

# JOF ONE

# JOF 23

# JOF 23-A (110V.)

## OWNER'S MANUAL



## Index

<b>1) INTRODUCTION.....</b>	<b>4</b>
<i>1i: TYPE OF USE AND LIMITATIONS .....</i>	<i>4</i>
<i>1iii: TESTING .....</i>	<i>4</i>
<b>2) GENERAL SAFETY .....</b>	<b>5</b>
<i>2i: GENERAL SAFETY STANDARDS.....</i>	<i>5</i>
<i>2ii:LOCATION REQUIREMENTS.....</i>	<i>5</i>
<b>3) INSTALLATION.....</b>	<b>5</b>
<i>3i: INTRODUCTION .....</i>	<i>5</i>
<i>3ii: MATERIALS AND CHILLING SOLUTIONS.....</i>	<i>6</i>
<i>3iii: ELEMENTARY SAFETY STANDARDS.....</i>	<i>6</i>
<i>3iv: INSTALLATION INSTRUCTIONS.....</i>	<i>6</i>
<i>3v: CONNECTING TO THE POWER SUPPLY.....</i>	<i>6</i>
<b>4) ADVICE FOR PROPER USE OF THE EQUIPMENT.....</b>	<b>7</b>
<b>5) GENERAL OPERATION.....</b>	<b>7</b>
<i>5i: PRE-COOLING .....</i>	<i>7</i>
<i>5ii: CORE PROBE (Optional) .....</i>	<i>7</i>
<i>5iii: LIDS AND CONTAINERS.....</i>	<i>7</i>
<i>5iv: POSITIONING OF THE PRODUCT .....</i>	<i>7</i>
<i>5v: CONSERVATION.....</i>	<i>7</i>
<i>5vi:STANDARD USE INSTRUCTIONS.....</i>	<i>7</i>
<b>6) KEYPAD IDENTIFICATION.....</b>	<b>9</b>
<b>7) USER FUNCTIONS.....</b>	<b>10</b>
<b>8) FUNCTIONS OF THE BLAST CHILLER/BLAST FREEZER.....</b>	<b>13</b>
<i>8i: PRELIMINARY INSTRUCTIONS .....</i>	<i>13</i>
<i>8ii: BLAST CHILLING AND CONSERVATION.....</i>	<i>13</i>
<i>8iii: HARD BLAST CHILLING AND CONSERVATION .....</i>	<i>14</i>
<i>8iv: BLAST FREEZING AND CONSERVATION.....</i>	<i>14</i>
<i>8v: SOFT BLAST FREEZING AND CONSERVATION .....</i>	<i>15</i>
<i>8vi: PRE-COOLING START .....</i>	<i>15</i>
<b>9) “HACCP” FUNCTION.....</b>	<b>15</b>

**9i: PRELIMINARY INSTRUCTIONS..... 15**

**9ii: ALARMS HACCP INFORMATIONS DISPLAY..... 16**

**9iii: CANCELLATION OF HACCP ALARM INFORMATION ..... 17**

**10) COMPRESSOR WORKING HOUR CALCULATION..... 18**

**10i: COMPRESSOR WORKING HOUR DISPLAY ..... 18**

**10ii: COMPRESSOR WORKING HOURS CANCELLATION..... 18**

**11) SETTING ..... 18**

**11i: REAL DAY AND HOUR SETTING..... 18**

## 1) INTRODUCTION

Thank you for choosing TECHFROST products. We are certain that you will be more than satisfied with their performance. To help maintain efficiency and performance please follow the guidelines set forth in this manual describing the correct use and maintenance of the Blast Chiller Freezer.

### *1i: TYPE OF USE AND LIMITATIONS*

This Blast Chiller Freezer has been designed for chilling and preserving food. It rapidly lowers the temperature of cooked food and specialty frozen desserts, preserving quality and assuring ultimate product freshness. Any other use is considered improper and incorrect. This Chiller must not be installed outside and or in environments subject to weather conditions. The manufacturer declines all responsibility for uses other than those given in this manual.

### *1ii: CHARACTERISTICS OF THE MACHINE*

The machine, to which this handbook refers, is a blast chiller/freezer which is completely constructed of stainless steel AISI 304. It will continue working until reaching **-40 °F**. This machine is capable of quickly tempering the heart of the cooked products from +158°F to +37.4°F during blast chilling and from +158°F to -0.40°F during blast freezing. This thermal shock, keeps bacteria from spreading without altering the organoleptic conditions or modifying the product's quality. Through the use of this process, hygiene, security, and product quality is maintained.

Features of the blast chiller include:

- Indirect system of air circulation
- Constant temperature from shelf to shelf
- Advanced cooling system for a quick, cold penetration to the product's core
- Maintenance of a high humidity rate in the chilled product (80%-85%) thus avoiding drying or dehydration, eliminating the risk of weight loss
- Excellent thermic conditions during transfer to the conservation cell

A product is at peak quality at the point that it is taken from the oven, batch freezer or other production process. The high temperatures reached by the oven act to destroy microorganisms without altering the product's quality. The molecular structure of a frozen dessert is at its best when first extracted from the production machine. You can keep this high quality level unchanged by starting the chilling process immediately after production. The blast chiller acts to lower the temperature rapidly, preventing external drying and early deterioration of your product. These low temperatures also block bacterial proliferation.

