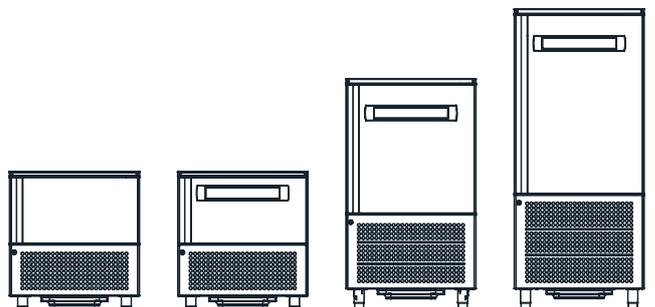


Blast chillers

EN



Dear Customer,

Thank you for choosing one of our products, the result of lengthy experience and continuous research for a product that is superior in terms of reliability, performance and safety.

In this manual you will find all the information and advice needed to use your product ensuring utmost safety and efficiency.

This manual is an integral part of the product and provides all the necessary information for correct installation, proper use and maintenance of the machine.

The user must read the manual and refer to it when using the machine. It must also be kept in a place known and accessible to all authorised operators (installer, user, maintenance technician).

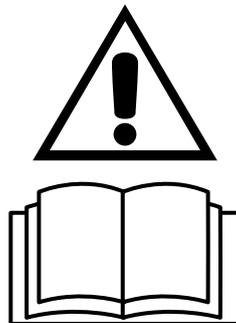
**OPERATIONS HIGHLIGHTED WITH THIS SYMBOL ARE STRICTLY RESERVED TO CERTIFIED TECHNICIANS .**

In particular these include:

- Electrical connections
- Hydraulic connections
- Machine installation
- Testing of the machine
- Repairs on all the components and parts of the machine
- Dismantling of the machine and/or of its components
- Operations of adjustment and calibration
- Maintenance and cleaning of the machine for parts and components (electrical, electronic, mechanical, chilling)

**THE TEXT HIGHLIGHTED WITH THIS SYMBOL IS OF PARTICULAR IMPORTANCE OR SIGNALS POTENTIAL DANGER**

Note: it clarifies operations in progress



**READ THIS MANUAL
CAREFULLY**

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1 WARNINGS AND IMPORTANT ADVICE



This manual is an integral part of the product and provides all the necessary information for correct installation, proper use and maintenance of the machine.

In the event of sale or transfer of the appliance, this manual must be handed over to the new user.

The user must read the manual and refer to it when using the machine. It must also be kept in a place known and accessible to all authorised operators (installer, user, maintenance technician).

The manufacturer does not accept any contractual or non-contractual liability for damage caused by incorrect installation, misuse or failure to comply with the applicable national and local regulations and the instructions provided by the same manufacturer.

Carefully read this manual before installing and using the appliance. In particular pay attention to the safety warnings. Be sure to only use the installation components supplied or specified.



The machine is designed for professional use and therefore only qualified persons may use it.

The machine is only intended for the use for which it was designed, namely for the freezing and storage of foodstuffs. Excluded are products that require constant temperature monitoring and recording, such as thermo-reagent chemicals, medicines and blood products

The manufacturer declines all responsibility for any damage caused by improper or unreasonable use, such as misuse by untrained personnel, technical modifications or interventions not specific for the models or non-compliance, even partial, with the instructions in this manual

Do not store explosives, such as pressurised containers with flammable propellant, in this

appliance

ATTENTION: Do not use electrical appliances inside the appliance compartments for the storage of frozen foods if they are not of the type recommended by the manufacturer

For appliances with a water condensing system the maximum inlet water temperature must not exceed 35°C

The maximum load per shelf is 25 Kg

Do not touch the machine with damp or wet hands or feet

Do not operate the appliance with bare feet

Do not insert screwdrivers, cooking utensils or other items between the guards and the moving parts

Before carrying out cleaning or ordinary maintenance operations, disconnect the machine from the mains by means of the on/off switch (if present also turn off the main switch of the machine)

Do not pull the power cable to disconnect the machine from the mains

It is prohibited to use the appliance in environments with flammable gases and in areas with the risk of explosion.

Check correspondence of the plate data and the specifications of the electrical power line (V, KW, Hz, no. of phases and power available)

Installation of the appliance and of the remote refrigerating unit (if any) must only be carried out by the manufacturer or by skilled technicians

2 TECHNICAL DATA

2.1 Plate data

The plate bearing the equipment specifications should be applied on the outside rear part of the machine and/or on the electrical panels. Any preparation of machines only for relocation of the condensing units must follow the regulations in force in the country of installation regarding fire safety (refer to the command of the local fire department for the relevant indications). It should also be considered that the possible intervention of safety valves or fusible plugs, located in the refrigerant circuit, entail the immediate discharge of all the refrigerant into the environment.

Code	_____
Model	_____
S/N	_____
V _____ A _____ W	
Gas _____ Kg _____ CO ₂ eq	
Age _____ IP _____	
L'apparecchio contiene gas fluorurati ad effetto serra - Ermeticamente sigillato	
The equipment contains fluorinated greenhouse gases - Hermetically sealed	
	

The appliance's climate class is stated on the serial plate

Environmental climatic classes (ISO 23953-2)		
Climate class	Temperature	Humidity
1	16°C	80%
2	22°C	65%
3	25°C	60%
4	30°C	55%
5	40°C	40%
6	27°C	70%

REGOLAMENTO (UE) 2015/1095 REGULATION (EU) 2015/1095 REGLAMENTO (UE) 2015/1095 VERORDNUNG (EU) 2015/1095 RÈGLEMENT (UE) 2015/1095

Modello Modèles Modelle Modelos	Alimentazione Power supply Source de courant Energieversorgung Fuente de alimentación	Refrigerante Refrigerant Fluide frigorigène Kühligas Fluido refrigerante	Carica refrigerante Refrigerant charge Charge de fluide frigorigène Kältemittelfüllung Carga de refrigerante (Kg)	GWP	Ciclo Abbattimento Positivo - Chilling Cycle - Cycle Chilling Kühlzyklus - Ciclo de enfriamiento				Ciclo Abbattimento Negativo - Freezing Cycle - Cycle de Congélation - Gefrierzyklus - Ciclo de congelación				
					Ciclo temperat. Temp. Cycle Cycle de temp. Temperaturzyklus Ciclo de temperat. (°C)	Capacità Capacity Capacité Kapazität Capacidad (Kg)	Durata ciclo Cycle time Temps de cycle Taktzeit Tiempo de ciclo (min)	Consumo Energia Energy Consumpt. Conso. Energie Energieverbrauch Cons. de energia (kWh/Kg)	Ciclo temperat. Temp. Cycle Cycle de temp. Temperaturzyklus Ciclo de temperat. (°C)	Durata ciclo Cycle time Temps de cycle Taktzeit Tiempo de ciclo (min)	Capacità Capacity Capacité Kapazität Capacidad (Kg)	Consumo Energia Energy Consumpt. Conso. Energie Energieverbrauch Cons. de energia (kWh/Kg)	
5.20	A	220-240V/50Hz	R404A	1,27	3922	+65° / +10°	19,2	98	0,099	+65° / -18°	14,4	268	0,384
5.20	W	220-240V/50Hz	R404A	1,27	3922	+65° / +10°	19,2	98	0,099	+65° / -18°	14,4	268	0,384
10.35	A	400V/3N/50Hz	R404A	2,20	3922	+65° / +10°	37,6	93	0,116	+65° / -18°	27,1	269	0,315
10.35	W	400V/3N/50Hz	R404A	1,80	3922	+65° / +10°	37,6	93	0,116	+65° / -18°	27,1	269	0,315
15.40	A	400V/3N/50Hz	R404A	2,20	3922	+65° / +10°	43,2	94	0,093	+65° / -18°	32,2	265	0,350
15.40	W	400V/3N/50Hz	R404A	2,00	3922	+65° / +10°	43,2	94	0,093	+65° / -18°	32,2	265	0,350
15.65	A	400V/3N/50Hz	R404A	2,50	3922	+65° / +10°	62,4	100	0,089	+65° / -18°	50,6	262	0,288
15.65	W	400V/3N/50Hz	R404A	2,00	3922	+65° / +10°	62,4	100	0,089	+65° / -18°	50,6	262	0,288
15.270	A	400V/3N/50Hz	R404A	2,50	3922	+65° / +10°	72,0	105	0,082	+65° / -18°	55,2	267	0,271
15.270	W	400V/3N/50Hz	R404A	2,00	3922	+65° / +10°	72,0	105	0,082	+65° / -18°	55,2	267	0,271

2.2 Refrigerant

The appliance contains fluorinated greenhouse gases covered by the Kyoto Protocol in the quantities indicated on the serial plate.

