original instructions

ZOOM

BLAST CHILLER

USE AND MAINTENANCE MANUAL

RF50C00011

ED. 02-2022

EN

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SAFETY WARNINGS BEFORE UTILISATION

- Any utilisation and cleaning performed in disagreement with that specified and foreseen in this book is considered not envisaged and may cause damages, injuries or fatal incidents, will void the warranty and exempt the builder from any responsibility.
- The utilisation is reserved only for qualified and trained personnel, who have attended periodical formation courses.
- Do not approach electrical components with wet hands or shoeless.
- IT is absolutely forbidden to tamper with or remove the safety devices provided (protective grilles, danger adhesive signs, etc...). The builder declines from any responsibility should the instructions above not be complied with.
- Do not insert screwdrivers or other tools between the guards (fan guards, evaporators, etc.).
- To ensure optimum functionality of the compressor and evaporator unit, never obstruct the existing air intakes.
- In case of fire, do not use water, keep CO_2 extinguishers available (carbon anhydrite) and cool as soon as possible the motor installation compartment.

CORRECT USE OF THE EQUIPMENT

- This equipment is considered an agrifood machine (CE Regulation no. 1935/2004), destined to the processing of food products in industrial and professional kitchens. It is not suitable for the conservation of pharmaceutical or chemical products, or any other non-food product.
- Specifically:
  - Showcases (+2/+8°C): are adequate for the conservation and exposure of bottles, tins, etc…
  - Refrigerators (-2/+8°C): are adequate for the conservation for short periods of fresh foodstuff and precooked prepared foods, and also for the refrigeration of beverages
  - Conservators (-22/-15°C): are adequate for the conservation during short periods of deep frozen products
  - Chillers (+90/+3°C) (+90/-18°C): are adequate for the quick lowering of foodstuff temperature, in order to keep unchanged its organoleptic properties
  - Leavening control (-15/+40°C) (-2/+40°C): are adequate for the production and conservation of pastries.
- With the purpose of achieving the best equipment performance it is necessary to observe the following indications:
  - Do not place inside the equipment hot food (except in the case of chilling functions) or open liquids, live animals, other objects or corrosive products.
  - Pack or protect food with other means, particularly if containing aromas or spices.
  - Position the foodstuff inside the equipment without disturbing the air circulation, do not place paper, cardboard, cutting boards, etc. over the grilles, which may obstruct the air flow.
  - Avoid as much as possible frequent and prolonged door opening.
  - If the door was opened, wait some time before opening it again.
  - Gradually arrange food starting from the bottom up; vice versa, remove food starting from the top down. The maximum load (evenly distributed) per tray or rack is 20 kg (GN 1/1) or 35kg (GN 2/1).
- The refrigeration equipment is built and designed with adequate features to guarantee the safety and health of the users, avoiding the presence of dangerous edges, sharp surfaces or elements that extend beyond the main volume. Its stability is ensured even with open doors, however it is forbidden to hang on the doors.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given su-

pervision and instruction concerning use of the appliance in a safe way and understand the hazard involved. Children must not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

- Failure to comply with these rules may cause damages and injuries, also fatal, and will void the warranty.

IN CASE OF EQUIPMENT MALFUNCTIONING...

- If the equipment does not work properly or if functional or structural problems are noticed, disconnect it from the electrical and hydraulic source and get in contact with an assistance centre authorised by the builder, and do not attempt to repair it yourself. The use of original spare parts is recommended. The builder declines from any responsibility for the use of non-original spare parts.
- To be sure that the equipment is maintained in perfect use and safety conditions, we recommend the execution of a maintenance and inspection service by an authorised assistance centre, at least once a year.

