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Instruction and Maintenance Manual

# PLASMA REFRIGERATOR – DEEP FREEZER

**Emsaş Elektrik Malzemeleri San. Tic. A.Ş**  
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## GENERAL INFORMATION

Before operating your device, read the User's Guide carefully and save it for future use. Contact the cargo company and report the damage if a defect is found. According to ICC regulations, this responsibility belongs to the customer.

When operating the device, please;

1. Obey warning labels.
2. Do not remove warning signs.
3. Do not operate the damaged device.
4. Do not operate the device with a damaged cable.
5. Do not move the device during operation.

- \* In case of a problem, contact the Service of Emsas Company.
- \* Ozone-friendly Refrigerant and CFC-free polyurethane material is used in our coolers.
- \* Before using our coolers, carefully reading the user manual will ensure you get the highest efficiency from the cooler.
- \* Emsaş has the right to develop and change the structure of its existing products.
- \* Keep the product package until you are sure that the product is complete and correct.

The validity of the guarantee is valid if the precautions described in the user manual are followed.

The information in this document belongs to EMSAS Company.  
It may not be reproduced or distributed without authorization.

## 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 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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***Please read this manual first!***

Dear Customer, we want your product, which has been produced in modern facilities and passed through rigorous quality control processes, to offer you the best efficiency. Therefore, we request that you read this entire manual carefully before using your product and keep it as a reference.

**This manual book**

- It will help you to use your product quickly and safely.
- Read the manual book before installing and operating your product.
- Observe especially the safety-related information.
- Keep the manual book in an easily accessible place as you may need it later.
- Also, read the other documents supplied with your product.

## **1.INTRODUCTION**

### **1.1. Description of the Device, Purpose of Use, and Working Principle**

#### **Description:**

EE 100 / EE 150 / EE 300 // EE 600 / EE 100 VK / EE 150 VK / EE 300 VK / EE 600 VK and EF 100 / EF 150 / EF 300 / EF 600 / EF 100 VK / EF 150 VK / EF 300 VK / EF 600 VK Plasma Storage Cabinet is a device that keeps it up is used for 6 to 12 months at -25°C and -40°C conditions of the platelet-rich plasma separated by re-centrifugation of whole blood designed for use in hospitals, laboratories, pharmacies, and blood centers.

#### **Purpose:**

EE and EF series is designed to store frozen products like plasma, frozen samples, and growth mediums at hospitals, laboratories, pharmacies, blood centers, etc. To store the platelet-rich plasma obtained as a result of centrifugation of whole blood for up to 6 or 12 months at -25°C and -40°C conditions of the Plasma separated by re-centrifugation.

#### **Working Principle:**

- Our Plasma Storage Cabinets EE 100 / EE 150 / EE 300 // EE 600 / EE 100 VK / EE 150 VK / EE 300 VK / EE 600 VK and EF 100 / EF 150 / EF 300 / EF 600 / EF 100 VK / EF 150 VK / EF 300 VK / EF 600 VK has been produced to serve blood banks for many years. VK models are models with optionally added thermal printer.
- The device is designed for storing products at a controlled temperature for the following temperature range.

**EE 100 / EE 150 / EE 300 / EE 600 / EE 100 VK / EE 150 VK / EE 300 VK / EE 600 VK:**  
-5°C / -30°C,  
**EF 100 / EF 150 / EF 300 / EF 600 / EF 100 VK / EF 150 VK / EF 300 VK / EF 600 VK:**  
- 20°C / -40°C

It is set to be available in ranges.

- The device work with a circulation cooling system.
- While the device is running, the compressor and refrigerant provide cooling circulation, this circulation helps the evaporator to keep the cold air inside the evaporator. The cold air inside the evaporator is blown from the evaporator into the cabin by the fan. This process works with the principle of lowering the cell temperature.
- The device work with a microprocessor-controlled electronic card. Whereby, the electronic card supply; the thermostat range, alarm conditions, defrost time, set temperature value and working differential.
- The heat insulation, which is proportional to the device size, not only provides energy efficiency, but also helps the homogeneous temperature distribution. It can make precise temperature control with its programmable PID microprocessor control system and offers a safe operation with its adjustable safety thermostat.

