Thank you for choosing this product.

Please read the warnings contained in this manual carefully, as they provide important information regarding safe operation and maintenance.
Make sure to keep this manual for any future reference by the various operators.

In some parts of the manual, the ⚠ symbol appears, indicating an important warning that must be observed for safety purposes.

CHAPTER 1 BOUNDARY CHARACTERISTICS OF OPERATION

The blast chiller has been designed and built to operate in optimal conditions at temperatures of up to +43°C, with adequate air circulation. In places with characteristics that are different from the requirements, the stated performance cannot be guaranteed.
The supply voltage must be 230V +/- 10% 50Hz as standard, or as indicated on the EC label.

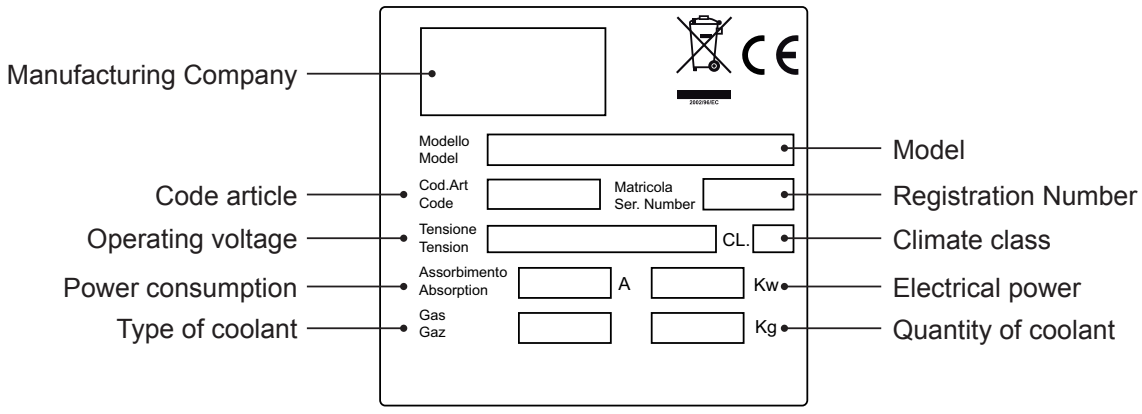
The following table shows the cooling and/or freezing capacity in kg.

Model	Blast chilling +90°C / +3°C	Rapid freezing +90°C / -18°C
BASIC MINI	7 Kg.	4 Kg.
BASIC ABF 03	10 Kg.	5 Kg.
BASIC ABF 05 E	14 Kg.	9 Kg.
BASIC ABF 05 C	20 Kg.	12 Kg.

N.B.: the times and quantities in kg above are valid for products with a maximum thickness of 4 cm.

The blast chiller complies with the European directives as described in detail in the Annex **"EC Declaration of Conformity"**

The data are reported on the EC label placed in the blast chiller, inside the engine compartment.



The manufacturer declines any liability for improper use of the blast chiller, as well as use that could not have been reasonably foreseen, and for all operations performed on it that disregard the instructions in the manual.

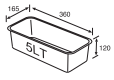
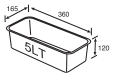
The main general safety standards are listed below:

- do not use or place electrical devices inside the refrigerated compartments if they are not of the type recommended by the manufacturer
- do not touch the blast chiller with damp or wet hands or feet
- do not use the blast chiller barefoot
- do not insert screwdrivers or other objects between the guards or moving parts
- do not pull the power cord to unplug the blast chiller from the electricity network
- the blast chiller is not intended to be used by persons (including children) with physical or mental problems, or lack of experience and knowledge, unless they are controlled or instructed in using the unit by a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.
- before carrying out any cleaning or maintenance, disconnect the blast chiller from the mains power supply by turning off the main switch and pulling the plug
- in the event of failure and/or malfunction of the blast chiller, turn it off and to refrain from any attempt to repair or intervene directly. It is necessary to exclusively contact a qualified technician.

The blast chiller is composed of a modular monocoque coated with different materials and insulated with polyurethane foam of density 42 kg/m3.

In the design and construction, all measures have been adopted to ensure a blast chiller that complies with safety and hygiene requirements, such as: rounded interior corners, deep drawing with drain on the outside for the condensate liquids, no rough surfaces, fixed guards on moving or dangerous parts.

The products must be stored in observance of the load limits given in the table, in order to ensure an efficient circulation of air inside the blast chiller.

Load capacity			
BASIC MINI	**BASIC ABF 03**	**BASIC ABF 05 E**	**BASIC ABF 05 C**
3 x GN 2/3	3 x GN 1/1	5 x GN 1/1	5 x GN 1/1
-	-	5 x EN 60x40	5 x EN 60x40
-	-	6 x 	6 x 

The installation must be performed exclusively by a qualified technician

1.1 It is prohibited to remove the guards and safety devices
t is absolutely forbidden to remove safety guards.

The manufacturer disclaims any liability for accidents due to failure to comply with this obligation.

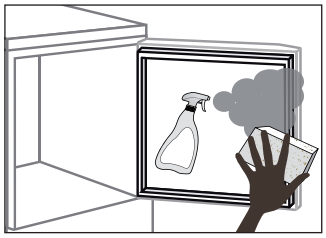
1.2 Information on emergency operations in the event of fire
- disconnect the blast chiller from the electrical outlet or cut off the main power supply
- do not use water jets
- use dry chemical or CO2 extinguishers

CHAPTER 2 CLEANING THE REFRIGERATOR

Since the blast chiller will be used to store food, cleaning is necessary for hygiene and health protection purposes. The cleaning of the blast chiller has already been carried out at the factory. It is suggested, however, to carry out an additional cleaning of the internal parts before use, making sure that the power cord is unplugged.

2.1 Cleaning the interior and exterior cabinet

For this purpose the following are indicated
- the cleaning products: water and mild, non-abrasive detergents. DO NOT USE SOLVENTS AND THINNERS
- methods for cleaning: wash the interior and exterior parts with warm water and mild soap or with a cloth or sponge with suitable products
- disinfection: avoid substances that can alter the organoleptic characteristics of the food
- rinsing: cloth or sponge soaked in warm water. DO NOT USE WATER JETS
- frequency: weekly is recommended, the user can set different frequencies depending on the type of food being stored.



⚠ **REMARK :** Clean frequently the door seals.
Some preserved products could release some enzymes that could damage the seals causing its quick deterioration.
For the cleaning, use only specific products for this purposes, available also on request on our sales network.

2.2 Cleaning the condenser

The efficiency of the blast chiller is compromised by the clogging of the condenser, therefore it is necessary to clean it on a monthly basis. Before carrying out this operation, switch off the blast chiller, unplug the power cord and proceed as follows:

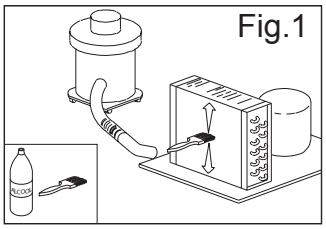


Fig.1

With the aid of a jet of air or dry brush, eliminate, in a vertical movement (Fig. 1), the dust and lint deposited on the fins. In the case of greasy deposits, we recommend using a brush moistened with special cleaning agents. For models with hinged front, loosen the locking screw and rotate the front panel on the hinges located at the top. At this point, proceed to clean as done with the models with fixed front panel.

