INDEX

INTRODUCTION

The "BLAST CHILLER / SHOCK FREEZER" has been constructed in respect of the overall community norms concerning the free circulation of industrial and commercial products in EU countries

Directive 2004/108/CE	-	**Electromagnetic Compatibility**
Directive 2006/95/CE	-	**Low Voltage**
Directive 2002/95/EC	-	**RoHS**

Before proceeding with all the operations on the products, it is recommendable to read carefully the user's manual and maintenance. In addition, it is important to follow all the current regulations (loading-unloading, installation of the product, electrical connections, positioning of the item, disposal of material).

Therefore, the units are supplied with all the documentation imposed by such standards.

The company will not be held liable for any breakage, accidents or faults due to non-compliance, including non-compliance for not following the instructions of this manual. Moreover, the company will not be responsible if the user makes any modifications, variants or if non-authorised accessories are installed in the unit. The maintenance requests easy operations, which can be carried out exclusively by specialized technician.

USING MANUAL

The user and maintenance manual constitutes an integral part of the blast chiller. It must be kept intact and in the safe place for the entire life of the appliance, even if the appliance is transferred to another user or owner. The manual must be easily consulted by operators and maintenance staff and must be placed nearby the unit.
The appliance includes all documentation required by regulations in force, which are reached during the planning and manufacturing phase. All the instructions prescribed on this manual must help the operator and the qualified technician to conduct all installation procedures, connections, use and maintenance of the system, in a safely manner and correctly. This user and maintenance manual contains all the information required for handling the unit with particular attention to safety.

MANUAL PRESERVATION

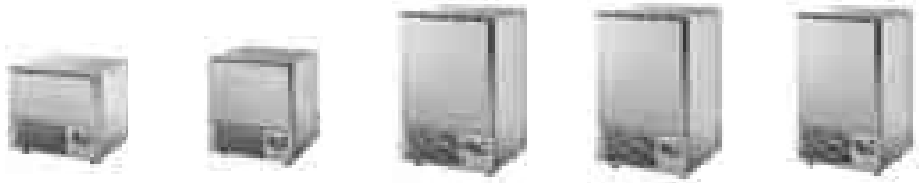
It is advisable to use the manual with care and in such a way as not to compromise its contents. Under no circumstances shall the user remove, pull out or rewrite any parts of the manual.
Keep the manual in a place protected against humidity and heat. The instruction manual shall be kept nearby the unit so that operators can easily consult the manual. The manual must also return to its location after each consultation. Furthermore, the manual must be kept for the entire life of the appliance and must be handed over to any successive user or owner.

THE MANUFACTURER RESERVES THE RIGHT TO MAKE TECHNICAL MODIFICATIONS TO ITS OWN PRODUCTS WITHOUT GIVING PRIOR NOTICE.

DESCRIPTION OF THE BLAST CHILLER

The current manual refers to a blast chiller that is an appliance suited for cooling quickly cooked food to a temperature of +3° C (positive process) or to -18° C (negative process).

WITH UNIT



		3 TRAYS	5 TRAYS	7 TRAYS	10 TRAYS	10 TRAYS
DIMENSIONS	WxDxH mm	750x740x720/750	750x740x850/880	750x740x1260/1290	750x740x1260/1290	750x740x1260/1290
NET WEIGHT	kg	50	71	90	90	102
CHAMBER DIMENSIONS	WxDxH mm	600x400x280	610x400x410	760x630x410	760x630x410	760x630x410
CAPACITY	TG	3 GN1/1 - 3 60x40	5 GN1/1 - 5 60x40	7 GN1/1 - 7 60x40	10 GN1/1 - 10 60x40	10 GN1/1 - 10 60x40
SPACE BETWEEN TRAYS	cm	7	7	10,5	7	7
BLAST CHILLING PERFORMANCE	+3°C	14 kg	20 Kg	25 Kg	25 Kg	35 Kg
BLAST FREEZING PERFORMANCE	-18°C	11 kg	15 Kg	20 Kg	20 Kg	25 Kg
GAS	GAS	R404A/R507	R404A/R507	R404A/R507	R404A/R507	R404A/R507
TEST DETAIIS	°C / RH	+43 / 65%	+43 / 65%	+43 / 65%	+43 / 65%	+43 / 65%
ABSORBED POWER	W	1150	1424	1490	1490	2100
POWER SUPPLY	V-P-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50

WITHOUT UNIT

		3 TRAYS	5 TRAYS	7 TRAYS	10 TRAYS	10 TRAYS
DIMENSIONS	WxDxH mm	750x740x720/750	750x740x850/880	750x740x1260/1290	750x740x1260/1290	750x740x1260/1290
NET WEIGHT	kg	30	51	60	60	69
CHAMBER DIMENSIONS	WxDxH mm	600x400x280	610x400x410	760x630x410	760x630x410	760x630x410
CAPACITY	TG	3 GN1/1- 3 60x40	5 GN1/1 - 5 60x40	7 GN1/1 - 7 60x40	10 GN1/1 - 10 60x40	10 GN1/1 - 10 60x40
SPACE BETWEEN TRAYS	cm	7	7	10,5	7	7
BLAST CHILLING PERFORMANCE	+3°C	14 kg	20 Kg	25 Kg	25 Kg	35 Kg
BLAST FREEZING PERFORMANCE	-18°C	11 kg	15 Kg	20 Kg	20 Kg	25 Kg
GAS	GAS	R404A/R507	R404A/R507	R404A/R507	R404A/R507	R404A/R507
TEST DETAIIS	°C / RH	+43 / 65%	+43 / 65%	+43 / 65%	+43 / 65%	+43 / 65%
ABSORBED POWER	W	40	70	80	80	100
POWER SUPPLY	V-P-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50

Available with racks kit and guides to fit pans 600x400mm or GN 1/1.
The external and internal structure is made of stainless steel. While the motor compartment is made of zinc-coated metal sheet. The basin is insulated with expanded polyurethane resin with a density of 40Kg./Mc.
The power supply is possible thanks to electric cable with plug already provided by the manufacturer.