RISKS ASSOCIATED TO THE USE OF THE EQUIPMENT

- RISKS DUE TO DISPLACEMENT ON WHEELS: if the equipment is supported by wheels, be careful during displacements to avoid pushing the equipment strongly, because it may tip or get damaged, pay attention also to eventual unevenness of the rolling surface. The equipment supported on wheels cannot be levelled, therefore be sure that the supporting surface is perfectly horizontal and flat. Always block the wheels with the devices provided.
- RISKS DUE TO MOBILE ELEMENTS: the only mobile element present is the fan, but it presents no risk because it is protected by a protective grille fastened with bolts.
- RISKS DUE TO LOW/HIGH TEMPERATURES: adhesive signs indicating “DANGER DUE TO TEMPERATURE” are affixed close to the dangerous zones with low/high temperatures, .
- RISKS DUE TO ELECTRICAL POWER: the risks of electrical nature are solved by the design of the electrical installation according to the CEI EN 60335-1 and CEI EN 60335-2-89 standard. Appropriate adhesives indicating “high voltage” identify the zones with dangers of electrical nature.
- Noise level less than 70 dB.

Deep freezing

- Allows a quick temperature drop in the core of the product to -18°C, keeping intact the product structure and consistency.
- Deep freezing allows the purchase of products at their best moment concerning freshness, ripening and availability on the market, always conserving unchanged all peculiarities.
- Thanks to a controlled air flow at -40°C, it is possible to freeze in time the quality of a fresh product.

MENU key

- Gives access to the machine's set-up menu.
- Inside a menu, allows the navigation downward.
- During set-up, decreases the value of the magnitude to be modified.

START key

- Starts the selected function or gives access to the selected menu page
- Stops the cycle in progress.
- During set-up, permits to render editable the value to be modified, and another pressing of the same confirms the set value.

Chilling

- Allows the quick selection of a chilling cycle.
- Once a chilling cycle is selected, it is possible to change a temperature-based chilling (core probe) to a time-based one and vice versa.
- Within a menu or during set-up: act on the "ESC" key and take the controller to the upper page."

HARD Function

- Once the chilling/deep freezing cycle to be followed is selected, allows the passage from the HARD mode to the SOFT one and vice versa.

AUX key

- Gives access to the menu for the selection of the machine's special cycles.
- Within a menu, permits the navigation upwards.
- During set-up, increases the value of the magnitude to be modified

ICON:

- Temperature on cell
- Temperature on the core
- Chilling
- Chilling hard
- Deep freezing
- Deep freezing soft
- Time-based cycle
- Compressor on outlet
- Cycle in progress
- Door open
- Fish sanitising cycle in progress
- Ice cream stiffening cycle in progress
- Number of the phase in progress
- Chilling/deep freezing cycle successfully completed
- Chilling/deep freezing cycle NOT successfully completed

What is the use of a temperature-based chiller?

The chiller is an equipment that decreases very quickly the temperature of the introduced foodstuff, either fresh or already cooked. Fresh or recently cooked food have in fact the best organoleptic and flavour quality; however, if not consumed immediately, it looses its initial qualitative characteristics with the passage of time, and a multiplication of micro-organisms potentially dangerous for humans will take place.
Chilling is carried out when the food is not consumed immediately after the preparation, by reducing the product temperature within 90 minutes until it reaches +3°C in the core. After this, the product must be conserved under refrigeration at a temperature of 0/+3°C, therefore conserving its quality for up to 5 days.

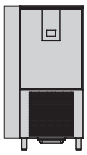
Deep freezing is carried out to conserve unchanged all the organoleptic characteristics of the food. The chiller reduces the product temperature until it reaches -18 degrees in the core. Then the product must be conserved in a freezer at a constant temperature of -20 degrees and can be consumed even after 3/18 months, according to the product, provided the cooling chain standards are complied with.