## 2. TECHNICAL SPECIFICATIONS

### 2.1. Technical Specifications Table

FEATURES/MODEL	EE 100/EE 100 DATA LOGGER	EE 150/EE 150 DATA LOGGER	EE 300/ EE 300 DATA LOGGER	EE 600/EE 600 DATA LOGGER	EF 100/EF 100 DATA LOGGER	EF 150/EF 150 DATA LOGGER	EF 300/EF 300 DATA LOGGER	EF 600/EF 600 DATA LOGGER
TEMPERATURE RANGE(°C)	-5 °C/ -30 °C	-5 °C/ -30 °C	-5 °C/ -30 °C	-5 °C/ -30 °C	-20 °C/ -40 °C	-20 °C/ -40 °C	-20 °C/ -40 °C	-20 °C/ -40 °C
SET POINT(°C)	-30 °C	-30 °C	-30 °C	-30 °C	-40 °C	-40 °C	-40 °C	-40 °C
COOLING SYSTEM	FAN	FAN	FAN	FAN	FAN	FAN	FAN	FAN
TEMPERATURE SENSOR	NTC	NTC	NTC	NTC	NTC	NTC	NTC	NTC
REFRIGERANT	R404A	R404A	R404A	R404A	R404A	R404A	R404A	R404A
TEMPERATURE FLUCTUATIONS	<1	<1	<1	<1	<1	<1	<1	<1
TEMPERATURE DEVIATION	<1	<1	<1	<1	<1	<1	<1	<1
ISOLATION (NON-CFC POLYURETHANE-mm)	61 mm	75 mm	97,5 mm	78,5 mm	61 mm	75 mm	97,5 mm	78,5 mm
ALARM SYSTEM	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL	AUDIO AND VISUAL
SHELF SYSTEM	2 PCS Cr-Ni SHELF	3 PCS Cr-Ni SHELF	4 PCS Cr-Ni SHELF	5 PCS Cr-Ni SHELF	2 PCS Cr-Ni SHELF	3 PCS Cr-Ni SHELF	4 PCS Cr-Ni SHELF	5 PCS Cr-Ni SHELF
CONTROL SYSTEM	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR	MICROPROCESSOR
THERMAL PRINTER	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+
SUPPLY VOLTAGE	230 V 50HZ	230 V 50HZ	230 V 50HZ	230 V 50HZ	230 V 50HZ	230 V 50HZ	230 V 50HZ	230 V 50HZ
INNER SURFACE MATERIAL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
OUTER SURFACE MATERIAL	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET	EPOXY-POLYESTER ELECTROSTATIC PAINTED STAINLESS STEEL SHEET
LIGHTING	LED	LED	LED	LED	LED	LED	LED	LED
CASTORS	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR	2 PCS BRAKED/2 PCS REGULAR
EXTERNAL DIMENTIONS(WxLxH-mm)	600*660*1050	600*670*1650	765*830*1950	910*842*1938	600*660*1050	600*670*1650	765*830*1950	910*842*1938
INTERNAL DIMENTIONS(WxLxH-mm)	478*497*556	450*467*1000	570*593*1190	753*630*1427	478*497*556	450*467*1000	570*593*1190	753*630*1427
GROSS WEIGHT(KG)	125 KG	125 KG	215 KG	260 KG	125 KG	125 KG	215 KG	260 KG
NET VOLUME(L)	113 L	175 L	348 L	589 L	113 L	175 L	348 L	589 L
GROSS VOLUME(L)	132 L	210 L	402 L	677 L	132 L	210 L	402 L	677 L