When the operation is completed, restart the blast chiller.

⚠ During this operation, use the following personal protective equipment: goggles, respiratory protection mask, chemically resistant gloves (gasoline-alcohol).

CHAPTER 3 PERIODIC CHECKS TO BE CARRIED OUT

The following are the points or units of the blast chiller that require periodic checks:
- integrity and efficiency of door seals
- integrity of the grilles in contact with food
- integrity of the fixing hinges of the doors
- integrity of the power cord

3.1 PRECAUTIONS IN CASE OF LONG PERIODS OF INACTIVITY

A long period of inactivity is defined as a stoppage of more than 15 days.
It is necessary to proceed as follows:
- switch off the blast chiller and disconnect it from the power supply
- carry out a thorough cleaning of the interior cabinet, shelves, trays, guides and supports, paying special attention to critical points such as the joints and magnetic gaskets, as indicated in Chapter 2.
- leave the door partly open to prevent air stagnation and residual humidity

CHAPTER 4 PREVENTIVE MAINTENANCE

4.1 Restarting after a long period of inactivity

Restarting after long inactivity is an event that requires preventive maintenance.
It is necessary to perform a thorough cleaning as described in chapter 2.

4.2 Control of the warning and control devices

We recommend that you contact your dealer for a service or maintenance contract that includes:
- cleaning of the condenser
- verification of the coolant load
- verification of the full cycle operation
- electrical safety

⚠ CHAPTER 5 EXTRAORDINARY MAINTENANCE AND REPAIR

All maintenance activities that have not been described in previous chapters are considered “Extraordinary Maintenance.” Extraordinary maintenance and repair are tasks reserved exclusively to the specialist personnel authorized by the manufacturer.
No liability is accepted for actions carried out by the user, by unauthorized personnel, or with the use of non-original replacement parts.

CHAPTER 6 TROUBLESHOOTING

Problems may occur, in the blast chiller, identified as shown in the table:

TROUBLE DESCRIPTION	POSSIBLE CAUSES	HOW TO REPAIR IT
the blast chiller does not turn on	no power supply	check the plug, socket, fuses, line
	other	contact technical support
the refrigeration unit does not start	the set temperature has been reached	set new temperature
	defrosting in progress	wait until the end of cycle / turn power off and on again
	control panel failed	contact technical support
	other	contact technical support
the refrigeration unit runs continuously but does not reach the set temperature	location is too hot	aerate more
	condenser is dirty	clean the condenser
	insufficient coolant	contact technical support
	stop the condenser fan	contact technical support
	insufficient sealing of doors	check the seals / provision of goods
	evaporator completely frosted	manual defrosting
	other	contact technical support
the refrigeration unit does not stop at the set temperature	command panel failed	contact technical support
	P1 temperature sensor failed	contact technical support
block of ice on the evaporator	misuse	see chapter 1.
	defrost heater fault	contact technical support
	defrost probe P2 damaged	contact technical support
accumulation of water or ice in the drip tray	drain clogged	clean the pipette and the drain
	blast chiller is not level	check levelling

CHAPTER 7 INSTRUCTIONS FOR REQUESTING ASSISTANCE

For any technical problem, and any requests for assistance or service, you must exclusively contact your own dealer.

CHAPTER 8 SAFETY AND ACCIDENT PREVENTION

The blast chiller has been built with suitable measures to ensure the safety and health of the user. The following are the measures taken to protect against mechanical risks:

- **stability:** The blast chiller, even with the grilles removed, has been designed and built in such a way that under the intended operating conditions, its stability is suitable for use without risk of overturning, falling or unexpected movement

- **surfaces, edges, corners:** the accessible parts of the blast chiller are, within the limits allowed by their functions, free of sharp angles and sharp edges, as well as rough surfaces likely to cause injury

- **moving parts:** were designed, constructed and arranged to avoid risks. Certain parts are equipped with fixed guards so as to prevent risks of contact which may result in injury

The following are the measures taken to protect against other risks:

- **electricity:** The blast chiller has been designed, built and equipped so as to prevent risks from electricity, in accordance with the specific legislation in force

- **noise:** The blast chiller has been designed and built in such a way that risks resulting from the emission of airborne noise are reduced to the minimum level

8.1 safety devices adopted
It is absolutely forbidden (Fig. 2) :
- to tamper with or remove the evaporator housing casing that protects the user against the risk of being cut by the evaporator fins
- remove the labels applied at the inner edge of the engine compartment, showing the technical specifications (1) and the instructions for grounding (2)
- remove the label applied on the evaporator guard and near the electrical wiring inside the engine compartment, which warns the user to turn off the power supply before working on the unit (3)
- to remove the labels applied inside the engine compartment, indicating grounding (4)
- to remove the label applied on the power cord, indicating the type of power supply (5)
The manufacturer declines any responsibility for the safety of the blast chiller if this were to happen.

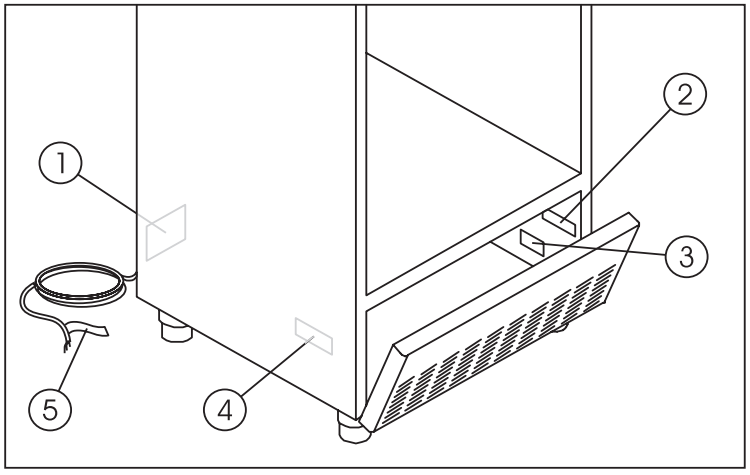
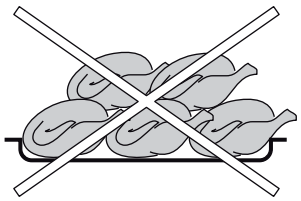


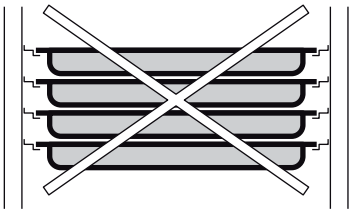
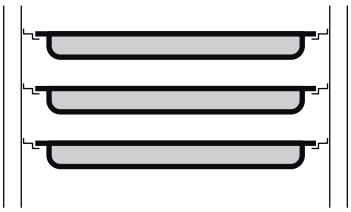
Fig.2

8.2 Indications for optimal operation
- do not block the air vents of the engine compartment
- place the foodstuffs on the appropriate shelves or containers. Do not place them directly on the bottom, or leaning against the walls, doors or fixed guards
- close the doors carefully
- always keep the defrost water drain hole clear of obstructions
- limit, to the extent possible, the frequency and duration of door opening. Each opening causes a change in the internal temperature
- perform periodically current maintenance (see chapter 3)