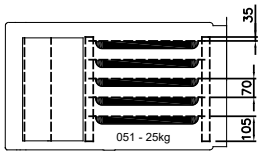
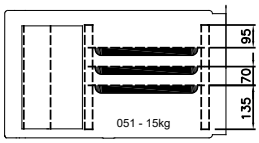
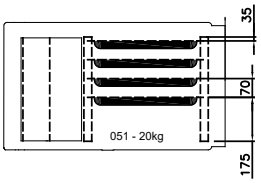
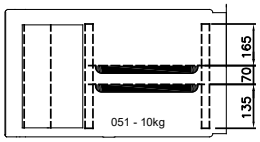
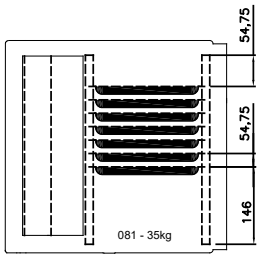
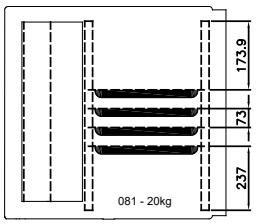
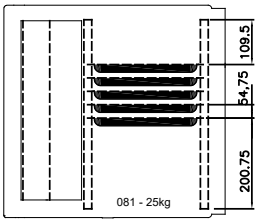
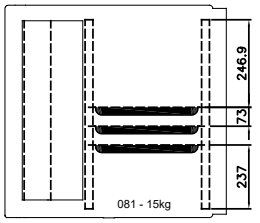
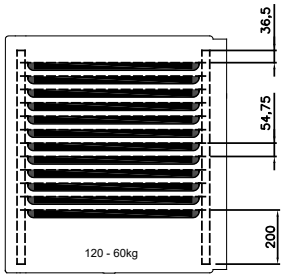
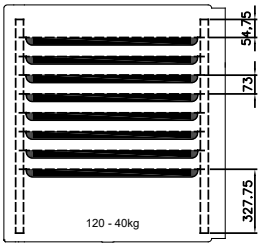
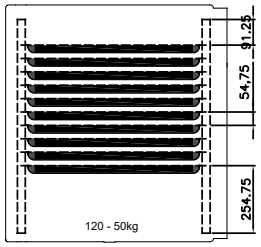
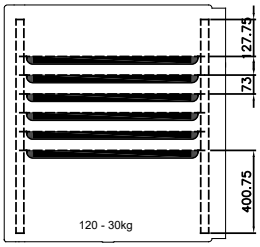
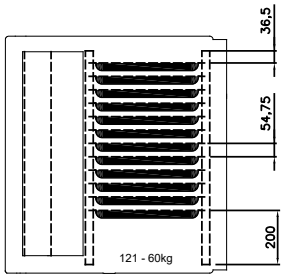
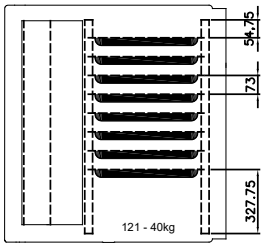
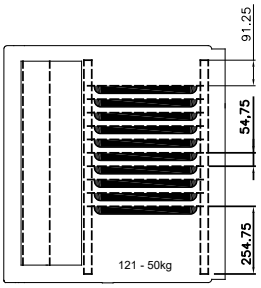
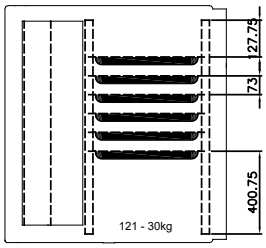
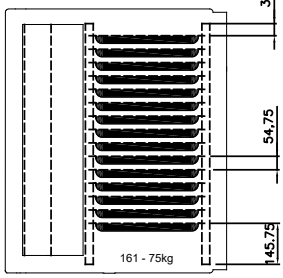
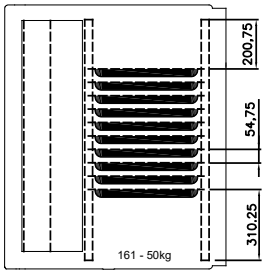
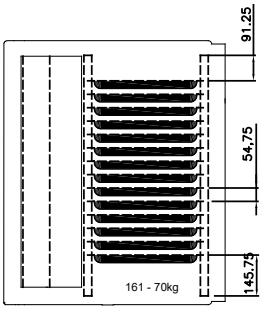
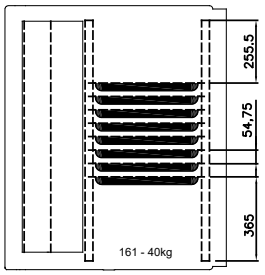
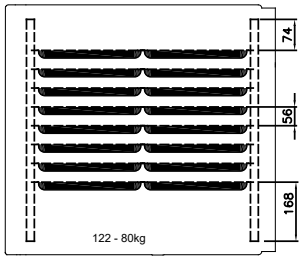
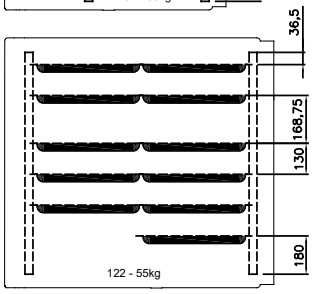
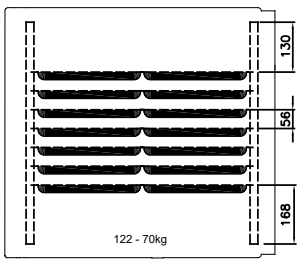
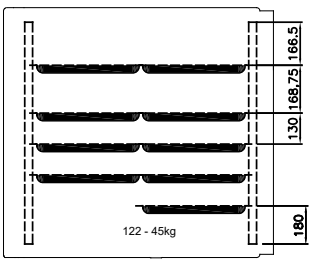
Regular refrigerators and freezers, as opposed to a chiller, don't have the features to quickly decrease the initial product temperature, as a result the later will be damaged at the organoleptic and flavour levels.

