



Istruzioni per l'utilizzatore  
User Instruction  
Instructions pour l'utilisateur  
Benutzeranleitungen

**ABBATTITORI / SURGELATORI RAPIDI  
BLAST CHILLERS / SHOCK FREEZERS  
CELLULES DE REFROIDISSEMENT / SURGELATION RAPIDE  
SCHNELLKÜHLER / SCHOCKFROSTGERÄTE**



**ABF 05P-10P-15P**

**Capitolo 1 NORME ED AVVERTENZE GENERALI**  
**Section 1 STANDARDS AND GENERAL WARNINGS**  
**Chapitre 1 NORMES ET AVERTISSEMENTS GENERAUX**  
**Kap. 1 NORMEN UND ALLGEMEINE HINWEISE**

**1.1 DICHIARAZIONE DI CONFORMITA' - 1.1 DECLARATION OF CONFORMITY**  
**1.1 DECLARATION DE CONFORMITE - 1.1 KONFORMITÄTSERKLÄRUNG**

**DICHIARAZIONE CE DI CONFORMITA'**  
**CE DECLARATION OF CONFORMITY**  
**DECLARATION CE DE CONFORMITE**  
**KONFORMITÄTSERKLÄRUNG**

**NOI - THE COMPANY - NOUS - DIE FIRMA**

EVERLASTING S.R.L. - Fabbrica Frigoriferi Industriali

S.S. Cisa km. 161 - 46029 SUZZARA ( MN ) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto  
Declares, under its own sole responsibility, that the product designated  
Déclarons sous notre responsabilité exclusive que le produit  
Erklärt unter der eigenen und ausschließlichen Verantwortung, daß das Produkt

**ABBATTITORE**  
**BLAST CHILLER**  
**CELLULE DE REFROIDISSEMENT**  
**SCHNELLKÜHLER**

Numero di serie  
Serial number  
Numéro de série  
Seriennummer

al quale questa dichiarazione si riferisce è conforme alle seguenti direttive europee:  
to which the present declaration refers, complies with the following european directives:  
auquel cette déclaration se rapporte, est conforme aux dispositions européennes suivantes:  
auf das sich diese Erklärung bezieht, den Bestimmung folgende europäische Richtlinien entsprechen:

"Macchine" 2006/42/CE  
"Bassa tensione" 2006/95/CEE e successive modificazioni  
"Compatibilità elettromagnetica" 2004/108/CEE e successive modificazioni  
"Materiali ed oggetti destinati a venire in contatto con i prodotti alimentari" 89/109/CEE  
"Direttiva 97/23/CE" (PED - Pressure Equipment Directive) apparecchi in classe 1

"Machines" 2006/42/CE  
"Low voltage" 2006/95/EEC and subsequent modifications  
"Electromagnetic Compatibility" 2004/108/EEC and subsequent modifications  
"Materials and objects designed to come into contact with foodstuff" 89/109/EEC  
"Directive 97/23/EC" (PED - Pressure Equipment Directive) appliances in class 1

"Machines" 2006/42/CE  
"Basse Tensions" 2006/95/CEE et modifications successives  
"Compatibilité Electromagnétique" 2004/108/CEE et modifications successives  
"Matériels et objets destinés à entrer en contact avec des produits alimentaires" 89/109/CEE  
"Directive 97/23/CE" (PED - Pressure Equipment Directive) appareils en class 1

"Maschinen" 2006/42/CE  
"Niederspannung" 2006/95/EG und nachfolgende Änderungen  
"Elektromagnetische Verträglichkeit" 2004/108/EG und nachfolgende Änderungen  
"Zum Umgang mit Nahrungsmitteln bestimmte Materialien und Gegenstände" 89/109/EG  
"Richtlinie 97/23/EG" (PED - Pressure Equipment Directive) Geräte in Klasse 1

La persona autorizzata a costituire il fascicolo tecnico è Paolo Guidetti, legale rappresentante della ditta  
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La personne autorisée à constituer le dossier technique est Paolo Guidetti, représentant légal de la société  
EVERLASTING S.R.L. S.S. CISA KM 161 – 46029 SUZZARA (MN) – ITALIE, où le dossier est conservé.

Die Person die berechtigt ist die technische Unterlagen zusammenzustellen ist Paolo Guidetti, gesetzlicher Vertreter der Firma  
EVERLASTING S.R.L. S.S. CISA KM 161 – 46029 SUZZARA (MN) – ITALIEN, wo die Datei gehalten wird.

Suzzara .....

  
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## 1.2 TESTING AND GUARANTEE

The appliance is tested in our works in compliance with established regulations and then shipped ready for use.

Only special models Spm require additional testing at the place of installation, because these units require a series of connections to be made by a qualified installer (see headings 3.2 and 3.3).

The guarantee is valid for a full 12 months from the date of delivery of the appliance and it covers the repair or replacement of any defective parts, with the exception of electrical and electronic components.

Manifest defects or differences with respect to the client's order must be communicated to the manufacturer within five days from the receipt of the goods or they will not be covered by the guarantee terms.

Any hidden or other defects must be communicated to the manufacturer within five days from the time that they are discovered and, in any event, within the maximum guarantee term of six months. The purchaser shall be entitled only to request repair or replacement of the goods. The purchaser is not entitled to claim compensation for direct or indirect damages of any whatsoever nature. In any event, the entitlement to repair or replacement of the materials must be exercised within the maximum term of the guarantee, which is contractually stipulated to cover a shorter period than the maximum term established by law.

Repairs or replacement of defective materials will be carried out at the manufacturer's works; material returned to the manufacturer must be shipped carriage paid and will be returned to the purchaser carriage forward.

## 1.3 INTRODUCTION

This manual has been prepared with the scope of supplying all the instructions required for the correct use of the appliance and to maintain it in optimal condition. It also contains important user safety information.

The following professional roles are explained in order to define the responsibilities of each:

**Installer:** a qualified technician who positions the appliance and places it in service in accordance with the instructions in this manual.

**User:** the person who, after having read this manual carefully, operates the appliance in accordance with the intended use specified in this manual.

Users' responsibilities:

- to ensure that food products are conserved at suitable temperatures and not exceeding the permitted period of time
- to be aware of the regulations governing the conservation of food and to observe any whatsoever hygiene indications that may be applicable.

The user is obliged to read the manual attentively and refer to the information in the manual at all times.

Particular attention must be paid to the contents of heading 1.5 **General safety warnings**.

**Routine maintenance technician:** qualified technician able to perform routine maintenance of the appliance by following the instructions in this manual (see section 6).

**Special maintenance technician:** qualified technician, authorized by the manufacturer to perform extraordinary maintenance of the appliance (see section 7).

The symbol  appears at certain points in the manual to draw the reader's attention to important safety information.

The manufacturer declines any whatsoever responsibility in the case of improper use of the appliance deviating from the reasonably construed intended use, and for all operations carried out that are not in compliance with the instructions laid down in the manual.

This manual must be conserved in a place that is accessible and known to all operators (installer, user, routine maintenance technician, special maintenance technician).

This manual must not be reproduced or divulged, in whole or in part, using any whatsoever means or in any whatsoever form.

## 1.4 PRODUCT DESCRIPTION

The appliance comprises a modular single body with panelling in various materials and insulation in expanded polyurethane foam, density 42 kg/m<sup>3</sup>.

The appliance instruments are located on the front panel which closes the front of the motor unit, inside which the condenser unit and electrical wiring can be housed.

The refrigerator interior is fitted with suitable supports for wire shelves (grids) or trays and Gastronorm containers.

The doors are fitted with an automatic return device and magnetic seal elements.

During the design and construction stage all measures have been adopted to implement total safety including radiused interior corners, funnel-shaped base panel to convey condensate to exterior, no rough surfaces, fixed guards protecting moving or potentially dangerous parts.

1) *The available models are described in table 1.*

## 1.5 GENERAL SAFETY REGULATIONS

Read this manual carefully and follow the prescriptions contained herein.

The user assumes full responsibility in the case of operations carried out without observing the instructions in the manual.

Primary general safety regulations:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- make sure that the appliance is not used by children or unsuitably qualified persons
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug
- in the case of faults or malfunctions, switch off the appliance and do not attempt to repair it yourself. All service and repair operations must be performed exclusively by suitably qualified authorized technicians.

## 1.6 CLIENT'S RESPONSIBILITIES

The customer is required to:

- execute the electrical connection of the appliance
- prepare the place of installation
- provide consumable materials for cleaning
- perform routine maintenance
- prepare and mount, in a remote location, the condenser unit supplied with the system (**SPM special model**)
- Provide adequate protection for pipes and cables external to the appliance (**SPM special model**)

In the case of power failures or malfunctions for more than 15 minutes the blast chilling or schock freezing cycle must be interrupted because the conditions for a right process within the times established by the regulations fail.