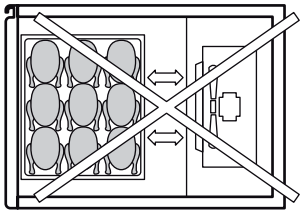
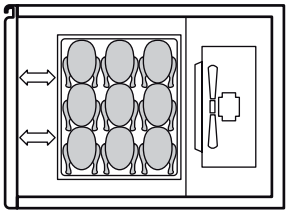
AVOID overloading the blast chiller beyond the set limits shown in the table

NO	OK
	

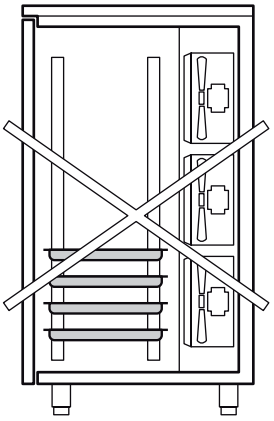
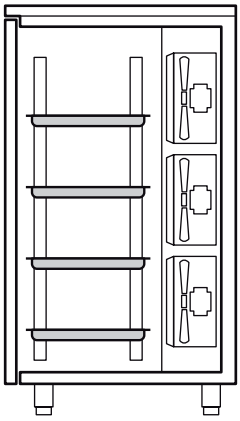
Do not place the trays too close to each other so as to avoid uneven air circulation inside the blast chiller

NO	OK
	

Do not place the trays too far away from the evaporator

NO	OK
	

Do not concentrate the trays in one area of the blast chiller in case the load is not complete; distribute its height evenly

NO	OK
	

In case of interruption or failure of the power supply circuit, prevent the opening of the doors in order to maintain a uniform temperature inside the blast chiller.
If the problem persists longer than a few hours it is recommended to move the material to a suitable place.

CHAPTER 9 CONTROLS

9.1 Description of the controls and of the keys (Fig. 3)

The control panel is a digital thermoregulator for cold, and it is provided with 6 keys with specific functions:

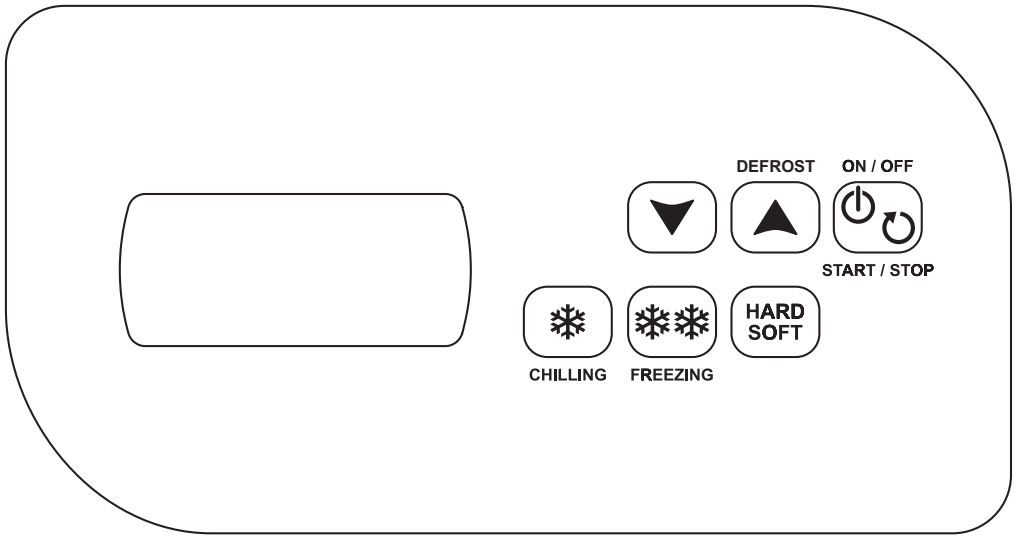


Fig.3

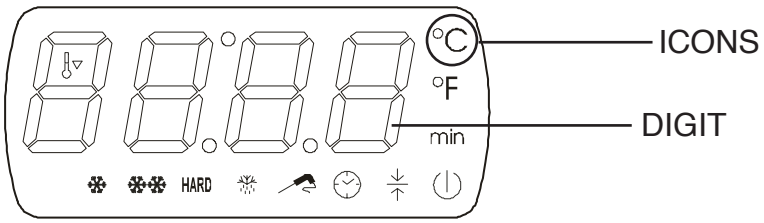
The control keys of the blast chiller are:

START/STOP KEY ON / OFF START / STOP	Turns the blast chiller on or off, Pressing the key for 1 second.
DOWN KEY	Reduces a value.
UP KEY DEFROST	Increases a value. When control board is in “ON” mode, it activates a manual defrosting cycle, pressing the key for 4 seconds.
HARD / SOFT KEY HARD SOFT	For selecting a Hard or Soft chilling cycle.
FREEZING KEY FREEZING	Turns on a freezing cycle.
CHILLING KEY CHILLING	Turns on a positive chilling cycle.

Nb. To silence the acoustic BUZZER, press and release any key.

Display

Visualization is carried out through a display where you can see four digits – once on, they turn blue – and twelve icons. For ease of reference, from now on the four digits will be designed as “display”, and each icon will be identified singularly.



FREEZING ICON ❄❄	► Flashes while selecting a freezing cycle ► Remains on during the freezing cycle
CHILLING ICON ❄	► Flashes while selecting a chilling cycle ► Remains on during the chilling cycle
HARD ICON **HARD CHILLING / FREEZING**	► Flashes while selecting a Hard chilling or freezing cycle ► Remains on during the Hard chilling or freezing cycle
ICONS **TEMPERATURE-BASED CHILLING / TEMPERATURE-BASED FREEZING ICON**	► Remains on while selecting: - A chilling cycle with core probe - A temperature-based freezing cycle ► Flashes during the test attesting that the core probe has been correctly inserted
ICONS **TIME CHILLING / TIME FREEZING ICON**	► Remains on: - While selecting a time chilling cycle - While selecting a time freezing cycle
STORAGE ICON	► Remains on during a storage cycle ► Flashes when displaying the room’s temperature
DEFROSTING ICON	► Remains on while defrosting is being carried out
PRECOOLING ICON	► Remains on while precooling is being carried out, and the room’s temperature has reached the pre-set parameters ► Flashes when precooling is being carried out, and the room’s temperature has not reached the pre-set parameters

FAHRENHEIT °F ICON	► Remains on when displaying a temperature measured in Fahrenheit degrees
CELSIUS °C ICON	► Remains on when displaying a temperature measured in Celsius degrees
MINUTES min ICON	► Remains on when displaying a time lapse expressed in minutes (e.g. the duration of a chilling / freezing cycle)
ON / STAND BY ICON ⏻	► Remains on when the unit is in “STAND BY” mode

9.2 INSTRUCTION FOR USE

9.2.1 Start-up

Before starting up the blast chiller, please make sure that the power wiring and the connection have been performed as per dispositions in chapter 15.
When the control board is fed, a two-seconds lamp test is carried out.

There are 4 statuses of functioning:

☞ **OFF status:**

► the unit is not being fed, the display is off

☞ **Stand-by status:**

► the unit is being fed and is off	The display only shows the ⏻ icon, coloured in red.