Load the equipment correctly

The food pieces are placed on a single layer, in recipients:
- uncovered;
- proper for food use;
- resistant to the temperatures reached in the chilling cycles.

The recipients must be evenly and uniformly distributed inside the cell.
The correct positioning of the containers allows free air circulation inside the cell: avoid obstructing the ventilation fans and overloading the equipment beyond the permitted limits.

														
Modello			**051S**	**051B**	**081S**	**081B**	**120S**	**120B**	**121S**	**121B**	**161S**	**161B**	**122S**	**122B**
Capacity chill in 120'	+65>+10°C EN17032	kg	20	25	25	35	50	60	50	60	70	75	70	80
Capacity freez. in 270'	+65>-18°C EN17032	kg	10	15	15	20	30	40	30	40	40	50	45	55
Type of pans/ grilles			GN1/1 600x400		GN1/1 600x400		GN1/1 600x400		GN1/1 600x400		GN1/1 600x400		GN 1/1 600x400	
Pan capacity GN 1/1 - EN1	H 20 mm	n°	10	10	18	18	22	22	24	24	28	28	44	44
	H 40 mm	n°	6	6	12	12	14	14	16	16	18	18	28	28
	H 65 mm	n°	5	5	9	9	11	11	12	12	14	14	22	22

ZOOM B EN17032 +65°C > +10°C	ZOOM B EN17032 +65°C > -18°C	ZOOM S EN17032 +65°C > +10°C	ZOOM S EN17032 +65°C > -18°C
			
			
			
			
			
			

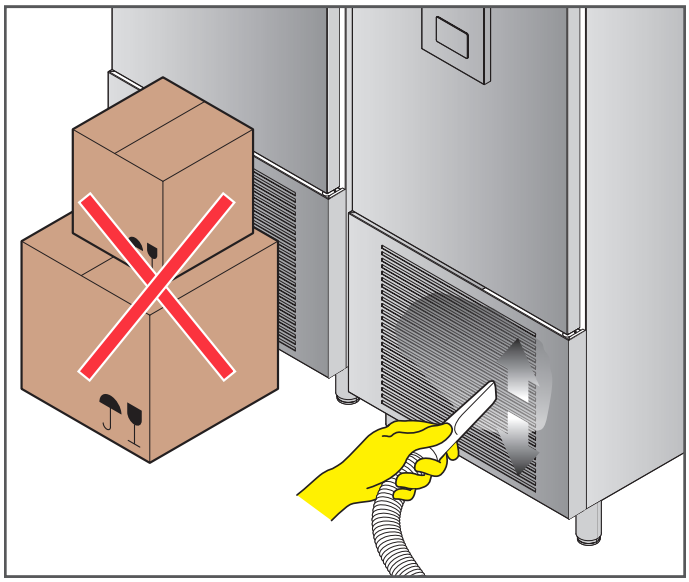
Achieve better results and work safely

- Keep the air inlets of the motor compartment free of objects and clear of dust;
- wash periodically or replace the filter located behind the air inlets of the motor compartment;

For more information about how to remove the filter consult chap. Cleaning of the grilles on page 34.