## 1.7 CLIENT SERVICE REQUESTS

For all technical problems and any requests for technical service, refer exclusively to your local dealer.

## 1.8 ORDERING SPARE PARTS

Spare parts orders must be made by consulting the relative spare parts catalogue which gives the correct description of the part, the part reference code and the serial number of your appliance.

Consult your dealer.

## Section 2 SPECIFICATIONS

### 2.1 DIMENSIONS

Dimensions of appliances when packed in cartons, cages and crates are shown in Table 1.

### 2.2 PRODUCT CONFIGURATION

The appliance is designed solely for the blast chilling and schock freezing of food products (see heading 4.1).

The products must be stored in observance of the load limits shown in the table and in figures 1a/b - 2a/b - 3a/b - 4a/b in order to ensure efficient air circulation inside the appliance.

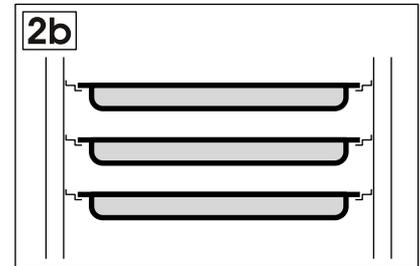
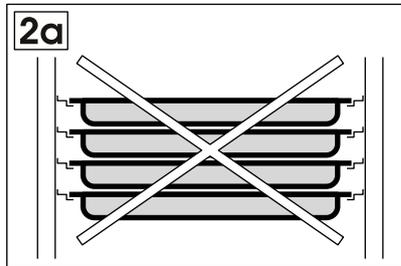
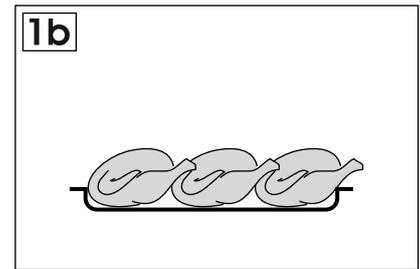
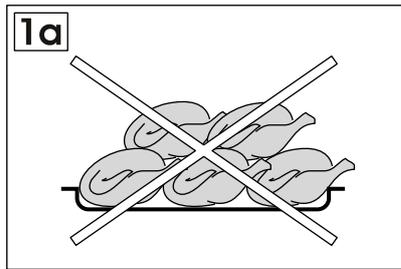
	Blast chilling (+90°+3°C)	Schock freezing (+90°-18°C)
	kg	kg
ABF 05	22	14
ABF 10	30	20
ABF 15	50	30

Do not exceed the loading capacity stated on the preceding table at page 6 (Fig. 1a - 1b)

Do not leave the trays too close to avoid a wrong air circulation within the cabinet (Fig.2a - 2b)

Do not set the trays too far from the evaporator (Fig. 3a - 3b)

If the unit is not completely loaded avoid to concentrate the trays in one part of the appliance and distribute them all over the available height (Fig. 4a -4b)



**2.3 POWER OUTPUT AND ABSORBED POWER**

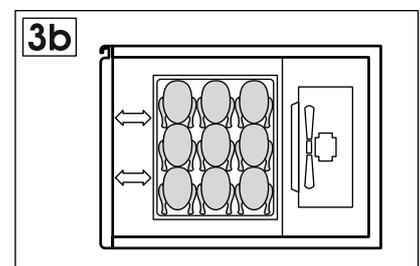
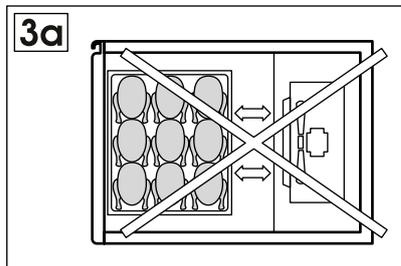
Technical data for power output and absorbed power are given in Table 1. Bear in mind the operational limit characteristics as indicated in heading 4.4.

**2.4 WEIGHTS**

Unit weights of the appliance are shown in Table 1.

**2.5 NOISE LEVEL**

Noise level of the appliance according to the law.



**2.6 MATERIALS AND REFRIGERANTS**

Materials in contact or potentially in contact with food products are in compliance with the relevant directives. The appliance is designed and built so that food contact parts can be cleaned before each use. The refrigerants utilized (R404A,) comply with established regulations.

**Section 3 INSTALLATION**

**3.1 TRANSPORT AND HANDLING**

 *The appliance must be transported and handled exclusively in a vertical position, in observance of the instructions printed on the packing.*

This precaution is necessary to avoid contamination of the refrigerant circuit with compressor lube oil with resulting valve and heat exchanger coil failure and problems starting the electric motor.

The manufacturer accepts no responsibility for problems due to transport executed in conditions other than those specified above.

The accessories supplied with the appliance (runners, wire shelves, basins, trays, remote condenser with connection pipes) are supplied in separate packs shipped inside or separately from the unit.

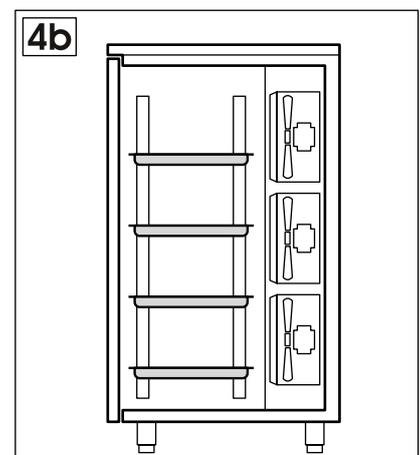
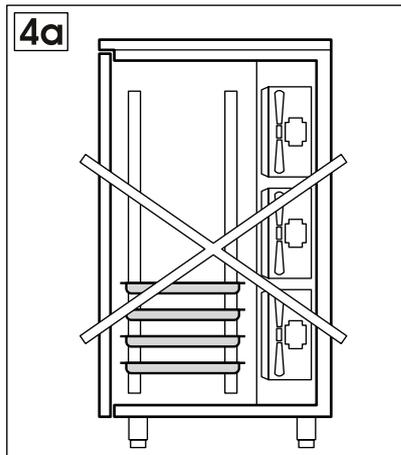
The appliance is secured to a wooden base and wrapped in polyethylene or packed in a carton, cage or crate.

Refer to heading 3.6 for information on correct disposal of packing material.

The appliance must be handled using a fork lift truck or a pallet truck with suitable forks (fork length at least equal to 2/3 length of unit).

The dimensions and weight of the packed appliance are shown in Table 1.

Maximum permissible stacking and the position of the centre of gravity are shown on the information label on the packing.



**3.2 POSITIONING**

Incorrect positioning can cause damage to the appliance and generate hazardous conditions for personnel. The installer must therefore observe the following general regulations:

- make sure you maintain a minimum of 5 cm from the walls
- the room must be well ventilated
- keep well away from sources of heat
- avoid direct sunlight

## Specific positioning procedures



- remove packing material (polyethylene, cardboard box, crate, cage)

*Polyethylene is potentially dangerous to children*

- remove accessories from inside the unit

- take away the wooden basement: by means of a hammer unnailed the feet-block hinder ledge, tilt the cabinet to one side and loosen the two thread-forming screws (Fig.5), drag the cabinet from the back side holding the basement still until the 4 feet have gone out from the containing holes, slightly tilt the cabinet backward and take the basement away pulling it from the front side.



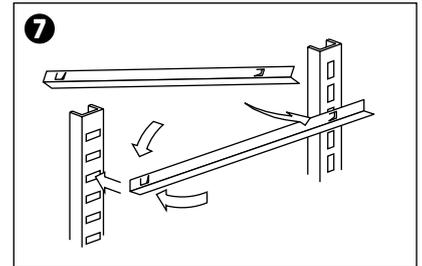
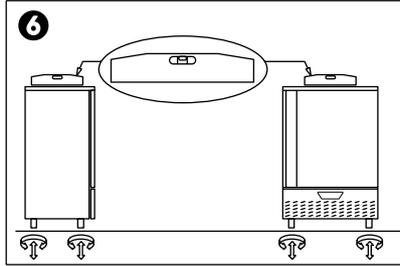
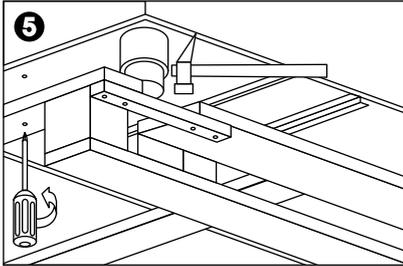
- use gloves when handling wooden packing materials and the wooden base to protect the hands from splinters

- position the appliance with the help of a spirit level. Adjust the leveling feet on the metal base of the unit if necessary (Fig.6)

- remove the protective PVC film from the external surfaces of the unit

- position the shelf runners in the holes in the uprights (Fig.7)

- insert the condensate collection tray in the relevant runners located beneath the unit.



