



WARMING CABINET

EMI

25-50-150-250-350 &

EMI-D 500

Manual Book

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GENERAL INFORMATION

Please read the manual book carefully and keep the book for forward before using your device.

If there can be any defect contact with the shipping company to the report damage. According to ICC regulations, the responsibility belongs to the consumer.

When operating the device;

1. Follow the warning labels
 2. Do not remove the labels
 3. Do not operate the damaged device
 4. Do not operate the device with a damaged cable system.
 5. Do not move the device while the device operating.
- * In case of any problem please contact with EMSAŞ A.Ş technical service.
 - * Read the manual book carefully before using the device, this ensures you to get high efficiency.
 - * The EMSAŞ A.Ş has the right of changing and developing the device structure.
 - * Please keep the product package until be sure the device is full, complete, and correct.
 - * The warranty is valid until the precautions described in this manual are followed.

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WARRANTY CONDITIONS

1. The warranty period starts from the delivery date of the goods and is two years.
2. The entire product, including all parts, is under our company's warranty.
3. In case of malfunction of the product within the warranty period, the period of repair is added to the warranty period. The repair period of the goods is maximum of thirty working days. This period starts from the date of notification of the goods to the service station. In case there is no service station, respectively; it starts from the date of notification to one of the seller, dealer, agency, representative, importer or manufacturer of the goods. If the defect of the industrial goods cannot be fixed within 15 working days, the manufacturer or the importer; it has to allocate another industrial good with similar characteristics to the use of the consumer until the repair of the good is completed.
4. If the product fails during the warranty period due to material and workmanship or assembly errors, it will be repaired without any charge under any other name, such as labor cost, replacement part price, or any other name.
5. Despite the consumer's use of the right to repair, the goods;
 - The fact that the same fault is repeated more than twice within a year from the date of delivery to the consumer, or that different faults occur more than four times, or that the sum of different faults is more than six within the specified warranty period, and that these faults perpetuate the inability to benefit from the goods,
 - Exceeding the maximum time required for repair,
 - In cases where it is determined that the repair of the fault is not possible with the report to be issued by the company's service station, if the service station is not available, respectively, one of the dealers, agents, representatives, importers, or manufacturers, the consumer may request a free replacement of the goods, a refund or a price reduction at the rate of the defect.
6. Defects arising from the use of the product contrary to the terms in the user manual are not covered by the warranty.
7. For problems that may arise regarding the warranty certificate, the Ministry of Industry and Trade, General Directorate of Protection of Consumer and Competition can be applied.

CUSTOMER MATTERS REGARDING THE WARRANTY

Issues that our customers should pay attention to regarding the warranty

1. Malfunctions arising from the use of the device other than its normal use,
2. Defects arising from exposure to substances with physical or chemical effects,
3. Damages and malfunctions that occur in case of non-compliance with the points in the user manual,

4. Damages due to lower excess voltage faulty installation or using a voltage different from the voltage written on the label of the device,
5. Damages that will occur during loading, unloading, and transportation under the responsibility of the customer,
6. The device has been disassembled for various reasons or its functions have been changed by people other than service officials,
7. Malfunctions and damages that may occur due to fire and lightning,
8. Responsibility for the completion of the warranty certificate and the delivery to the consumer belongs to the seller, dealer, agency, or representative office from which the consumer purchased the goods,
9. This warranty is void if the warranty document has been tampered with, the original serial number on the product has been removed or tampered with.

THIS MANUAL MUST BE READ CAREFULLY BEFORE OPERATING THE DEVICE.

WARRANTY CONDITIONS APPLY IF THE INSTRUCTIONS AND WARNINGS DESCRIBED IN THE DEVICE'S USER MANUAL ARE COMPLIED.

***THE INFORMATION CONTAINED IN THIS MANUAL BELONGS TO EMSAS.
THE INFORMATION IN THE MANUAL CANNOT BE REDUCED OR DISTRIBUTED WITHOUT
EMSAS' PERMISSION.***

In the above-mentioned cases, troubleshooting is done for a fee.

The product's installation and transportation to the place of use are not included in the product price.

* The useful life of the goods announced by the Ministry of Industry and Trade in accordance with the Law on the Protection of the Consumer No. 4077 is 10 years.