## 2.2 Specification Descriptions

- Among the deep freezers, the EE series allows storage at -5°C / -30°C, and the EF series between -20°C / -40°C.
- Among the deep freezers, the EE series allows to -30°C set temperature, and the EF series allows to -40°C set temperature.
- The device has a fan blow cooling circulation system, and as a refrigerant used R404A gas.
- The device has an NTC heat sensor.
- The device has an audio and visual alarm system.
- The door system of the device is made of stainless steel material and has been designed in ergonomics that accelerates air circulation.
- Temperature deviation and temperature fluctuation in the device is a value less than one.
- The door system of the device has a magnetic gasket that provides sealing with a stainless heating surface, and high-density polyurethane-filled insulation.
- Deep Freezer insulation is provided by polyurethane material obtained at high density.
- Deep Freezer works silently and without vibration.
- There is an automatically charged accumulator system on the device control panel. This system ensures that the digital control panel and thermal printer continue to work for 72 hours in case of possible power cuts.
- The device is used to store Fresh Frozen Plasma in blood banks and hospitals.
- A user-friendly microprocessor digital control panel is used on the cabinet.

- A 10-year record can be taken with the USB output that enables the transfer of the cabinet temperature information to the computer when requested.
- There is a fully automatic defrost system to maintain the cabinet cooling efficiency.
- The thermostat on the device control panel can measure with an accuracy of 0.1°C.
- When the plasma storage cabinet is operating, when the upper and lower temperature limits are exceeded, when the door of the device is left open, when there is a power cut or low voltage problem, the device gives a warning with visual and audible warning signals. It also sends error codes to the optional thermal printer along with the display.
- The cooling system and insulation system of the Plasma Storage Cabinet do not contain harmful CFC gases for the ozone layer.
- The interior lighting of the cabinet is provided by the LED system.

### 3.INSTALLING THE DEVICE

#### 3.1. Environmental Conditions

Your device works efficiently in the following ambient conditions:

- \* Indoor use only
- \* Storage and Transport Temperature: 20 ° C / 45 ° C
- \* Relative Humidity: 65%
- \* Temperature values: -5°C / -40°C
- \* Maximum altitude: 2000 meters
- \* Ambient range for maximum performance: 20°C / 30°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 transporting your cooler and when it needs to be relocated, have it done through the service channel, if necessary.
- \* **There are 2 fixed and 2 movable 4 wheels on the device. Be sure to fix the device after placement so that it does not move.**

#### 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. Visually inspect the device 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 the product place

- \* Check that the settlement is suitable for its intended use.
- \* Keep away from direct sunlight and heat sources.
- \* 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 it does other work.



- \* When placing the cooler make, sure that there is at least 8 cm space between the side, back and front surfaces and 20 cm space at the top of the place where it will be placed.
- \* The hose in the compressor compartment of your cooler; for evacuation of dripping water during defrosting. Before operating the cabinet, be sure to check whether the hose is in the container.
- \* When moving your cooler or when it needs to be relocated, have it done through the service channel, if necessary.