The blast chiller is a professional instrument that closely follows regulations regarding the thermal treatment of gastronomy, pastry, and ice cream products, before and after cooking. It facilitates application of the **HACCP System** (Hazard Analysis Critical Control Point) and compliance with ISO9000 norms.

The passage to conservation at the pre-defined temperature follows the chilling or deep freezing cycle automatically.

**AIR STERILIZATION** (accessory by request) is obtained by, the production of agglomerates of active oxygen atoms. These atoms destroy bacteria, viruses, mildew spores, odor molecules, etc.

### *1iii: TESTING*

Every Techfrost Chiller is thoroughly tested before shipping. Testing includes a visual inspection, an electric test, and a functional test. Final testing is certified for the relevant documentation (please refer to the enclosed appendixes).

## 2) GENERAL SAFETY

### *2i: GENERAL SAFETY STANDARDS*

The Chiller in question is manufactured conforming with the European Directives relevant to low tension 73/23-93/68/EEC, and electromagnetic compatibility 89/336/EEC; EN60335- 1, EN60335-2-24, EN55014, EN61000-3-2, EN61000-3-3, EN55104.

### *2ii: LOCATION REQUIREMENTS*

It is necessary that electrical supply to the freezer be provided as specified on the data plate of your Techfrost freezer. Each freezer comes with electrical cord and power connector as required.

- The chiller and its control board should only be operated by adults.
- Installation and any other operation (including a possible extension of the power cable) must be carried out by **authorized personnel** only.
- Maintenance and service have to be carried out by qualified technicians. Only factory replacement parts should be used for repairs.
- Do not attempt to modify the chiller yourself; the operation could be dangerous.
- In order to avoid the risk of over-heating of the compressor and consequent damage, it is crucial to allow sufficient air circulation around the machine.
- The chiller should be placed so that there remains sufficient space for air circulation in the back (at least 10 cm or approximately 4in.).
- While installing or transporting the unit, take care in ensuring that the cord is not crimped or kinked. Before any cleaning or installing operation, remember to switch the machine off and disconnect the plug. Make sure you do not pull the cord.
- The deep-freezing system, placed on the back and inside the machine, contains a refrigerant solution. Do not use sharp objects in the vicinity of the evaporator, cooling plate, or near the pipe coils (located on the back and inside the chiller). The accidental perforation of the system could cause damage to the unit.
- Wait for at least 30 minutes before connecting the plug to the power point after sitting freezer in place. If the chiller has been transported in the horizontal position, be sure to keep it vertical for at least four hours. This allows the oil contained in the compressor to be transferred back to its original location.
- **WARNING!** Do not keep explosive gases and liquids or glass bottles in the machine. Doing so may result in damages to persons or things.
- When the “**DEEP-FREEZING**” process has concluded, dry gloves or cloths should be used to remove containers from the machine.
- Do not open the machine door while executing its working cycle. Doing so may prevent cycle completion.
- The constructor is not liable for damages arising from improper use or installation, connection to non-authorized equipment, use of non-original fittings, or tampering by non-authorized personnel.

**CAUTION: The Blast Chiller/Blast Freezer must be connected to an electrical supply source that matches the data plate on the machine. Make sure it is level and always use qualified personnel to install, repair and service your Chiller.**

## 3) INSTALLATION

### *3i: INTRODUCTION*

This manual aims to provide the user with all the necessary information to correctly use and maintain the chiller.

Before use, carefully read all the instructions given in this manual. The manufacturer shall decline all responsibility for operations and use which disregard the instructions herein.

### 3ii: MATERIALS AND CHILLING SOLUTIONS

The areas in contact with the product are made of stainless steel. The chilled coolant, found in this machine, is used as permitted by current legislation and the HFC. The type and quality of gas used, are indicated on the data plate.

### 3iii: ELEMENTARY SAFETY STANDARDS – RISKS

The chiller has no dangerous corners, sharp/cutting surfaces, or protruding parts. All safety guards on moving parts or electrical components are properly attached to the cabinet. To prevent accidental contact with parts that present risk to the user, always respect safety standards:

- Do not touch the chiller with wet hands or feet
- Do not use the chiller without proper footwear
- Do not place any object between the safety guards mounted on the moving parts
- Before cleaning or servicing the chiller, disconnect from the power supply

### 3iv: INSTALLATION INSTRUCTIONS

Carefully follow and adhere to the instructions given in this manual to guarantee working efficiency and safety when the Chiller is in use.

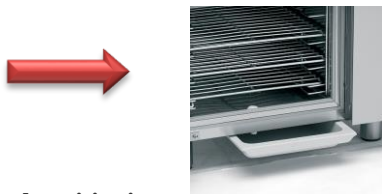
**CAUTION: When transporting or moving the Chiller to the installation site do not push or drag it. Lift it and position it on a trolley to avoid overturning.**

#### LOCATION

- Locate the Chiller in a ventilated area distant from heat sources such as, radiators, air conditioning units, deep-fryers, and ovens.
- Make sure the Chiller is located at a distance not less than 4in. from the back wall and 4in. and 4in. from the right side, to permit a good cooling effect for the various components.
- To maintain the correct internal temperature, the ambient temperature must not exceed 85°F
- Adjust height and level using the support feet.
  - If the Chiller is not perfectly level, working efficiency and condensation flow may be affected.
- Make certain that the door closes properly
- Remove the PVC protective film.

#### Condensation Pan

Insert the condensation collector from the front part of the machine. Slide the collector along the runners (located on the bottom of the machine) while pushing toward the rear.