- place the foodstuff to be chilled as explained in the previous chapter;
- close the doors tightly during every work cycle;
- always keep the unbrining water discharge orifice unobstructed;
- avoid opening the doors during the chilling or deep freezing cycles;
- carry out regularly the ordinary maintenance as specified in the dedicated section;

For more information consult par. MAINTENANCE on page. MANUTENZIONE.



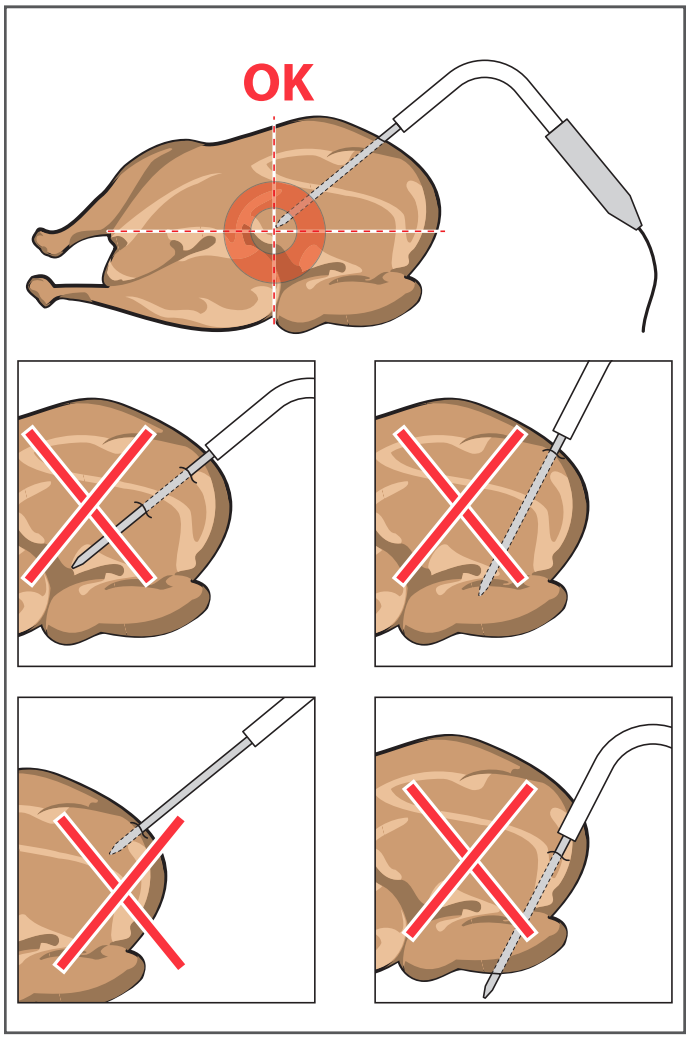
How to use the rod probe

The rod probe detects the temperature at the "core" of the food piece during a chilling or deep freezing cycle: when it reaches the value set by the user or at the plant, this means that the food has been either chilled (***Chilling*** function) or frozen (***Deep freezing*** function).

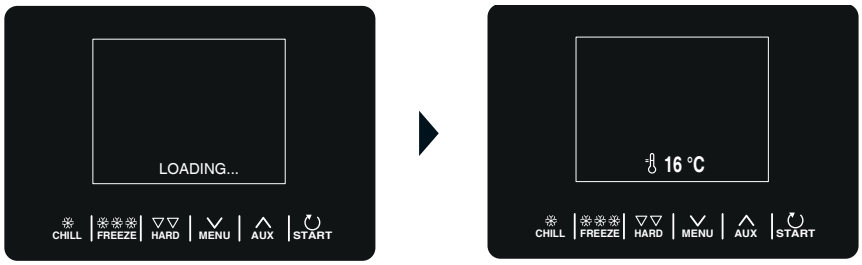
The rod probe is inserted deeply into the food to be chilled/deep frozen: be sure that the rod tip reaches the "core" of the food, this means its most internal point, without extending out.
Be careful not to insert it in points with much grease or next to bones.
If the food thickness is too small, insert the probe parallel to supporting surface.
It is recommended to keep the probe always clean and hygienic.

HANDLE THE PROBE CAREFULLY BECAUSE IT IS SHARP.

The probe can be heated to make the extraction from frozen food easier, consult page Heating of the rod probe.