## **4.INSTRUCTIONS**

### **4.1 Operating the Device**

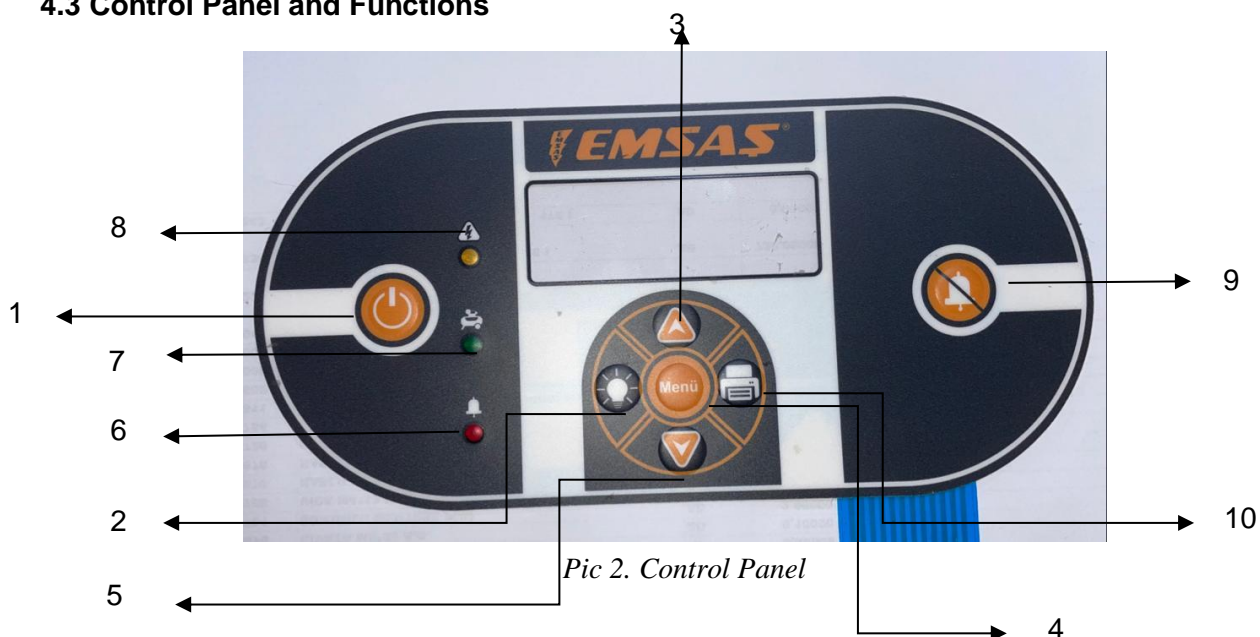
- \* Plug in the device (Grounded Socket)
- \* Start the device by pressing the On/Off button.
- \* Check the grade. The adjusted setpoint is -20°C in the EE series and -40°C in the EF series.
- \* Before operating the cooler, have a technical personnel (electrician) check whether the socket to be used is grounded or not and whether the mains voltage is appropriate. Do not operate if the socket is not grounded.
- \* After opening the package of the cooler, wait at least 45 minutes before operating it. This will prevent the compressor of your cooler from damage.
- \* In the first start-up, the service representative must give the information about the device to the technical personnel of the relevant customer and the health personnel (nurse/Dr).











#### 4.2 devices Introduction Image



*Pic 1. EE ve EF Series Plasma Refrigerator*

### 4.3 Control Panel and Functions



<b>CONTROL BUTTONS</b>	1		On/Off
	2		Light
	3		Up Button
	4		Menu and Setting Button
	5		Down Button
<b>DIGITAL SCREEN BUTTONS</b>	6		Red alert (LCD Screen)
	7		Green Light (When the compressor is on)
	8		Yellow Light (power light)
	9		Alarm Silent
	10		Printer

#### Error Codes

- 1) H1: Sensor fault
- 2) H2: Door open failure
- 3) H3: No electricity failure
- 4) H4: Upper limit exceeded alarm
- 5) H5: Lower limit exceeded alarm
- 6) H8: No communication error

Supply Voltage: 220Vac/50Hz

Power Taken: 10VA

External Battery: 12V/7Ah

#### Alarm conditions;

- **When the specified temperature goes out of range**
- **When the door is open**

**EE 100 - EE 150 – EE 300 – EE 600**
**EF 100 - EF 150 – EF 300 – EF 600**
**Control Board Settings (User login password (2112))**

- 1) Temperature Setting : -5°C / -30°C
  - 2) Working Differential : 0,4°C...2,0°C
  - 3) Alarm upper limit value: 0,0°C...-20°C
  - 4) Alarm lower limit value: 0,0°C...-32°C
  - 5) Defrost interval : 6 hour
  - 6) Defrost time : 35 second
  - 7) Date setting : The calendar date is set
  - 8) Printer-RS232 recording interval: 15...60min (in 15min steps)
  - 9) Printer-RS232 recording mode: Printer on or off
- \*\* Alarm states (conditions for transition of the system to alarm state)
- 1) If the cabin temperature rises above the alarm upper limit.
  - 2) If the cabin temperature drops below the alarm lower limit
  - 3) If the door remains open (if the door remains open for 2 minutes)
  - 4) If the 220V supply voltage is canceled (if the supply voltage does not come for 30 seconds)