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1.INTRODUCTION

1.1. DESCRIPTION OF DEVICE, FUNCTION, AND OPERATING PRINCIPLE

DESCRIPTION:

EMI series are designed for use in hospitals, laboratories, operating rooms and blood centers, devices that allow serum products to reach the temperature that can be given to the patient (+20°C / +80°C) are called "Liquid Serum Warming Cabinet".

PURPOSE:

In order to prevent the patient from going into shock, to ensure that products such as liquid serum and blankets reach the temperature of delivery to the patient with a wide temperature setting.

OPERATING PRINCIPLE:

- Our Serum Warming Cabinets are manufactured to serve in hospitals and operating rooms for many years.
- The device is designed to store products at a controlled temperature for the following temperature range EMI series devices; It can operate in the temperature range of +20°C / +80°C and the set temperature is set as +50°C in the factory.

2.2 Technical Specification Description

- The outer surface of the device is made of corrosion-resistant electrostatic painted galvanized sheet and the inner surface is made of chrome-nickel sheet material.
- The device works with a mains voltage of 195-230 V / 50 Hz.
- The door of the device is double glazed, lockable, and magnetically sealed. In this way, it allows stock tracking.
- Inside the device, there are plastic-coated wire shelves that differ according to the model.
- The operating temperature range of the cabinet is +20/+80°C, and the set temperature is +50°C.
- Equal heat distribution is ensured by the reinforced fan system in the cabinet.
- The device works silently and without vibration.
- Cabinet interior lighting is realized with LED lighting module.
- A user-friendly microprocessor digital control panel is used on the cabinet.
- The thermostat in the cabinet control panel can measure with 0.1 degree accuracy.
- There is an automatically charged accumulator system on the device control panel. This system ensures that the digital control panel continues to work for 24 hours in case of possible power cuts.
- The device gives a warning with visual and audible warning signals when the lower and upper temperature limits are exceeded, when the door of the device is left open, when there is a power cut or low voltage problem while the liquid serum heating cabinet is operating.
- There are two stops and two fixed wheels on the device that ensure easy portability.
- All medical devices manufactured by Emsaş A.Ş are guaranteed for 2 years.
- All of our products are produced in accordance with ISO 9001:2008, TSE service place qualification requirements. Our blood cabinets have CE, UBB registration and Barcode.

3.INSTALLING THE DEVICE

3.1. Environmental Conditions

Your device works efficiently in the following ambient conditions:

- *Indoor use only
- *Storage and Transport Temperature: +25 ° C / -45 ° C.
- *Relative Humidity: 65%
- *Temperature values: +20°C / +50°C
- *Max altitude: 2000 meters
- *Temperature range at which maximum performance will be achieved: +20°C / +50°C.

3.2. Handling and Shipping

- Due to the weight of the device, all handling and transportation should be carried out with suitable transport equipment (forklift, pallet truck, etc.) and experienced personnel. While the device is being transported, it must be supported from underneath and must not be turned upside down.
- Internal hardware (shelf rails, supports, wire shelves) is shipped inside the unit. The device is fixed to a wooden base by means of screws or packaged with cardboard, styrofoam and burst nylon.
- When moving your device and when a change of location is required, have it done through the service channel, if necessary.

3.3. Unpacking

Open the cardboard box of the device. Remove the stretch film and styrofoam, which is the second packaging on the device. Lift the wooden base. The device is visually inspected for shipping damage. If there is any damage during transportation, immediately take a photo of the product and tell the transport company officer to keep a report.

3.4. Determination and Placement of Settlement

- *Check that the settlement is suitable for the intended use.
 - * Remove accessories from inside the unit
 - * Check that the device placed where it will be used is on a flat ground and four legs.
- Make sure that the device is mounted on a flat surface. Otherwise, your device will not work properly.
- * Check that the user has the opportunity to monitor the device if he/she does other work.

4. INSTRUCTIONS OF USE

4.1 Device Operation

- Plug the device in (grounded plug)
- Press the on/off switch, enter the password and turn on the device.
- The operating range of the device is between +20°C to +50°C.
- Before operating your device, have technical personnel (electrician) check whether the socket to be used is grounded or not and the mains voltage. Do not operate if it is not grounded.
- Service representative at first start-up; Information about the device; technical personnel and health personnel (nurse - Dr) of the relevant customer should transfer.