The insulation of the basin is free of CFC in order to guarantee a low environmental impact.

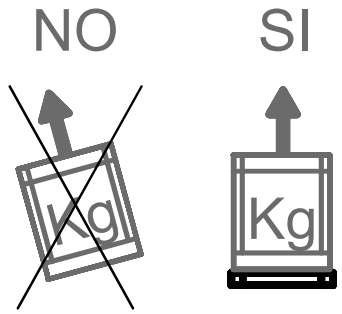
ATTENTION

All the operations regarding chapters:
1. POSITIONING THE BLAST CHILLER – 2. ELECTRICAL CONNECTIONS AND EARTHING – 3. CLEANING – 4. RECOMANDATIONS AND WARNINGS – 6. MAINTANANCE
Must be carried out by high qualified technical staff.

1. POSITIONING OF THE BLAST CHILLER/FREEZER

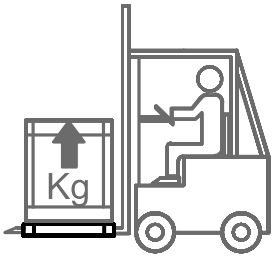
Before unloading/loading and positioning the blast chiller/freezer inside the shop/kitchen, you are kindly requested to read carefully the instruction manual in the different chapters regarding the unloading/loading, dimensions, weight, evaporating water basin, adjustable feet, electric connections and maintenance procedures of the blast chiller/freezer subjected in the present manual.

1.1 TRANSPORT



Do not superimpose blast chiller packing (allowed only if there is wooden crate packing option).
We recommend you to transport the blast/chiller always in the upright position (as mention on the packing). If the blast chiller/freezer with built in condensing unit was inclined during transportation we suggest you to keep the product in the suggested upright position for at least 8 hours, before switching it on. In this way, you will allow the oil to flow in all the components, lubricating them again. Afterwards you can proceed with the start.

1.2 UNLOADING / DIMENSIONS/ WEIGHTS



The unloading/loading procedures should be executed by pallet-jack or by forklift driven by skilled and authorized staff. We decline any liability for failing to comply with safety rules currently in force.
Before starting the unloading, positioning and installation procedures of the blast/chiller freezer inside the shop/kitchen according to the model of the blast chiller/freezer, please read carefully the information showed in the dimensions and weights list.

The manufacturer declines any responsibilities due to operations performed without adopting the above safety precautions.

For further information, refer to the previous chapter "DESCRIPTION OF THE BLAST CHILLER".

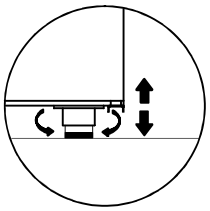
1.3 PACKING

At the delivery please check that the packing is intact and that during transportation no damage was occurred. Remove the external carton-box; remove the fastener that keeps still the blast chiller/freezer to its pallet, put it in the correct position and then remove the adhesive white protection of the stainless steel.
The recovery and the recycling of the packing materials such us, plastic, iron, carton box, wood help the saving of row material and reduce the waste. Please consult your area address book for disposal of materials and authorized garbage dump.

1.4 CONDENSATE WATER DRAINING/ DRAINING CONNECTION

The blast chiller/freezer is available with a built in condensing unit complete with a removable condensate water basin with manual defrost (without defrost heater).
The basin is assembled in the lower part, under the condensing unit.

1.5 POSITIONING AND FEET REGULATION



Place the blast chiller/freezer in a perfect horizontal position, acting if necessary on the screw type adjustable feet. Use a spirit level to check it. The blast chiller/freezer must be placed in order to operate properly and allow the correct defrost condensate water draining. In this way you will avoid noisy vibrations of the condensing unit. Check the correct positioning of the condensate water basin and its draining.

1.6 INSTALLATION INSIDE YOUR SHOP/RESTAURANT /WORKROOM

We suggest you to install the blast chiller/freezer inside an air-conditioned room. We kindly remind you that without this facility, malfunction may occur (for example condensation etc).

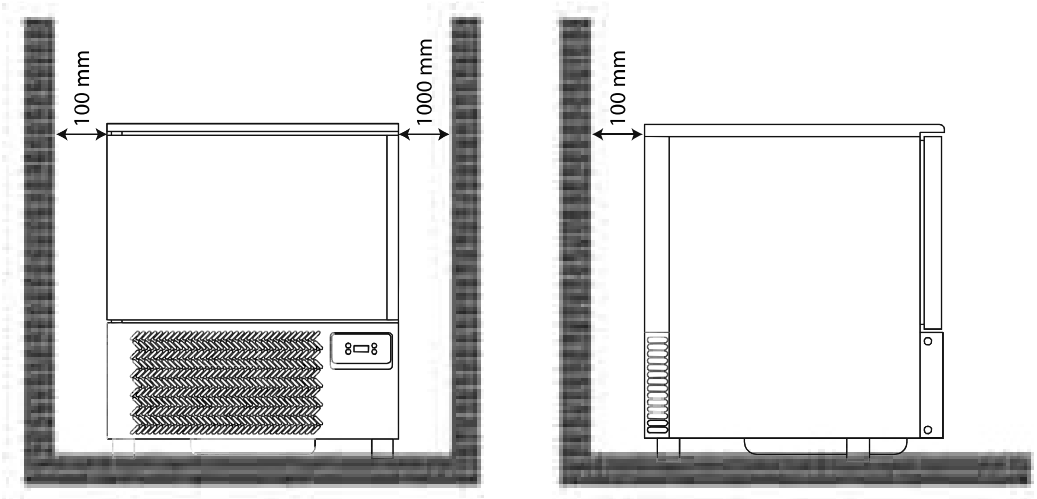
ATTENTION

In order to allow a good functioning of the blast chiller/freezer please draw attentions to the following instructions.