**Control Board Settings (User login password (2112))**

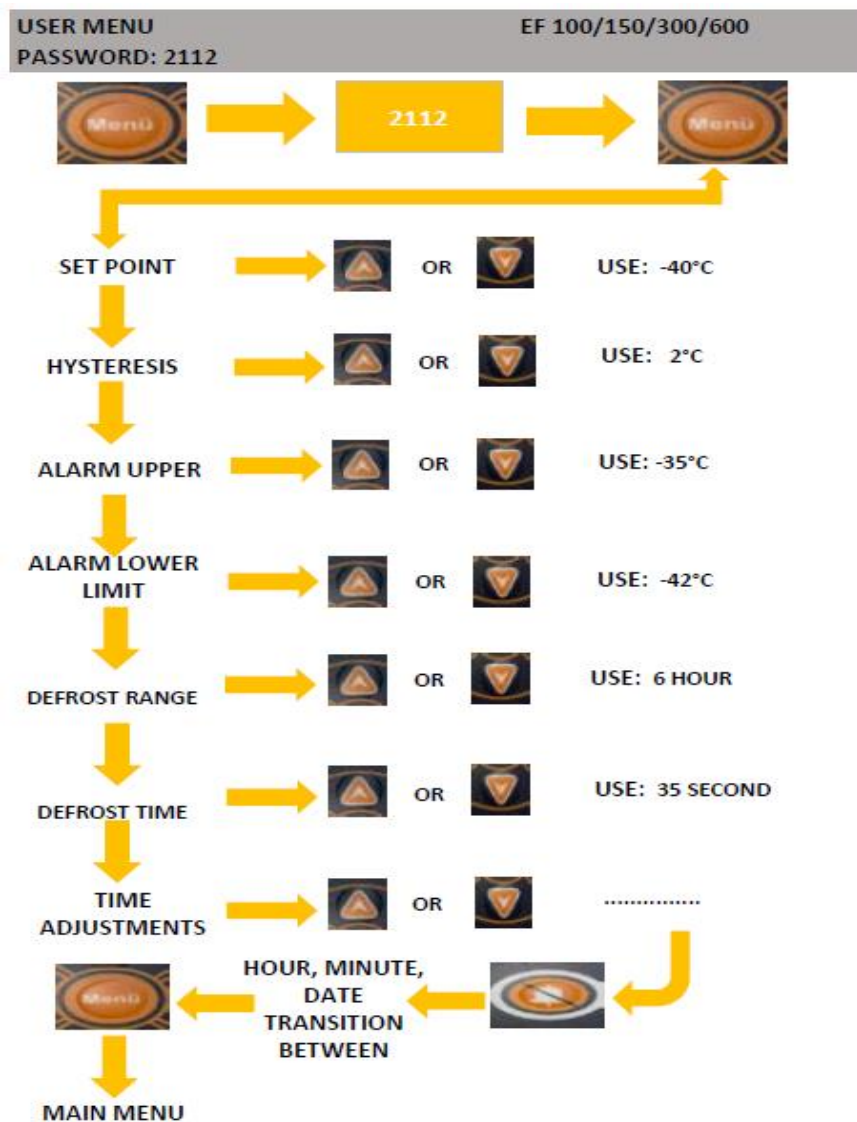
- 1) Temperature Setting : -20°C / -40°C
  - 2) Working Differential : 0,4°C...2,0°C
  - 3) Alarm upper limit value: 0,0°C...-30°C
  - 4) Alarm lower limit value: 0,0°C...-42°C
  - 5) Defrost interval : 6 hour
  - 6) Defrost time : 35 second
  - 7) Date setting : The calendar date is set
  - 8) Printer-RS232 recording interval: 15...60min (in 15min steps)
  - 9) Printer-RS232 recording mode: Printer on or off
- \*\* Alarm states (conditions for transition of the system to alarm state)
- 1) If the cabin temperature rises above the alarm upper limit.
  - 2) If the cabin temperature drops below the alarm lower limit
  - 3) If the door remains open (if the door remains open for 2 minutes)
  - 4) If the 220V supply voltage is canceled (if the supply voltage does not come for 30 seconds)