The type of refrigerant gas present in the refrigerant circuit of the appliance is shown on the serial plate

The GWP (global warming potential) of the HFC R134a gas is 1430 and of the HFC R404A gas it is 3922.

The system is hermetically sealed:

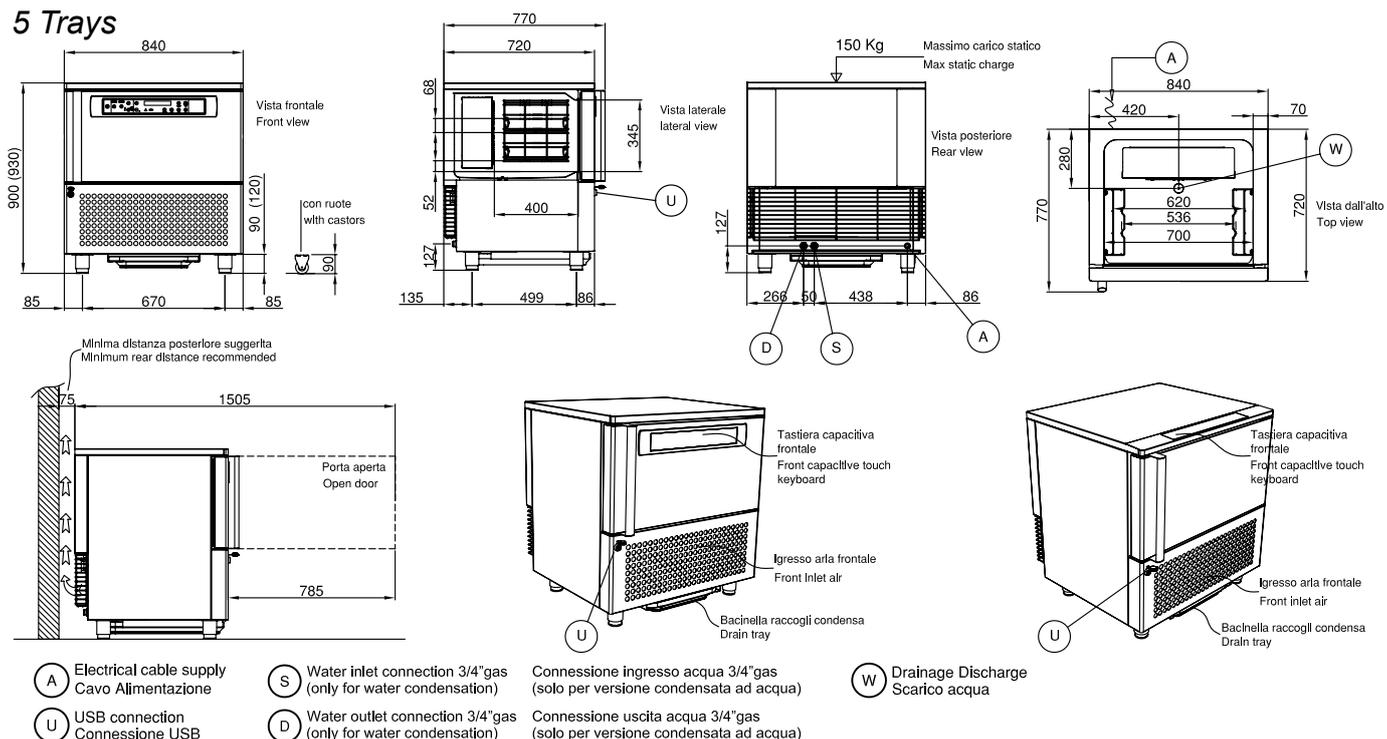
The CO₂ equivalent data is shown on the serial plate



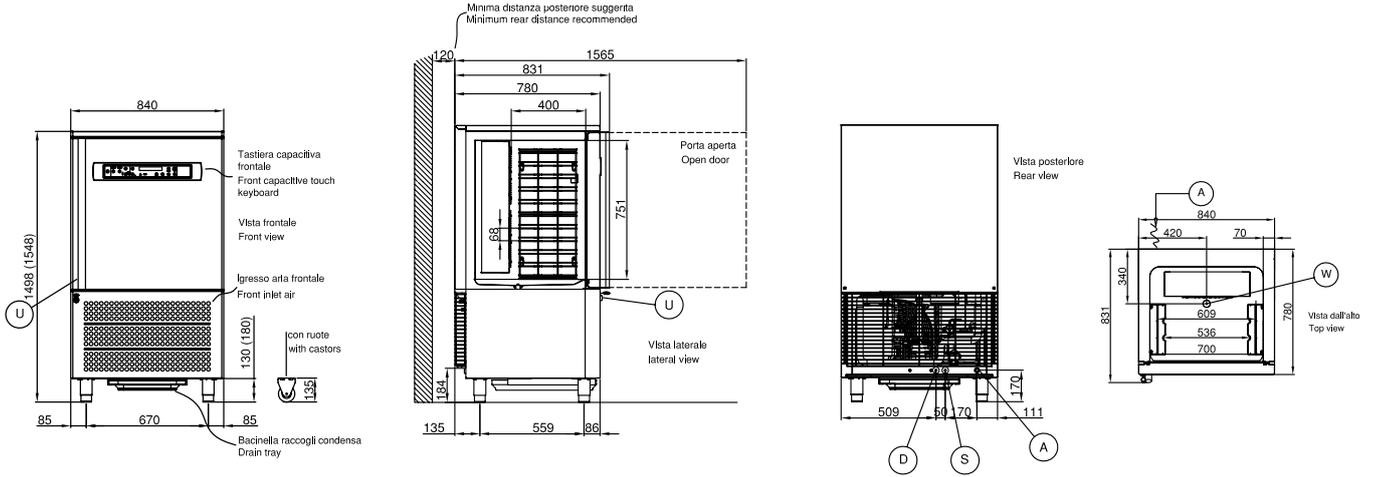
According to Regulation (EC) 1272/2008, R134a and R404A gases are non-flammable and non-toxic. In high concentrations they can be asphyxiating. Contact with liquid may cause burns and frostbite. In the system the gas is pressurised; it may explode if heated.