### 3.2.1 Spm blast chillers and schock freezers (Fig.8)

- position the unit as described above (Figs. 5-6-7)

**- N.B.: the plant is factory pressurized with refrigerant**

- arrange the two pipes coming out of the unit for subsequent connection to the relevant lines

- depressurize the circuit and then charge it with refrigerant

- make the electrical connections between the appliance and condenser.

### 3.3 WIRING AND ELECTRICAL HOOK-UP

The electrical plant and electrical hook-up operations must be performed by a qualified electrician

For safety reasons adhere to the following indications:

- check that the electrical plant is suitably sized for the absorbed power of the unit

- if the electrical socket and the plug on the appliance power cord are incompatible, change the plug with a suitable component, ensuring the replacement part is of the approved type

- do not use reductions or multi-way adapters (**ABF 03**)(Fig.9)



*It is important to connect the appliance correctly to an efficient earth system executed in compliance with the relevant legislation.*

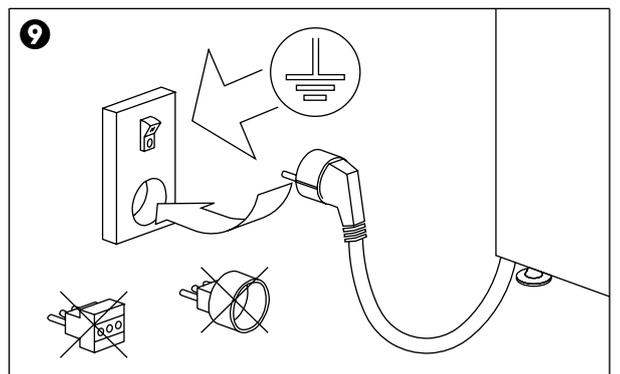
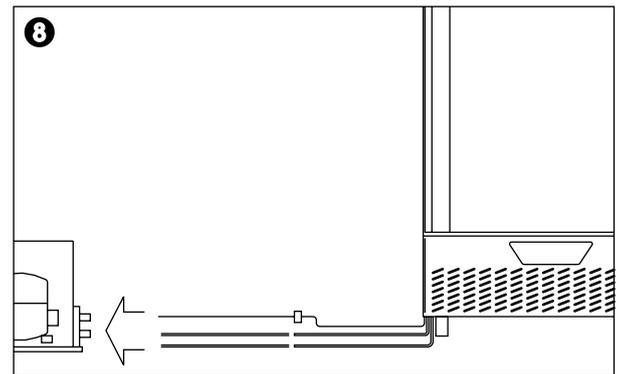
### 3.4 SET-UP OPERATIONS

To avoid errors and accidents, perform a series of checks for possible damage sustained during transport, installation and hook-up operations before starting up the unit.

#### Preliminary checks

- check the condition of the power cord (no cuts or chaffing)
- check that the feet, door hinges and shelf supports are stable
- check the condition of internal and external components (pipelines, heat exchanger elements, fans, electrical components, etc.); check also that all parts are firmly fixed into position
- check that the door seals are not damaged (broken or scratched) and that the doors close and are sealed properly
- make sure pipelines, unions are in perfect condition (**SPM special model**).

The user must also observe the following instructions to obtain the best operation from the appliance:



### Indications for optimal duty

- do not block the motor compartment air vents
- arrange the food on suitable shelves or in containers. Do not place food directly on the base or against the walls, doors or fixed guards of the unit (see Fig. 1a/b -2a/b - 3a/b - 4a/b at page 7)
- make sure doors are kept closed
- keep the defrost water drain outlet clear
- avoid to open the doors during the blast chilling and schock freezing cycles
- perform routine maintenance regularly (see section 6).

### 3.5 RE-INSTALLATION

Observe the following procedure:

- switch off the appliance from the main switch
- disconnect the power cord from the electrical outlet
- handle the appliance in accordance with the instructions in heading 3.1
- follow the instructions in headings 3.2 and 3.3 for positioning and hook-ups in the new location

### 3.6 SCRAPPING AND DISPOSAL

Scrapping and disposal of the appliance must be carried out in full observance of established legislation in your country.

## Section 4 OPERATION

### 4.1 APPLICATIONS AND INTENDED USE

#### 4.1.1 Intended use and permitted use

The appliance is designed and built for blast chilling, schock freezing and conservation of products on commercial premises.

#### 4.1.2 Improper and unauthorized use

1) treatment of products that require constant monitoring with indications in the case of temperature changes or interruption of refrigeration. For example:

- medicinal products
- blood and plasma
- thermo-sensitive chemical reactants

2) use in places subject to explosive atmosphere

All uses except authorized uses of the appliance shall be construed as "improper use" for which the manufacturer declines all responsibility.

### 4.2 SAFETY AND ACCIDENT PREVENTION

The appliance embodies various features designed to assure the safety and protect the health of the user. The following list describes the protections adopted against mechanical risks:

- **surfaces, edges, corners:** accessible parts of the appliance have no sharp corners, sharp edges or rough surfaces that could cause injury
- **moving parts:** moving parts of the unit are designed, built and configured to avoid risk. Moving parts are protected by fixed guards to prevent accidental contact that could result in injury.

Measures adopted for protection against additional risks:

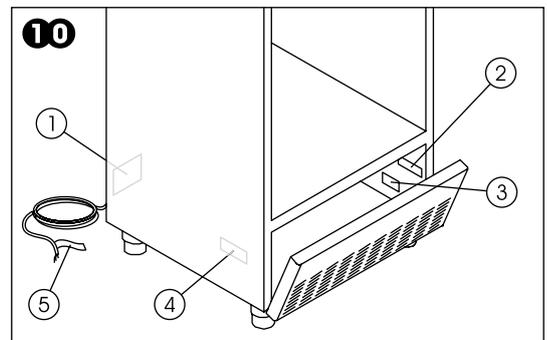
- **electrical power:** the appliance is designed, built and fitted out with the aim of preventing the risk of electric shock in compliance with established safety legislation
- **noise:** the appliance is designed and built to reduce risks related to the emission of airborne noise to the minimum possible.

### 4.3 SAFETY DATAPLATES AND GUARDS

It is strictly forbidden (Fig.10):

- to tamper with or remove the evaporator cover that protects the user from the risk of cutting on the heat exchanger fins
- to remove the dataplate fixed low behind the appliance showing technical specifications (1) and earth connection warning (2)
- to remove the dataplates on the evaporator unit cover near the electrical wiring inside the motor housing which warn the user to disconnect electrical power before working on appliance (3)
- to remove the dataplate fixed inside the motor compartment indicating earthing (4)
- to remove the data tag fixed to the power cord showing the type of power supply (5)

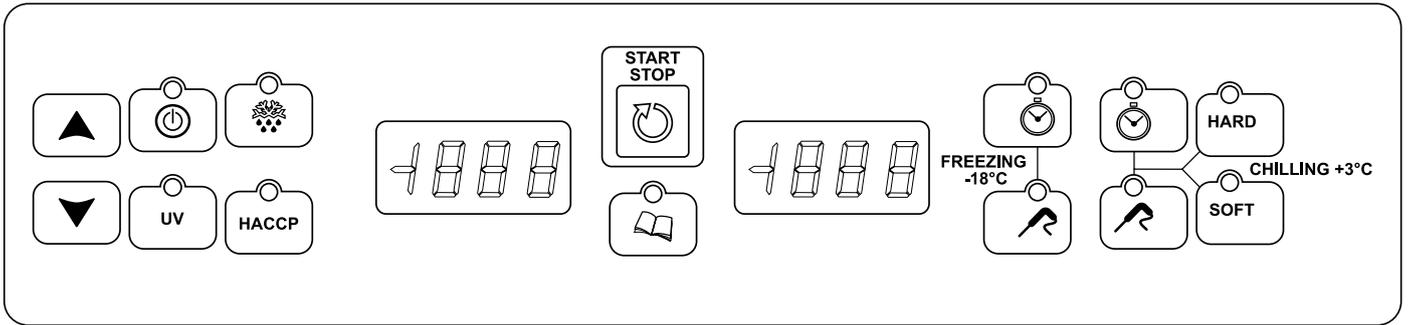
The manufacturer declines all responsibility for safety of the appliance if the above recommendations are not observed.



