit, visual or acoustical warning device etc.

The alarm output is managed by the built in controller of the unit.

Alarm criteria may be too low temperature, too high temperature, power failure, open door or similar.

The alarm output is an electrical relay which acts like a ON/OFF switch.

A OptoMOS relay with maximum switch rating of 60V 3A is maintained by the build-in controller unit. The relay can be set to normally open or normally closed in the settings menu.

The relay terminals are explained this way:

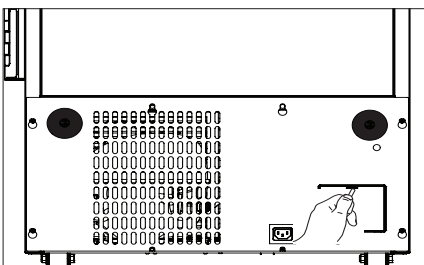
COM: COMMON terminal

NO/NC: NORMALLY OPEN/ NORMALLY CLOSED terminal. Normal position is set in the settings menu

An alarm interface cable of maximum 30 meters can be attached without the use of tools to the 3-pole alarm clamp connector.

Wire thickness must be within 0.5mm² to 2.5mm² and fitted with core crimp terminals.

Access to alarm connection



Turn off the power before access to remote alarm connection.

If there is a need to access the alarm connection you may use a pointed screw to click the lid open.

When you need to close it again, be aware that it must give a click again. Make sure it is closed.

CONTROLLER

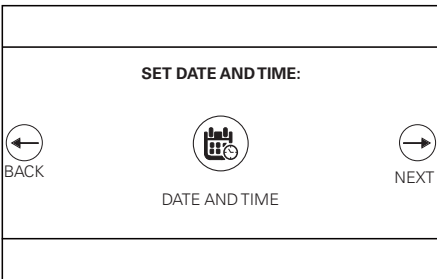
Wizard



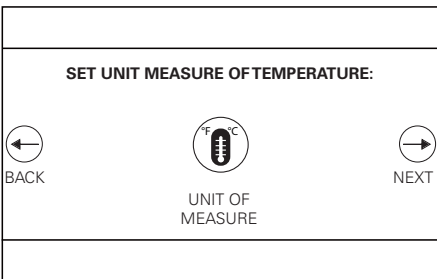
When the appliance is first started, or after performing a reset with default values, a configuration wizard is displayed. Through a few settings it allows you to commission the appliance with the minimum settings for its operation.

At this stage it is sufficient to select:

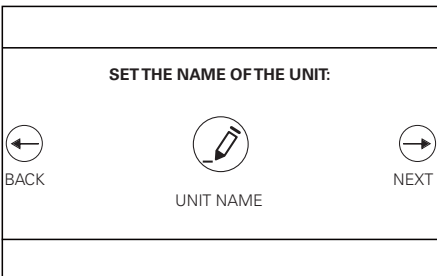
- the interface language



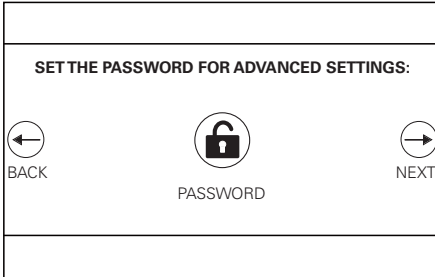
- the date and time



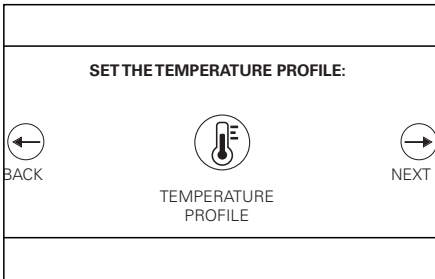
- temperature unit of measurement



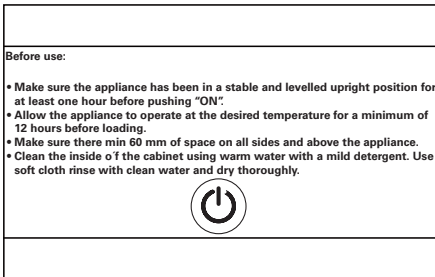
- appliance name



- service code



- selection of the desired temperature profile



- recommendations for use and installation and turn on unit.

