Blast chillers / User and Maintenance Manual

Welcome

The producer thanks you for choosing one of its products.
We kindly ask you to read carefully our manual: this will guarantee the optimal use of your appliance.

Correct disposal of the product

Applicable in the European Union and other countries which have separate collection system

The label shown on the product or its documentation, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment of human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material sources. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

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INTRODUCTION

The appliances called ñBLAST CHILLERò of ñISOò series have been manufactured in accordance with all EC regulations regarding free circulation of industrial and commercial goods in EEC countries (see ñDirective in Electromagnetic Compatibilityò ï DIRECTIVE 2004/108/EC of the European Parliament and of the Council; see ñdirective on Low Voltageò ï DIRECTIVE 2006/95/EC of the European Parliament and of the Council). The appliances conform to directive EU2002/95/EC ï RoHs.
Therefore, the units are supplied with all the documentation imposed by such standards.
The manufacturer has devised the appliance with the intent of ensuring a safe use. Excluding any electrical safety devices or disassembling the manufactureôs protection devices will seriously compromise the aforesaid safety conditions. Furthermore, these conditions are subject to compliance if installation instructions and power supply requirements for the unit, which mus be strictly followed. The appliance must be used according to the specifications of this manual. It is strictly followed. The appliance must be used according to the specifications of this manual. It is therefore highly advisable to carefully read all installation procedures, start-up procedures and/or removal procedures (when the appliance is moved and relocated to another position).
It is also advisable to pay particular attention to all the instructions specified herein. The conformity of all the standards and guidelines will ensure a safe use of the appliance and appropriate handling. Maintenance operations can be carried out by a specialised technician by following a few simple operations. For maximum durability and best operating costs, it is advisable to scrupulously follow the guidelines prescribed herein.

<u>USING MANUAL</u>
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 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 MANUFACTURER RESERVES THE RIGHT TO MAKE TECHNICAL MODIFICATIONS TO ITS OWN PRODUCTS WITHOUT GIVING PRIOR NOTICE.

USER AND MAINTENANCE MANUAL

UNIT DESCRIPTION

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).

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 bottom, the ceiling and the back are made of zinc-coated sheet. The basin is insulated with expanded polyurethane resin with a density of 40Kg./Mc.
The power supply is possible thanks to electric cable 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 ï 2. ELECTRICAL CONNECTIONS AND EARTHING ï 3. CLEANING ï 4. RECOMANDATIONS AND WARNINGS ï 6. MAINTANANCE

Must be made 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 subject of the present manual.

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.

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.

UNLOADING / DIMENSIONS/ WEIGHTS

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. Do not superimpose the blast chiller packing (only if there is wooden crate packing option).

PACKING

At the delivery please check that the packing was 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 refer to your area address book for disposal and authorized garbage dump.

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.

For additional information please apply to TECHNICAL DATA ñTYPE ï VERSIONò chapter.

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.

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 attend 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 lean 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.

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 duly work.

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 start.

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 nonobservance of the above rules in force.

See the blast chiller electrical layout (appendix ï 2 page 23).

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 mag thermic anti-electrical shock 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 that the supply tension at the socket must be between +/- 10% when you start the compressor.
- We recommend you to install a unipolar-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
Before switching on the blast chiller, be sure that:

- Your hands must be dry
- The floor and the electrical socket must be dry
- The build in condensing unit blast chiller must be carried only in upright position. If it was leant, 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 working parameters regulation refer to the user instructions of the control panel enclosed to this current handbook.
- 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.
- For the setting up of the temperature follow the table regarding the product categories / usage temperature.
- The start of the blast chiller with the built in unit must be carried out by qualified staff.

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

For the working parameters regulation refer to the user instructions of the control panel enclosed to this current handbook.

3. CLEANING

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.

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 defrost removing the lid of the drainage basin. All the procedures must be carried out with the stationary unit removing the tension from both the refrigerated item and the condensing unit.

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.
Attention, during the cleaning operations it is recommended to use work gloves.
It is advisable to carry out the inner cleaning at least once in a month if the blast chiller is used as the conservation of deep-frozen food.

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 3.1.

3.3 CLEANING THE CONDENSER UNIT

The steel is called stainless steel AISI 304.
For the cleaning and maintenance of the parts made of stainless steel, keep to the following 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.

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 that the cleaning must be carried out by qualified staff. 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.

For these operations we advise to use protection gloves.

ATTENTION
The operations of ordinary and extraordinary maintenance are described on the chapter 5 ñMAINTENANCEò.

4. RECOMMENDATIONS AND WARNINGS

4.1 MANUAL DEFROSTING

The blast chiller has manual defrosting.
We recommend a daily external cleaning of the blast chiller, including the inner side of the door nearby the gaskets.