4.2 Introduction Image



PIC 1. EMI-350 Warming Cabinet

The Other EMI Devices on The Serie;



EMI-50



EMI-250

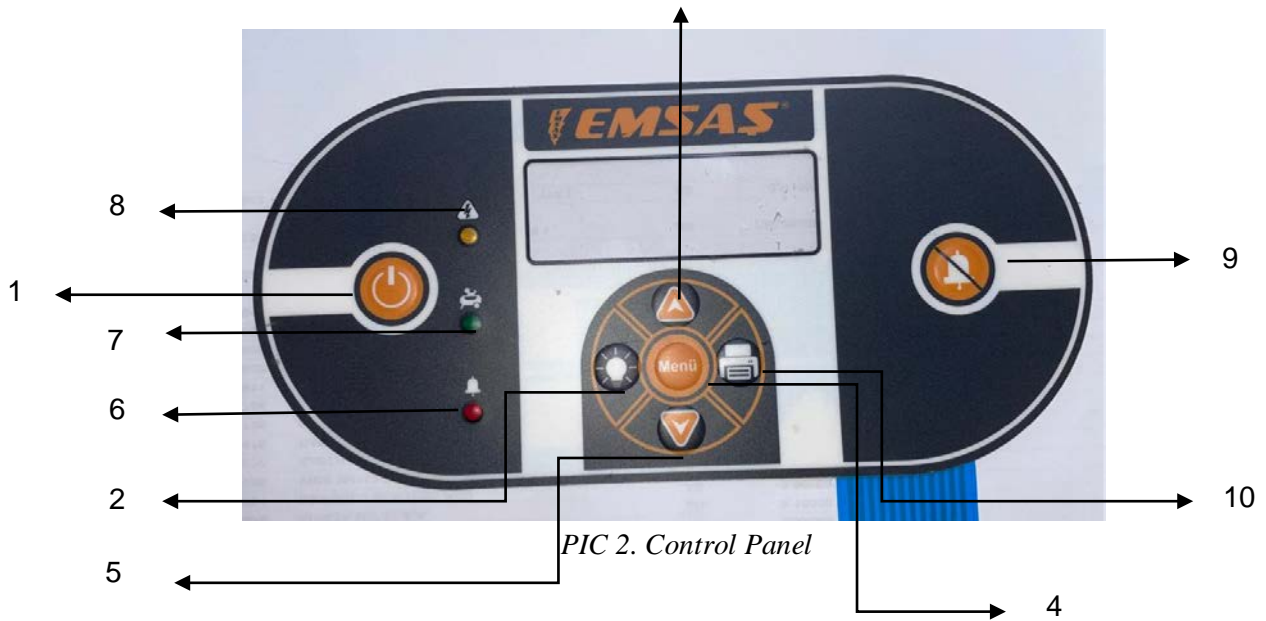









EMI-D 500



EMI-150

4.3 Control Display Panel and its Function

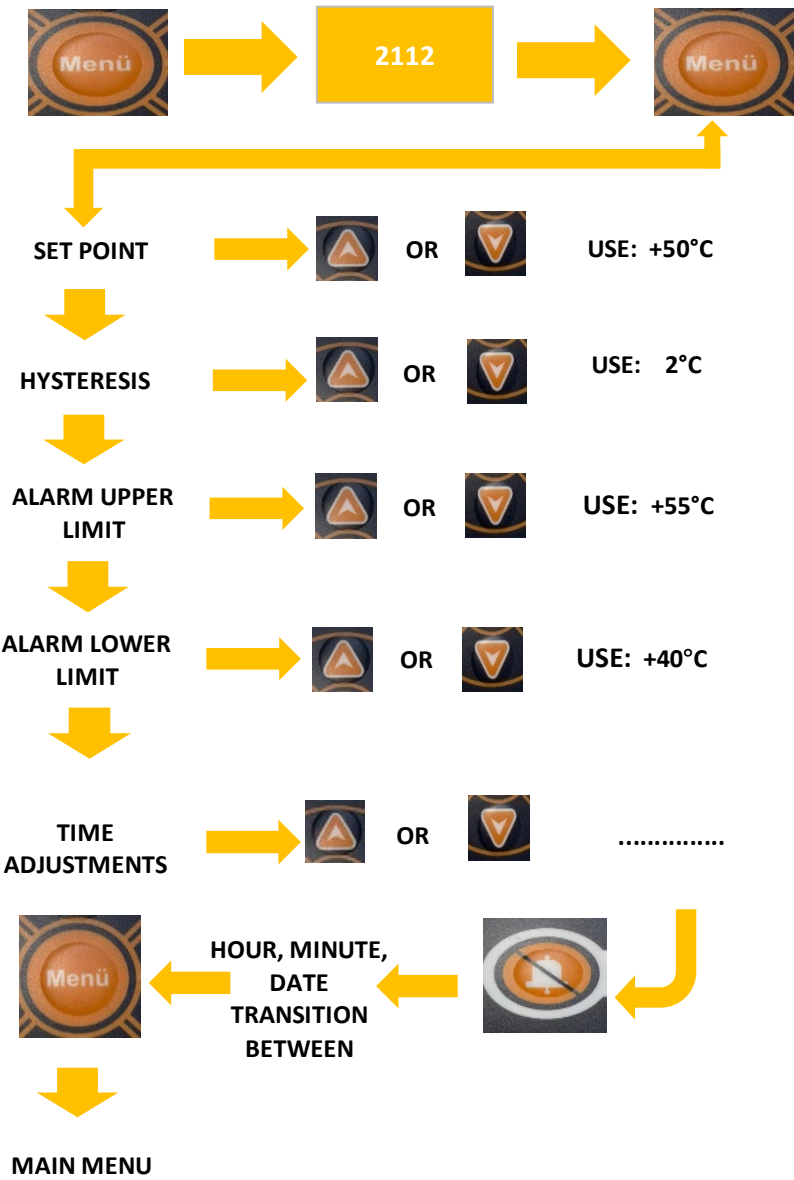


CONTROL BUTTONS	1		On/Off
	2		Light
	3		Up Adjustments Button
	4		Menü & Settings Button
	5		Down Adjustments Button
DIGITAL DISPLAY BUTTONS	6		Red Light (LCD Display)
	7		Green Light (When Compres sor is on mode)
	8		Yellow Light (Power Light)
	9		Alarm Silence Button
	10		Printer