- **Do not place the blast chiller/freezer to a direct exposure of sunlight and to all the other means of irradiation,** such as high intensity incandescent lights, cooking ovens, heating radiators.
- **Do not place the blast chiller/freezer close to external exits into draught,** such as doors, windows, air vent or air conditioning fans.
- **Do not obstruct the blast chiller/freezer air inlet**.
- **Do not place any kind of material on the blast chiller.** Keep clear the whole blast chiller/freezer perimeter in order to allow a proper air circulation.
- **Do no place the blast chiller/freezer into an high relative humidity room** (condensate water creation is possible)
- **Do not place the blast chiller/freezer inside a closed cavity.** Without a proper air circulation the refrigeration unit will not work efficiently.
- **Do not place hot trays or pans on the top of the blast chiller**.

Verify that in the installation room there is enough air turnover, even during closing and rest hours. In this way the expansion/condensing unit will work correctly.

1.7 MINIMUM WALL DISTANCE



In order to allow a good blast chiller/freezer functioning and a correct air circulation, during the positioning you have to respect some minimum wall distance as follows:

- Keep a minimum distance, corresponding to the door opening length, from the front unit grid view.
- Keep a minimum 10 cm distance of the blast chiller back from the wall.

1.8 BLAST CHILLER WITH BUILT IN CONDENSING UNIT

The blast chiller is provided with built in condensing unit, therefore it is necessary not to obstruct the blast chiller/freezer air inlet corresponding to the front grid for the air extraction in order to allow a proper air circulation. Keep clear the whole blast chiller/freezer perimeter.
We remind you that room temperature rises or insufficient quantity of air to the unit condenser, reduce the blast chiller performances with possible deterioration of the products and more energy consumption. If the blast chiller/freezer with built in condensing unit was leant on the side during transportation we suggest you to keep the product in upright position for at least 8 hours, before switching it on. In this way, you will allow the oil to flow in all the components, lubricating them again. Afterwards you can proceed with the starting

1.9 BLAST CHILLER WITH REMOTE CONDENSING UNIT

For what concerns the electric connection, it is necessary to follow meticulously the electrical rules in force. We remind you that all the operations must be performed by qualified staff only.
The remote condensing unit must be placed far from atmospheric agents, avoiding using the room where it is installed for storing goods, in order to assure air circulation.
According with the remote condensing unit characteristics, it is necessary to respect the space from the wall and other obstacles, to ensure always and adequate circulation of air which grants the correct functioning of the item and an easy maintenance.

2. ELECTRICAL CONNECTION AND EARTHING

2.1 ELECTRICAL POWER SUPPLY

The installation and the electrical connections must be carried out in conformity with the electrical rules in force. These operations must be carried out by qualified staff. The company declines any responsibilities originated from the no observance of the above rules in force.

See the blast chiller electric diagrams at appendix – IV at the end of this manual.

Before plugging in the blast chiller, it is necessary to proceed with its complete and careful cleaning, using warm water with no aggressive detergents and drying with a soft cloth all the humid parts (read with attention the chapter regarding the blast chiller cleaning).
In order to carry out a correct plug in you must proceed as follow:

- **Prearrange a thermal magnetic circuit breaker switch** and be sure that the frequency/tension of the line corresponds to that shown on the blast chiller serial number label (see the label placing).
- **Verify the supply tension at the socket,** it must be between +/- 10% when you start the compressor.
- **We recommend you to install a bipolar-switch** (or 4 square pole switch) with contact opening of at least 3 mm, at the head of the socket. This switch is obligatory if the loading is over 1000 W or when the blast chiller is connected directly without the use of the plug. The mag thermic switch has to be placed nearby the blast chiller in order to be well seen by the technician in case of maintenance.

It is necessary that the power supply cable section is adequate to the unit power consumption.

The earthing of the appliance is compulsory in conformity with the law. Therefore it is necessary to connect it to an efficient earthing system. If the power supply cable was damaged, it must be substituted by the technical qualified staff. It is strongly recommended to avoid the use of electrical appliance inside the blast chiller compartment.

- **If the compressor is damaged, it must be replaced exclusively by qualified staff**, in order to prevent any risks. In case of breakdown we suggest to unplug the appliance and to use a high sensitivity mag thermic anti-electrical shock switch.

2.2 STARTING THE BLAST CHILLER

ATTENTION

The first start up must be carried out by qualified staff.

Before switching on the blast chiller, be sure that:
- Your hands must be dry
- The surface of the blast chiller must be dry
- The floor and the electrical socket must be dry

Furthermore, be sure that:

- The build in condensing unit blast chiller must be carried only in upright position. If it had leaned, we recommend to wait at least 8 hours before proceeding with the start so that the oil will flow in all the components, lubricating them again.

For the temperature setting make reference to the corresponding chart about product categories/ usage temperature, in addition For the working parameters regulation refer to the user instructions of the control panel enclosed to this current manual.

Once the blast chiller is connected with the power cable (see the previous paragraph), proceed powering it with the switch closing.

For the built in unit, before plugging it in, verify that the selector is open in 0, OFF or green position. Insert the socket and then turn off the switch. Before placing inside the food to be chilled or frozen, it is necessary to clean the chamber of the appliance (see chapter about cleaning) and afterwards it will be required to chill in advance the chamber before starting the positive or negative processes.