#### Level positioning

The machine should be placed on flat and firm ground and all four feet are steadily in place. You can adjust the feet yourself: make sure that the chiller does not lean against other machines.



The machine should be placed in a way that allows adequate space for air circulation.

### ***3v: CONNECTING TO THE POWER SUPPLY***

Always connect blast chiller/freezer to an electrical supply that matches data plate. Connect the unit only to energy sources that are properly grounded. Do not damage the power cord (danger of electric shock). If it is damaged, it must be replaced immediately by a qualified electrician.

**CAUTION: the manufacturer shall not be held responsible for damage or accidents caused by negligence due to the non-observance of the recommendations and regulations given or of the local governing standards and laws regarding electrical safety.**

### **4) ADVICE FOR PROPER USE OF THE EQUIPMENT**

Before using the Chiller remove all traces of glue using a detergent as there might be traces of condensate due to final testing in the factory.

### **5) GENERAL OPERATION**

Efficiency when chilling and freezing depends on the following factors:

#### ***5i: PRE-COOLING***

Simply turn the machine “ON” to the desired mode to precool the internal parts prior to use.

#### ***5ii: CORE PROBE (Optional)***

The core probe shall be properly positioned in the core of the thicker portion of the product. Its point shall neither come out nor touch the pan. The probe shall be cleaned before starting any cycle, in order to prevent contaminations. \*PLEASE NOTE, YOUR PARTICULAR MACHINE MAY/MAY NOT HAVE A CORE PROBE\*

#### ***5iii: LIDS AND CONTAINERS***

Do not cover pans or other containers with lids or insulating films. The more the surface of the product is exposed to the air circulating in the cell, the less it will take to chill and deep freeze it.

#### ***5iv: POSITIONING OF THE PRODUCT***

- Do not layer the products on top of one another
- Make sure they are not thicker than 1.97in. thick.
- Do not overload the unit beyond the quantity recommended by the manufacturer.
- Allow a sufficient space between the pans in order to permit the proper air circulation
- Do not put too many pans on one side of the unit. Distribute them evenly.

#### ***5v: CONSERVATION***

The chilled and/or frozen product shall be covered and protected (film, airtight, hermetic sealing) after chilling or freezing.

#### ***5vi: STANDARD USE INSTRUCTIONS***

#### **Functions of the blast chiller/Freezer:**

#### **Preliminary Instructions-**

As soon as the machine is connected, it is in OFF position. Press and hold the ON/OFF Key to turn the machine ON.

You can select from the following functions:

- BLAST CHILLING \*
- BLAST CHILLING HARD \*
- BLAST FREEZING HARD \*\*\*
  - Every function cycle can be preceded by pre-cooling; please check the paragraph 4.6 “Pre-cooling”. It is used to cool down the internal room of the blast chiller to +5°C before placing product in the machine. To activate the pre-cooling cycle, press and hold the\* BLAST CHILLING key for 1 second.
  - Each selected program will pass automatically into the **CONSERVATION** phase at the end of the cycle. The conservation phase will reach +2°C when BLAST CHILLING and -20°C when BLAST FREEZING.
  - The machine’s memory will store all the time and temperature parameters modified from default, even if the machine has been unplugged.
  - Pressing the \* BLAST CHILLING or \*\*\* BLAST FREEZEING key during a normal cycle will display the time remaining until cycle completion

### ***BLAST CHILLING (0°C)***

Make sure the device is "on"

Press the \* BLAST CHILLING key. The LED ✱ will flash

You can modify the default temperature setting of 0°C by, pressing the key ▲ to increase the temperature or the key ▼ to decrease the temperature. (This option is active only **before** starting the program.)

Press the key ON/OFF to start the BLAST CHILLING

The BLAST CHILLING phase will last 90 minutes.

You can modify the **time** of the BLAST CHILLING phase by pressing the key ▲ to increase the time or the key ▼ to decrease the time. (This option is active only **after** having started the program)

Once completing the 90 minute cycle, the device will pass into conservation (setpoint 2°C)

### ***BLAST CHILLING HARD (-20°C)***

Please make sure the device is "on."

Press the key \* BLAST CHILLING: the LED ✱ will flash

Press the key HARD/SOFT: the LED HARD will flash

Press the key ON/OFF to start the BLAST CHILLING hard cycle

The phase of BLAST CHILLING phase will last 90 minutes.

I can modify the **time** of the BLAST CHILLING phase by, pressing the key ▲ to increase the time or the key ▼ to decrease the time. (This option is active only **after** having started the program)

Once 90 minute cycle has concluded, the device will pass into conservation (setpoint 2°C)



### **BLAST FREEZING (-40°C)**

Make sure the device is "on."

Press the key \*\*\* BLAST FREEZING: the LED ❄️ and the LED HARD will flash.

You can modify the default temperature setting of -40°C by, pressing the key ▲ to increase the temperature or the key ▼ to decrease the temperature. (This option is active only **before** starting the program)

Press the key ON/OFF to start the BLAST FREEZING phase

The BLAST FREEZING phase will last 240 minutes.

You can modify the **time** of the BLAST CHILLING phase by, pressing the key ▲ to increase the time or the key ▼ to decrease the time. (This option is active only **after** having started the program)

Once the completion of the 240 minute cycle, the device will pass into conservation (setpoint -20°C)

WARNING: The BLAST FREEZING HARD phase is set by default. If the HARD key is pressed before starting the cycle, HARD is stopped and the SHOCK FREEZING will cease even if in the BLAST FREEZING phase w/ temperature setting of 0°C.