2.3 Measurements

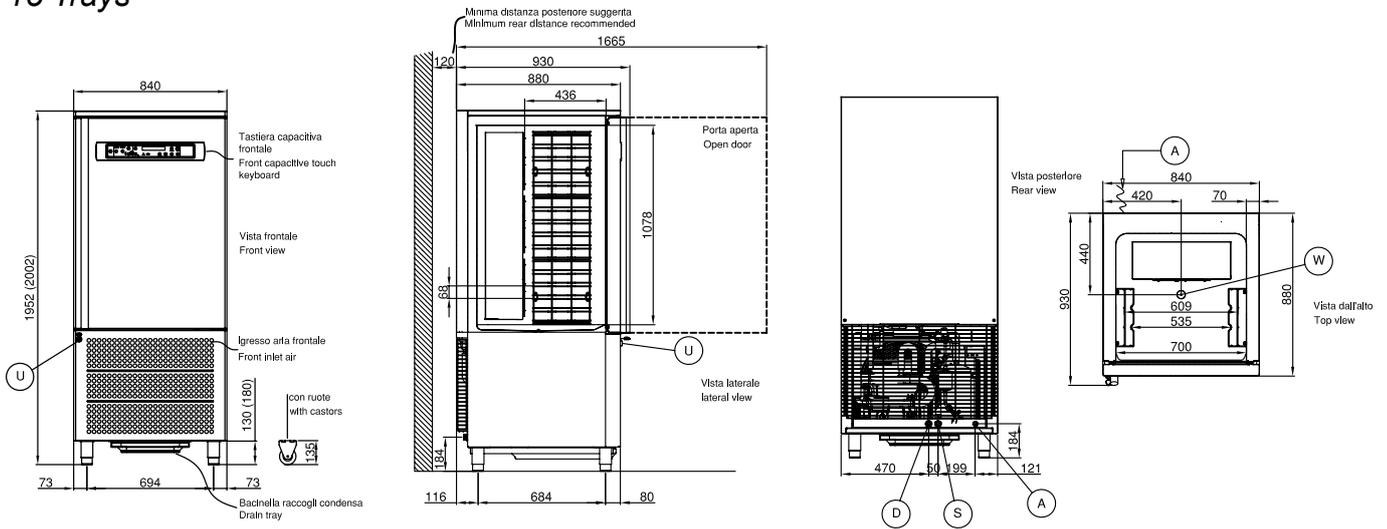
5 Trays



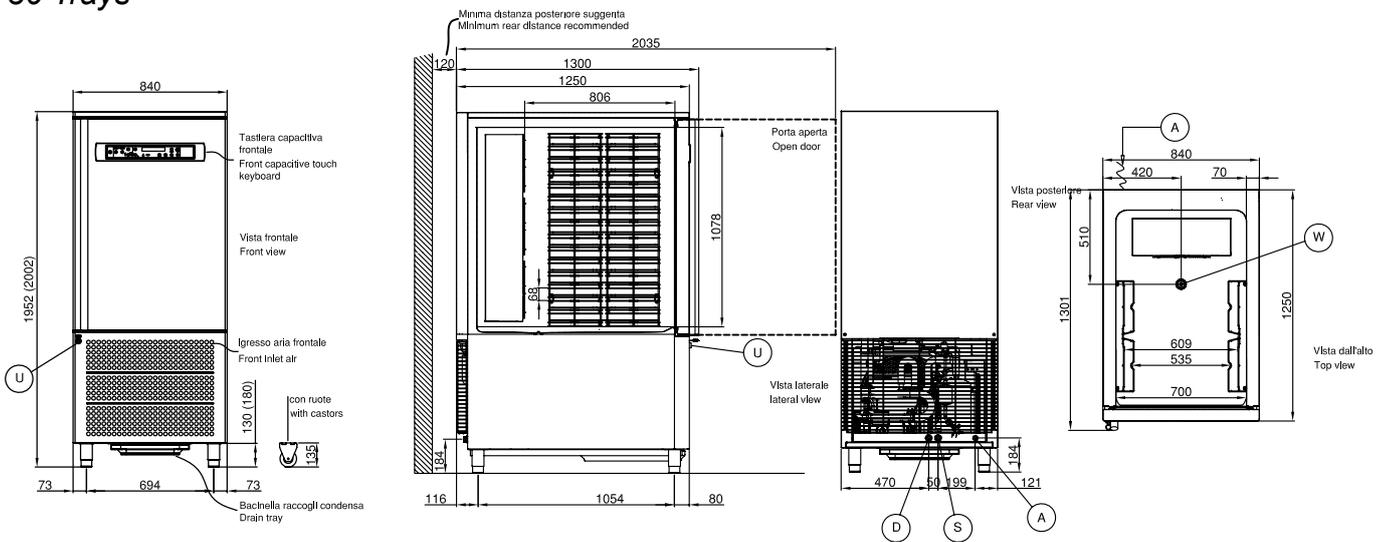
10 Trays



15 Trays



30 Trays



(A) Electrical cable supply
Cavo Alimentazione

(U) USB connection
Connessione USB

(S) Water inlet connection 3/4" gas
(only for water condensation)

(D) Water outlet connection 3/4" gas
(only for water condensation)

Connessione ingresso acqua 3/4" gas
(solo per versione condensata ad acqua)

Connessione uscita acqua 3/4" gas
(solo per versione condensata ad acqua)

(W) Drainage Discharge
Scarico acqua

3 INSTALLATION



ALL STAGES OF INSTALLATION MUST BE CARRIED OUT IN COMPLIANCE WITH THE NATIONAL STANDARDS IN FORCE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND BY PROFESSIONALLY QUALIFIED PERSONNEL

Installation of the appliance and of the refrigerating unit must only be carried out by technicians of the manufacturer or by skilled personnel.

If the machine was supplied with a remote condensing unit, it is the installer's responsibility to check all the connections in accordance with the instructions provided for the installation of systems and machinery.

The installer is advised to use the appropriate personal protective equipment necessary for processing and in compliance with the regulations in force.

3.1 Transportation and handling

The net and gross weight of this appliance can be found on the external packaging.

Loading and unloading of the appliance and/or of the subsystems from the means of transport can be performed using a forklift truck or fork pallet truck, the length of which is more than half that of the unit or using cranes where the appliance/subsystem is fitted with eyebolts. The lifting equipment must be chosen according to the size of the packaged machine/components and with sufficient capacity.

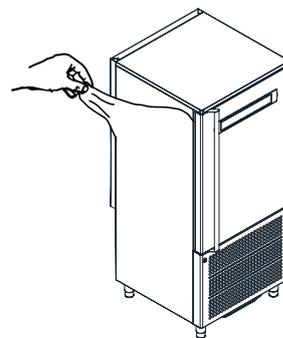
For handling of the appliance/subsystems, every precaution must be taken not to damage them, respecting the indications on the packaging.

3.2 Unpacking and disposal

Remove all cardboard or the wooden crate from the base on which the machine is placed. Then lift the machine/sub-assemblies with a suitable means (forklift truck); remove the wooden base and position the machine/sub-assemblies in the place provided.

After removing the packaging, verify the integrity of the machine/sub-assemblies. In case of uncertainty do not use it and contact the distributor.

Remove the protective PVC film on the stainless steel panels from all sides both internally and externally.



Note: all the various components of the packaging must be disposed of according to the regulations in force in the country where the appliance is being used. In any case nothing must be disposed of into the environment.

3.3 Positioning

The appliance:

- **must be installed in places where it can be checked by qualified personnel.**
- it must not be installed outdoors.
- it must not be installed in dusty environments.
- it must not be placed in locations with the presence of water jets.
- it must not be washed with water jets.
- **It must be installed and tested in full compliance with safety laws, traditional systems and with the regulations in force.**
- it must be positioned at a minimum distance of 120 mm from the rear wall

The installer must verify any requirements for fire safety (refer to the command of the local fire department for the relevant indications).

Level the appliance through adjustment of the feet. For the setting up of heavier machines, use dedicated hoists (fig. A - Chap. 3.1).

If the appliances are not levelled their functioning and the flow of condensates could be impaired.

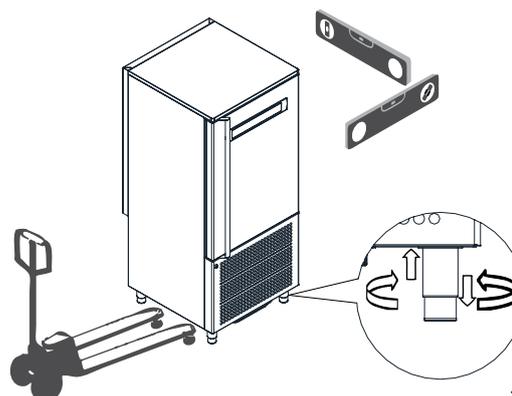
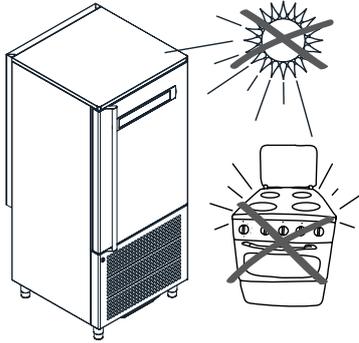


fig. A



Avoid locations exposed to direct sunlight, indoor environments at high temperatures and poor air circulation and avoid installing the machine near any heat sources



3.4 Ambient temperature and air exchange

For air cooled liquid chillers, the ambient operating temperature must not exceed 32°C. Above this temperature the declared performance is not guaranteed. The machine can operate safely up to a temperature that is referred to by the climatic class indicated on the serial plate. Remote condensing units must be installed in special rooms or, if outdoors, in a place protected from direct sunlight, from adverse weather conditions and from heavy wind (above 5 m/sec. Where circumstances so require, it is the responsibility of the installer to evaluate the use of a cover or canopy (costs to be borne by the purchaser). In any case sufficient air circulation must be guaranteed.

3.5 Hydraulic connection for water cooled condensing units

It is advisable to install a valve between the mains and the appliance's inlet hose in order to be able to stop the passage of water if necessary.

For appliances with water cooled units the water supply temperature must be between 10°C (50°F) and 30°C (86°F) and the operating pressure must be between 0.1 MPa (1 bar - 14psi) and 0.5 MPa (5 bar - 72 psi)

3.6 Electrical connection

⚠ No responsibility is accepted for damage to persons, animals or property caused by failure to earth the appliance and the creation of an electrical installation that does not comply with current standards.