### 4.4 OPERATING LIMITS

The appliance is designed and built to work in ambient temperatures of between + 10°C and + 32°C with maximum relative humidity of 60%. If the ambient conditions are different it will not be possible to achieve the performance levels specified by the manufacturer. The standard power supply must be 230/240V; 50 Hz ABF 05 - 400/420V; 50 Hz ABF 10/15/20.

## USER INTERFACE



## KEYS

### INCREASE key

Increase the parameter value in the display

### DECREASE key

Decrease the parameter value in the display

### Key ON/OFF

With card in OFF: the single pressure input's the STANDBY  
With card in STANDBY or with in progress: the continuous pressure for five seconds puts in OFF

### STERILIZATION Key

With card in STANDBY: the single pressure selects the sterilization.

### DEFROSTING key

Con files in STANDBY: the single pressure selects and starts the defrosting cycle.

### HACCP Key

With card in OFF: pressed for five seconds allows vision of the alarms list.  
Once visualized the alarm list: a single pressure allows the printing operation

### START / STOP KEY

With a selected cycle: a single press to start on.  
With a cycle in progress: a single pressure to the off.

### PROGRAM KEY

With card in Standby: the single press select's a memorized program.  
In phase of selection: the continuous pressure for five seconds to enter in memorization program menu.  
View Historic HACCP: the single pressure allows to check the parameters of the historic memory.

**TEMPORIZED FREEZING Key**

With label in STANDBY: the single pressure selects a temporized shock freezer.

**TEMPERATURE FREEZING Key**

With label in STANDBY: the single pressure commutes a negative (freezing) shock cycle in to a temperature freezing cycle .

**KEY TIME**

With label in STANDBY: a single pressure commutes the shock freezing selected in to a correspondent modality time cycle.

**TEMPERATURE FREEZING Key**

With label in STANDBY: a single pressure commutes the shock freezing selected in to a correspondent modality temperature cycle.

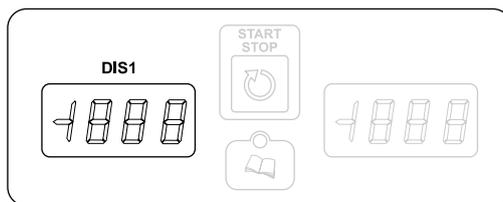
**KEY SOFT**

With card in STANDBY: a single pressure select a positive shock.

**HARD KEY**

With Key in STANDBY:  
the single pressure allows the selection of an Hard cycle.

## TEMPERATURE DISPLAY



### With label in OFF:

Visualized the "label off "

### With label in STANDBY:

Visualized the internal ambient temperature in the cold room.

### After a reset during a performing

Visualize the label RES blinking

### With selected cycle:

Visualized the set point cold room in relation to the selected one .

In imposed / selection program:

Visualized the label of the program chosen.

### During a defrosting performance:

visualize the label DEF

Parameters selection:

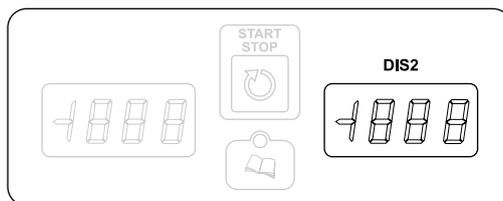
visualize the label parameter reference

### Historic view of HACCP alarms

Visualize the historical information's reference.

**NOTE:** The right digital light dot signalize the entry of a new alarm in the historic memory.

## DISPLAY TIME



### With card in off position:

off

### With card in STANDBY:

- it visualizes three hyphens.

### With selected time:

- visualize the duration of the cycle.

### With time in progress:

- visualize the time in decrement.

### In formulation parameters:

- visualizes the value of the selected parameter.

### With visualization Historical HACCP:

- Visualizes the information related to the historical HACCP.

## LEDS



### Led ON/OFF

Light on with label in Standby or On



### STERILIZATION Led

Turned on, during a sterilization cycle.



### DEFROSTING Led

Turn on, during a manual defrosting , blinking during the calculation of condensation time.



### HACCP LED

Turn on during the historic alarm view.



### Led START/STOP

Turned on during the execution and flashing during the maintenance.



### PROGRAM Led

Light ON if in selection input program and during the performance of one of the 99 programs.



### FREEZING TEMPORIZED Led

Light on if select/input blast negative temp. cycle temporized.



### FREEZING TEMPERATURE Led

Light on if selected a blast chillers negative temperature. cycle (freezing).



### TIME Led

Light on if selected an hard or soft temporized cycle .



### LED CORE probe

Light on if selected a blast chillers temporized soft or hard



### Led HARD

Light on if selected an hard cycle and visualize the set point cold room in the first phase, flashing if visualizing the set point of the second phase.

Turned on if the first phase of a hard is in progress, flashing during the execution of the second phase.



### BLAST CHILLERS Led

Light on if selected a positive blast chillers cycle.

## START ON

When the label is fed it , performs a lamp-test turning on all the led's and display for five seconds, once departed, turns back in the same state in which was found' it before interrupt the power supply .

If, there was a cycle in progress before the power down, at the turn on, the cycle departs in the same point in which was interrupted and the display DIS1 visualizes the label "RES" flashing, to point out that a lack of tension is verified.

If before the lack of tension there was no cycle in progress, the display DIS1 visualizes the temperature of the probe could room, and the display DIS2 shows up three hyphens. In this case the label is in STANDBY and is possible proceed to another selection and start execution.

### WITH SCHEDULE IN OFF:

the display DIS1 visualizes the label "OFF", while the display DIS2 and all the led's are turn it off.

Press the key on/off to the standby

If pressed for five seconds the key HACCP allows the visualization of the historic alarm list.

Press for five seconds, the key TIME  to set up time and date.

### WITH LABEL IN STAND BY:

If pressed keys:

Blast chillers, temporized freezing , temperature freezing or Hard, allows the selection of one of the those cycles.

Press STERILIZATION key , to start the cycle.

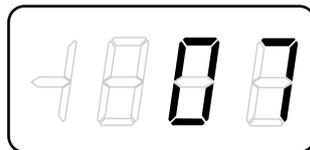
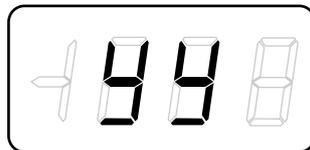
Press DEFROSTING key  to activate a defrosting cycle

Press for five seconds the key Temperature freezing, to start a cycle of heating core probe.

## POINT UP TIME AND DATE

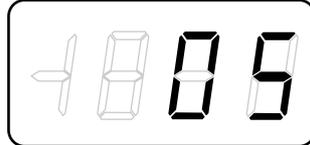
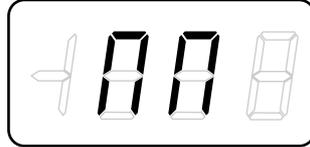
With label in OFF press for five seconds the key time 

the display group shows up the following picture:



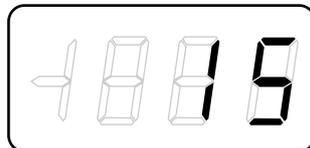
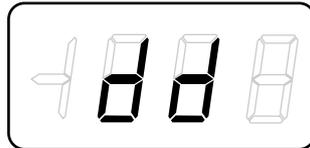
Press key more  or less  to input the year.

Press the key time  to input the month



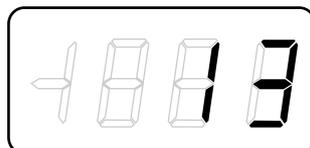
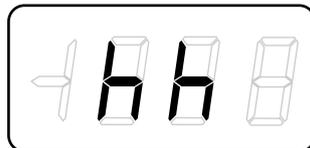
and select with keys more  or less  (increase / decrease).

Press the key time  to select the day



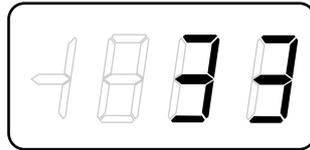
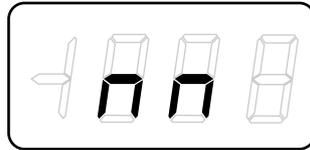
and with keys more  or less  to input. (increase / decrease).

Press the key time  again to input the hour



and select more  or less  (increase / decrease), to input the legal time.

Press the key time  to select the minutes



Finally, press the key time  to confirm all the values and turn back to OFF.