**Factory Settings**
**EE SERIES**

- 1) Working temperature setting : -20°C
- 2) Hysteresis setting : 2°C
- 3) Defrost period : 6 hour
- 4) Defrost time : 35 second
- 5) Compressor delay : 30 second
- 6) Open door alarm delay : 2 minute
- 7) Alarm muting time : 10 second
- 8) Thermal printer printing time : 8

**EF SERIES**

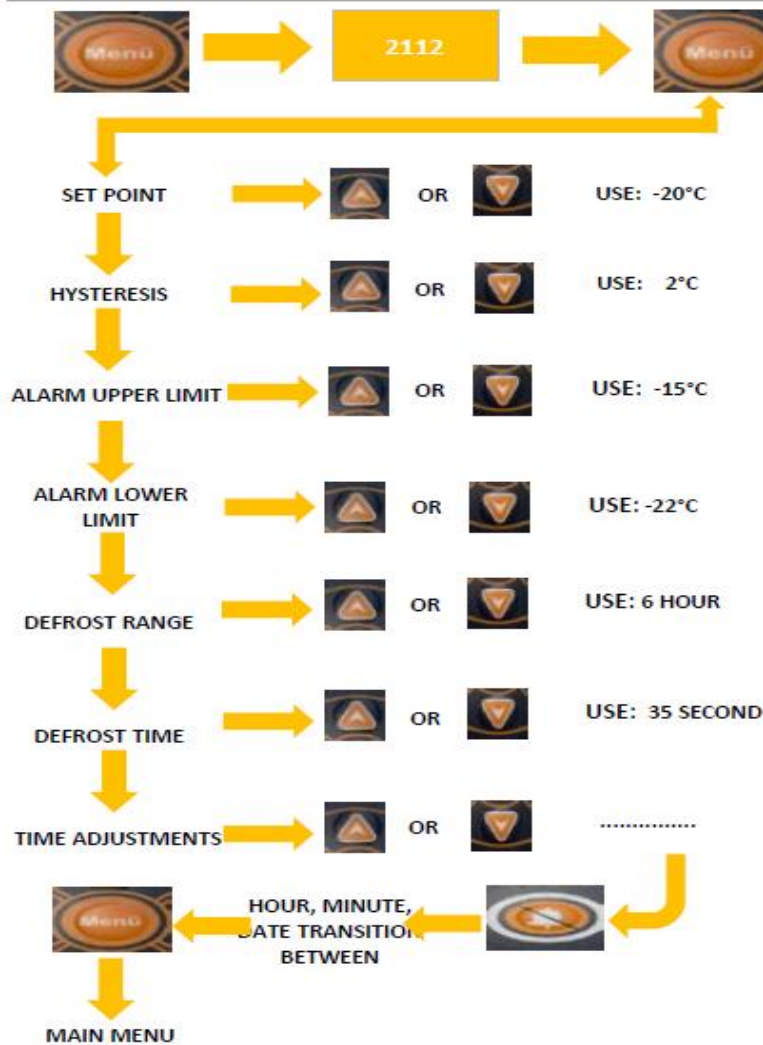
- 1) Working temperature setting : -40°C
- 2) Hysteresis setting : 2°C
- 3) Defrost period : 6 hour
- 4) Defrost time : 35 second
- 5) Compressor delay : 30 second
- 6) Open door alarm delay : 2 minute
- 7) Alarm muting time : 10 second
- 8) Thermal printer printing time : 8