☞ **ON status:**

► the unit is being fed, is on and waiting for a working cycle to be carried out.	The display shows the room’s temperature

☞ **RUN status:**

► the unit is being fed, is on, and a working cycle is being carried out.	The display shows the following information: ► if a chilling or freezing cycle with core probe is being carried out, the display shows the temperature detected by the probe ► if a chilling cycle or a time-based freezing is being carried out, the display shows the time remaining before the end of the current cycle ► if a storage cycle is being carried out, the display shows the room’s temperature

9.2.2 Turn on/off

- Make sure the keyboard is not locked and that no procedures are being carried out.
Press the **START/STOP** key for 1 second to turn on and off the unit.

The icon ⏻ turns on or off.

9.2.3 Operation

The blast chiller carries out chilling or freezing cycles, which can be Hard and Soft, time-based (setting the duration of the cycle) and temperature-based (checking the core temperature of the product via core probe).

Before each working cycle, a precooling may be carried out (Par. 9.2.10).

Before each cycle with a core probe, a test is carried out, to make sure the probe has been correctly inserted; if it is not inserted, time-based cycles will start in a time-based mode.
Each chilling / freezing cycle is followed by a storage cycle.

CHILLING TYPE	TEMPERATURE RANGE	SUGGESTED PRODUCTS
CHILLING SOFT	► Core temperature of the product +90°C / +3°C ► The air temperature inside the room never goes below zero.	Delicate, thin or small products such as vegetables, rice and fried products.
CHILLING HARD	► Core temperature of the product +90°C / +3°C ► The air temperature inside the room reaches -20°C.	Ideal for dense, fat, big in size or packed products.
FREEZING SOFT	► Core temperature of the product +90°C / -18°C ► The air temperature inside the room reaches 0°C during the first phase, and reaches even -40°C during the second phase.	Ideal for any foodstuff that, once freezed, is due to be stored for many weeks or months. Soft freezing is suitable for delicate and small products, needing a softer freezing process
FREEZING HARD	► Core temperature of the product +90°C / -18°C ► The air temperature inside the room reaches -40°C.	Ideal for any foodstuff that, once freezed, is due to be stored for many weeks or months. Hard freezing is suitable for products that are big in size and are not affected by a fast temperature decrease.

POSITIVE CHILLING WITH CORE PROBE

SOFT	HCARD
► Room temp. setpoint.: 0°C ► Core probe temp. setpoint.: 3°C **+** **SORING CYCLE** ► Setpoint Temp. room: 2°C	a) 1st phase ► Room temp. setpoint.: -20°C ► Core probe temp. setpoint.: 15°C a) 2nd phase ► Room temp. setpoint.: 0°C ► Core probe temp. setpoint.: 3°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: 2°C

POSITIVE TIME-BASED CHILLING

SOFT	HARD
100% of time Soft chilling ► Room temp. setpoint.: 0°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: 2°C	60% of time Hard chilling ► Room temp. setpoint.: -20°C 40% of time Soft chilling ► Room temp. setpoint.: 0°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: 2°C

FREEZING WITH CORE PROBE

SOFT	HARD
a) 1st phase ► Room temp. setpoint.: 0°C ► Core probe temp. setpoint.: +3°C a) 2nd phase ► Room temp. setpoint.: -40°C ► Core probe temp. setpoint.: -18°C **+** **STORAGE CYCLE** ► Room temp setpoint: -20°C	► Room temp setpoint: -40°C ► Core probe temp. setpoint: -18°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: -20°C

TIME-BASED FREEZING

SOFT	HARD
60% of time Soft chilling ► Room temp. setpoint.: 0°C 40% of time Hard chilling ► Room temp. setpoint.: -40°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: -20°C	100% of time Hard chilling ► Room temp. setpoint.: -40°C **+** **STORAGE CYCLE** ► Room temp. setpoint.: -20°C

☞ 9.2.4 POSITIVE SOFT CHILLING with core probe and subsequent storage

The time-based chilling and storage cycle consists in two phases:

► Soft chilling cycle (Room temp. setpoint 0°C; Core probe temp. setpoint 3°C)
► Storage (Room temp. setpoint 2°C)

- Make sure the unit is in “ON” mode, that the keyboard is not locked and that no procedures are being carried out.

► Press and release the CHILLING key:	the ❄ icon starts flashing
The display shows the room’s temperature setpoint. ► It is possible to use the ▼ ▲ keys to modify this value.	
► Press and release the ON / OFF START / STOP key within 20 seconds:	❄ and icons remain on, and a one-minute test is carried out, to make sure the core probe has been correctly inserted: ► If the test has a positive outcome, the chilling cycle with core probe does not stop. ► If the test has a negative outcome (e.g. core probe not inserted), the acoustic buzzer warns us 3 times (each 10 seconds) that the core probe has not been inserted. In this case there is no need to press any keys, after 30 seconds a time-based cycle automatically begins.
During the chilling cycle, the display shows the temperature detected by the core probe, and the icon is on.	
► It is possible to display the room’s temperature in any moment, pressing and releasing the CHILLING key. ► To restore the standard display mode, press and release the same key or do not operate for 15 seconds. ► Once the chilling cycle has been carried out, the unit automatically switches to a storage cycle. ► During the storage, the display shows the temperature detected by the room probe and the icon is on.	
► To stop any cycle, press the ON / OFF START / STOP key.	

NB: If the required temperature is not reached within the scheduled time (positive chilling: 90 min, freezing: 240 min), the control board emits a repeated loud bleep as a warning.
The blast chiller keeps chilling / freezing until reaching the scheduled temperature. Failure to reach the temperature within the scheduled time may take place when introducing products which are bigger in size or weight compared with the standard ones.

☞ 9.2.5 POSITIVE HARD CHILLING WITH CORE PROBE and subsequent storage

The chilling cycle with core probe and subsequent storage consists in three phases:

► **Hard chilling cycle** (Room temp. setpoint -20°C; Core probe temp. setpoint 15°C)
► **Soft chilling cycle** (Room temp. setpoint 0°C; Core probe temp. setpoint 3°C)
► **Storage** (Room temp. setpoint 2°C)

After completing a phase, the unit automatically switches to the next one.

- Make sure the unit is in “ON” mode, that the keyboard is not locked and that no procedures are being carried out.

►Press and release the CHILLING key	the ❄ icon starts flashing.
► Press and release the HARD SOFT key	the **HARD** and ❄ icon flash
The display shows the working setpoint during the chilling. ► It is possible to use the ▼ ▲ keys to modify this value.	
► Press and release the ON / OFF START / STOP key within 20 seconds	the ❄ , **HARD** and icon remain on, and a one-minute test is carried out, to make sure the core probe has been correctly inserted: ► If the test has a positive outcome, the chilling cycle with core probe starts. ► If the test has a negative outcome (e.g. core probe not inserted), the acoustic buzzer warns us 3 times (each 10 seconds) that the core probe has not been inserted. In this case there is no need to press any keys, after 30 seconds automatically begins a time-based cycle.
During the chilling cycle, the display shows the temperature detected by the core probe, and the icon is on. ► It is possible to display the room’s temperature in any moment, pressing and releasing the CHILLING key. ► To restore the standard display mode, press and release the same key or do not operate for 15 seconds. ► Once the chilling cycle has been carried out, the unit automatically switches to a storage cycle.	