## SELECTION CYCLES

With label in STANDBY it's possible select a cycle of Blast / freezing. The cycles can be checked by the temperature of the core probe or from Time selected. If checked by the temperature of the core probe, the end of the blast chillers happens when the core probe reaches the set point of end blast chillers /freezing, while if a the cycle has been defined by a time, the end expire at the end of the time settled.

For both types of cycle, once finished the phase of blast chillers/

Freezing, it begins the phase of maintenance, whose term's are defined by the pressure of the key START/STOP that puts the schedule in STANDBY.



### Positive Blast Cycle

Press key ON/OFF 

Press the key blast  to select a positive cycle  
The cycle selected is controlled by the core probe, from default.

The blast  and temperature  led's are light on, the display DIS1 shows the cold room set point wile the display DIS2 shows three dashes .

With keys more  or less  is possible change the cycle time.  
The changes applied are only temporary and don't remain in memory.

Press key START/STOP  to the start on.

**NOTE:** The minimum settable value for the cold room set point is -40° C and the maximum is 99° C.  
The minimum settable time value is 0 minutes, the maximum is 400 minutes.

### Temporized Blast Cycle

Press key temporized freezing  to select a negative temperature temporized Blast.

The led temporized freezing is on .

The display DIS1 shows up the set point cold room while the display DIS2 shows up three dots,

With keys "More"  and Less  is possible change the set point of the cold room.

Press the key START/STOP  to the start on of the cycle.

**NOTE:** the values degrees settable for the cold room are from -40°C until 99°C. the lower and highest minutes value settable are from 0 to 400 minutes..

### Hard Blast Cycle

Press the key hard  to select an Hard blast cycle  
This kind of cycle is divided in two phases with two different set points.  
The cycle selected is controlled by the core probe, from default.

The hard  and temperature  led's are light on, the display DIS1 shows the first phase cold room set point while the display DIS2 shows three dashes .

With keys more  or less  is possible change the set point.

To change the cold room set point II phase, press the key Hard  for at least 5 seconds.

The led Hard  blinking and the display DIS1 shows the cold room set point second phase.

To commute the cycle in to a temporized cycle, press key Time .

The display DIS2 shows up the time, use keys more  or less  to change the value, that can not overcome the parameters in precedence settle because it defines the complete durability of all the blast hard cycle.

The changes applied are only temporary and don't remain in memory.

Press key START/STOP  to the start on.

**NOTE:** The minimum settable value for the cold room set point is -40° C and the maximum is 99° C. The minimum settable time value is 0 minutes.

## PROGRAM MEMORIZATION

Select a Blast/Freezing cycle in modality "Time or Temperature "

Press for five seconds the Key PROGRAMS 

The display DIS1 shows up "P" followed up of the number of the first free program, with Keys more  or less  (increase or decrease) is possible choose the number of the program you wish memorized.

To memorize the cycle chosen press the key Program  for five seconds.

If selected programs already written, will be cancel and memorized once again.  
Are available 99 programs.

## PROGRAM SELECTION

To select a memorized program, press key Program , the display DIS1 will show up "P1,

with keys more  or less  (increase and decrease) select the program chosen.

Press key START/STOP  to the start on.

During the performance is possible see the number of the program if pressed key PROGRAMS .  
The memorized programs are actually normal cycles of Blast/freezing.

## CYCLE POINT PERFORMANCE

After the selection of a cycle, press the key START/STOP  to visualize.

The formalities of execution of the cycles are brought in the following paragraphs.

### ***Blast Positive Cycle***

The display DIS1 shows up the core probe temperature in case of temperature cycles, or the temperature of the probe cold room in cycles in modality "time".

The display DIS2 visualizes the time in decrement in both kinds, temperature or time cycles.

The time used for the temperature cycles is determined by the value of the parameter.

For the temperature cycles the decrement of the time begins only if the temperature of the core probe is below the value.

The blast led on 

Press the key less  to visualize on the display DIS2 the performance time pass from the beginning of blast phase.

During a temperature cycle is possible to visualize the temperature of the probe cold room, pressing the key Blast the visualization remains on the displays for five seconds.

During a cycle "time" is possible to visualize the temperature of the core probe pressing the key probe .  
The visualization remains on the displays for five seconds.

When the temperature of core probe reaches the value defined for a temperature cycle, or the time planned expires , the blast cycle end's, the buzzer plays and starts the phase of maintenance.

To switch of the buzzer press the key less  (decrease).

During the phase of maintenance the pressure of the key less  (Decrement) allows the visualization of the general duration of the blast phase.

To visualize the temperature of the core probe, press key “temperature” , the visualization remains on the displays for five seconds.

**NOTE:** If the temperature of the core probe doesn't reach the set point within the defined time, the display DIS2 blinking, the cycle continues up to the attainment of the set point however.

**Freezing Cycle in Temperature or time modality.**

The display DIS1 shows up the core probe temperature in case of temperature cycles, or the temperature of the probe cold room in cycles set' it in modality “time”.

The display DIS2 visualizes the time in decrement in both kinds, temperature or time cycles.

To temperature modality cycles, the decrease of the cycles starts only if the core probe temperature is under the value set' it.

The led time  or temperature  frizzing turned on.

The pressure of the key Decrement  allows to visualize on the DIS2 , the time used since the beginning of the freezing phase.

During a temperature cycle is possible view the core probe temperature cold room, press of the key freezing time 

or temperature .

The visualization remains on the displays for five seconds.

When the temperature of the core probe reach the value set' it for a temperature cycle or expires the time set for a time cycle, the blast negative cycle ends, the buzzer plays and it starts the maintenance phases.

To switch of the buzzer press the key less  (decrease).

During the maintenance phases, press the key Less  (decrease) allows the viewer of the all complete during of the freezing phases.

During a temperature cycle is possible view the core probe temperature cold room by the press of the key Freezing

 time or temperature.

the values are available on the displays for five seconds.

**NOTE:** if the probe core don't reach the set point within the defined time, the display DIS2 blinks on, and the cycle continues until the set point reach.

## Blast Hard Cycle

The display DIS1 shows up the core probe temperature in case of temperature cycles, or the temperature of the probe cold room in cycles set' it in modality "time".

The display DIS2 visualizes the time in decrease in both kinds, temperature or time cycles.

The time used for the temperature cycles is determinate by the value of the parameter.

To Temperature modality cycles, the reduction of the cycles start only if the core probe temperature is under the value set' it .

To Temperature modality cycles, the decrease of the cycles starts only if the core probe temperature is under the value settled.

The hard led is on , during the first phase, while in the second blinking.

The pressure of the key Decrement  allows to visualize on DIS2 the time spent by the beginning of the cycle.

During a temperature cycle is possible view the core probe temperature cold room, press the key HARD  visualization remains on the displays for five seconds.

During a time cycle is possible view the core probe temperature cold room, press the key TEMPERATURE  visualization remains on the displays for five seconds.

When the temperature of the core probe reach the value set' it for a time cycle or expires the time set for a time cycle, the first phase ends and automatically starts the second phase, that once reached the temperature chosen or the time set' it expires, the buzzer plays and it starts the maintenance phases.

To switch of the buzzer press the key less  (decrease).

During the maintenance phases, press the key Less  (decrease) to see the all complete during of the Hard phases.

To see the core probe temperature, press the Key Core Probe , the value remain on the displays for five seconds

**NOTE:** if the probe core don't reach the set point within the defined time, the display DIS2 blinks on and the cycle continues until the set point reach.

## CONTROL OF THE CORE INSERT

During a temperature cycle a test is made to verify the correct insertion of the probe core in the product.

The test is articulated in two steps.

The first step verifies for five times the difference of temperature between the probe core and the probe cold room, if for three times the difference is highest to the value of the parameter, the probe core is considered inserted correctly and the second step don't have to be performed.

If, instead, the result of the first phase is negative, the second step must be performed on the fact that the temperature in the cold room goes down more quickly that the temperature inside the product. At this point check that the difference of temperature between the outside and the inside increases.

If the result of the second test is positive the program continues normally and the core probe is considered inserted correctly on the product.

If the result of the second test is negative, the led Temperature , for the blast chiller soft and hard cycles or the led

Freezing Temperature , blinking and the buzzer plays in intermittent (5 brief beeps and one of break of 10 seconds).

The performance of the cycle continues in temperature modality any way.

To interrupt the buzzer pres key less  (decrease).

**DEFROSTING**

There are 3 modalities of defrosting cycle , precisely by air, electric and warmed gas, the activation of the cycles of defrosting can be automatic or manual (in detail in the following paragraphs).