For regulating the functioning parameters consult the instructions for the instrument panel enclosed to the current manual.

3. CLEANING

All the procedures must be carried out with the stationary unit removing the tension from both the refrigerated item and the condensing unit.

3.1 CLEANING OF THE BLAST CHILLER

The maintenance of the blast chiller must include at least one daily cleaning of the loading zone, in order to prevent the development and the accumulation of bacteria.
Before cleaning the blast chiller room, carring out the defrosting keeping the door open and removing the lid of the derainage pipe

ATTENTION

It is essential to keep daily clean the blast chiller in order to prevent the development and the accumulation of bacteria. Before cleaning the chamber of the blast chiller, you must execute a defrosting process, by removing the lid of the drainage basin.

- **Do not flush directly the inner parts of the blast chiller** because the electrical parts could get damaged.
- **Do not use any hard metal tools to remove the ice**.
- **For the cleaning use only warm water (not hot) with no-aggressive detergents, taking care of drying the wet parts with a soft cloth.**
- **Avoid to use products that contain chlorine or diluted solutions, caustic soda, abrasive detergents, muriatic acid,** vinegar, bleach or other products that might scratch or grind.
- **We recommend to clean the device at least once a month,** when it used for deep-frozen products.

Attention, during the cleaning operations it is recommended to use work gloves.

3.2 CLEANING THE PROBE

The maintenance of the blast chiller must include at least one daily cleaning of the temperature core probe.

It is essential to keep daily clean the blast chiller room probe. All the procedures must be carried out with the stationary unit removing the tension from both the refrigerated item and the condensing unit. We recommend to rinse carefully the probe with clean water and with hygienized solution.
Refer to the same methods and detergents for cleaning named in the previous paragraph.

3.3 CLEANING THE CONDENSER UNIT

All the cleaning operations must be carried out when the unit is off, taking off the electric tension from both the device and the condensing unit. Only qualified staff shall carry out the cleaning operations.

For the cleaning and maintenance of the parts made of stainless steel, follow the below recommendations, considering that the first and basic rule is to guarantee the no-toxicity and the maximum hygiene of the treated

products. The stainless steel has a fine layer of oxide that prevents the making of rust. There are detergents that can destroy or corrode that layer, originating therefore corrosions.
Before using any detergents inquire with your family supplier about neutral products without chlorine, in order to avoid corrosions of the steel. In case of scratches on the surface it is necessary to smooth it with the finest STAINLESS STEEL wool or with abrasive cloth made of sinewy synthetic material.
For the cleaning of the STAINLESS STEEL it is recommended not to use steel wool and do not leave them on it because little ferrous deposits might remain on the surface and therefore it could cause the making of rust and compromise the hygiene conditions.

In order to have always a good function of the condensing unit it is necessary to carry out periodically the condenser cleaning. This cleaning depends mostly on the environment where the condensing unit is installed.
It is advisable to use an air flush blowing from the inside to the outside of the unit. If it was not possible, use a long bristle brush on the external of the condenser. Be careful not to damage the circuit of the cooling fluid. The built in condensing unit is placed in the lower side of the blast chiller. Do not use water splashes.

Attention, during the cleaning operations it is recommended to use work gloves.

ATTENTION

The operations of ordinary and extraordinary maintenance are described on the chapter 65 "MAINTENANCE".

4. RECOMMENDATIONS AND WARNINGS

We recommend to make a daily cleaning of the external part of the blast chiller, including the internal side of the door near the gaskets.

4.1 MANUAL DEFROSTING

The blast chiller has manual defrosting and can be made with open door or closed door (in this case the time of defrosting will be longer).

ATTENTION

- ***When the blast chiller has finished the process, it is necessary to remove the lid of the water drainage pipe in order to allow the water draining into the basin. The drainage pipe is useful also for the draining of other liquids from the product.***
- ***At the end of the process, check the level of the water and, if it necessary, empty the basin.***

4.2 MAXIMUM SHELF LOAD AND STORAGE

ATTENTION

The blast chiller is suitable to drop the temperature of already cooked food (see the chart with the temperatures according to the products which must be dropped).
Do not introduce into the blast chiller products which are just taken out of the oven. Wait few minutes before placing the products inside the room and then start the cycle. We remind you that the blasting time to reach the requested temperature, depends on different factors such as:

- **The shape, the type, the thickness and the material in which the food to be chilled is contained.**
- **The usage of lids above the containers.**
- **The physical features of the product, density, water and fat contents.**
- **The temperature condition of the food to be chilled.**
-

The setting of the time for the positive chilling and negative blasting must be set according to the type and the weight of the food to be treated.

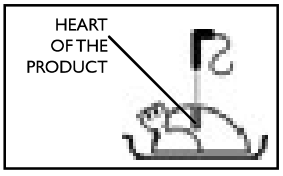
MODALITIES SELECTION OF THE PROCESS TIME

The modalities selection of the blast chiller are:

- Time cycle, when the process time is specified. When the time cycle phase finishes, the conservation modality automatically starts.
- With core probe, it is sufficient to set the temperature of the product to be chilled of frozen; the probe records the temperature and after the acoustic signal the device will pass into the conservation modality (see position of core probe).