### **GELATO PROGRAM**

To use the shock freezer for Gelato it is recommended to select a BLAST FREEZEING cycle and choose a maximum time of 500 minutes. This way, the machine will always work at its maximum despite the continuous door opening during gelato production.

### **Manual defrosting start**

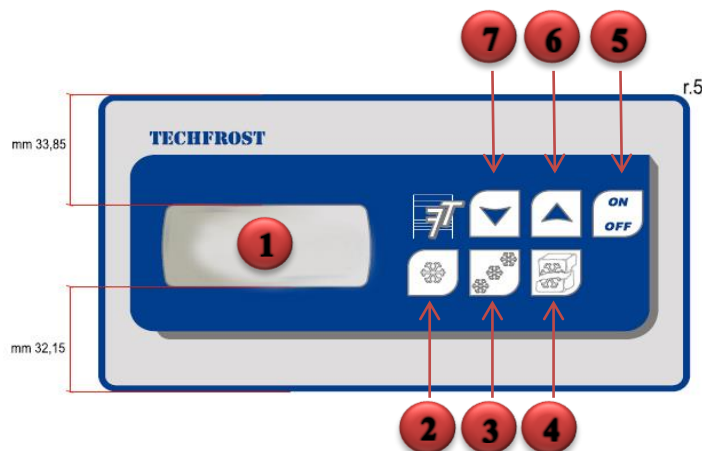
Make sure that the cycle is over and that no procedure is on.

Press and hold the key ▲ for 4 s: the LED DEFROSTING ❄️ will switch on.

The defrosting will last 20 minutes. Leave the door open during the defrost phase.

### **6) KEYPAD IDENTIFICATION**

The drawing below is an illustration of the electronic panel



1	display
2	blast chilling key
3	blast freezing key
4	hard blast chilling or soft blast freezing key, then also named "HARD/SOFT key"
5	on/off/start/stop key, then also named "START/STOP key"
6	increase key, then also named "UP key"
7	decrease key, then also named "DOWN key"

For further information, please refer to the following chapters.

## 7) USER FUNCTIONS

### a) Preliminary instructions

The following are the states of the machine:

- the state "off" (the device is not fed).
- the state "stand-by" (the device is fed and it is out).
- the state "on" (the device is fed, you/he/she has turned on and it is waiting for the start of a cycle of operation).
- the state "run" (the device is fed, you/he/she has turned on and a cycle of operation is in progress).
- the state "lighting of the device", is the transition from the state "stand by" to the state "on".
- the state "turning of the device" is the transition from the state "on" to the state "stand by".


If an interruption of the feeding occurs during the state "stand-by" or during the state "on", the restoration of the feeding device will propose the same state.

If an interruption of the feeding occurs during the state "run", the restoration of the feeding device will work in the following way:

- if a temperature blast chilling cycle or a temperature blast freezing cycle was in progress, it will be restarted from the beginning
- if a time blast chilling cycle or a time blast freezing cycle was in progress, it will be restarted within 10 minutes of error occurrence
- if a conservation cycle was in progress, the conservation cycle will start again.

### b) Blast chiller switching on/off

If the blast chiller is turning on and shutting back off, please use the following steps:

1. Please make sure that the keyboard is not jammed and that some procedure is not in progress.
2. Please keep pressed the key START / STOP for 1 second: the LED  will turn on and then back off.

### c) The display

During the state "off" and during the state "stand-by" the display is off.

During the state "on" the display shows the temperature of the cell.

During the state "run" the device will work in the following way:

- if a time blast chilling cycle or a time blast freezing cycle is in progress, the display will visualize the residual cycle time
- if a maintenance is in progress, the display will visualize the temperature of the cell.

### d) Cell temperature display

Please operate in the following way:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the key DOWN pressed for 1 second. The display will show the first available label.
3. Press and release the UP or the DOWN key to select "PB1"
4. Press and release the BLAST CHILLING key. The display will show the temperature of the cell

To leave the procedure, please operate in the following way:

5. Press and release the BLAST CHILLING key or do not operate for 15 seconds. The display will again read, "PB1"
6. Press and release the UP key or the DOWN key until the display matches the state from paragraph 8iic or do not operate for 60 seconds.

### e) Evaporator temperature display

Please operate in the following way:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the DOWN key pressed for 1 second. The display will read out the first available label.
3. Press and release the UP key of the DOWN key to select "PB3"
4. Press and release the BLAST CHILLING key. The display will indicate the temperature of the evaporator.

To leave the procedure, please operate in the following way:

5. Press and release the BLAST CHILLING key or do not operate for 15seconds. The display will again read "PB3"
6. Press and release the UP key or the DOWN key until the display behaves as mentioned in paragraph 8iic "the display"

### f) Condenser temperature display

Please operate in the following way:

1. Make sure the keyboard is not jammed and that a procedure is not in progress.

2. Keep the DOWN key pressed for 1 second. The display will show the first available label.
3. Press and release the UP key or the DOWN key to select "Pb4."
4. Press and release the BLAST CHILLING. The display will read the temperature of the condenser.

To leave the procedure, operate in the following way:

5. Press and release the BLAST CHILLING key or do not operate for 15 seconds. The display will again show "Pb4."
6. Press and to release the key UP or the key DOWN until the exhibits the suitable state from paragraph 8iic, "the display

#### **g) Manual defrosting starting**

Please operate in the following way:

1. Make sure that a maintenance cycle is in progress.
2. Make sure the keyboard is not jammed and that a procedure is not in progress.
3. Keep the UP key pressed for 4 seconds. The LED ☼ will switch on.