► During the storage, the display shows the temperature detected by the room probe and the icon is on.

► To stop the cycle, press the ON / OFF START / STOP key.

NB: If the required temperature is not reached within the scheduled time (positive chilling: 90 min, freezing: 240 min), the control board emits a repeated loud bleep as a warning.
The blast chiller keeps chilling / freezing until reaching the scheduled temperature. Failure of reaching the temperature within the scheduled time may take place when introducing products which are bigger in size or weight compared with the standard ones.

☞ 9.2.5 SOFT TIME-BASED CHILLING and subsequent storage

In order to select a time-based chilling cycle, you just need to make sure not to insert the core probe.

The Soft time-based and storage cycle consists in two phases:

► **Soft chilling cycle** (Room temp. setpoint 0°C during the whole cycle)
► **Storage phase** (Room temp. setpoint 2°C)

- Make sure the core probe is not inserted.
- Make sure the unit is in “ON” mode, that the keyboard is not locked and that no procedures are being carried out.

► Press and release the CHILLING key	the icon starts flashing
The display shows the working setpoint during chilling. ► It is possible to use the keys to modify this value and modify the values with the same keys	
► Press and release the ON / OFF START / STOP key within 20 seconds:	The icons remain on and the cycle starts
► The control board carries out a one-minute test, to make sure the core probe has been correctly inserted, the icon flashes during the whole test, and turns off at the end of it. ► If the core probe has not been correctly inserted, the acoustic buzzer warns us 3 times (each 10 seconds). ► There is no need to press any keys, a time-based cycle will automatically begin.	
During the chilling, the display shows the temperature detected by the room probe and the and **min** icons remain on. ► It is possible to modify the duration of the cycle by pressing the keys.	

► To display the room's temperature, press and release the CHILLING. To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

►Once the chilling has been completed, according to the scheduled duration, the unit automatically switches to storage.

-During storage, the display shows the temperature detected by the probe, and the icon is on.

►To stop the cycle, press the ON / OFF START / STOP key.

☞ 9.2.6 HARD TIME-BASED CHILLING and subsequent storage

In order to select a time-based chilling cycle, you just need to make sure not to insert the core probe.

The Soft time-based and storage cycle consists in three phases:

► 1st phase: Hard chilling cycle (60% of the whole duration of the cycle; Room temp. setpoint -20°C)
► 2nd phase: Soft chilling cycle (40% of the whole duration of the cycle; Room temp. setpoint -0°C)
► Storage cycle (Room temp. setpoint: 2°C)

After completing a phase, the unit automatically switches to the next one.

- Make sure the core probe is not inserted
- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

► Press and release the CHILLING key:	the icon starts flashing
► Press and release the HARD SOFT key	the **HARD** icon starts flashing
The display shows the working setpoint during the chilling. It is possible to use the keys to modify this value	
► Press and release the ON / OFF START / STOP key within 20 seconds:	The , **HARD** and icon remain on and the cycle starts
► The control board carries out a one-minute test, to make sure the core probe has been correctly inserted, the icon flashes during the whole test, and turns off at the end of it.	

If the core probe has not been correctly inserted, the acoustic buzzer warns us 3 times (each 10 seconds). There is no need to press any keys, a time-based cycle will automatically begin.

► During the chilling, the display shows the time remaining before the end of the cycle.

► The 'icon turns off, while the and **min** icons remain on.

► It is possible to modify the duration of the cycle by pressing the keys.

► To display the room's temperature, press and release the CHILLING key.

► To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

► Once the Hard chilling has been completed, according to the scheduled duration, the unit automatically switches to chilling.

► display shows the time remaining before the end of the chilling, the , and **min** remain on

► Once the chilling has been completed, according to the scheduled duration, the unit automatically switches to storage.

► During storage, the display shows the temperature detected by the probe, and the icon is on.

► To stop the cycle, press the ON / OFF START / STOP key.

☞ 9.2.6 HARD FREEZING WITH CORE PROBE and subsequent storage

The freezing time-based and storage cycle consists in two phases:

► **Hard chilling cycle** (Room temp. setpoint -40°C; Core probe temp. setpoint -18°C)
► **Storage cycle** (Room temp. setpoint -20°C)

- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

► Press and release the FREEZING key	The , and **HARD** icons starts flashing

The display shows the temperature setpoint during the chilling.

► It is possible to use the keys to modify this value

► Press and release the ON / OFF START / STOP key within 20 seconds:	The , , **HARD** and icon remain on.

A test is carried out, to make sure the core probe has been correctly inserted:	► If the test has a positive outcome, the storing cycle with core probe is activated. ► If the test has a negative outcome, a time-based chilling cycle is activated.

► During freezing, the display shows the temperature detected by the probe, and the  icon is on.

► To display the room's temperature, press and release the 

key. To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

► Once the freezing has been completed, the unit automatically switches to storage.

► During storage, the display shows the temperature detected by the probe, and the  icon is on.

► To stop the cycle, press the 

key.

NB: If the required temperature is not reached within the scheduled time (positive chilling: 90 min, freezing: 240 min), the control board emits a repeated loud bleep as a warning.
The blast chiller keeps chilling / freezing until reaching the scheduled temperature.

Failure to reach the temperature within the scheduled time may take place when introducing products which are bigger in size or weight compared with the standard ones.

☞ 9.2.7 SOFT FREEZING WITH CORE PROBE and subsequent storage

The Sorf temperature-based freezing and storage cycle consists in three phases:

► **Soft freezing cycle** (Room temp. setpoint 0°C; Core probe temp. setpoint +3°C)
► **Freezing cycle** (Room temp. setpoint -40°C; Core probe temp. setpoint -18°C)
► **Storage cycle** (Room temp. setpoint -20°C)

After completing a phase, the unit automatically switches to the next one.

- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

► Press and release the  key	The ❄, ❄❄ and **HARD** icon starts flashing
► Press and release the  key	the **HARD** icon turns off

The display shows the temperature setpoint during the freezing.
► It is possible to use the  keys to modify this value

▸ Once the values have been modified, press and release the ON / OFF START / STOP key	The ❄ , ❄❄ and icons remain on and a test is carried out to make sure the probe has been correctly inserted. ▸ If the test has a positive outcome, the temperature-based freezing cycle is activated. ▸ If the test has a negative outcome, a time-based chilling cycle is activated.

▸ During the Soft freezing phase, the display shows the temperature detected by the probe, and the icon is on.

▸ To display the room's temperature, press and release the ❄❄ FREEZING key. To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

▸ Once the Soft freezing phase has been completed, the unit automatically switches to freezing.

▸ During the freezing phase, the display shows the temperature detected by the probe, and the icon is on.

Once the freezing phase has been completed, too, the unit automatically switches to the storage phase.

▸ During the storage phase, the display shows the temperature detected by the probe, and the icon is on.

▸ To stop the cycle, press the ON / OFF START / STOP key

NB: If the required temperature is not reached within the scheduled time (positive chilling: 90 min, freezing: 240 min), the control board emits a repeated loud bleep as a warning.

The blast chiller keeps chilling / freezing until reaching the scheduled temperature.

Failure to reach the temperature within the scheduled time may take place when introducing products which are bigger in size or weight compared with the standard ones.