MAINTENANCE

| TASK | Description | Frequency | | | |
|--|--|-----------|----------|---------|-----------|
| | | Quarterly | Annually | 3 Years | As needed |
| The compressor compartment and the condenser must be kept free of dust and dirt. | <ol style="list-style-type: none"> 1. Unplug unit from power supply 2. Remove the lower panel. 3. Use a vacuum cleaner to remove dust and dirt. | X | | | |
| The door gasket(s) around the door must be cleaned regularly. | <ol style="list-style-type: none"> 1. Wipe the seal with a soft cloth and clean water 2. Check that it continues to provide a tight seal. | | | | X |
| Clean vacuum release | <ol style="list-style-type: none"> 1. Excessive frost accumulation in the vacuum release could restrict air flow. 2. Brush away any loose frost using a stiff nylon brush. 3. If frost has built up in the pipe of the vacuum release, thrust with a stick to remove the frost inside. | | | | X |
| Defrost and clean the chamber to prevent ice building. | <p>Quick defrosting: Small amounts of loose frost can be removed using a plastic scraper.</p> | | | | X |
| | <p>Complete defrost:</p> <ol style="list-style-type: none"> 1. Remove all products and place it in another ULT cabinet. 2. Disconnect the power supply. 3. Open the inner and outer doors. 4. Wait until the ice has thawed. 5. Dispose of the ice and wipe out water. 6. Dry the interior of the device. 7. Close the doors and start the freezer | | | | X |
| Replace the battery backup for the controller every 3 years. | Only a certified technician must replace the battery. | | | X | |
| Clean the interior and exterior of the device. | <ol style="list-style-type: none"> 1. Use warm water (max. 65°C) with a little mild, perfume-free detergent with a soft cloth. 2. Rinse with clean water and dry thoroughly. <p>Note: It is important to prevent water from entering the control panel.</p> | | | | X |

GENERAL INFORMATION

Warranty, spare parts and service

Warranty disclaimer

Faults and damage caused directly or indirectly by incorrect operation, misuse, insufficient maintenance, incorrect building, installation or mains connection. Fire, accident, lightening, voltage variation or other electrical interference, including defective fuses or faults in mains installations. Repairs performed by others than approved service centers and any other faults and damage that the manufacturer can substantiate are caused by reasons other than manufacturing or material faults are not covered by the warranty.

Please note that changes to the construction of the appliance or changes to the component equipment of the appliance will invalidate warranty and product liability, and the appliance cannot be used lawfully. The approval stated on rating plate will also be invalidated.

Transport damage discovered by the buyer is primarily a matter to be settled between the buyer and the distributor, i.e. the distributor must ensure that such complaints are resolved to the buyer's satisfaction.

Before calling for technical assistance, please check whether you are able to rectify the fault yourself. If your request for assistance is unwarranted, e.g. if the appliance has failed as a result of a blown fuse or incorrect operation, you will be charged the costs incurred by your call for technical assistance.

Spare parts

When ordering spare parts, please state the type, serial and product numbers of your appliance. This information is given on the rating plate. The rating plate contains various technical information, including product- type and serial numbers.

SO-LOW
ENVIRONMENTAL EQUIPMENT COMPANY

Gross volume I
100-240V~ 50/60Hz
Refrigerant: (R600/R1150/R50)
Design Pressure

Type : 
ULTF

MV85

Serial No.:000019

 Conforms to
UL 61010-2-011
UL 61010-1
Certified to CSA star
Intertek
C22-2881010-2-011
C22-2881010-1
CN.3073450

Prod nr.:

↑
Product number

DISPOSAL

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2012/19/EU and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

Dismount battery before disposal.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union.

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

These symbols are only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.



Note for the battery symbol:

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.
Dismount battery before disposal.

NOTE:

It is very important to dismount the door before disposal. This to prevent any accident by children playing with the cabinet and door.

Revision date: 08-05-2025
Drawing no.: 8061023 rev 0A