If the temperature of the evaporator upon starting the defrosting cycle, is not above that established with the parameter d2, the cycle will not be activated. If the parameter P4 is set to 1, the defrosting cycle won't begin.

#### **h) Keyboard Block/unblock**

To stop the keyboard, please operate in the following way:

1. Please make sure a procedure is not in progress.
2. Please keep the DOWN and the START / STOP key pressed for 1 second. The display will read "Loc" for 1 second.

If the keyboard is jammed, the following operations won't be allowed:

- Device switching on/off
- Cell temperature display (per paragraph 8iic)
- Evaporator temperature display
- Condenser temperature display
- Manual defrosting starting
- Operation cycle start/stop
- Lighting of the UV light for the cycle of sterilization
- Alarms HACCP information display
- Alarms HACCP information cancellation
- Compressor working hours display
- Compressor working hours cancellation
- Formulation of the day and real time.

To unlock the keyboard please operate in the following way:

1. Make sure that a procedure is not in progress.
2. Keep the DOWN key and the START / STOP key pressed for 1 second. The display will visualize "UnL" for 1 second.

**i) Buzzer off**

Please operate in the following way:

1. Make sure that a procedure is not in progress.
2. Press any key and release.

## **8) FUNCTIONS OF THE BLAST CHILLER/BLAST FREEZER**

### ***8i: PRELIMINARY INSTRUCTIONS***

The following types of operation cycles can be managed:

- Blast chilling and conservation
- Hard blast chilling and conservation
- Blast freezing and conservation
- Hard blast freezing and conservation.

For further information please consult the following paragraphs.

Every cycle of operation can be preceded by a pre-cooling cycle. Please refer to paragraph 7i: "Pre-cooling."

### ***8ii: BLAST CHILLING AND CONSERVATION***

The temperature blast chilling and conservation cycle it is composed by the followings two phases:

- blast chilling
- conservation

When the first phase finishes the device automatically passes to the following one.

To start the cycle, please operate in the following manner:

1. Make sure the device is "on"
2. Make sure that the keyboard is not jammed and that a procedure is not in progress.
3. Press and release the BLAST CHILLING key: the LED ❄ will flash.
4.
  - 4a. If the parameter r19 is set to 0, the display will show the work setting from the blast chilling cycle. It is also possible to set this value through the parameter r7.
  - 4b. If the parameter r19 is set to 1, the display will show the temperature taken at the end of the blast chilling cycle. It is also possible to set this value through the parameter r3.
  - 4c. Press and release the UP key or the DOWN key within 15 seconds to modify the value of the parameter.

### ***8iii: HARD BLAST CHILLING AND CONSERVATION***

The temperature hard blast chilling cycle and conservation are distinguished by the followings three phases:

- hard blast chilling phase
- blast chilling
- conservation.

When the first phase ends the device automatically passes to the following one.

To start the cycle, please operate as follows:

1. Make sure that the device is "on."
2. Make sure that the keyboard is not jammed and that a procedure is not in progress.
3. Press and release the BLAST CHILLING key: the LED ❄️ will flash.
4. Press and release the HARD / SOFT key: the LED HARD will flash.
5.
  - 5a. If the parameter r19 is set to 0, the display will show the work setting from the blast chilling cycle. It is also possible to set this value through the parameter r7.
  - 5b. If the parameter r19 is set to 1, the display will show the blast chilling end temperature. It is also possible to set this value through the parameter r3.
  - 5c. Please press and release the UP key or the DOWN key within 15 s to modify the value of the parameter.

### ***8iv: BLAST FREEZING AND CONSERVATION***

The temperature blast freezing cycle and conservation cycle are distinguished by the followings two phases:

- blast freezing
- conservation

When the first phase ends, the device automatically passes to the following one.

To start the cycle, please operate as follows:

1. Make sure that the device is "on."
2. Make sure that the keyboard is not jammed and that a procedure is not in progress.
3. Press and release the BLAST FREEZING key: the LED ❄️, the LED ❄️❄️ and the LED HARD will flash.
4.
  - 4a. If the parameter r19 is set to 0, the display will show the work setting from the blast freezing cycle. It is also possible to set this value through the parameter r8.
  - 4b. If the parameter r19 is set to 1, the display will show the end blast freezing temperature. It is also possible to set this value through the parameter r4.
  - 4c. Press and release the UP key or the DOWN key within 15 seconds to modify the value of the parameter.

### **8v: SOFT BLAST FREEZING AND CONSERVATION**

The temperature soft blast freezing cycle and conservation cycle are distinguished by the followings three phases:

- soft blast freezing
- blast freezing
- conservation.

When the first phase ends the device automatically passes to the following one.

To start the cycle:

1. Make sure that the device is "on."
2. Make sure that the keyboard is not jammed and that a procedure is not in progress.
3. Press and release the BLAST FREEZING key: the LED ❄, the LED ❄❄ and the LED HARD will flash.
4. Press and release the HARD / SOFT key: the LED HARD will turn off.
- 5.1 If the parameter r19 is set to 0, the display will show the work setting from the blast freezing cycle; it is also possible to plan this value through the parameter r8.
- 5.2 If the parameter r19 is set to 1, the display will show the end blast freezing temperature. It is possible to set this value through the parameter r4.
- 5.3 Press and release the UP key or the DOWN key within 15 seconds to modify the value of the parameter.