The mains connection must be made according to existing national rules and by experienced, qualified personnel. Before connecting the appliance to the mains make sure that the mains voltage corresponds to the voltage indicated

on the data plate.

Verify that the electrical installation is adequate to the maximum power of the appliance, as indicated on the plate. Upstream of each device it is mandatory to install a differential thermal breaker according to current regulations in the country of installation.

The electric connecting cables must be dimensioned in accordance with the rules in force in the country of installation. In cases where the power cord of the appliance is damaged, it must be replaced with another with characteristics that comply with the rules in force in the country of installation and performed by qualified personnel in order to prevent any risk to persons.

The earthing conductor must be correctly connected to an efficient earthing system.

The manufacturer declines any responsibility and any warranty obligation in the event of damage to the equipment, to persons and to property caused by incorrect installation and/or failure to respect the applicable laws.

3.7 Remote group refrigerator connection

The diameters of the supply lines of the equipment are sized for distances of up to 10 meters.

Contact the manufacturer for longer distances.

3.8 Condensate drainage connection (if applicable)

It is necessary to provide a drainage pipe for the condensation and washing water of a minimum diameter of 1".

It is advisable to dispose of the condensate through an open drain at ground level and fitted with a siphon with a minimum diameter of 1/2 "



Uno scarico provvisto di sifone diametro di almeno 1 1/2" ad altezza del suolo.

3.9 Notes for the installer

- Verify the correct installation and system testing before starting up the machine (test report)
- Check for any gas leaks from the welds or joints made during the installation phase.
- Check the efficient insulation of the connecting pipes between the condenser and the remote condensing unit.
- Check the electrical connection
- Check the electrical input
- Verify the standard pressures of the refrigerating system.
- Check the water connections with adjustment of the pressure valve during operation and good circulation of the condensation water (water cooled groups).

3.10 Commissioning

 **Commissioning must be carried out by authorised and qualified personnel.**

Perform at least one complete cycle of rapid storage freezing (to reach the SET temperature), and a manual defrost cycle. If the equipment or the remote condensing units were delivered in an upright position (e.g. on their back) or were overturned during installation, do not turn on immediately but wait at least 4 hours before use.

Inform the customer of the exact use of the equipment with specific reference to the use and to customer requirements.

3.11 Safety and control systems

- Door microswitch: this locks operation of the fans in the cell when the door is opened
- General protection fuses: they protect the entire power circuit against short circuits and possible overloads.
- Compressor thermal relay: this intervenes in case of overloads or malfunctions
- Safety pressure switch: this operates in the case of excess pressure in the refrigerant circuit
- Fusible plug: this intervenes in the case of overpressure and failure of the afore-mentioned safety pressure switch
- Chamber temperature control: this is operated by the electronic card via the probe positioned inside the cell
- Defrost termination temperature control: this is managed by the electronic card via the probe located on the evaporator.

3.12 Stop modes

In an emergency, to stop the machine remove power from the main panel using the earthing switch or by removing the plug from the socket making sure hands are not wet

or damp.

3.13 Signalling/reports of malfunctioning

In cases of malfunction of the machine and for report signalling concerning the blast chillers supplied:

Assembled

You are requested to communicate to the retailer/service centre the machine model, code and the serial number shown on the registration plate located on the rear of the machine and inside the door.

Dismantled (with condensing units/remote condensers)

You are requested to communicate to the retailer/service centre the machine model and the code shown on the registration plate located above the control panel.

3.14 Waste electrical and electronic equipment WEEE (not valid for fixed installations)



The following information applies to EU Member States. The crossed out wheellie bin symbol indicates that this product cannot be disposed of as household waste. Ascertaining that this product is disposed of correctly will help prevent potential negative consequences for the environment and human health that might otherwise be caused by incorrect disposal of the same.

4 COMMAND INTERFACE SYMBOLS



Capacitive Interface

1 - Stand-by Button

Standby button, if pressed for more than 3 seconds it takes the card into standby or switches it on again

2 - Positive Chilling Button

used to select the mode of positive chilling

3 - Negative Chilling Button

used to select the mode of negative chilling

4 - Chill. LED Temperature

Led on means that the chilling is via Temperature mode (insert probe)

5 - Chilling mode button

A button that selects the mode of chilling with Time or Temperature (insert probe use); the selected mode is represented by ignition of one of the two LEDs located on the right and left of the button and they are marked with the temperature or time symbol

6 - Chill. LED Time

Led on means that the chilling is via Time mode

7 - Decrease Button

Parameter or setting value decrease buttons (the "-" button allows silencing of the beeper if active)

8 - Chilling Phase LED

Symbol representing the chilling phase (it flashes when at that phase)

9 - Storage Phase LED

Symbol representing the chilling phase (it flashes when at that phase)

10 - Ice-cream button

The ice-cream button if pressed once starts the ice-cream cycle (see section 12), and if pressed for more than 3 seconds it starts the ice-cream defrost cycle

11 - HACCP button

The HACCP button which starts the data reversal cycle onto USB

12 - Ozone Button

Button that starts the ozone sanitising cycle (if any)

13 - Defrost Button

Button that when pressed once starts drying with door open (see section 9), while if pressed for at least 3 seconds it starts the hot gas defrost cycle

14 - Status LED

RGB on mark lettering. The lettering assumes the following colours depending on the following relative connected states:

BLUE - Phase of chilling, deep-freezing or storage

LIGHT BLUE - Defrost time

GREEN - Machine on stand by

WHITE - Machine at standstill

RED FLASHING - Serious alarm

FLASHING YELLOW - Non serious alarm (door opening - maintenance -1° kriwan intervention)

15 - Thawing Button

Button that when pressed starts the defrost cycle

16 - Program Button

Programs recall or storage button

17 - Temperature Symbol

The symbol lights up when a cycle is active and the cell temperature (Time chilling) or Product temperature (Temperature chilling) is detected. In the second case the product probe is shown with the highest value. With the cycle in progress press the button (12) to display in sequence the values of the insert probe 1 and 2 and of the evaporator sensor probe in flashing mode and the display (19) will show the letters in sequence SP1+"probe value", SP2+"probe value" and SE+ "value"

18 - Display- Temperature

Second part of the alphanumeric display (last 4 digits) for representation of the T° cell or T° product and evaporator value

19 - Display- Time

First part of the alphanumeric display (first 4 digits) for representation of the time value remaining of chilling

20 - Time Symbol

The symbol lights up when the cycle is running; the time remaining will be displayed. If the button (5) is pressed the elapsed time will flash for 5 seconds (both for Time and Temperature chilling)

21 - Increase Button

Parameter or setting value increase buttons

22 - Cycles Start/Stop Button

Start/Stop button to start/stop the chilling cycle set; with a cycle started, the button remains lit

23 - Negative Chilling LED

The number of LEDs lit indicates the intensity of the negative chilling (increments by pressing the button (2))

24 - Positive Chilling LED

The number of LEDs lit indicates the intensity of the positive chilling (increments by pressing the button (1))

5 MACHINE ON/OFF

When the equipment is powered, it will appear in STANDBY conditions (scrolling text on the display). To start the machine press the button (1) for at least 3". Similar to machine without cycles in progress, to switch it off simply press the button (1) for at least 3".

Where a cycle was in progress, and the situation is returning from a blackout the appliance, once reconnected, will resume from the interrupted cycle.

5.1 Compressor preheating management

Upon ignition of the equipment a compressor preheating time of 120 minutes must be respected where the blast chiller is not available.

The scrolling text will appear "Compressor Heating-Riscaldamento Compressore" and then the fixed lettering "XXX min" to represent the time remaining. These two messages will alternate until the end of heating. This phase can be bypassed by pressing the "HACCP" (11) button for approximately 5 seconds.

6 DATE AND TIME SETTING

Upon initial ignition, it is advisable to check the date and time set; their accuracy is beneficial in relation to HACCP management.

To access the clock setting, press for more than 5 sec the Temperature/Time button (5) with the machine in Stop mode. The Labels shown below will appear on the left display; the right display will show the 2-digit numeric value to be set:

Hour(Ora) / Minute(Minuti) / Day(Giorno) / Month(Mese) / Year(Anno)

The Temperature/Time button (5) can be used to scroll through the Labels, while with the +/-buttons (21/7) it is possible to change the values.