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 have 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 positive and the negative blasting time depends on the product to be treated. We recommend to use the cycle at the maximum speed for all the dense food or thick pieces but in any case never exceeding 4 kg of loading (for GN 1/1 grids and 60x40 pans) and 50 mm thickness for the positive phase and 3 kg of loading and 40 mm thickness for the negative phase.

The reduced speed cycle is suitable for delicate products like vegetables, creams, puddings or for small thickness products.
In any case check that the positive phase, until +3°C at the product core, does not take more than 90 minutes and the freezing phase, until -18°C at the product core, does not take more than 240 minutes. It is necessary to chill the room before starting the positive blasting or the freezing and it is recommend not to cover the food during the cycle in order not to extend the time. When the thickness of the products allow 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.

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 10 cm space between the pans.

POSITION OF THE PANS

In order to permit a good freezing, 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.

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.

The following chart refers to the conservation time of some deep frozen products.

- Avoid leaving at room temperature the food cooked and to be blast freezed.
- Avoid humidity loss, at risk of the food fragrance.
- The blast freezed food must be protected by a 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 CONSERVATION TIME (IN MONTHS) FOR DEEP-FROZEN FOOD

FOOD	Freezing at -18	Freezing at -25	Freezing at -30
DAIRY PRODUCTS			
Cheese			
Butter			
POULTRY AND MEAT			
Beef			
Veal			
Lamb			
Pork			
Poultry			
Rabbit, goose			
Duck, turkey			
Game			
FISH			
Lean			
Fat (eel, mackerel, salmon, herring)			
Shellfish with pincers			
Shellfish			
VEGETABLES AND FRUITS			
Vegetables			
Fruits			
PASTRY			
Cakes			
PRE COOKED FOOD			
Pre cooked food			

5. BLAST-FREEZING TIME

FOOD	PAN	MAXIMUM LOADING CAPACITY	PRODUCT THICKNESS	BLAST-FREEZING TIME	CYCLE USED
White sauce					
Meat Stock					
Cannelloni					
Vegetable soup					
Fresh pasta					
Meat and tomato sauce					
Bean soup					
Fish soup					
MEAT AND POULTRY					
Roast					
Braised beef					
Boiled beef					
Chicken breast					

Roast-beef
FISH
Grouper
Sea cicada
Vacuum-packed moules
Fish salad
Boiled polyp
Humid cuttle fish
VEGETABLES
Carrot
Mushroom
Courgettes
PASTRY
Vanilla and chocolate pudding
English cream
Custard cream
Creamy sugary pudding
Semifreddo
Tiramisù

THE MANIFACTURE HAS THE RIGHT TO MAKE TECNICAL CHANGES WITHOUT WARNING

6. MAINTENANCE

All maintenance operations and reparations of the blast chiller 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.

6.1 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.

6.2 SUBSTITUTION OF THE COMPRESSOR/ Refrigerating gas

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

6.3 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.

ATTENTION!

All ordinary and extraordinary cleaning operations are described in chapter 2 ñCLEANINGò .

7. CONTROL PANEL

+time regulation

LED deep-freezing function

Function and time selector
Start/stop freezing

-Time regulation
Signal switching off (Buzzer)

Function light
Display

ATTENTION!

At the end of the blast-freezing cycle, the conservation function passed automatically: +3 (°C) for positive cycle and -18 (°C) for negative cycle.

7.1 DESCRIPTION

The control allows the blast chiller basic function management :

. positive blast-freezing or cooling
. negative blast-freezing or deep-freezing
. hearth probe or time blast-freezing
. conservation
. defrosting manual

The final user can select chilling time if the heart probe is not selected.

Control panel position

Interface

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

Stand-by

Display
The display shows ó--ó

Buttons
Pushing set button for 4 seconds the control goes in Stop modality.

Stop

Display
The display shows the time (in hours and minutes), if it is on time cycle.
The display shows the probe reading, if it is on probe cycle.

Buttons
Set, Up, Dw buttons permit to go to chilling cycle setting.
Set goes automatically to the probe cycle if previously there has been set a time cycle or it is in set-point without modify it.
Pushing Set button for 4 sec the control is in stand-by.
Pushing Up or Dw automatically is a time cycle if it was in heart probe cycle, otherwise is in setï point.
If the buzzer is on, with the first Dw push can turn it off.
Start/Stop pushing start the chilling cycle.
If P5=1 defrosting cycle is on. It can be turned on pushing Start/Stop for 4 sec.

This is a special chilling cycle, and it takes P11+P12. During the first P11 minutes there is the defrosting and than for P12 minutes there is de cooling.

Start
Display
The display shows the time (in hours and minutes), if it is on time cycle.
The display shows the probe reading, if it is on probe cycle.