☞ 9.2.8 HARD TIME-BASED FREEZING and subsequent storage

In order to select a time-based chilling cycle, you just need to make sure not to insert the core probe

The time-based freezing and storage cycle consists in two phases:

▸ **Freezing cycle** (Room temp. setpoint -40°C during the whole cycle)
▸ **Storage cycle** (Room temp. setpoint -20°C)

- Make sure the core probe is disabled.
- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

▸ Press and release the FREEZING key:	The ❄, ❄❄ and **HARD** icons starts flashing

The display shows the working setpoint during the freezing.

▸ It is possible to use the ▼ ▲ keys to modify this value.

▸ Press and release the ON / OFF START / STOP key within 20 seconds:	The ❄ , ❄❄ ,**HARD** and icon remain on and the cycle starts.

▸ The control board carries out a one-minute test, to make sure the core probe has been correctly inserted. The icon flashes during the whole test, and turns off at the end of it.

▸ If the core probe has not been correctly inserted, the acoustic buzzer warns us 3 times (each 10 seconds). There is no need to press any keys, a time-based cycle will automatically begin.

▸ During the freezing phase, the display shows the time left before the end of the freezing, and the ❄, ❄❄, and min are on.

▸ It is possible to use the ▼ ▲ keys to modify the duration of the cycle.

▸ To display the room's temperature, press and release the FREEZING key. To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

▸ Once the freezing cycle has been completed, the unit automatically switches to a storage cycle.

▸ During the storage phase, the display shows the temperature detected by the probe, and the icon is on.

▸ To stop the cycle, press the ON / OFF START / STOP key

☞ 9.2.9 SOFT TIME-BASED FREEZING and subsequent storage

In order to select a time-based chilling cycle, you just need to make sure not to insert the core probe

The time-based freezing and storage cycle consists in three phases:

▸ **1st phase:** Soft freezing cycle (60% of the whole duration of the cycle; Room temp. setpoint 0°C)
▸ **2nd phase:** Freezing cycle (40% of the whole duration of the cycle; Room temp. setpoint -40°C)
▸ **Storage** (Room temp. setpoint -20°C)

After completing a phase, the unit automatically switches to the next one.

- Make sure the core probe is disabled.
- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

▸ Press and release the FREEZING key	The ❄, ❄❄ and **HARD** icon starts flashing
▸ Press and release the HARD SOFT key	The HARD icon turns off

The display shows the working setpoint during the freezing.

▸ It is possible to use the ▼ ▲ keys to modify the duration of the cycle

▸ Press and release the ON / OFF START / STOP key within 20 seconds:	The ❄ , ❄❄ and icons remain on and the cycle starts

The control board carries out a one-minute test, to make sure the core probe has been correctly inserted. The icon flashes during the whole test, and turns off at the end of it.

▸ If the core probe has not been correctly inserted, the acoustic buzzer warns us 3 times (each 10 seconds). There is no need to press any keys, a time-based cycle will automatically begin.

▸ During the Soft freezing phase, the display shows the time left before the end of the cycle, and the ❄ ,❄❄, and **min** are on.

▸ It is possible to use the ▼ ▲ keys to modify the duration of the cycle

▸ To display the room's temperature, press and release the FREEZING key. To restore the standard display mode, press and release the same key or do not operate for 15 seconds.

▸ Once the first freezing phase has been completed, the unit automatically moves to the second phase.

▸ During the freezing phase, the display shows the time left before the end of the cycle, and the ❄, ❄❄, and **min** icons are on.

▸ Once the freezing phase has been completed, the unit automatically moves to the storage phase.

▸ During the storage phase, the display shows the temperature detected by the core probe, and the icon is on.

▸ To stop the cycle, press the ON / OFF START / STOP key.

☞ 9.2.10 Activation of a PRECOOLING CYCLE

Each cooling cycle might be preceded by precooling
Precooling temperature is set by default at 0° C and cannot be modified by the user.
- Make sure the unit is in "ON" mode, that the keyboard is not locked and that no procedures are being carried out.

▸ Press the CHILLING key for 1 second	the icon starts flashing
▸ To stop the precooling:	press the CHILLING key for 1 second or start a working cycle

☞ 9.2.11 Activation of a MANUAL DEFROSTING cycle

Defrosting is activated manually, and lasts no longer than 30 minutes.
The cycle ends when the evaporator probe detects a temperature of 8°C.

- Make sure the unit is in “ON” mode, that the keyboard is not locked and that no procedures are being carried out.
- Air defrosting is carried out: the chiller’s door must therefore be left open during the whole duration of the cycle.

▸ Press the DEFROST key for 4 seconds to start the defrosting	The display shows the icon.

NB: It is advisable to perform a defrosting cycle daily, if possible at the end of the working day

CHAPTER 10 ALARMS

LEBEL	ALLARM	CAUSE	SOLUTION
TIME + Acoustic bleep	The chilling / freezing cycles with core probe have not been carried out within the scheduled time (positive chilling: 90 min, freezing: 240 min),	▸ Insertion of excessively hot foodstuff ▸ Refrigerating unit breakdown	▸ Check refrigerating unit ▸ Contact customer service
AH	Maximum temperature alarm	▸ Refrigerating circuit out of gas ▸ Compressor breakdown ▸ Control board breakdown	▸ Check room temperature ▸ Contact customer service
HP Only for ABF 05 E/C models	High pressure alarm	▸ Dirty condenser ▸ Insertion of excessively hot foodstuff ▸ Condenser fan breakdown	▸ Check the conditions of the high-pressure input ▸ Contact customer service
Pb1	Room probe error	▸ Room probe breakdown	▸ Contact customer service
Pb2	Core probe error	▸ Core probe not inserted ▸ Core probe breakdown	▸ Contact customer service

CAPITOLO 11 VISUALIZATIONS – KEYBOARD LOCK

While the unit is in “ON” mode, the display shows a series of data, for instance the room’s temperature and the temperature detected by the core probe.

☞ 11.1 Visualization of the room’s temperature

- Make sure the keyboard is not locked and that no procedures are being carried out.

▸ Press the ▼ key for 1 second	
▸ Select the first label available (“Pb 1”) using the ▼ ▲ keys	
▸ Press and release the ❄ CHILLING key	the display shows the room’s temperature
▸ To go back to menu press the ❄ CHILLING , key, to exit press the ⏻ ON / OFF START / STOP key or do not operate for 15 seconds.	
▸ Once the display shows the “Pb 1” label, press and release the ▼ or ▲ key to restore the stand-by mode.	

☞ 11.2 Visualizzazione detected by the core probe

- Make sure the keyboard is not locked and that no procedures are being carried out

▸ Press the ▼ key for 1 second	
▸ Select “Pb 2” label with the ▼ ▲ keys	
▸ Press and release the ❄ CHILLING key	the display shows the temperature detected by the probe.
▸ To exit, press and release the ❄ CHILLING key or do not oprate for 15 seconds.	
▸ Once the display shows the “Pb 2” label, press and release the ▼ or ▲ key to restore the stand-by mode.	