After the year value the change will be automatically saved

7 BLAST CHILLING CYCLES

7.1 General operating principles

Pre-cooling of the machine should always be performed upon initial running of a blast chilling or deep freezing operation. This optimises the subsequent work cycle, reducing the time.

Blast chillers are refrigeration systems that work with a two-phase cycle:

- **Chilling phase (limited duration)**
- **Storage phase (unlimited period).**

The chilling phase starts upon pressing of the "Start/Stop" button (22) and continues until the end of the chilling phase that is used to achieve the time set (Time chilling) or for reaching of the product temperature set (Temperature chilling); changing to the unlimited duration storage cycle takes place automatically (except for the HARD+HARD negative chilling cycle). It is possible to stop the chilling or storage at any time by pressing the "Start/Stop" button (22).

Chilling Time

During this type of chilling, the display (18) shows the cell probe temperature while the other display (19) shows the time remaining at the end of the chilling phase. The Time chilling LED (6) is lit as is the time symbol (20).

Temperature Chilling

If Temperature chilling is selected, at the start of a cycle a check is performed of the correct insertion of the product probe (if enabled). If the test provides a negative result an alert appears on the display "SONDA NON INSERITA - PROBE NOT INSERT" and the beeper sounds for 60 seconds (parameter c9); that symbol disappears when the beeper is silenced by pressing the button (7). If instead the button is pressed again (5) switching to Temperature cycle, the cycle continues based on the data read by the the product probe. If nothing is pressed, the temperature cycle automatically switches into a Time cycle for the remaining duration of the countdown.

During this type of chilling, a display (18) will show the temperature of the probe (the highest value of the two) and the other (19) will show a countdown. The countdown only starts when the insert temperature is less than 65°C. The temperature chilling LED (4) is on as is the probe insert symbol (17).

Chilling and storage status symbols

During chilling the LED that lights the symbol will be lit and flashing. Upon completion of chilling, this LED flashes alternately with the LED located beneath the storage symbol (8) while the beeper sounds for 60 sec, and the scrolling text appears "End Cycle - Fine ciclo". After this time, the chilling LED (9) switches off, the storage one starts flashing (8) and the scrolling text disappears (even when the beeper silencer button (7)) is pressed

The LED (8) will flash when the compressor is on while if the set value has been reached, they will only remain lit until transition to storage. Similarly with storage, the LED (9) will flash when the compressor is active and will remain lit for the rest of the storage.

7.2 Chilling phases

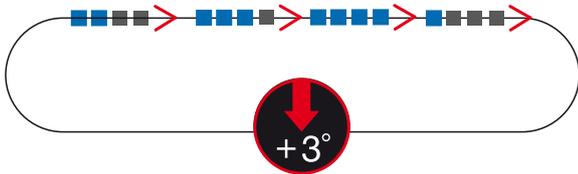
Pressing the positive chilling button (2) or negative chilling button (3) allows selection of a different chilling mode. The number of LEDs lit (23) or (24) define the "intensity" of chilling. The "Time" or "Temperature" chilling mode will be set by pressing the button (5). Lighting up of the corresponding LEDs on the sides will define the type of chilling

Each time the positive chilling button (2) is pressed the display will show successively for 3 seconds one of the following cycles: *LIGHT, SOFT, MEDIUM, FAST*

Each time the negative chilling button (3) is pressed the display will show successively for 3 seconds one of the following cycles: *LIGHT, SOFT, HARD, RUN*

7.3 Selecting and starting the Positive chilling cycle

When the button (2) is pressed for the first time, "SOFT" mode will be selected, represented with lighting up of two of the four LEDs (24); subsequent pressing takes to 3 and 4 the LEDs lit and results in the "HARD" mode. Successive pressing reduces from 4 to 1 the LEDs lit and so on.



“LIGHT” - 1 LED only on

In this condition, there will be a cell temperature set of -3°C . This avoids the risk of ice formation during the positive chilling phase and it will be used for loads which can be damaged by excessively heavy treatment (vegetables etc.)

“SOFT” - 2 LEDs on (Default)

In this condition, there will be a cell temperature set of -5°C . This set will allow quicker chilling for products that in any case are fairly resistant to the freezing process.

“MEDIUM” - 3 LEDs on

In this condition, there will be an initial cell temperature set of -20°C ; after the HARD time, this will be taken to a cell temperature of -3°C . This method accelerates cooling in the presence of products that are resistant and very hot initially.

“FAST” - 4 LEDs on

In this condition, there will be an initial cell temperature set

of -20°C ; after the HARD time, this will be taken to a cell temperature of -5°C . This method accelerates cooling in the presence of products that are resistant and very hot initially.

With the MEDIUM or FAST temperature chilling, the set change will be decided by the product temperature detected according to the parameter (Cd).

Once the MEDIUM or FAST cycles are started, to modify the HARD phase duration simply press the button (2) that will show on the display (19) the words "Hard" and will result in flashing on the display (18) the value in minutes of the HARD phase. With the +/- buttons it is possible to increase or decrease this value and confirm with the button (2) or wait 5 seconds (N.B. THE CHANGED VALUE ONLY APPLIES TO THE CYCLE IN PROGRESS).

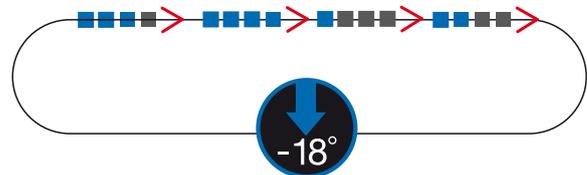
Once the cycle is selected, it is necessary to select the Time or Temperature mode by pressing the button (5) until coming on of the relevant LED.

At this point to start the cycle press the START/STOP button (22)

In the event of Temperature chilling, it is possible to change this chilling end value by pressing the button (2) or (3) depending on the type of chilling in progress. Having pressed the button, the display (19) will show the lettering "Set" and on the display (18) will appear the value of the end chilling temperature set, which can be modified within the envisaged range. Having pressed the button (2) or (3) or after 5 seconds the changed value is saved.

7.4 Selection and starting the Negative chilling cycle

Pressing the button (3) for the first time will select the "HARD" mode, represented by coming on of three of the four LEDs (23) present. Subsequent pressing will take to 4 the LEDs lit and will return into "RUN+HARD" mode. Successive presses reduce from 4 to 1 the LEDs and so on.



“LIGHT” - 1 LED only on

In this condition, there will be an initial cell temperature set of -5°C ; after the SOFT time defined by the parameter (ts) this will move to a temperature of -30°C . This mode is for use on large pieces where it is important to homogenise the chilling cycle.

“SOFT” - 2 LEDs on

In this condition, there will be an initial cell temperature set of -20°C; after the SOFT time defined by the parameter (ts) this will move to a temperature of -30°C. This mode is for use on large pieces where it is important to homogenise the chilling cycle.

In the case of SOFT or LIGHT temperature chilling, the set change will be decided by the product temperature detected according to the parameter (C2).

Once the cycle to change the duration of the SOFT phase is started (never greater than the parameter C4) simply press the button (3) which will show on the display (19) the wording "Soft" and on the display (18) the value in minutes of the SOFT phase. With the +/- buttons, it is possible to increase or decrease this value and confirm it with the button (3) or wait for 5 seconds (N.B. THE CHANGED VALUE ONLY APPLIES TO THE CYCLE IN PROGRESS).

In the case of temperature chilling, the set change will be decided by the product temperature detected (see parameter cd)

"HARD"-3 LEDs on (Default)

In this condition and in the absence of adjustments 0/10V of the compressor, there will be a set of cell temperature of -40°C. This set accelerates the freezing process in the presence of products that do not require particular preparation.

"RUN" - 4 LEDs on flashing

In this condition and in the absence of adjustments 0/10V of the compressor, there will be a set of cell temperature of -40°C. This set accelerates the freezing process in the presence of products that do not require particular preparation. In this case then the deep-freezing cycle will be continuous without moving into storage. The move to storage will be performed by pressing the button (3) and reducing the LEDs from 4 to 3. That process should be used in continuous insertion and extraction condition produced by the blast chiller. During negative chilling, the compressor stops when the air temperature reaches the planned set point. In this cycle there will NOT BE automatic defrosting.

- Probes value reading

With the cycle in progress, pressing the button (12) will show in sequence, after the cell probe value, the values of the insert probe 1 and 2 and the evaporator probe in flashing mode on the display (18) while on the display (19) will appear the wording in sequence of SP1, SP2, and SE that represent the type of probe being displayed.