SET PARAMETERS

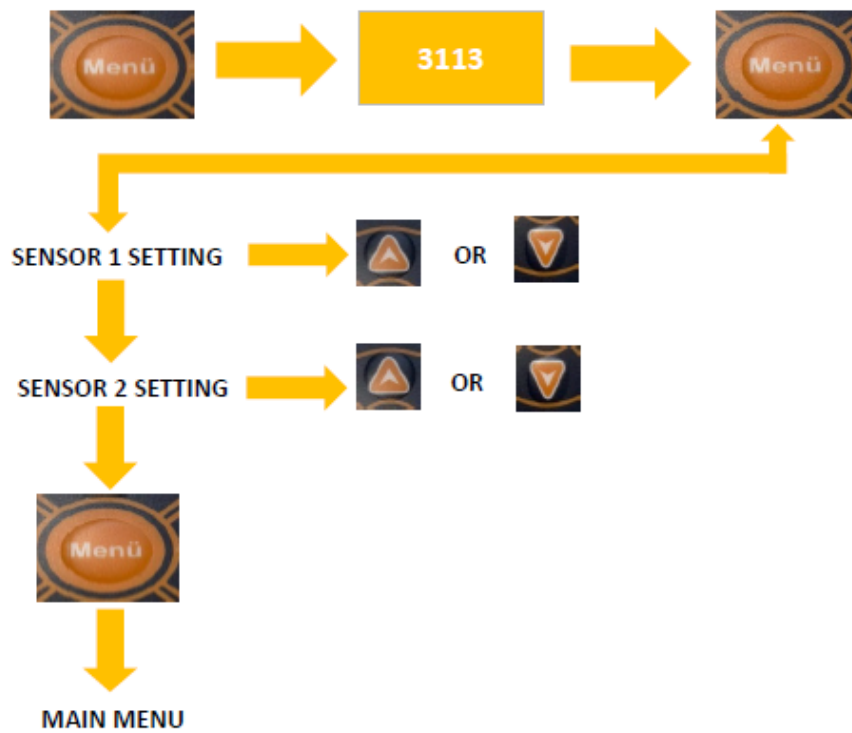
USER MENU
PASSWORD: 2112

EMI SERIES



CALIBRATION MENU
PASSWORD: 3113

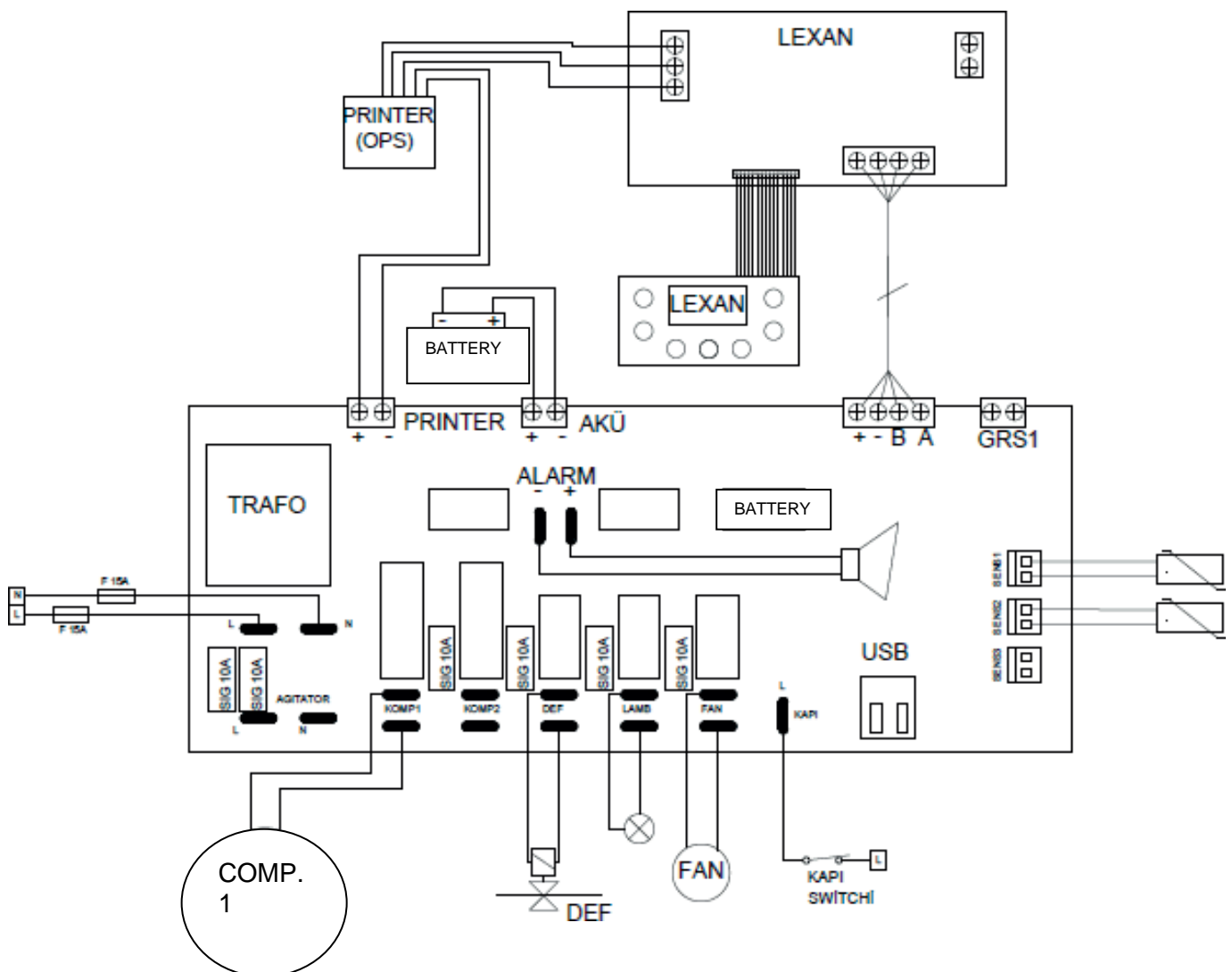
EMI SERIES



Factory Settings EMI SERIES

1) Temperature Range	: +20°C / +50°C
2) Set Temperature	: +50°C
4) Compressor Delay	: 30 sec.
5) Standby Time for Door Open Alarm	: 2 min.
6) Alarm Silence Time	: 30sec.