TYPE OF PROCESS	TYPE OF CYCLE	TYPE OF PRODUCT	LOADABLE PRODUCT	THICKNESS	CYCLE AT THE PRODUCT CORE
POSITIVE	FULL SPEED	for dense food or thick size	4 kg each tray maximum	50 mm	+3 °C MAX 90 min
NEGATIVE	FULL SPEED	for dense food or thick size	3 kg	40 mm	until -18°C (240 min)
	REDUCED SPEED	delicate products, vegetables, crème, sponge dessert, small size products	-	-	-

MEASURING THE TEMPERATURE AT THE PRODUCT CORE



When the thickness of the products allows it, always use the core probe to know exactly the reached temperature at the product core, and do not interrupt the cycle before the temperature of +3°C and -18°C is reached.
For a correct function of the blast chiller, it is necessary that the products contained inside are well placed in the middle, in order to allow a good circulation of the air in the blast chiller.
Do not obstruct the blast chiller/freezer air inlets inside the device.

For a correct function of the Blast Chiller, it is necessary that the products contained inside are well placed in the middle, in order to allow a good circulation of the air in the Blast Chiller.

ATTENTION

Children must be kept away from the Blast Chiller.

LOADING OF THE FOOD

The food to be chilled cannot be superimposed.

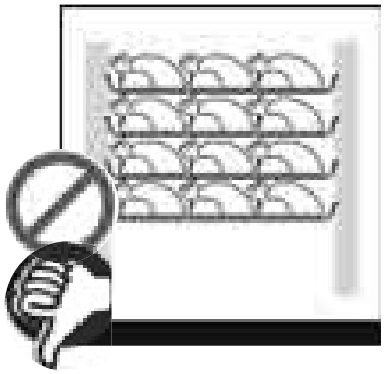
The thickness must be lower than:

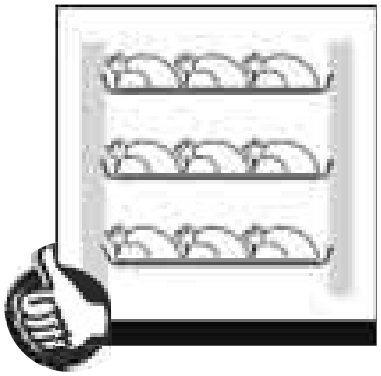
- 50 mm for negative cycle
- 80 mm for positive cycle

SPACE BETWEEN THE PANS

In order to permit a good air circulation inside the Blast Chiller room:

- it is necessary to keep at least 7 cm space between the pans.

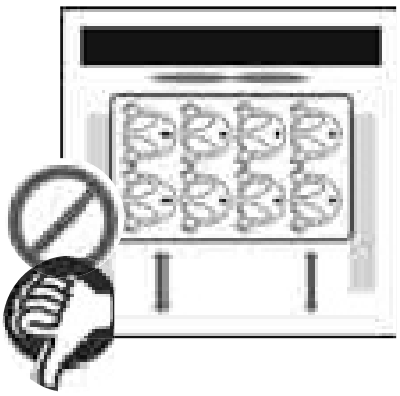


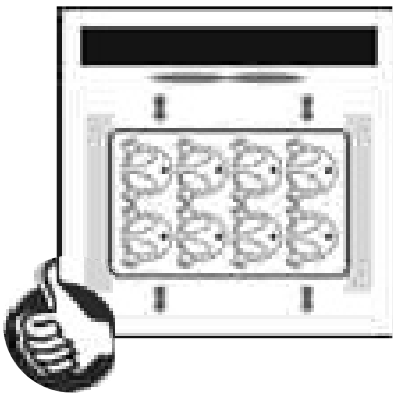


POSITION OF THE PANS

In order to permit a good process:

- The pans must be placed closed to the evaporator.
- Divide in equal spaces the distance between the pans.





CONSERVATION OF THE FOOD COOKED AND BLAST FREEZED

The food cooked and blast freezed can be preserved in the fridge keeping the organoleptic qualities up to 5 days from the date of treatment.
It is important to respect the cold chain, keeping during the consevation a stead temperature between 0°C and 4°C, according to the food.
Using the technique of vacuum packing, the time of conservation can be raised until about 15 days.

CONSERVATION OF THE FOOD COOKED AND DEEP FROZEN

The food cooked and deep frozen can be preserved in the fridge keeping the organoleptic qualities up to several months from the date of treatment. It is important to respect the cold chain, maintaining during the conservation a stead temperature from 0° to 4°C, according to the kind of the food.
Using the vacuum technique, the conservation time can be raised until about 15 days.

The food which is subject to negative cycle can be safely preserved for a period of time from 3 to 18 months, according to the food treated.

- It is important to respect the conservation temperature equal or below -20°C.

ATTENTION

- **Avoid leaving at room temperature the food cooked and to be blast frozen.**
- **Avoid humidity loss, at risk of the food fragrance.**

The blast frozen food must be protected by a protective film (better if vacuum packed) and provided with adhesive label on which must be indicated:
- The content
- The day of preparation
- The assigned expired date
-

ATTENTION

Once the food is defrosted, it cannot be frozen again.

4.3 BLAST CHILLER STARTING UP PROCEDURES

BLASTING CYCLE WITH CORE PROBE

1- Push the green button
2- Push the button "SET" to select the temperature +3°c or -18°c.
3- Afterwards, push the button "START" to start the cycle
4- At the end of the cycle (when the buzzer starts to ring), the machine passes automatically into the conservation phase.

BLASTING CYCLE AT TIME

1- Push the green button
2- Push the button "SET" to select the temperature +3°c or -18°c.
3- Afterwards, push the button "UP", "DW" to set the requested time for the blasting cycle.
4- Push the button "START" to start the cycle
5- At the end of the cycle (when the buzzer starts to ring), the machine passes automatically into the conservation phase.

4.4 CONSERVATION TIME (IN MONTHS) FOR BLAST CHILLED-SHOCK FROZEN FOOD

In the chart below there are the preservation times of some deep-frozen food.