7.5 Storage phase

Storage always takes over and automatically after every

chilling event (apart from the negative RUN+HARD exception) and keeps the product at the storage temperature of +2°C or -25°C, depending on the type of chilling.

These values will be editable in all cases by pressing the button (2) or (3). It is possible to change during the storage phase the temperature set which appears flashing on the display (18), while on the display (19) the wording SET appears. To adjust the value (within 6 seconds) press the buttons +/-.

8 DEFROST MODE

"Gas-hot" or "air" defrosting takes place:

- in automatic mode only during the storage phase and with a default time of 8 hours that is editable;
- manually both with machine in storage and with machine in STOP (not during chilling) by pressing the defrost button (13). All defrosting in progress can be interrupted by pressing the defrost button.

Duration of the defrost cycle is given by reaching the defrost end temperature measured by the evaporator probe; there is in any case a maximum length for defrost after which defrosting ends automatically.

Whenever possible, namely during the cycles of chilling, of ice-cream hardening, of storage, defrosting in storage and defrosting at machine standstill, it is possible to view the evaporator probe temperature by pressing the button (12): the display will show for 5 seconds the wording "S.EV + valore".

Manual defrosts cannot be activated in the event that the value of the evaporator probe is higher than a certain temperature value, in which case a series of beeps will be emitted to alert the user to the fact that it is not possible to defrost and the wording "NoDefrost" will appear for 5 seconds.

9 DRYING WITH MACHINE AT STANDSTILL

When the machine is stopped by pressing the button (13) for more than 3 sec, ventilation will be activated for a maximum time of 20 minutes (either with door open or closed). During this function the LED flashes and the display shows the scrolling text "Air Defrost". To exit from this function press (short press) the defrost button (13). This mode is used when the machine is at a standstill for air defrost or to dry the machine after cleaning.

10 DOOR OPENING

When the machine is running (chilling, storage, defrost), the door is opened, the display shows the scrolling text "DOOR OPEN" every 5 seconds, alternating with the values read,

and the beeper emits beeps.

When closing the door, the fan starts without delays.

If the machine is running the door remains open for more than 5 minutes, the fan does NOT start again. The compressor is also locked and the open door alarm is given. Door reclosing, resetting of the audible alarm, visual and alarm relay.

If the door is opened while the machine is in "stop" the beeper does not sound but the appearance of the wording DOOR OPEN continues.

11 OZONATOR

This function is only available when the machine is stopped and is activated by pressing the ozonation button (12) (the LED of the button comes on). The ozone is released for 120 minutes after which the release ends (the LED goes off). At the same time as the Ozonator the fan is also activated to facilitate movement.

During the sterilisation cycle the word "Ozone" will flash on the display (18) and the display (19) will show the count-down of the cycle time. If the door is opened during the 120 minutes, the sterilisation cycle will stop IMMEDIATELY; it will not even start upon closing of the door, and the scrolling text "STOP Ozone Cycle" will appear for 5 seconds. If the ozonator is not installed the scrolling text "Ozone Not Present - Ozono non presente" will appear on the display for 10 seconds.

12 ICE-CREAM CYCLE

This cycle enables the user to use the chiller in negative chiller mode with a Timer that schedules the introduction and extraction of ice-cream containers, allowing the surfaces to harden, after leaving the ice-cream making machine.

With the machine in stop mode, press the "ice-cream" button (10); the beeper will emit a beep and the LED of the button will start to flash. The negative chilling cycle will start immediately (to cool the machine), the display (19) of the time will show the flashing cycle time while the display (18) will indicate the temperature of the cell probe.

The user has the option, at this point, to modify the time of the hardening cycle by pressing the "+" and "-", and to confirm the time by pressing the "ice-cream" button (10).

After this setting when the user opens the door (to introduce the ice-cream) and then recloses it, a beep is emitted as confirmation and the countdown will start. When the time reaches zero, the beeper will sound for 60 seconds, and the sliding text "carica gelato - charge ice cream" will appear. Then whenever the door is closed, any countdown in progress is interrupted and a new one starts.

During the cycle the user may at any time change the time

and the temperature Set as default as follows:

1) by pressing the "ice-cream" button (10), with the first time press the time on the display (19) will flash and it can be changed with the buttons +/-.

2) the next press of the button (10) will acquire the new value.

3) now using the buttons +/- it is possible to change the flashing set represented on the display 1(8) with a value that can range from the minimum value to a maximum one (this theoretically allows setting of the long softening cycles for ice-cream which, extracted from the storage machine, must be placed on display).

4) pressing the button (10) allows saving of the new value followed by return to the cycle.

The user can stop this cycle at any time by pressing the START/STOP button (22).

13 THAWING CYCLE

This function aims to safely thaw (below 10°C of temperature) cell) previously frozen or deep-frozen products. The process is based both on cell temperature control, with a positive value between 3°C and 10°C average, and on the action of forced ventilation.

When the machine is stopped, select the thawing cycle by pressing the button (15); the cycle will start immediately showing on the "display 19" the standard thawing time and on display 18" the measured cell temperature .

To change the values of time and temperature set, simply press the button (15) until the display flashes which will present the time value set. With the +/--buttons it is possible to modify the thawing time. With the modification completed with the +/--buttons it is possible to change the SET which will be confirmed by pressing the button (5) or by waiting 5 seconds.

Then the temperature set value flashes on the display (8) which can also be changed with the +/- buttons. With the modification completed with the +/--buttons (6) it is possible to change the SET by pressing the button (3) or by waiting 5 seconds.

Then on the display, if VE2 is different from 100, the wording "HARD FANS" will be represented (**if fan regulation is enabled**). To confirm press the button (5), while to change press the +/- buttons until appearance of the second option "SOFT FANS" (reduced evaporator fan speed); pressing the button (5) the value selected is confirmed.

After this operation, the cycle in function is resumed which when finished will activate the beeper and the scrolling text

"End Cycle - Fine ciclo" will appear. At that time the cycle will go into storage.

To see the value of the insert probe during thawing, simply press the button (12) which will display the product probe value for 5 seconds flashing on the display (18) and the wording "SP1" and "SP2" is shown on the display (19) to distinguish the probe reading.

14 CHILLING PROGRAM STORAGE

The user has the button (16), which allows the saving or recalling of 99 chilling cycles.

To store a chilling cycle the user must:

- 1) set a chilling type (buttons (1)-(2)).
- 2) set the mode of chilling (by temperature or by time, button (5)).
- 3) set the total time or the final temperature +/- buttons.
- 4) press and hold (long press) the "PROGRAM" button (16) until the beeper emits a beep; the LED of the button starts to flash. On the basis of the first display it will flash signifying waiting for setting of the first letter/number.
- 4) then using the keys +/- set the first letter/number and confirm with the button (5). This will confirm the value, passing on to the next one. Arriving at the ninth character or even before, it is possible to press the START button for start and storage (ATTENTION, if a program with the same name already exists, it will be overwritten).
- 5) press START/STP (22).

With Start the software stores the "type" and "mode" of chilling selected.

To discontinue saving of the program, press the storage button again or wait for the Time out (approximately 10 sec.). If time chilling has been set, the duration set is stored.

In the case of Temperature chilling, it will store the time in which the insert probe reaches the PRODUCT TEMPERATURE SET set, and will store this time as duration of the chilling.

In addition, if the chilling is Positive Hard, it also saves the time necessary to reach the core at +20°C (Hard)

When saving a temperature (insert probe) chilling cycle, the LED of the programming button flashes to indicate that storage of the times is in progress. As soon as the temperature chilling cycle ends, the LED stops flashing to indicate that storage has been successful.

If storing a temperature cycle, this stops (due to alarms,

button stop, etc.), the cycle times are not saved. The initial settings however remain saved.

15 CHILLING PROGRAM EXECUTION

To call up and run a memory-resident program, the user must:

- 1) press the "PROG" button (short press), the LED lights up and with the +/- buttons, select one of the saved programs.
- 2) press START

If the save button is pressed by accident, pressing it again will exit that function.

While a program is running, by pressing the "PROG" button, the display shows the name of the program in progress.

16 ALARMS

Summarised here are the main alarms that can appear and that will be represented by the scrolling text on the display:

16.1 Evaporator probe alarm

Cause: Being outside the operating range (-50°C / +100°C) for more than 30 seconds.

Effect: Interruption of any defrosting in progress. Inhibition of all periodic defrosting. Inhibition of manual defrosting (except forcing of fans with machine at standstill).