☞ 11.3 Lock / unlock keyboard

- Make sure the keyboard is not locked and that no procedures are being carried out

Lock keyboard

▸ Press simultaneously the ▼ and ON / OFF / START / STOP keys until the label is displayed.	**“Loc”**

Unlock keyboard

▸ Press simultaneously the ▼ and ON / OFF / START / STOP keys until the label is displayed.	**“UnL”**

CHAPTER 12 NOISE LEVEL

The noise threshold of the blast chiller is lower than 70 dB (A).

CHAPTER 13 MATERIALS AND FLUIDS USED

The materials in contact or which may come into contact with foodstuffs comply with the relevant directives.
The blast chiller has been designed and built in such a way that these materials can be cleaned before each use.
The refrigerants used R404A/R290 conform to the relevant provisions of law (see Table 1).
R404A is a fluorinated gas covered by the Kyoto Protocol with a GWP potential of 3300

⚠ For Blast chillers containing R290: R290 (Propane) is a natural gas with no effect on the environment but it is flammable and therefore contained in the system in minimum quantities prescribed by regulations on flammable gas and it is hermetically sealed.
Before any intervention on the refrigerant system, carefully read the attached INSTRUCTIONS FOR REPAIRS ON UNITS WITH R290 REFRIGERANT GAS (PROPANE) supplied with the use and maintenance manual.

The symbol  indicates that this product must not be treated as household waste.

To prevent potential negative consequences for the environment and human health, make sure that this product is properly disposed of and recycled.

For more information regarding the disposal and recycling of this product, please contact your Distributor, after sale Service, or waste treatment Service.

CHAPTER 14 TRANSPORT AND HANDLING

The transport and handling of the blast chiller must only be done while maintaining the vertical position, observing the markings on the packaging.

The manufacturer disclaims any liability for problems resulting from transport performed under conditions other than those specified above.

The accessories of the blast chiller (guides, grilles, trays, remote condensing unit with pipes) are packaged separately and placed inside the unit.

The blast chiller is mounted on a wooden base with screws and packaged with polyethylene, carton, crate or boxes.

Regarding the disposal of the packaging it is necessary to refer to current regulations in your country.

The movement of the blast chiller shall be performed using a fork lift or pallet trucks equipped with suitable forks (length of at least 2/3 of the unit).
The dimensions and masses of the refrigerated cabinets packed are shown in Table 1.
The limits of stackability and the centre of gravity are indicated on the label of the package.

14.1 Positioning operations

Since the incorrect positioning of the blast chiller can cause damage to the same, jeopardizing its proper functioning and result in risk to the personnel, the installer must adhere to the following general rules:

- position the blast chiller keeping a minimum distance of 3 cm from any wall
- the environment must be sufficiently ventilated
- position the blast chiller away from heat sources
- avoid exposure to direct sunlight
- remove the polyethylene, cardboard or wood packaging

⚠ Polyethylene is dangerous for children

- remove any accessories with external connections

Removing the wooden base: tilt the blast chiller sideways and unscrew the two self-tapping screws (fig. 4)

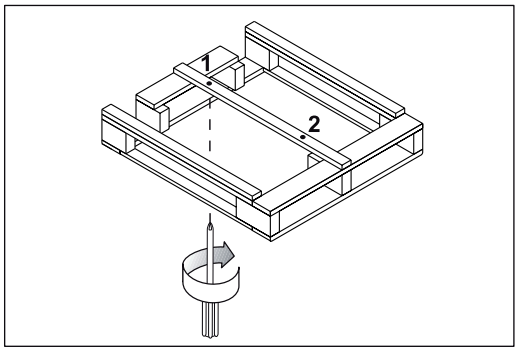


Fig.4

Drag the blast chiller from the rear while holding it slightly backwards and remove the base from the front part.

⚠ use protective gloves when handling the wooden packaging and the wooden base.

The presence of splinters may cause damage to your hands
- remove the PVC film applied as a protection to the outer surfaces of the blast chiller
- position the blast chiller using a level with possible adjustment of the feet of the metal base (Fig. 5)

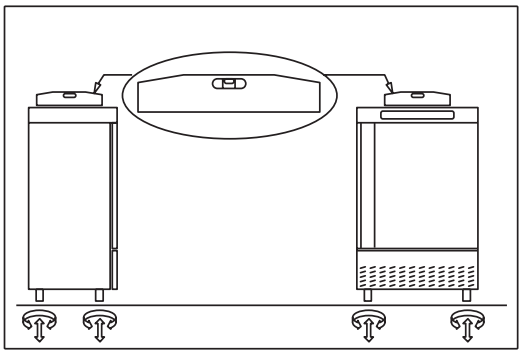


Fig.5

- position the grille holding guide fails in the holes of the racks (Fig. 6)

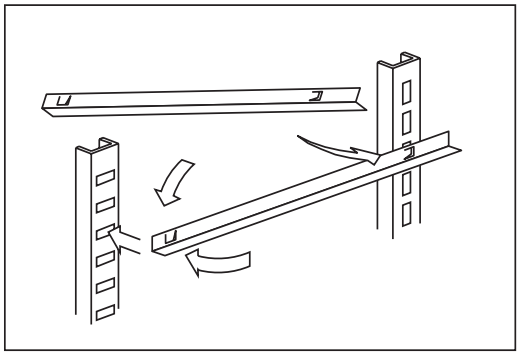


Fig.6

- insert the grilles for food in the special guides
- insert the condensate water drain pan into the special guide rails already fixed under the blast chiller if provided.

14.2 REM Blast chillers (Fig. 7)

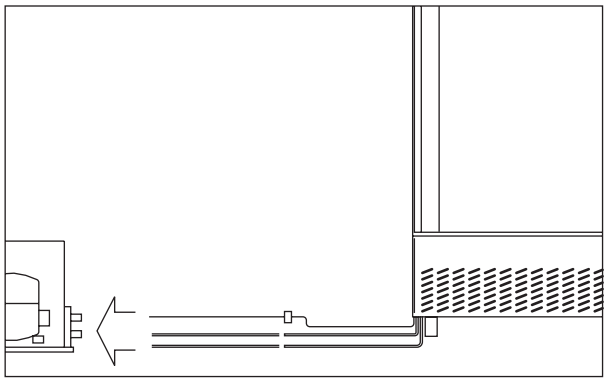


Fig.7

- position the blast chiller as described above (Fig. 5)
- N.B.: the system is pressurized by the manufacturer with refrigerant
- prepare the two pipes that protrude from the temperature blast chiller for the connection to the respective pipes
- connect the pipes of the condensing unit to the pipes of the blast chiller
- create a vacuum and then carry out the loading of the refrigerant
- make the electrical connection of the blast chiller to the condensing unit

CHAPTER 15 ELECTRICAL WIRING AND CONNECTIONS

The electrical system and connection must be carried out by qualified personnel. Before installation, measure the impedance of the network, the impedance value for the connection to the network must not exceed 0.075 ohm.