### **8vi: PRE-COOLING START**

Every cycle of operation can be preceded by a pre-cooling phase.

To start the pre-cooling phase please operate in the suitable way:

1. Make sure that the device is "on."
2. Make sure that a procedure is not in progress.
3. Keep the BLAST CHILLING key pressed for 1 second: the LED ❄ will flash.

To stop the pre-cooling phase:

4. Keep the BLAST CHILLING key pressed for 1 second or start a cycle of operation.

The parameter r12 establishes the work setting from the pre-cooling phase.

When the cell temperature reaches the one established with the parameter r12 the pre-cooling phase continues, the LED ❄ remains permanently turned on and the buzzer is activated for 1 second.

## **9) "HACCP" FUNCTION**

### **9i: PRELIMINARY INSTRUCTIONS**

Through the function "HACCP" it is possible to memorize up to 9 events for each of the 3 alarms HACCP, then the most recent event is written on the older one.

The following chart illustrates the information (related to the alarms HACCP) that the device is able to memorize.

Alarm	Code	Critical Value	Date and hour of event	Duration
alarm temperature blast chilling or temperature blast freezing not concluded within the maximum duration	Time	the temperature blast freezing not concluded within the maximum duration	yes	from 1 min to 99 h and 59 min, partial if the alarm is in progress
maximum temperature alarm during the maintenance	AH	cell maximum temperature during the alarm	yes	from 1 min to 99 h and 59 min, partial if the alarm is in progress
alarm stop feeding during the conservation phase	PF	cell temperature during the feeding restore	yes	from 1 min to 99h and 59 min

To avoid a continuous memorizing of feeding interruption alarms (code "PF"), please make sure the device is in the state "stand-by" or in the state "on" before the feeding.

If the duration of the feeding interruption alarm (code "PF"), causes the clock error (code "rtc"), the device will not memorize the date, the time when the alarm starts, or the duration of the alarm.

The LED HACCP gives information about the alarms HACCP memory state; please consult the paragraph 10.1 "signals."

### ***9ii: ALARMS HACCP INFORMATIONS DISPLAY***

Please operate in the following way:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the DOWN key pressed for 1 second. The display will show the first available label.
3. Press and release the UP or DOWN key to select "LS"
4. Press and release the BLAST CHILLING key. The display will show the code of the most recent alarm or one of the codes from chart 10.1 "Preliminary Instructions", followed by number "1" (the greater the number, the older the alarm).
5. Press and release the UP or DOWN key to select an alarm code (for example "AH3")
6. Press and release the BLAST CHILLING key: the LED HACCP will stop flashing and remain permanently on. For example, the display will show, the following information in sequence:



Information	Meaning
8.0	the critical value is 8.0 °C / 8 °F
StA	the display is going to show the date and the hour when the alarm occurred.
y11	the alarm occurred in 2011 (continue...)
n03	the alarm occurred in March (continue...)
d26	the alarm occurred on March 26th 2011
h16	the alarm occurred in the 16th hour (continue...)
n30	the alarm occurred at 16h 30m
dur	the display is going to show the alarm duration
h01	the alarm went off for 1h (continue...)
n15	the alarm went off for 1 h 15 min
AH3	selected alarm code

The display shows the information for 1 second.

To end the display of information:

7. Press and release the START/STOP key: the display will again show the code of selected alarm.

To leave the procedure:

8. Conclude the display of information.
9. Press and to release the UP key or the DOWN key until the display shows the appropriate state from paragraph 8iic: "the display" or do not operate for 60 s.

### **9iii: CANCELLATION OF HACCP ALARM INFORMATION**

Please operate as follows:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the DOWN key pressed for 1 second: the display will show the first available label.
3. Press and release the UP key or the DOWN key to select "rLS."
4. Press and release the BLAST CHILLING key: the display will read "0."
5. Press and release the UP key or the DOWN key within 15 s to set it to "149."
6. Press and release the BLAST CHILLING key or do not operate for 15 seconds: the display will visualize "- - - -", flashing for 4 s and the LED HACCP will turn off. The device will then

automatically end the procedure and the display will show the appropriate state from paragraph 8iic:  
“the display”

If the device has not memorized any information about the HACCP alarms, the label "rLS" won't be visualized.

## **10) COMPRESSOR WORKING HOUR CALCULATION**

### ***10i: COMPRESSOR WORKING HOUR DISPLAY***

Please operate per below:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the DOWN key pressed for 1 second: the display will visualize the first available label.
3. Press and release the UP key or the DOWN key to select "CH."
4. Press and release the BLAST CHILLING key: the display will show the compressor working hours.

To end this procedure:

5. Press and release the BLAST CHILLING key or do not to operate for 15 seconds: the display will again read "Pb2."
6. Press and release the UP key or the DOWN key until the display shows the suitable state from paragraph 8iic: “the display”, or do not operate for 60 seconds.

### ***10ii: COMPRESSOR WORKING HOURS CANCELLATION***

Please operate in the following way:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Press the DOWN key for 1 second: the display will show the first available label.
3. Press and release the UP key or the DOWN key to select "rCH."
4. Press and release the BLAST CHILLING key: the display will read "0."
5. Press and release the UP key or the DOWN key within 15 seconds to set it to "149."
6. Press and release the BLAST CHILLING key or do not operate for 15 s: the display will show "- - - -", flash for 4 s, and the LED HACCP will turn off. The device will then automatically go out of the procedure and the display will visualize the suitable size from paragraph 8iic: “the display”.