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display: The display shows the scrolling text "AL01 - SONDA EVAPORATORE DIFETTOSA - FAULT EVAPORATOR PROBE

Flashing RED symbol (14)

Reset: It resets by itself if the value of the probe falls (approximately 20 seconds), or if the probe is excluded with parameter "/5"

16.2 Product probe alarm

Cause: Being outside the operating range (-50°C / +100°C) for more than 30 seconds with a temperature chilling cycle in progress.

Effect: Interruption of the temperature chilling cycle in progress resulting in automatic start of Time chilling. Inhibition of temperature chilling button.

Beeper: The beeper sounds (3 seconds and then pauses for

30 seconds) until the silencer button is pressed (minus (6)).

Display: The display shows the scrolling text "AL02 - SONDA PRODOTTO 1(2) DIFETTOSA - FAULT PRODUCT PROBE 1(2). The symbol flashes RED (14)

Reset: Press the alarm silencer button (with beeper off) or exclude with parameter "/9" (temperature chilling disabled)

16.3 Cell probe alarm

Cause: Being outside the operating range (-50°C / +100°C) for more than 30 seconds.

Effect: If START is given to a positive chilling (both with Time and Temperature) or if the latter is already in progress, it immediately goes into pause-work positive storage mode (C5 and C6 parameters).

If START is given to a negative chilling (both with Time and Temperature) or if the latter is already in progress, it continues (as it is not conditioned by the cell temperature (until passing into negative storage which will be in pause-work mode (C5 and C7 parameters). If the event takes over during storage, this continues in pause-work mode.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display: The display shows the scrolling text "AL03- SONDA CELLA DIFETTOSA - FAULT ROOM PROBE"
Flashing RED symbol (14)

Reset: It resets by itself if the value of the probe is activated.

Note: With cell probe anomaly it is in any case possible to perform RUN+HARD chilling (compressor goes into continuous mode).

16.4) Door micro-switch alarm

Cause: Active input for more than 5 minutes (uF parameter) with machine in start.

Effect: The blast chiller behaves as described in the section "7 Door opening 7".

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display: The display shows the scrolling text "PORTA APERTA - OPEN DOOR"
The symbol (14) flashes YELLOW

Reset: Press the alarm silencer button (with beeper off), or it resets by itself if the input status is activated

16.5 Alarm - Differential Thermal Breaker - Oil Pressure

Cause: When the input alarm is activated for more than 5 seconds

Effect: It places the machine in STOP. Inhibition of all the buttons except that of silence/reset, entering the parameter menu and ON/OFF.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL06-MAGNETOTERMICO-PRESS. OLIO - BREAKER - OIL PRESS."

Flashing RED symbol (14)

Reset: pressing the off beeper alarm silencer button and alarm cause disappearance.

16.6 Automatic reset minimum pressure switch alarm 16.6.

Cause: When the machine is in start the alarm input is activated for more than 5 seconds (with machine in STOP it is not activated). The alarm is inhibited for approximately 2 minutes with each compressor start. The alarm is inhibited during "pump downs".

Effect: It places the machine in STOP. Inhibition of the Start/Stop and Defrost buttons

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL07-PRESSIONE MINIMA - MIN. PRESSURE"
Flashing RED symbol (14)

Reset: Pressing the off beeper alarm silencer button or switching off and switching on the card again (stand-by).

16.7 Automatic reset Kriwan Alarm

Cause: When the input is activated with machine in start for more than 5 seconds, at least 3 times in the same cycle.

Effect: Each time only the compressor stops and starts up again when the input is activated. Upon the third time the machine is placed in STOP.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: If the Kriwan alarm is activated, for the first two times only the word "Kriwan" appears, alternating with the Temperature and Time values represented, without locking the machine but only the compressor. Upon the third

time the scrolling text "AL08 - KRIWAN COMPRESSORE -COMPRESSOR KRIWAN" will appear.

Flashing RED symbol (14)

Reset: Pressing the off beeper alarm silencer button or switching off and switching on the card again (stand-by).

16.8 Input alarm HT1 - fusable

Cause: When the alarm is activated for more than 5 seconds.

Effect: electrical disconnection of certain components downstream of the fuse.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL09 - CAMBIA FUSIBILE - REPLACE FUSE".

Flashing RED symbol (14)

Reset: It resets itself when the status of the input is activated.

16.9 Overtemperature alarm

Cause: The overtemperature alarm is activated (only during storage) when the cell probe detects a certain temperature value time greater than the sum of the positive or negative storage set with the relevant alarm delta (parameter A2 or parameter A4). The overtemperature alarm is in any case disabled for a certain length of time (parameter A5) from the start of the storage phase and after a defrost. This alarm is not activated/managed if the cell probe is in alarm.

Effect: Storing of the alarm in the HACCP memory together with the date and time.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL11 - SOVRATEMPERATURA - OVER TEMPERATURE".

The symbol (14) flashes yellow.

Reset: Pressing the off beeper alarm silencer button or switching off and switching on the card again (stand-by).

16.10 Black-Out Alarm

Cause: it is activated when a cycle in progress is interrupted by a blackout, and when the duration of the blackout is greater than the time defined by the parameter "uL".

Effect: Storing of the alarm in the HACCP memory together with the date and time. The machine restarts the cycle set,

in the case of chilling time from the total time.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL12- BLACKOUT DURATA 00 h 00' - DURATION BLACKOUT 00h00' ". The symbol (14) lights up flashing YELLOW (21)

Reset: Press the alarm silencer beeper off button

16.11 Compressor preventative maintenance alarm

Cause: When the operating hours of the compressor are an integer multiple of the hours set (if alarm activated).

Effect: none

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "SERVICE + TEL . 00000000000000 "(see parameter TEL)

Alternating with the time and temperature values represented. The symbol (14) flashes yellow.

Reset: Press the alarm silencer beeper off button

16.12 Temperature not reached in the time set alarm

Cause: When temperature chilling lasts longer than the times for Time out (parameter c1 or c4).

Effect: signalling with flashing time or temperature display and beeper sound; press the "-" button (7) to stop the signals.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Reset: Press the alarm silencer beeper off button

16.13 Power keypad-card connection alarm

Cause: When there is no connection between the interface and the power card

Effect: All the buttons are disabled. All the relays are deactivated. All the inputs are ignored. The LED comes on corresponding to the button that was pressed.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) indefinitely.

Display/LED: The display (with scrolling text "AL15 - CONNESSIONE TASTIERA - KEYBOARD CONNECTION".

Flashing RED symbol (14)

Reset: Removing and restoring the power supply to the card.

Notes: As long as this warning persists, the chiller is unusable.

16.14 Maximum pressure switch alarm

Cause: When the alarm is activated for more than 5 seconds. Or in the presence of maximum pressure gauge if the maximum pressure value defined by the parameter "uH" is exceeded

Effect: The machine goes into STOP Inhibition of all the buttons except that of silence/reset, entering the parameter menu and ON/OFF.

Beeper: The beeper sounds (3 seconds and then pauses for 30 seconds) until the silencer button is pressed.

Display/LED: The display shows the scrolling text "AL16-PRESS.. MASSIMA - MAX PRESS."

Flashing RED symbol (14)

Reset: press the alarm silencer button (7) in the condition of the beeper off and alarm cause disappeared.

In the case of multiple simultaneous alarms, all the active alarms will be displayed alternately.

When the beeper sounds the user can silence it with the silencer button (7), by repressing the button (7). If the conditions no longer persist, the alarm can be reset.

17 HACCP ALARM MEMORIES RESET

With the appliance in standby mode press the HACCP button (11) for at least 5 seconds; the display will show the scrolling text "OFF RESET". Use the +/-keys (6) to show "ON RESET" and then confirm the alarms cancellation by pressing the HACCP button (11). The card goes back automatically to stand-by.

18 HACCP DATA READING

For HACCP management there will be three types of alarms recorded:

- overtemperature alarm (only active in storage mode)
- black-out alarm
- the alarm of chilling/deep-freezing that is overly long that will only be recorded in the Cycles file that can be downloaded using the USB key.

Of these alarms the last 20 alarms are stored.