FOOD	Freezing -18°C	Freezing -25°C	Freezing -30°C
DAIRY PRODUCTS			
Cheese	4	6	6
Butter	8	12	15
POULTRY AND MEAT			
Beef	9	12	18
Veal	6	12	18
Lamb	6	12	18
Pork	4	12	15
Poultry	5-9	12	18
Rabbit, goose	4-6	-	-
Duck, turkey	4-6	-	-
Game	6-10	12	12
FISH			
Lean	6-8	12	15
Fat (eel, mackerel, salmon, herring)	3-4	7-8	8-9
Shellfish with pincers	3-4	12	17
Shellfish	2-3	10	12
VEGETABLES AND FRUITS			
Vegetables	12	18	24
Fruits	12	18	24
PASTRY			
Cakes	2-4	8	12
PRE-COOKED FOOD			
Pre-cooked food	2-4	6	6

5. BLAST-CHILLING/SHOCK FREEZING TIME

FOOD	PAN	MAXIMUM LOADING CAPACITY	PRODUCT THICKNESS	BLAST-FREEZING TIME	CYCLE USED
PRIMI PIATTI					
White sauce	GN1/1 h60	6 L	4 cm	70 minutes	POSITIVE
Meat Stock	GN1/1 h110	7 L	6-7 cm	90 minutes	POSITIVE
Cannelloni	GN1/1 h40	4 Kg	3-4 cm	40 minutes	POSITIVE
Vegetable soup	GN1/1 h100	5 L	5 cm	90 minutes	POSITIVE
Fresh pasta	GN1/1 h40	1 Kg	5 cm	30 minutes	NEGATIVE
Meat and tomato sauce	GN1/1 h60	5 Kg	5 cm	90 minutes	POSITIVE
Bean soup	GN1/1 h60	5 Kg	5 cm	90 minutes	POSITIVE
Fish soup	GN1/1 h60	4 Kg	5 cm	90 minutes	POSITIVE
MEAT AND POULTRY					
Roast	GN1/1 h60	7 Kg	10 cm	90 minutes	POSITIVE
Braised beef	GN1/1 h60	7 Kg	15 cm	90 minutes	POSITIVE
Boiled beef	GN1/1 h60	6 Kg	12-18 cm	90 minutes	POSITIVE
Chicken breast	GN1/1 h40	5 Kg	4-5 cm	30 minutes	POSITIVE
Roast-beef	GN1/1 h40	4 Kg	10-15 cm	80 minutes	POSITIVE
FISH					
Grouper	GN1/1 h40	3 Kg	5-10 cm	90 minutes	POSITIVE
Sea cicada	GN1/1 h40	2 Kg	3 cm	25 minutes	POSITIVE
Vacuum-packed moules	GN1/1 h60	2 Kg	max 3-4 cm	20 minutes	POSITIVE
Fish salad	GN1/1 h40	4 Kg	3-4 cm	30 minutes	NEGATIVE
Boiled polyp	GN1/1 h60	5 Kg	-	60 minutes	POSITIVE
Humid cuttle fish	GN1/1 h60	4 Kg	4-5 cm	60 minutes	POSITIVE
VEGETABLES					
Carrot	GN1/1 h60	4 Kg	4-5 cm	60 minutes	POSITIVE
Mushroom	GN1/1 h60	4 Kg	4-5 cm	60 minutes	POSITIVE
Courgettes	GN1/1 h60	3 Kg	4-5 cm	90 minutes	POSITIVE
PASTRY					
Vanilla and chocolate pudding	GN1/1 h60	6 L	4-5 cm	90 minutes	POSITIVE
English cream	GN1/1 h60	3 L	4-5 cm	90 minutes	POSITIVE
Custard cream	GN1/1 h60	3 L	4-5 cm	90 minutes	POSITIVE
Creamy sugary pudding	GN1/1 h40	3 L	6 cm	60 minutes	POSITIVE
Semifreddo	GN1/1 h40	3 Kg	4-6 cm	50 minutes	POSITIVE
Tiramisù	GN1/1 h60	5 Kg	4-5 cm	45 minutes	POSITIVE

THE MANIFACTURE HAS THE RIGHT TO MAKE TECNICAL CHANGES WITHOUT WARNING

6. CONTROL PANEL

6.1 DESCRIPTION

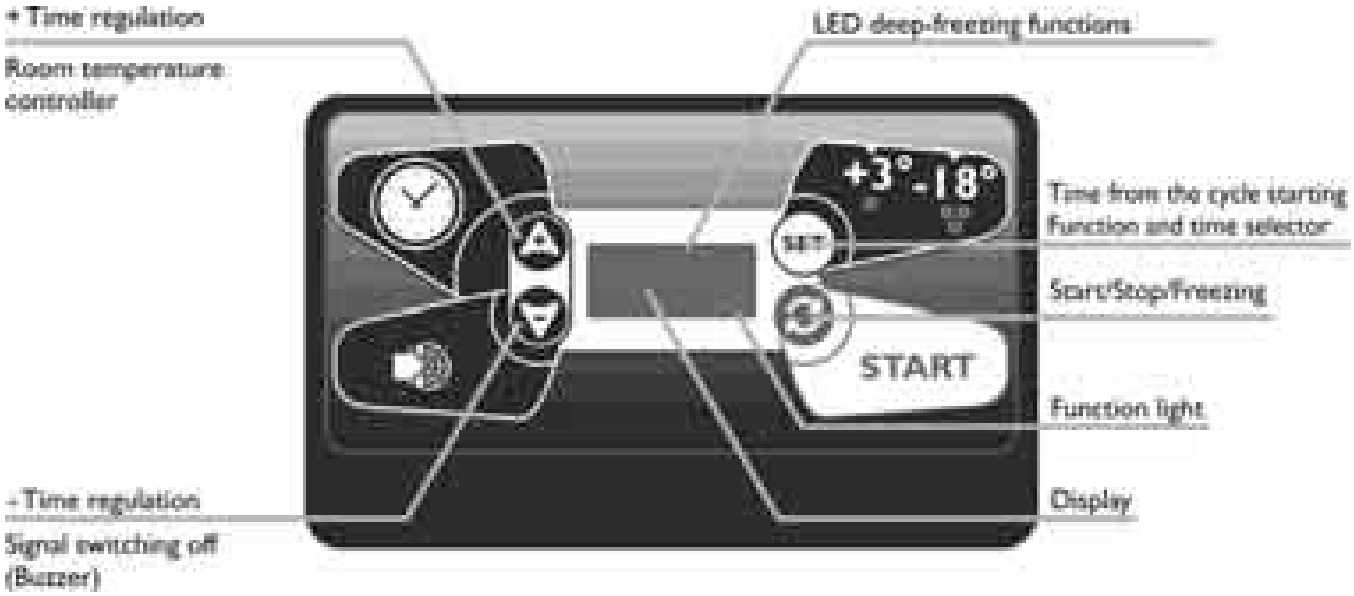
The control panels manages the basic functions of the device:

- Positive blast-freezing or cooling
- Negative blast-freezing or deep-freezing
- Hearth probe or time blast-freezing
- Conservation
- Manual defrosting without heater or hot gas

Thanks to some parameters is possible to erase some functions or change others.
The final user (the cook) can select the type of cycle and the chilling time when the core probe is not selected.

Control panel position

6.2 INTERFACE



There is a 5 seconds lamp-test when the control stats, after that it places in Operative position.

Stand-by

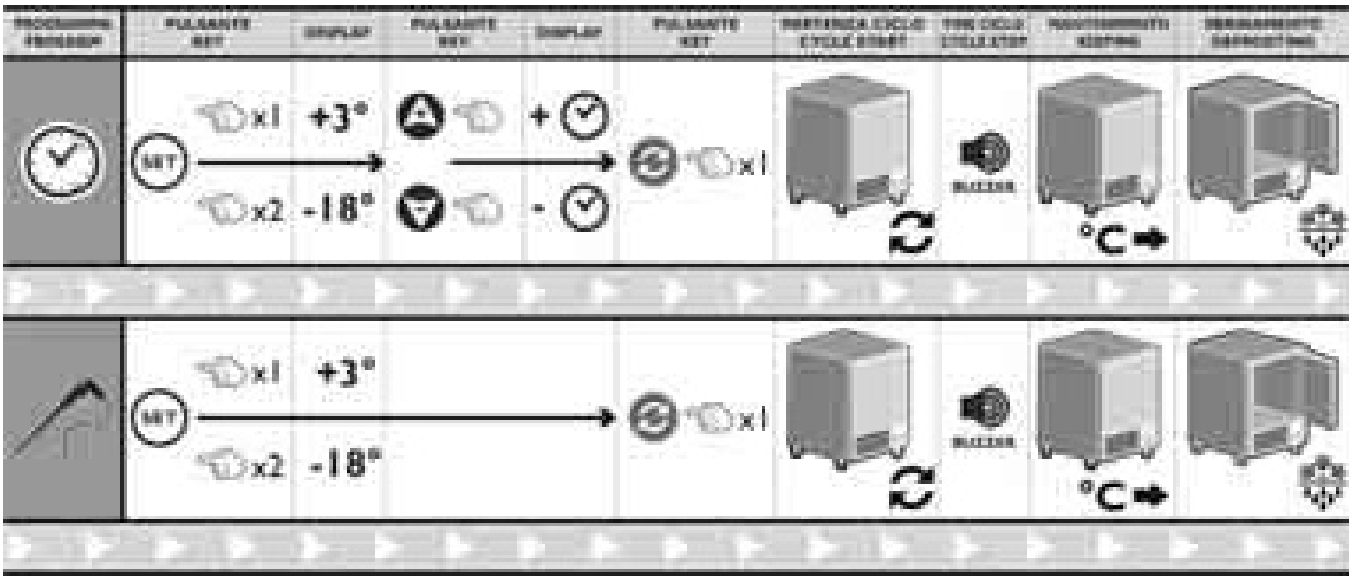
Display

The display shows '---'

Keys

The front panel stops in stand by functions if the button "SET" is pressing for 4seconds when the blasting cycles have been stopped

TIME AND CORE PROBE PROGRAMM SETTING



Stop

Display

When the time cycle is selected the display shows the time (in hours and minutes) or the records of the core probe if the probe cycle is selected.
The upper point of the second display shows the selection in case of negative process.

Keys

Set, Up Down keys permit to enter the cycle setting.

Set to go automatically to the negative and positive probe cycle process.

Press Set key for 4 sec the control panel is in stand-by.

Press Up or Down to set automatically time cycle if previously was selected the core probe cycle, otherwise set +/- for the time cycle.

If the buzzer is on, pressing Down to turn it off.

Press Start/Stop to start the cycle.

Start

Display

The display shows the remaining time (in hours and minutes), when the time cycle is selected or the records of the core probe if the probe cycle is selected.

If the presence of door is on (PI=I) and the contact is not well closed, on the display appears "dr" which shows that the door is open.

Keys

Pressing the "SET" key the display shows the time passed from the starting of the cycle or the time of the time cycle, in order to reach the cycle temperature, if it is in conservation modality.

Pressing Up , the temperature recorded by the room probe is shown. This data lasts 5 seconds.

If the buzzer is on, pressing Down to turn it off.