## **11) SETTING**

### ***11i: REAL DAY AND HOUR SETTING***

Please operate in the following way:

1. Make sure that the keyboard is not jammed and that a procedure is not in progress.
2. Keep the DOWN key pressed for 1 second: the display will show the first available label.
3. Press and release the UP key or the DOWN key to select "rtc."

To set the year:

4. Press and release the BLAST CHILLING key: the display will read "yy" followed by the last two numbers of the year and the LED ☺ will flash.
5. Press and release the UP key or the DOWN key within 15 seconds to change the value.

To set the month, please operate in the following way:

6. Press and release the BLAST CHILLING key during display of the year: the display will read "nn" followed by the two numbers of the month.
7. Press and release the UP key or the DOWN key within 15 seconds to modify the value.

To set the day of the month:

8. Press and release the BLAST CHILLING key during the display of the month: the display will read "dd" followed by the two numbers of the month.
9. Press and release the UP key or the DOWN key within 15 seconds to modify the value.

To set the hour:

10. Press and release the BLAST CHILLING key during the formulation of the day of the month: the display will read "hh" followed by the two numbers of the time.
11. Press and release the UP key or the DOWN key within 15 seconds to modify the value.

The time is display in the 24hour format.

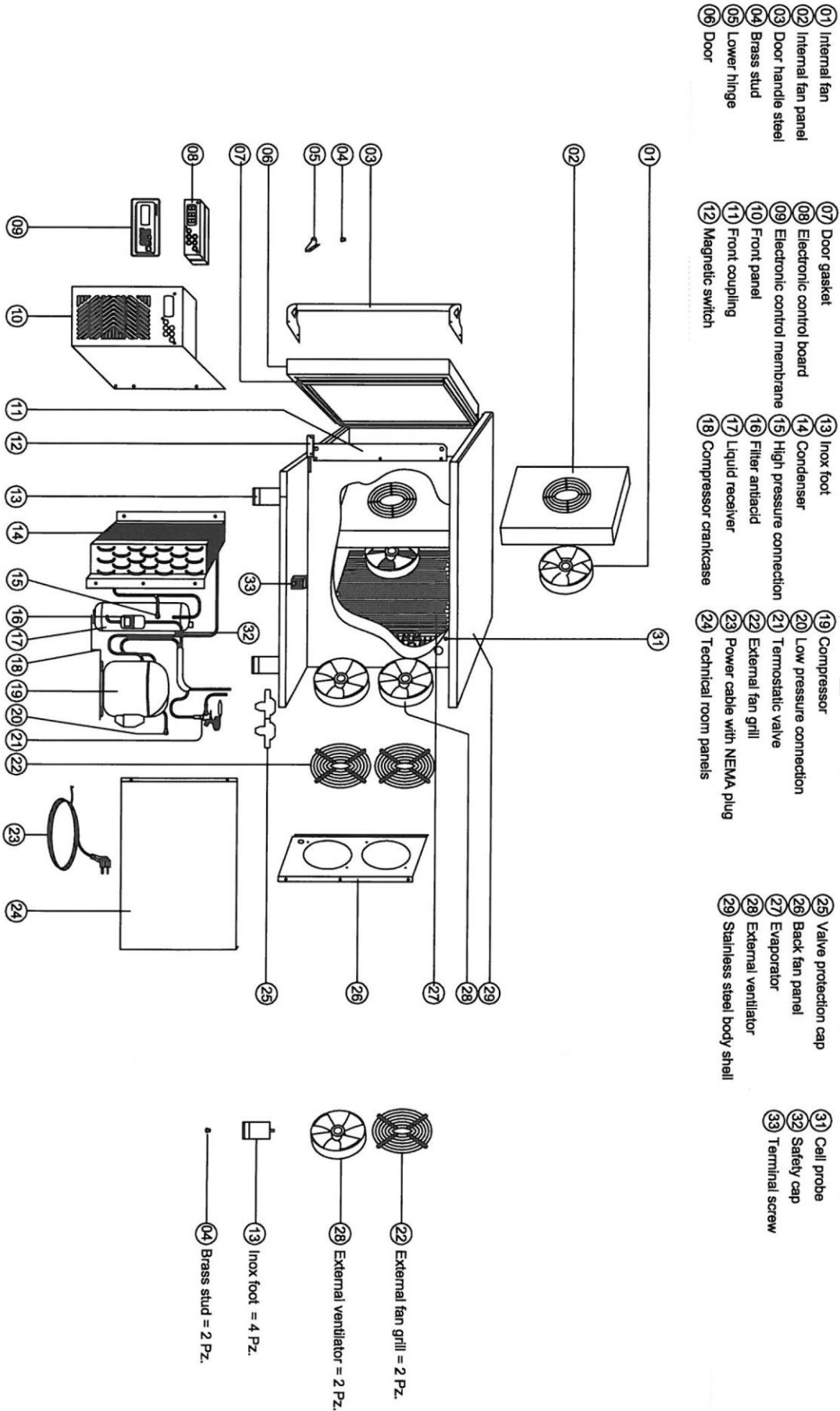
To set the minutes:

12. Press and release the BLAST CHILLING key during the display of the time: the display will read "nn" followed by the two numbers of the minutes.
13. Press and release the UP key or the DOWN key within 15 seconds to modify the value.
14. Press and release the BLAST CHILLING key or do not operate for 15 seconds: the display will again read "rtc" and the LED ☺ will turn off.