To view this history press (long press) the HACCP button (11) with machine in stop. To scroll through the Alarms on the display, press the + and - buttons as if they were the UP/DOWN buttons; to exit press the HACCP button (11) again or the standby button (1)

Here is an example of what will appear in succession, by pressing the down button (7):

- 1) the scrolling display "Alarm 1" + "Sovratemperatura-Overtemperature" or "Black-out"
- 2) scrolling " Data Inizio- Start Date" " 01/02/15"
- 3) scrolling " Ora Inizio- Start Hours" " 01:25"
- 4) scrolling " Data Fine- End Date" " 02/02/15"
- 5) scrolling " Ora Fine- End Hours" " 01:37"

19 HACCP DATA EXPORT WITH USB

There now follows a description on how to record data and to extract it onto a USB stick

19.1 Extracted data format

The data that can be exported in txt format are the **Alarms** and the **Working cycles**

Alarms

Each individual alarm is recorded, with its number linked to the type of alarm, in a dedicated file and marked with the following nomenclature:

Date - alarm start time - ALXX.txt

For example for a high pressure alarm we will have:

05_04_2014-12h24-AL16.txt

Inside the txt file generated should be recorded all the sizes of Digital/Analogue I/O; the alarm start and end data will also be recorded.

Work cycles

Every single work cycle in progress will be recorded with the following nomenclature:

Date - cycle start time - Cycle type .txt

In the event of positive SOFT chilling we will have:

05_04_2014-13h54-POS2.txt

By cycle Type it is meant:

Positive chilling: POS2-POS1-POS3 (depending on the

LEDs lit)

Negative chilling: NEG1-NEG2-NEG3-NEG4 (depending on the LEDs lit)

Chilling program: PROG no

Defrost. THAW

Ice-cream GEL

Ozone Cycle: OZN

The cycle start and end conditions will typically be recorded. and any alarms that intervene in the cycle and sampling of all the sensitive values will be provided.

19.2 Data downloading with USB

To extract the data with the machine at standstill insert the USB stick. The card will propose on the display (7) the scrolling text "Download Giorno-Day"; with the buttons (6) it will be possible to select the scrolling text "SETTIMANA-WEEK" or "MESE-MONTH" or "TUTTO-ALL", which will select the time range for which to download the files recorded on the USB stick.

Downloading will be performed as soon as the HACCP button (16) is pressed. During downloading the segments that will increase from 1 to 9 will appear on the display to simulate the download. With downloading finished, for at least 10 sec (if no button is pressed), the scrolling text "FINE DOWNLOAD- END DOWNLOAD" will appear on the display (7) .

Possible saturation of the memory will be resolved by erasing older files and replacing them with new ones.

The information and instructions in this chapter are intended for all staff who work on the machine: the user, the maintainer and unskilled personnel. All cleaning and maintenance operations must be performed after disconnecting the electricity supply from the system.



20 ORDINARY MAINTENANCE

20.1 Operations by the user that do not require the assistance of a qualified technician

20.1.1 Cell cleaning

In order to ensure hygiene and protection of the quantity of the food being processed, internal cleaning of the cell must be performed frequently, depending on the type of food stored.

Suggested frequency: weekly cleaning.

-The shape of the cell and of the internal components allow its cleaning using a cloth or sponge.



-Clean with water and non-abrasive neutral detergents.

Rinsing is possible with a cloth or sponge soaked in water or with a moderate water jet (not exceeding the system pressure). Do not scrape the surfaces with sharp or abrasive items.

20.1.2 Outer casing cleaning

For cleaning of the casing simply use a cloth dampened with a chlorine-free product, suitable for stainless steel.

20.1.3 Defrost water drainage

The system was designed for automatic and manual defrosting when needed.

Check for correct water drainage of the evaporator on the drip tray (if supplied), avoiding the occurrence of obstructions of the drainage pipe.



20.2 Operations that must be performed by an authorised installer

Below are listed the routine maintenance operations that must only be performed by qualified installation technicians. The manufacturer declines all liability for accidents caused by non-compliance with this requirement.

Below is a list of operations useful to preserve the efficient operation of the appliance with related recommended frequencies.

Detailed maintenance operations are described in the Service Manual kept by installers and qualified technicians.

20.2.1 Condenser cleaning (for air cooled models only)

For the correct and efficient operation of the condenser, the air cooled condenser must be kept clean to allow the circulation of air.

Recommended frequency: operation to be performed every 30 days or in any case according to the working conditions of the appliance (the presence of dust and flour in the work environment of the appliance significantly affects dirt accumulation of the condenser thus making it less efficient).

20.2.2 Condenser filter cleaning (for air cooled models only)

Recommended frequency: operation to be performed every 30 days. or in any case according to the working conditions of the appliance (the presence of dust and flour in the work environment of the appliance significantly affects dirt accumulation of the condenser thus making it less efficient).

20.2.3 Evaporator cleaning

For the correct and efficient operation of the appliance, the evaporator battery must be kept clean to allow free air circulation and especially to remove food residue and grease that can be a source of bacteria harmful to human health.

Suggested frequency: operation to be performed every 30 days. or depending on the type of food being processed.

20.2.4 Ozonator maintenance

Dirty and dusty environments reduce efficiency of the ozonator: for longer lamp life and for greater efficiency, the bulb of the ozonator should be cleaned periodically. To ensure maximum functionality the bulb must be replaced every 12 months.

For the correct maintenance and cleaning practices comply with the instructions in the service manual.

Suggested frequency: clean the lamp of the ozonator at least every 3 months .

Replacement of the lamp every 12 months (only genuine spare parts).

21 TIPS FOR SMOOTH OPERATION

21.1 Operating instructions

Before operating the machine it is necessary to perform thorough cleaning inside the cell.

21.2 Pre-cooling

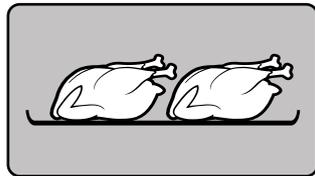
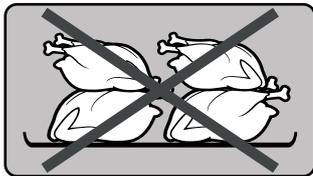
Before using the machine for the first time or after a period of disuse, pre-cool the cell by running the machine empty until it reaches the working temperature set.

To obtain good performance of the machine and to avoid food alterations, it is advisable to:

- stack the products in order to promote the circulation of cold air in the entire cell;
- avoid prolonged and frequent door openings.

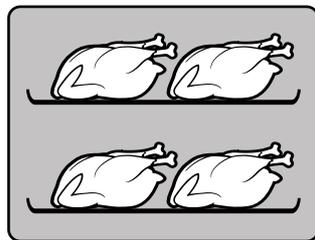
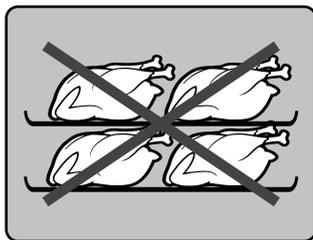
21.3 Loading of the machine

a) Make sure that the food to be chilled and/or deep-frozen does not overlap in any case that it does not have thicknesses greater than 50-80 mm. Do not overload the machine beyond what is stated by the manufacturer.

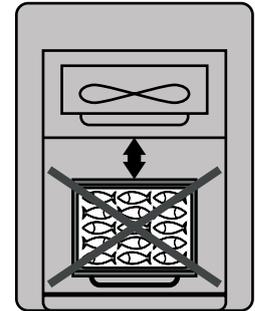
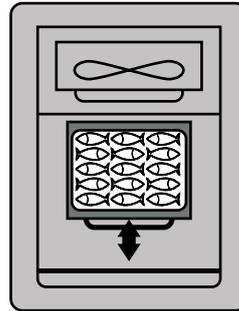


b) Ensure a sufficient distance is maintained between the trays to allow adequate air circulation.

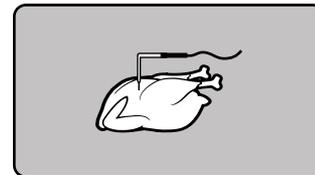
If the machine is not completely loaded, distribute the trays and the load over the entire useful height avoiding concentrations.



c) Place the trays in the inner part of the door, making sure that they are as close as possible to the evaporator.



d) The core probe must be positioned correctly in the centre of the product with the largest cut or piece, making sure that the tip of the probe does not protrude out or touch the tray. The probe must be cleaned and sanitised before each new cycle (work) in order to avoid undesirable contamination.



e) Do not cover the trays and/or container with lids or insulating films: the more the food is insulated the greater the time required for chilling and rapid freezing.

Packaging of the trays must be performed when the product is already frozen, before it is put into storage.