**Automatic Defrosting**

During the maintenance, are performed if necessary cycles of automatic defrosting that are cyclically repeat for all through the maintenance cycle. These defrosting cycles are activated only if the temperature of the probe evaporator is inferior to the value of the parameter.

**Automatic Defrosting At Started Cycle.**

Is possible start a defrosting cycle in concomitance of a blast freezing cycle.

During the execution of the defrosting cycle it lights on  the defrosting led and the display DIS1 visualizes the label “DEF.” The cycle finishes when the probe evaporator overcomes the value of the parameter or the timeout expires.

During the execution of a defrosting cycle the led DEFROSTING lights  on and the display DIS1 visualizes the “DEF”. The blast/freezing cycle starts on only after the end of the defrosting cycle.

**NOTE:** if verified an evaporator probe alarm, the defrosting cycle starts any way, the end is determinate at the expire of the timeout.

**Manual Defrosting**

The Defrosting key  allows the start on of a defrosting cycle only if there is'nt in performance a blast /freezing cycle.

The defrosting cycle starts on, only in case the temperature of the evaporator is lower then the parameter.

The DEFROSTING led lights on  and the display DIS1 visualize the label “DEF”.

A manual defrosting cycle ends by the pressure of the key if the evaporator probe is highest then the value parameter or by time out.

A cycle of manual defrosting can be performed even if a cycle of blast / freezing is selected.

Press the key START/STOP  to start the cycle of blast/freezing blocks an eventual defrosting manual cycle .

**STERILIZATION (opt.)**

To activate a cycle of sterilization cold room press the key Sterilization : the relative led lights  on and remains turned on for all through the sterilization cycle.

The sterilization finishes by the pressure of the key Sterilization  or when the performance time expires.

The activation of the sterilization process is possible only if there aren't other cycles in progress.

The open up of the door it stops the sterilization cycle.

## ALARMS

Each alarm is evidence by the sound of the buzzer, that can be turn off with the key Decrement .

Otherwise the buzzer goes on for a definite time.

**NOTE:** If there's sterilization in progress, the defined delay is not respected. In the case both in progress a heating hat probe core, the opening of the door doesn't implicate any signaling of alarm.

### Alarm Probe Cold Room

It appears, when notified a problem in the probe cold room. The display visualize the label "Er0" and if there's a cycle is in progress, will be immediately interrupt. The buzzer plays. The start on is automatic in condition of alarm disappeared.

### Evaporator Probe Alarm

Appears if notified problem of probe evaporator. The display visualize the label "Er1." The buzzer plays. The alarm doesn't have effect on a cycle of blast, while if a maintenance is in progress the evaporator fans are immediately disarmed. If there's a defrosting cycle in progress, this continues and it finishes to expire of the timeout. The start on is automatic in condition of alarm disappeared.

### Core Probe Alarm

Appears when notified a Core Probe problem. The display visualize the label "Er3." The buzzer plays. If a time cycle was in progress is immediately stopped. If a temperature cycle was selected it is not possible to perform it. The start on appends in condition of alarm disappeared.

### Condenser Probe alarm

Notice a problem probe condenser is possible only if turned on. The display visualize the label "Er4." The buzzer plays. The alarm doesn't have effect on the execution of a possible cycle in course but the fans condenser are not connected to the condenser temperature anymore, they depend of lighting and turning off "off" the condenser conditions. In circumstances of alarm, the highest Temperature of Condensation is not managed anymore. The star on is automatic only in condition of alarm disappeared.

### Alarm high Pressure

The display visualize the label "HP." The buzzer plays. If there's a cycle in progress it will be interrupt. The rearmament append in condition of alarm disappeared.

### Alarm Low Pressure

The display visualize the label "LP." The buzzer plays. If there's a cycle in progress it will be stopped. The rearmament append in condition of alarm disappeared.

### Alarm overheating of the compressor

The display visualize the label "it Has." The buzzer plays. If there's a cycle in progress it will be stopped. The rearmament append in condition of alarm disappeared.

### Open Door Alarm

The display visualized the label "d-r". The buzzer plays. The compressor and the fans condenser are deactivated. The rearmament append in condition of alarm disappeared. If the label is in STANDBY the opening of the door is signaled only on the displays.

### Alarm High Temperature Cold Room

If during a positive (negative) maintenance cycle, the temperature in the cold room is superior to the planned value the displays DIS1 visualize the label "AH", the buzzer plays. This alarm doesn't create any kind of effect.

### Alarm Low Temperature Cold Room

IF during a positive (negative) maintenance the temperature in the cold room is inferior to the planned value the displays DIS1 visualize the label "To the", the buzzer plays. This alarm doesn't create any kind of effect. The rearmament is automatic when the temperature in the cold room is superior to the set point.

**Alarm High Temperature of Condensation**

If the probe condenser is disposal and not damage , when the value of the temperature of the probe condenser is superior to the parameter the display DIS1 visualize the label “Ht”, the buzzer plays. It stops a possible cycle in progress. The rearmament is automatic when the temperature of the probe condenser is inferior to the value of the parameter.

**Visualization Historical Alarms For HACCP**

With label in OFF press for five seconds the key HACCP  to input the printing and visualization of the historical alarms.

The historical is managed in circular way and can contain and memorized at least ten verified alarms, by type of alarm, date and hour of when happens, the duration in minutes and record of maximum temperature in the cold room.

The entry of a new alarm in the memory can be visualized making blinking the dot of the right digit of the display DIS1. To flow the relative information of every single alarm:

Press the key Program , then press Increase  to visualize the following alarm of the list,

press the Decrement  to visualize the preceding alarm.

Press the key ON / OFF  makes return the label in OFF.

The maximum number of minutes visualized is 999, correspondent to 16 hours and 39 minutes. If the alarm remains for a superior time, are visualized 999 flashing instead of the minutes indication.

In the memory of the alarms, are memorized the following:

- Black out probe cold room E0
- Black out probe product E3
- Black out evaporator probe E1
- Black out condensation probe E4
- High pressure HP
- Low pressure LP
- Thermo compressor HA
- Open door d-r
- power failure PF
- High temperature cold room AH
- low temperature cold room AL
- high temp. Condensing Ht

**TERMINAL MANAGEMENT PRINT (OPT.)**

The Label is supplied with a door of communication serial RS485.

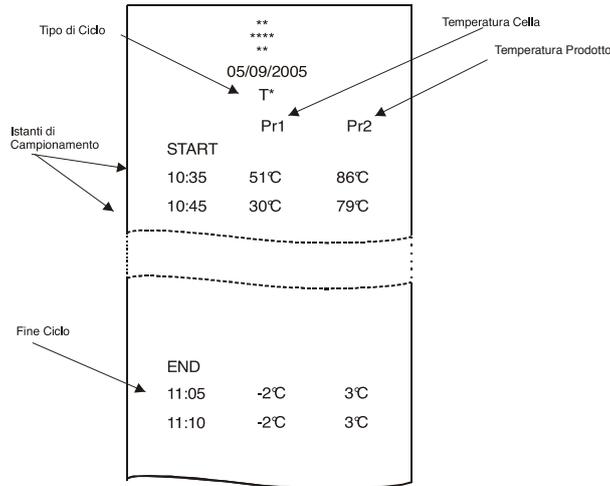
This door of communication can be used for the connection to a terminal of printing for the unload dates of cycle and memory diagnosis of alarms. The protocol of communication with the printing terminal, foresees a fixed baud rate to 9600 and bit of odd parity. You advises to verify the configuration of the pint terminal , brought in the relative manual, before start the connections.

**Print Report Of a Cycle dates**

The printing dates of a cycle, is automatically activated to the beginning of the Blast/freezing cycle .

The report of print brings the date, the type of selected cycle, the sampling of regular intervals of the temperatures cold room and product, the cycles of defrosting and possible alarms that are verified during the cycle.