For safety reasons you must follow these guidelines:
- verify that the sizing of the electrical system is suitable for the power consumption of the blast chiller and that it provides for a differential switch (circuit breaker)
- in case of incompatibility between the outlet and the plug of the blast chiller, replace the outlet with another of a suitable type provided that it is in accordance with regulations
- do not insert adapters and/or reductions (Fig. 8)

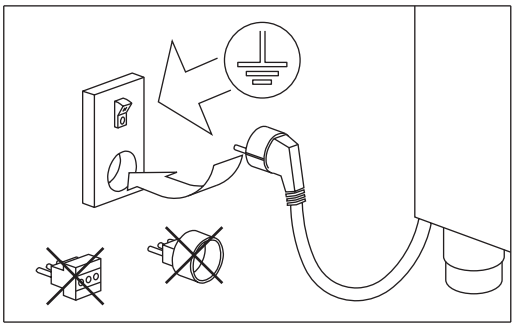


Fig.8

⚠ The power cord has the connection type “Y” and it can be replaced exclusively by the manufacturer or authorized technical service

⚠ It is essential to correctly connect the blast chiller to an efficient earthing system carried out as specified by the applicable provisions of law.

CHAPTER 16 INSTALLATION OPERATIONS

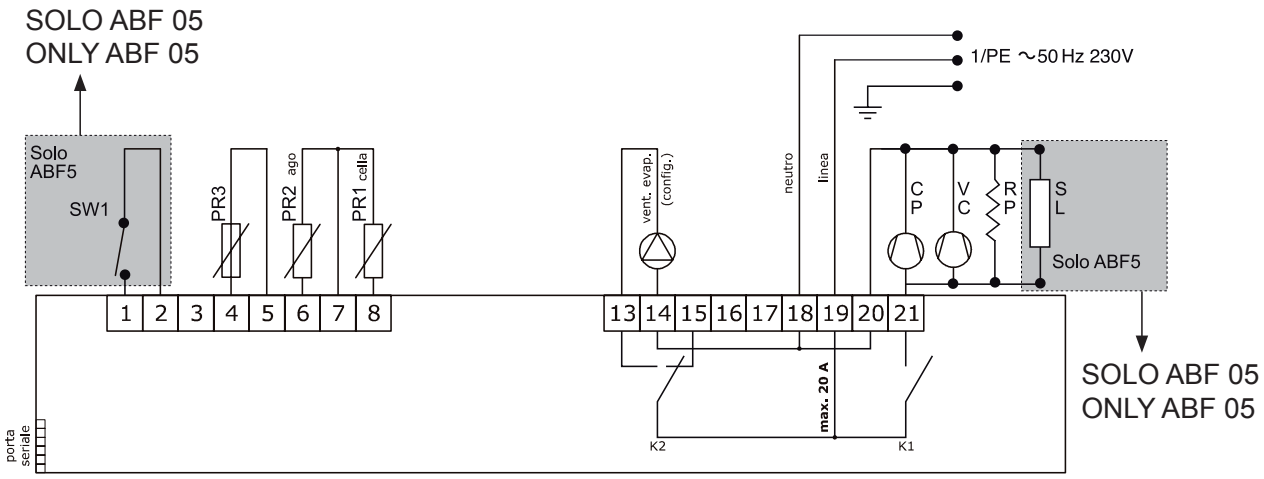
It is important, in order to prevent errors and accidents, to perform a series of checks before starting up the blast chiller in order to identify any damage incurred during transport, handling and connection.

Checks to be performed:
- check the integrity of the power cord (it must not have suffered abrasions or cuts)
- check the solidity of the legs, door hinges, shelf supports
- check the integrity of the internal and external parts (pipes, heating elements, fans, electrical components, etc.) and their fixing
- check that the seals of the doors and drawers have not been damaged (cuts or abrasions) and close with an airtight seal
- check the integrity of the pipes and fittings (REM)

CHAPTER 17 REINSTALLATION

It is necessary to comply with the following procedure:
- disconnect the power cord from the power outlet
- the handling should be carried out as described in chapter 14
- for a new placement and connection, please refer to par. 14.1
- proceed to the possible recovery of the refrigerant gas in accordance with the regulations in force in your country (REM)

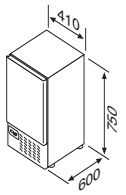
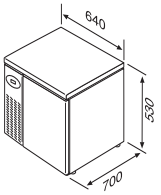
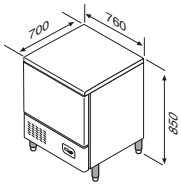
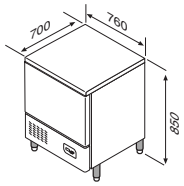
ABF MINI/03/05 E-C



Legenda componenti
CP - Compressore
K1 - Relè compressore
RP - Resistenza anticondensa
VC - Ventilatore condensatore
SL - Valvola solenoide liquido
VE - Ventilatore evaporatore
SG - Valvola solenoide sbrinamento
K2 - Relè ventilatore evaporatore
RE - Reattore lampada germicida
LG - Lampada germicida
PR1 - Sonda cella
PR2 - Sonda spillone
PR3 - Sonda evaporatore
SW1 - Pressostato
PRB4 - Sonda condensatore
RC - Resistenza carter

Components key
CP - Compressor
K1 - Compressor relay
RP - Anti-condensate heater
VC - Condenser fan
SL - Liquid solenoid valve
VE - Evaporator fan
SG - Defrost solenoid valve
K2 - Evaporator fan relay
RE - Germicidal lamp reactor
LG - Germicidal Lamp
PRB1 - Cell probe
PRB2 - Evaporator probe
PRB3 - Needle probe
SW1 - Pressostat
PRB4 - Condenser probe
RC - Housing heater

TABELLA 1 - TABLE 1 - TABLEAU 1 - TABELLE 1

													
modello model		**BASIC ABF MINI**			**BASIC ABF 03**			**BASIC ABF 05 E**			**BASIC ABF 05 C**		
Temperatura ambiente max °C Room temperature max °C		32			32			32			32		
Capacità di carico Load capacity		3 x GN 2/3			3 X GN 1/1			5 X GN 1/1 5 X EN 60X40			5 X GN 1/1 5 X EN 60X40		
Resa kg per ciclo di abbattimento +70° / +3°C Output kg for blast chilling process +70° / +3°C		7			10			14			20		
Resa kg per ciclo di congelamento +70° / -18°C Output kg for freezing process +70° / -18°C		4			5			9			12		
Potenza frigorifera W -23,3 °C / +54,4 °C Refrigerating power W -23,3 °C / +54,4 °C		380			490			730			750		
Potenza max assorbita kw Max absorption kw		0,6			0,9			0,6			1,2		
Tensione alimentazione Voltage		230/1/50			230/1/50			230/1/50			230/1/50		
Fluido refrigerante Kg Cooling gas Kg	**R404 A Kg**	0,4			0,6			0,9			1,1		
Peso unitario Unit Weight	**Kg**	53			68			93			108		
Peso del materiale imballato Kg Shipping Weight Kg	**Kg**	57			80			105			120		
		L	**P**	**H**	**L**	**P**	**H**	**L**	**P**	**H**	**L**	**P**	**H**
Dimensioni esterne L x P x H mm. External Dimension L x D x H mm.		410	600	750	640	700	530	760	700	850	760	700	850
Ingombri del materiale imballato Dimensions of packed material		500	740	950	730	840	730	850	840	1050	850	840	1050

EVERLASTING s.r.l.
46029 SUZZARA (MN) - ITALY - S.S. Cisa km.161
Tel.0376/521800 (4 linee r.a.) - Telefax 0376/521794
http://www.everlasting.it - E-mail:everlasting@everlasting.it