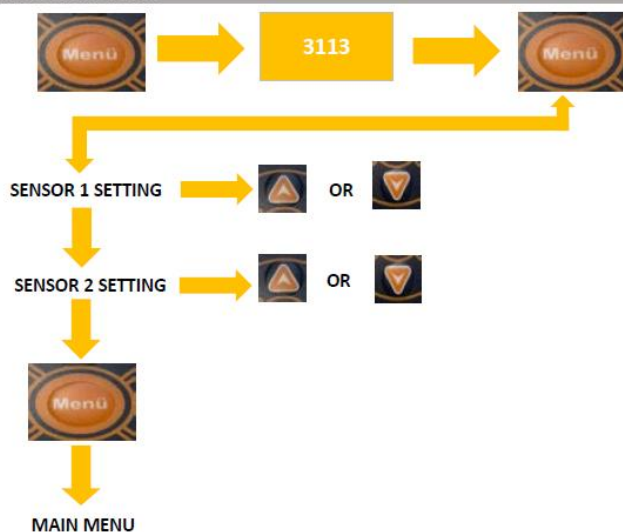
USER MENU  
PASSWORD: 2112

EE 100/150/300/600

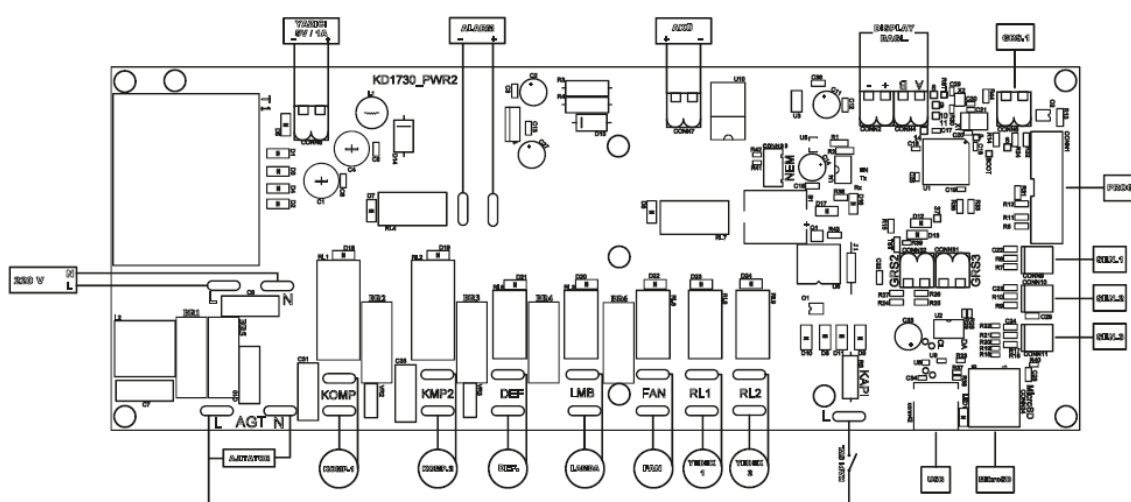


CALIBRATION MENU  
PASSWORD: 3113

EE/ EF 100/150/300/600



## 4.5 Wiring Diagram

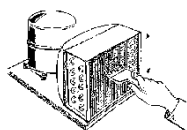


## **5.Cleaning and Periodic Maintenance**

**5.1 Maintenance:** According to the ambient conditions of the device, it should be maintained once a month when necessary, 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.
- \* According to the environmental conditions of your medical device, clean it regularly once a month when necessary, and once in 6 months under normal conditions.
- \*\* In order to clean the cooling condenser, it is necessary to clean it from dust first.
- \* The condenser compartment of the cooler should be cleaned by a technical person with a vacuum cleaner or a soft paintbrush and the electrical components should not be damaged.
- \* Pull out the electrical outlet and clean the condenser under the cooler at least once every 4 months.



- \* Glass doors can be cleaned with 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.

- \* Wipe the plastic drainage bowl next to the compressor, where the defrosting water reaches, with a damp cloth.
- \* Wipe the inner and outer body of the cooler with a damp cloth. Do not use abrasive and purifying chemicals while cleaning. Faults and errors that may arise from this reason will be treated out of warranty.
- \* Do not clean the engine compartment of the device with water and detergent. The engine compartment of the device must not be damaged.
- \* During the use of the device, the drainage bowl next to the compressor, where the water generated as a result of defrost reaches, should be wiped with a damp cloth.
- \* Do not use chemical materials that will cause corrosion in the engine compartment and other parts of the device.