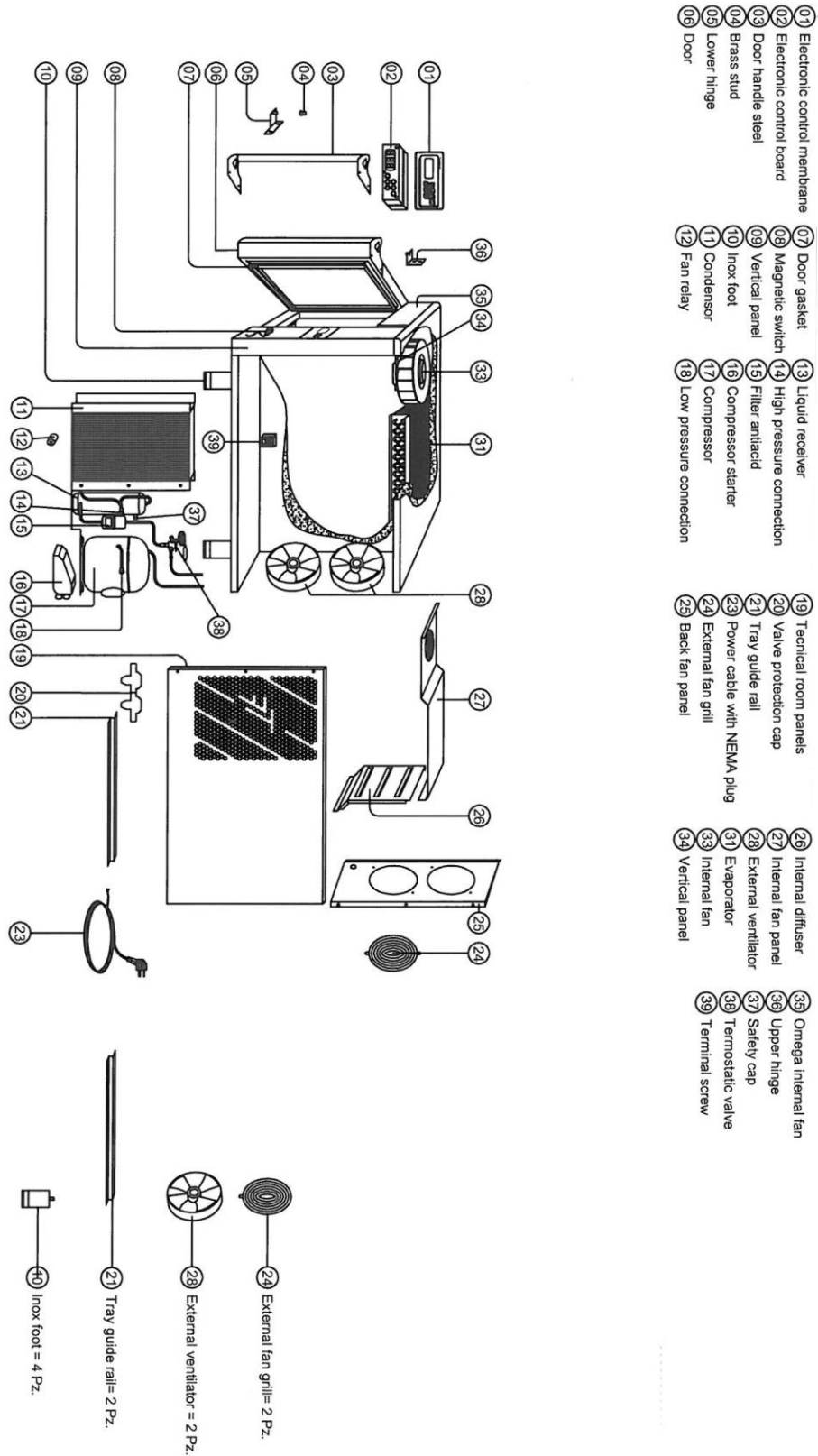
To end this process:

15. Press and release the UP or DOWN key until the display shows the suitable sizes from paragraph 8iic or do not operate for 60 s.

JOF 23/ 23-A EXPLODED VIEW



**JOF ONE EXPLODED VIEW**



- 01 Electronic control membrane
- 02 Electronic control board
- 03 Door handle steel
- 04 Brass stud
- 05 Lower hinge
- 06 Door
- 07 Door gasket
- 08 Magnetic switch
- 09 Vertical panel
- 10 Inox foot
- 11 Condenser
- 12 Fan relay
- 13 Liquid receiver
- 14 High pressure connection
- 15 Filter antiaid
- 16 Compressor starter
- 17 Compressor
- 19 Low pressure connection
- 19 Technical room panels
- 20 Valve protection cap
- 21 Tray guide rail
- 23 Power cable with NEMA plug
- 24 External fan grill
- 25 Back fan panel
- 26 Internal diffuser
- 27 Internal fan panel
- 28 External ventilator
- 31 Evaporator
- 33 Internal fan
- 34 Vertical panel
- 35 Omega internal fan
- 36 Upper hinge
- 37 Safety cap
- 38 Thermostatic valve
- 39 Terminal screw

- 29 External fan grill= 2 Pz.
- 28 External ventilator = 2 Pz.
- 21 Tray guide rail= 2 Pz.
- 40 Inox foot = 4 Pz.