Press Start/Stop to start the cycle.

ATTENTION

At the end of the positive process phase, the conservation program is set automatically at the temperature of 0 to +3°C.
At the end of the negative process phase, the conservation program is set automatically at the temperature of -22 to -25°C.

In order to respect the chilling and freezing time provided by law, while a cycle is in progress, it is strongly advised against opening the door of the device.

6.3 ALARMS

The existing alarms are those related to the probes. They are shown only when it is required the view of the relative probe. "Er" Generic or internal error of the probes.

"Er" generic error or inside the probe
"Erl" room probe error
"Er2" core probe error
If one program is in progress and an error is generated, the cycle passes to time process even if the error continues to be on. See chapter - 8.

6.4 REGULATIONS

Compressor

The compressor can be active only in START function when the room probe has no error.
If the presence of door is on (PI=I), the door must be closed to permit the starting of the compressor only if P6=0. With P6=0 the compressor is active even if the door is open and with arrested fan. The compressor starts according to the SET POINT on, corresponding to the selected cycle and according to the differential of temperature set (Parameter P8).

The protection time for the compressor are:

- P9: minimum delay that must exist between the switching off and the next starting up of the compressor. This parameter is used also like reset of the card.
- P10: minimum delay that must exist between 2 consecutive starting ups of the compressor.

Manual defrosting

The defrosting is carried out with open door, without the use of neither the heater nor the hot gas.

Parameters

Pressing contemporarily Up and Down to enter the parameter setting for at least 4 sec.
At this point on the display appears the number itself of the parameter (P0). Pressing the SET key, it is possible to see the value of the parameter itself and modify it.

The keys Up and Down, when the parameter setting is on, allow to pass to the next/former parameter; when the value of the parameter is on, they modify it.

	Description	Min	Max	Def.	Unit
0	Permit to enter into the conservation function; the buzzer rings for 60 sec.	0	1	1	---
1	Door present 0=door absent; 1=door present	0	1	1	---
2	Fan during the process 0=together with the compressor 1=always on	0	1	1	---
3	Permit to enter the core probe function	0	1	1	---
4	Permit to enter the negative process	0	1	1	---
5	Permit to enter the defrosting	0	1	0	---
6	Stopping functions when the door is open 0=compressor+fans; 1=fans	0	1	1	---
7	Configuration RL2 0=defrosting: 1=fan+defrosting	0	1	1	---
8	Hysteresis of regulation	1	20	3	°C
9	Protection of the compressor Off/On (also valid as reset)	0	99	2	min
10	Protection of the compressor On/On	0	99	3	min
11	Defrosting duration	0	99	10	min
12	Dripping duration	0	99	3	min
13	Core probe for the positive process	-50	99	3	°C
14	Core probe for the negative process	-50	99	-18	°C
15	Room probe for the positive process	-50	99	-2	°C
16	Room probe for the negative process	-50	99	-40	°C
17	Room probe for the positive conservation process	-50	99	0	°C
18	Room probe for the negative conservation process	-50	99	-25	°C
19	Positive time process duration	0	599	90	Min
20	Negative time process duration	0	599	270	Min

7. MAINTANANCE – GARBAGE MANAGEMENT – DISPOSAL OF MATERIALS

All maintenance operations and reparations of the apliance must be carried out with stationary unit, removing the tension from both the refrigerated item and the condensing unit. All the operations must be carried out by qualified and specialized staff.

CAUTION

All cleaning ordinary and extraordinary operation are described in chapter "CLEANING"

7.1 PERIODICAL CHECKS

At regular intervals (at least once a year), it is important to make a complete system check by qualified staff only. Please check that:

- the water drainage system works properly.
- there are no refrigerating gas leaks and the complete refrigerating system works properly.
- the maintenance state of the electrical system is completely safe.
- the door gaskets and the door itself close properly.
- the condenser of refrigerating unit is clean.

7.2 SUBSTITUTION OF THE FAN MOTOR

If the device is provided with a fan motor and it is necessary to remove it, it is important to taking off the tension, verify the label with technical data of the fan motor and substitute it with one of identical power, voltage and frequency.

7.3 SUBSTITUTION OF THE COMPRESSOR/ Refrigerated gas

In case of compressor damaging and/or replacing, save its refrigerating gas and oil and avoid dispersing it in the environment.

7.4 GARBAGE DISPOSAL

Plastic, gaskets, sheet metal, polyurethane components, panel controls and electric material in general must be

saved and/or dumped in public dumps and/or garbage authorized centre.
Be sure not to disperse.
Save the refrigerating gas and oil in special tanks, do not dispose of them in the sewage system but dump them in according to your local laws.

7.5 REQUESTING SPARE PARTS

When requesting spare parts, please say clearly:

- Model of the item
- Serial number of the item
- Quantity of the spare part

Possibly, enclose also a picture of the part to be ordered.

8. MESSAGES OF ERROR AND SOLUTIONS

Er	Ensure that all the cables are included in the terminal	generic error or/ Internal error of the probe	If the cable is tore off, insert it again and screw it up
Er1	Ensure that all the cables are included in the terminal	error of the room probe	If the cable is tore off, insert it again and screw it up
Er2	Ensure that all the cables are included in the terminal	error of the room probe	If the cable is tore off, insert it again and screw it up
	Blasting time too long	Check if the evaporator is blocked with ice	Leave the door open for at least 15 min to melt the ice
		Check if the product is loaded correctly and does not exceed	Lighten the load of trays and grills
		Check if the internal fan is spinning	Contact the assistance
		Ensure that the laboratory temperature is not too high and with high percentage of humidity	Contact the assistance
	Failed conservation of the food at the end of the blasting cycle		Contact the assistance