4.4 Electronic Wiring Diagram

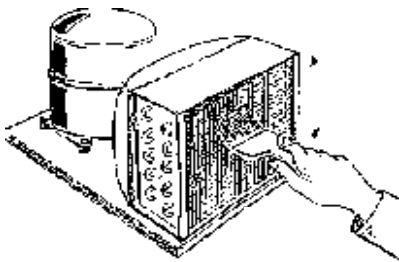


5.CLEANING & MAINTENANCE

5.1. Maintenance: Periodic maintenance should be carried out once a month depending on the ambient conditions in which the device is located, and once every 6 months under normal conditions.

5.2.Cleaning

- The device is cleaned in our factory before delivery to the customer.
- Clean the device at ambient temperature after disconnecting the power cable from the device.
- Wipe your device with a damp and dry cloth against dirt and dust. Finally, plug in your cabinet and start it from the on-off button.
- Depending on the environmental conditions of your Medical Device, clean it regularly once a month or once every 6 months.
- In order to clean the condenser of your device, it is necessary to clean it from dust first.
- The condenser compartment of your device should be cleaned by technical personnel with a vacuum cleaner or a soft paintbrush, and the electrical components should not be damaged.
- Clean the condenser under your device with a damp cloth at least once every 4 months by pulling out the electrical outlet.



- The glass doors can clean with proper glass cleaner.
- Do not clean the engine compartment of your cooler with water, etc. It will damage the electrical components of your water closet and the user may be exposed to electric shocks.
- Do not use abrasive and purifying chemicals while cleaning inside and outside your cooler with a damp cloth, it can cause damage. Faults and errors that may arise from this reason will be treated out of warranty.

6. SAFETY

- Before doing cleaning and maintenance please review and read your safety instructions.
- If the device needs to be relocated or moved for maintenance, be sure to check the brakes of the wheels. Otherwise, the wheels may be damaged and broken. In this case, the balance of your device may deteriorate and may not work efficiently.
- Do not touch the unit with wet hand and/or feet
- Do not insert screwdrivers or other pointed objects between the moving parts of the device.
- The device cannot use by an unauthorized person.
- Before doing any kind of cleaning or maintenance operations please cut the electricity.
- Disconnect the main switch from the switching power before unplugging the appliance when cleaning or maintaining the appliance.
- Check that the device placed where it will be used is on flat ground and with four legs. It's dangerous to do any repair or service operations about device by unauthorized persons.
- When your device plugin do not any kind of maintenance and reparation.
- We strongly recommend you to use a voltage regulator in order not to damage the compressor in places where there may be larger changes.
- Do use your device according to the principles of the user manual.
- When you have a service request regarding your product, please contact our Service Center at the phone numbers above.

7. DISPOSAL

The user is responsible for the proper disposal of each part as waste. Electronic parts used, except power and current sources, should be disposed of according to the rules specified for the waste of electronic devices. When the product is to be disposed of, hospital, laboratory and national legislation should be followed.

8. WARNINGS & PRECAUTIONS

Pay attention to the warnings down below.

- Do not use the device out of usage aim
- The device should operate after reading the manual book by authorized and educated personnel. In case of any problem, only authorized personnel can interfere to the device.
- The voltage in the electrical network must be suitable for the power of the device and must be grounded.
- Only spare parts and accessories provided by Emsaş A.Ş should be used.
- There should be no substances in the usable volume that may be affected by the operating temperature of the device and damage the device.
- We strongly recommend you to use a voltage regulator in order not to damage the compressor in places where there may be larger changes.
- In order not to deform the shape and structure, arrange the temperature carefully.
- The samples which can turn into solid-state to liquid state, also can be volume expansion should not be located closed container.
- The boiling point of the liquids that need to be heated should be higher than the set temperature.
- Liquids that expand when heated should not overflow from their containers.
- The safety thermostat must be higher than the set temperature.
- Check that the steam structure of the heated materials is not harmful to human health, flammable or explosive.
- There should not be any kind of material that may affect device operating and that may harm to the device, inside of the device.
- The environment in which the device will be installed should not be wet and/or damp. It may harm to the battery and/or other electrical components. Attention should be paid to this.
- Do not touch the components of the device with wet hands and/or feet.
- Keep away your device from heat sources (stove, oven and etc) and direct sunlight.
- The device shall not be close to any other dissipate heat device. Otherwise, it can cause damage to the device's electrical systems.
- After operating your device, your device can give audible and visual alarms until it reaches the ideal operating temperature. When your device reaches the ideal operating temperature, the alarms shut down. Then you can load the products.
- When you receive your product confirm the warranty certificate your authorized dealer.