## 6. SAFETY

- \* Before performing equipment maintenance and repair, review the safety instructions.
- \* If the device needs to be moved or moved for maintenance, be sure to check the brakes of the wheels. Otherwise, the wheels will be damaged and the device will be unstable, preventing it from working properly.
- \* Do not touch the unit with wet hands and/or feet.
- \* Do not insert screwdrivers or other pointed objects into places between the shielding area or moving parts of the device.
- \* Do not pull the power cord to disconnect the electrical mains.
- \* Make sure that the device is not used by unauthorized persons.
- \* Before any cleaning or maintenance operation on the device, disconnect the power and remove the plug.
- \* Check that the device placed where it will be used is on a flat ground and four legs. It is dangerous and inconvenient to perform any repair or service on the device by unauthorized persons.
- \* Never do maintenance and repairs while the cable of your blood cabinet is plugged in.
- \* In places where voltage fluctuations larger than normal may occur, we strongly recommend using a voltage regulator to prevent damage to the compressor.
- \* Use your product according to the principles of the manual book.
- \* When you have a service request regarding your product, please contact our Service Center at the phone numbers above.











## 7. DISPOSER

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.

## **8. WARNINGSS and PRECAUTIONS**

Pay attention to the following warnings.

-  Do not use the device other than its intended use.
-  The device should be used by authorized and trained personnel after reading the user manual. In case of a problem, only authorized technical personnel should intervene in the device.
-  The power line must be suitable for the power of the device and must be grounded.
-  Only spare parts and accessories provided by Emsas Company 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.
-  In order to ensure homogeneous cooling in the plasma storage cabinet, do not load above its capacity.
-  The temperature must be carefully adjusted so that the shape and structure of the specimens are not deteriorated without the user's request.
-  When putting blood bags in your Plasma Storage Cabinet, do not stack them on the back it cause prevent air circulation. This will cause unwanted temperature differences in the upper and lower parts of your cooler.
-  After starting your cooler, it can give an alarm visually and audibly until it reaches the ideal operating temperature on the digital display. When it reaches the ideal temperature (-25°C) or (-40°C), the visual and audible alarm will stop. After that, you can carry out your installation in the closet.
-  When you receive your product, have the warranty certificate approved by your Authorized Dealer.

## **9. LABEL SYMBOLS AND MEANINGS**

### **9.1 Labels on the Device**



### **Manufacturer Name and Address**

Indicates the medical device manufacturer as defined in Directives 90/385/EEC, 93/42/EEC and 98/79/ECAB.



**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.



**Frangible**

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.



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.**



**Keep Upright. It is located on the parcel.**

## 10. Service

- 10.1 Your cooler may give a visual and audible alarm during the first operation, in this case, it will be sufficient to press the button with the alarm sign on the microprocessor.
- 10.2 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.
- 10.3 When you encounter a problem with the device, call the authorized service or Emsas numbers that made the first installation.

## 11. Diagnostic

FAULT	CAUSE/ACTION
<b>The cooler is not working No electricity</b>	-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 (See 3.2,3.4), the cooler will not work. -Make sure the power button is on.
<b>The light does not turn on when the door is opened</b>	-The fluorescent lamp may be broken or moved from its socket. If it is broken, notify the service -Lamp switch may be broken. Notify the service.
<b>The temperature distribution in the cabinet is not homogeneous enough, the top and bottom are at separate temperatures.</b>	-Material may have been placed in front of the indoor fan. Materials should not be placed at the bottom for good air circulation. -The indoor fan may be faulty; notify the service -Fan switch may be faulty; notify the service

<b>The cabinet is not cooling</b>	<ul style="list-style-type: none"> <li>-Clean the condenser, check whether the rear fan is working</li> <li>- If the fan is not working, inform the service.</li> <li>-If the fan works but cooling does not occur, inform the service.</li> </ul>
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## 12. SPARE PARTS & ACCESSORIES

### 12.1 Spare Parts

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

### 12.2 Accessories

Warranty Certificate and Manual Book.

EE 150 Shelf Quantity	3
EE 300 Shelf Quantity	5

### Contact

For any service request or training or questions about your device please use this guide [kalite@emsas-as.com.tr](mailto:kalite@emsas-as.com.tr).

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