For the details of the alarms see the historical alarms.  
 Example of printing report:



Legenda Tipo di Ciclo

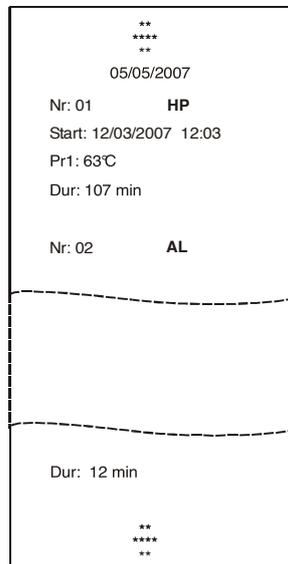
- T\*            Abbattimento a Temperatura
- T\*\*\*        Surgelazione a Temperatura
- T>>>\*      Abbattimento HARD a Temperatura
- t\*            Abbattimento a Tempo
- t\*\*\*        Surgelazione a Tempo
- t >>>\*      Abbattimento HARD a Tempo
- P1.....99   Programma 1.....99

**PRINTING REPORT OF MEMORIZED ALARMS**

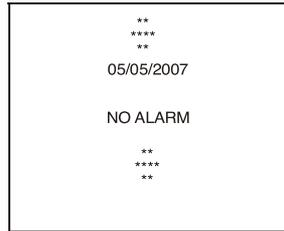
Press the key HACCP  to activate the print and vision in the display of the alarm memory.

For every present alarm in memory, will be print type of affiliation, time and date, highest temperature reached and durability of the alarm.

During the printing of the memory alarm the display DIS1 visualizes the label Prt.  
 Example of press:



Example of press in the case of any present alarm in memory:



## VISUALIZATION CODE PROJECT

Press the key Sterilization  to visualize the code project, version and revision of the present firm are in the basic card and in the user interface.

The display DIS1 alternates the visualization of the code project and version, while the display DIS2 visualizes the code of the revision of the present firmware in the basic label.

The following pressure of the key Sterilization  visualizes in the same way the code project, version and revision of the present firmware in the user interface.

## VISUALIZATION PROBES

Is possible visualize the temperature noticed by the probes pressing for five seconds the key Program .

The display DIS1 visualizes the label "Pr1" and the display DIS2 visualizes the value of the temperature in the cold room,

press the key Increase  to pass to the following probe.

The used labels are Pr2 to point out the probe core , Pr3 to point out the probe evaporator and Pr4 to point out the probe condenser.

If the probe condenser has not been disposal , the visualization stops at Pr3 (it sounds evaporator).

The pressure of the key ON/OFF  to return the card in OFF.

## Section 6 ROUTINE AND PROGRAMMED MAINTENANCE

The information in this section regards the user, or other non-specialized personnel, and the routine maintenance technician.

### 6.1 BASIC SAFETY REGULATIONS

We summarize the safety regulations already shown in heading 1.5 to ensure that the user or maintenance technician can perform the work in conditions of total safety:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug

#### 6.1.1 Prohibited: removal of guards and safety devices

It is strictly forbidden to remove guards or safety devices when performing routine maintenance work. The manufacturer disclaims all liability that may arise if this regulation is not observed.

#### 6.1.2 Indications on emergency measures in case of fire

- disconnect the appliance from the electrical power socket or switch off the master switch on the electrical mains line
- do not use water to douse fires
- use powder or foam extinguishers

### 6.2 CLEANING THE APPLIANCE

The unit is designed to preserve food products so it is important to keep it clean for reasons of hygiene and health. The appliance is thoroughly cleaned in our factory before delivery. We recommend, however, that you clean the interior of the appliance before use. Before cleaning the appliance make sure the power cord is disconnected.

#### 6.2.1 Cleaning the interior and exterior of the appliance

- cleaning products: water and non-abrasive neutral detergent. **DO NOT USE SOLVENT OR THINNERS**
- cleaning method: use a cloth or sponge soaked in a suitable cleaning product to clean the interior and exterior parts of the cabinet
- sanitation: do not use substances that could alter the taste and smell of stored food
- rinsing: use a cloth or sponge soaked un clean water. **DO NOT USE WATER JETS**
- frequency: once a week or at different intervals in accordance with the type of food product conserved.

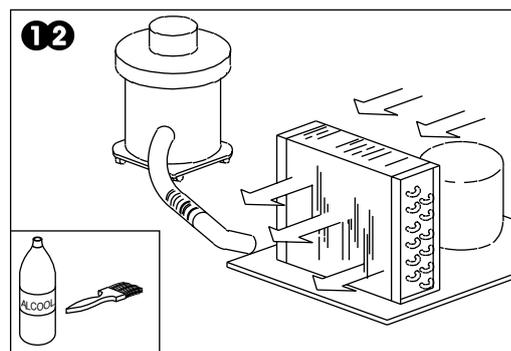
#### 6.2.2 Cleaning the condenser

The condenser will work less efficiently if it is obstructed with foreign material so it must be cleaned once a month. Before cleaning the condenser switch off the appliance, disconnect the power cord and proceed as follows:

Open the control panel by slackening the screws and pulling it down on its hinges

Use an air jet or dry brush and, working with up and down movements (Fig.12), remove any dust or fluff that has deposited on the heat exchanger fins. If there are greasy deposits on the fins use a brush soaked in benzene or alcohol. After cleaning, start the appliance as described in heading 5.1 and 5.2 (with bottom motor models, remember to close control panel).

*During this operation use the following personal safety measures: safety glasses, respirator mask, chemical resistant gloves (benzine - alcohol).*



### 6.3 PERIODIC CHECKS

The following areas of the appliance or component assemblies require periodic checking:

- condition and efficiency of the door sealing elements
- condition of shelves in contact with food products
- condition of hinges and correct fixing of the doors
- condition of electrical cables and electrical parts

### 6.4 PRECAUTIONARY MEASURES FOR PROLONGED DISUSE

If the appliance is to remain unused for more than 15 days proceed as follows:

- switch off the appliance and disconnect it from the electrical supply
- clean the interior of the cabinet, shelves, trays, runners and supports, paying special attention to critical areas such as articulations and magnetic sealing strips in accordance with the indications in heading 6.2.
- leave doors slightly open to prevent accumulation of residual humidity

## 6.5 PREVENTIVE MAINTENANCE

### 6.5.1 Start-up after prolonged disuse

Before starting the appliance after prolonged disuse perform preventive maintenance. Clean the unit thoroughly as described in heading 6.2.

### 6.5.2 Checking warning and control devices

Check that the various controls are working properly in accordance with the indications in headings 5.1 and 5.2. We recommend you take out a service or maintenance contract with your dealer covering:

- cleaning of the condenser
- keeping a check on the refrigerant charge
- checking complete cycle operation
- electrical safety

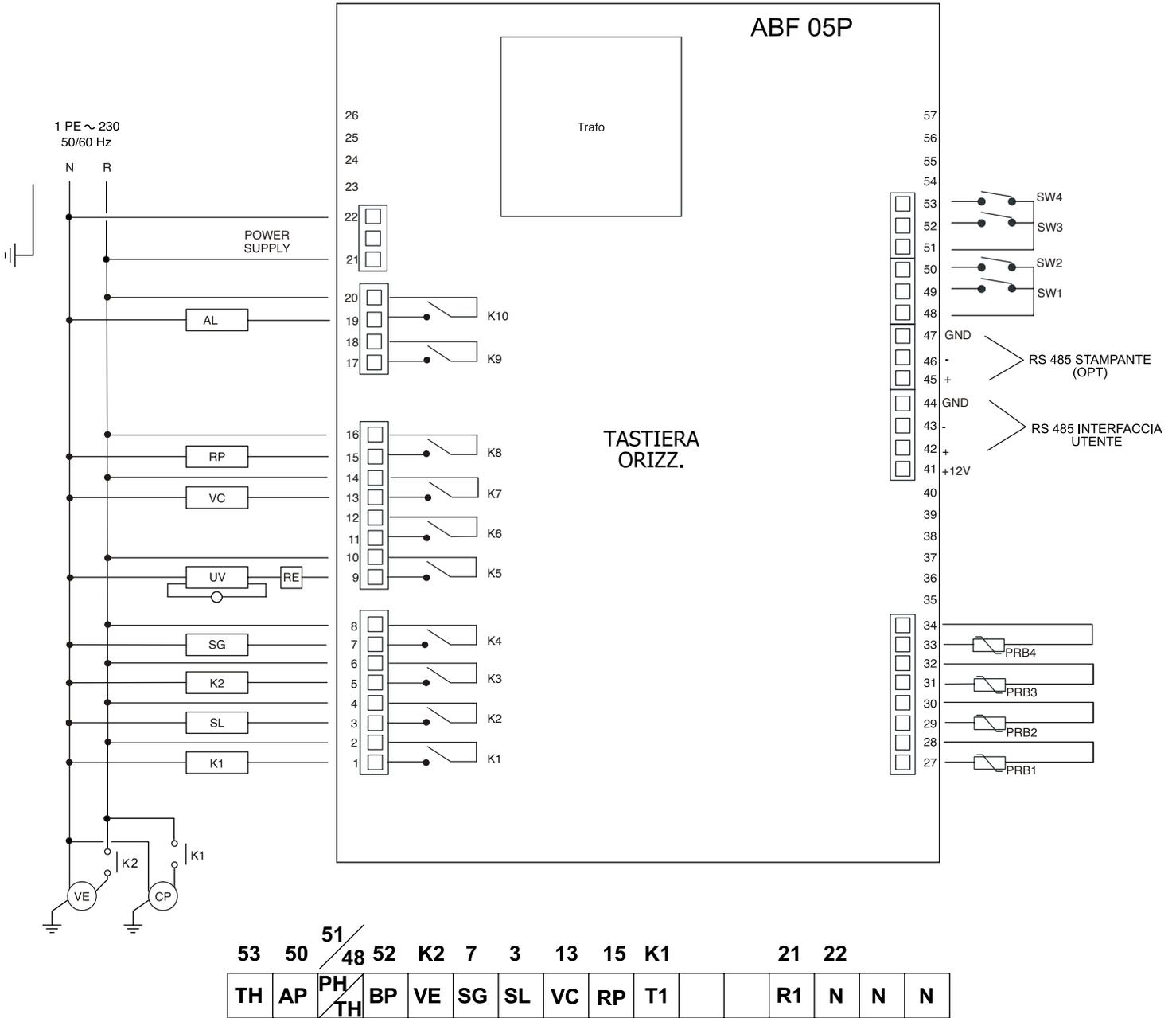
## Section 7 SPECIAL MAINTENANCE AND REPAIRS