9. MEANING OF SYMBOLS

9.1. Meaning of Symbols On Top Off The Device



CE Certificate



Manufacturer Name and Address



Date of Manufacture

Indicates the date of manufacture of the medical device.



Catalog Number

Indicates the manufacturer's catalog number by which the medical device can be identified.



Serial Number

Indicates the manufacturer's serial number by which a particular medical device can be identified.



Fragile

This indicates that a medical device may break or be damaged if not handled carefully. It is located on the parcel.



Keep away from the sun.

**Protect from heat and radioactive sources.**

The device is affected by heat. For this reason, the device must be protected from heat sources.

**Protect from moisture. Located on the parcel.**

Storage conditions: 20°C / 45°C

**Usage Instruction**

A synonym for "refers to using instructions" is "refer to operating instructions".



This symbol draws attention to safety warnings and potentially dangerous situations. Failure to follow these warnings could result in damage to the device and injury to users.



This indicates that the user should refer to the instructions for use for important warning information such as warnings and precautions that cannot be presented on the medical device for many reasons.

**Grounded Socket**

Operate in a place with protective grounding

**Alternative Current**



Dangerous Voltage!

It is a symbol indicating the current available on the device. The place where there is electricity is also the symbol that should be specified.



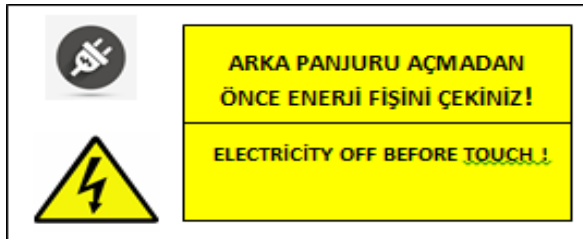
Do not touch!



Do not touch with wet hand and/or feet!



Keep Upright. It is located on the parcel.



10. SERVICE

Your device can give audible and visual alarms in the first operation. In case of this situation press the alarm silent button located on the display

Do not allow the repair of the device to anyone other than the authorized service during the warranty period. In case of interventions other than authorized service, the device will be subject to operation out of warranty.

When you encounter a problem with the device, call the authorized service or Emsaş numbers that made the first installation.

10.1 Troubleshooting Table

FAULT	CAUSE /CORRECTION
THE DEVICE DOES NOT WORK THERE IS NO ELECTRICITY	<ul style="list-style-type: none">• Make sure it is plugged in.• Make sure there is electricity in the mains.• If there is voltage outside the tolerances given in the network, the device it doesn't work.• Make sure the power button is on.
LIGHT IS NOT WORKING WHEN THE DOOR OPEN	<ul style="list-style-type: none">• The lamp can be broken or it may have moved from the lamp socket. If it is broken inform the service• The lamp switch may be damaged. Inform the service
THE TEMPERATURE DISTRIBUTION IN THE CABINET IS NOT HOMOGENEOUS ENOUGH, THE TOP AND BOTTOM ARE AT SEPARATE TEMPERATURES.	<ul style="list-style-type: none">• Material may have been placed in front of the indoor fan. For better air circulation materials should not be placed in front of the fan.• The inner fan may be damaged, inform the service.• The fan switch may be damaged, inform the service.
THE DEVICE IS NOT COOLING	<ul style="list-style-type: none">• Keep condenser clean. Do the control fan in the back is working or not• If the fan is not working, inform the service• If the fan is working and the cabinet is not getting cold, inform the service

11. Spare Parts & Accessories

11.1 Spare Parts

There are no spare parts on the device that you can replace. Please notify our authorized service in case of malfunction.

11.2 Accessories

Warranty Certificate and Manual Book.

There is no other accessories than these.

Contact

For any service request or training or questions about your device please use this guide kalite@emsas-as.com.tr.

For general information use info@emsas-as.com.tr or to see <http://www.emsas-as.com.tr>