All maintenance work not described in the previous sections must be considered "Special Maintenance".

Special maintenance interventions and repairs are to be performed exclusively by specialized technicians authorized by the manufacturer.

The manufacturer declines all liability in the case of work performed by the user or unauthorized persons, or if non-original spare parts are fitted to the appliance.

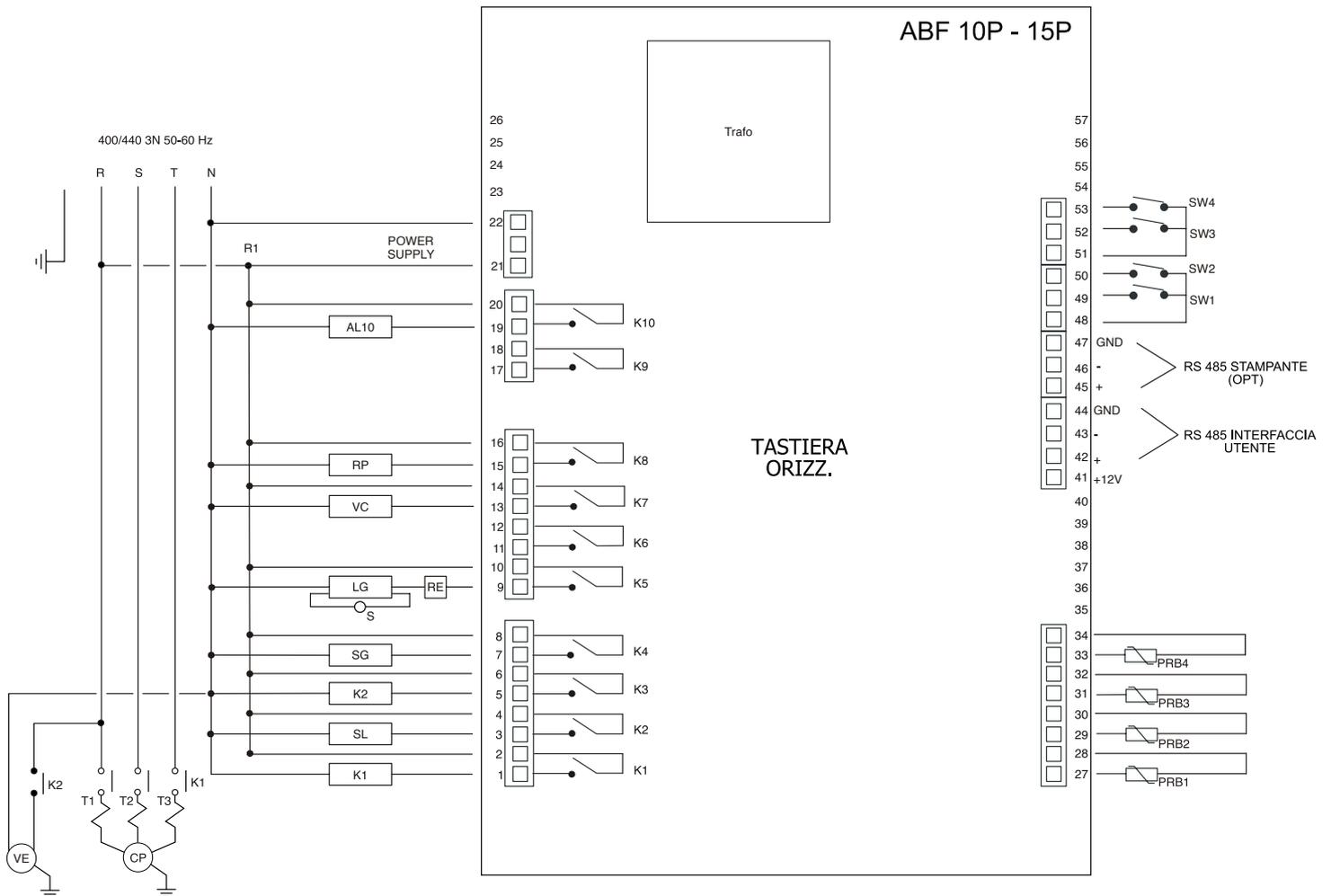


**LEGENDA:**

CP - COMPRESSORE  
 K1 - RELE COMPRESSORE  
 RP - RESISTENZA ANTICONDENSA  
 VC - VENTILATORE CONDENSATORE  
 SL - VALVOLA SOLENOIDE LIQUIDO  
 VE - VENTILATORE EVAPORATORE  
 SG - VALVOLA SOLENOIDE SBRINAMENTO  
 K2 - RELE VENTILATORE EVAPORATORE  
 RE - REATTORE LAMPADA GERMICIDA  
 LG - LAMPADA GERMICIDA  
 PRB1 - SONDA CELLA  
 PRB2 - SONDA CUORE  
 PRB3 - SONDA SPILLONE  
 PRB4 - SONDA CONDENSATORE

**LIST OF COMPONENTS:**

CP - COMPRESSOR  
 K1 - COMPRESSOR RELAY  
 RP - ANTI-CONDENSATE RESISTANCE  
 VC - CONDENSER FAN  
 SL - LIQUID SOLENOID VALVE  
 VE - EVAPORATOR FAN  
 SG - DEFROSTING SOLENOID VALVE  
 K2 - EVAPORATOR FAN RELAY  
 RE - GERMICIDAL LAMP REACTOR  
 LG - GERMICIDAL LAMP  
 PRB1 - PROBE CELL  
 PRB2 - PROBE HEART  
 PRB3 - PROBE PIN  
 PRB4 - PROBE CONDENSER



53	50	51	48	52	K2	7	3	13	15	K1			21	22		
TH	AP	PH	TH	BP	VE	SG	SL	VC	RP	T1	T2	T3	R1	N	N	N

**LEGENDA:**

- CP - COMPRESSORE
- K1 - RELE COMPRESSORE
- RP - RESISTENZA ANTICONDENSA
- VC - VENTILATORE CONDENSATORE
- SL - VALVOLA SOLENOIDE LIQUIDO
- VE - VENTILATORE EVAPORATORE
- SG - VALVOLA SOLENOIDE SBRINAMENTO
- K2 - RELE VENTILATORE EVAPORATORE
- RE - REATTORE LAMPADA GERMICIDA
- LG - LAMPADA GERMICIDA
- PRB1 - SONDA CELLA
- PRB2 - SONDA CUORE
- PRB3 - SONDA SPILLONE
- PRB4 - SONDA CONDENSATORE

**LIST OF COMPONENTS:**

- CP - COMPRESSOR
- K1 - COMPRESSOR RELAY
- RP - ANTI-CONDENSATE RESISTANCE
- VC - CONDENSER FAN
- SL - LIQUID SOLENOID VALVE
- VE - EVAPORATOR FAN
- SG - DEFROSTING SOLENOID VALVE
- K2 - EVAPORATOR FAN RELAY
- RE - GERMICIDAL LAMP REACTOR
- LG - GERMICIDAL LAMP
- PRB1 - PROBE CELL
- PRB2 - PROBE HEART
- PRB3 - PROBE PIN
- PRB4 - PROBE CONDENSER



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