Starting and shutting off



Screen when starting *Principal screen*

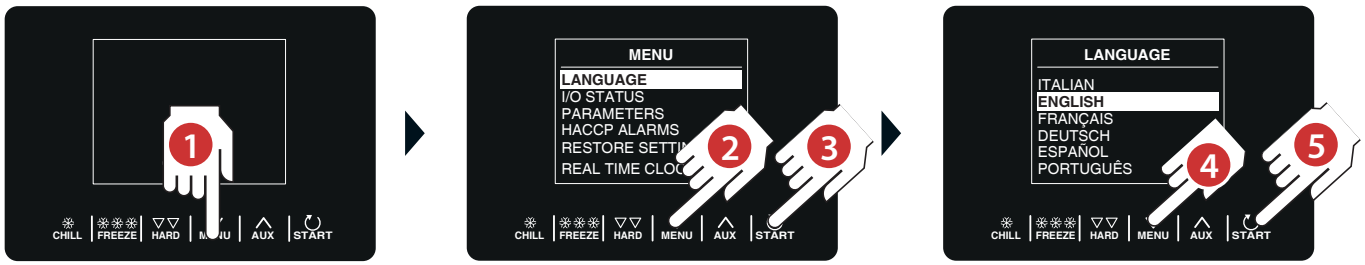
1. When the equipment receives power, the system loading screen will be displayed for a few seconds..
2. At the end of a chilling or deep freezing cycle, the equipment returns to the principal screen after a few seconds.

Power failure

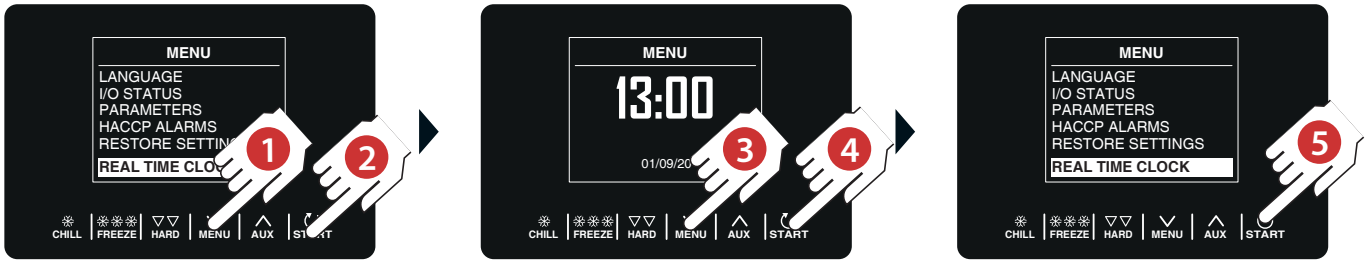
After a electrical current interruption during a function in progress, the equipment will behave in three ways when the power is restored:

1. if a chilling or deep freezing cycle was in progress, the cycle is reactivated considering the duration of the period without power;
2. if a conservation was in progress, the cycle continues keeping the same settings.
3. When the current returns, if the "clock - code RTC" error is displayed, it will be necessary to set again the present day and time.

Initial settings



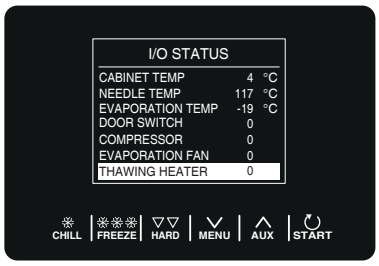
1. Touch the ***MENU*** key: the Set-up screen is displayed.
2. Press several times the ***MENU*** key to scroll along the several menu items to select ***LINGUE - LANGUAGE***.
3. Confirm with the ***START key.***
4. Press several times the ***MENU*** key to scroll along the several languages available to select the one you need.
5. Confirm with the ***START key.***



1. Press several times the ***MENU*** key to scroll along the several menu items to select ***REAL TIME CLOCK.***
2. Confirm touching the ***START key.***
3. The 2 digits for the year start to flash: set them with the keys ***MENU*** and ***AUX***.
4. Confirm with the ***START key.***
5. Once the date and time are set, return to the previous menu touching the ***START key.***

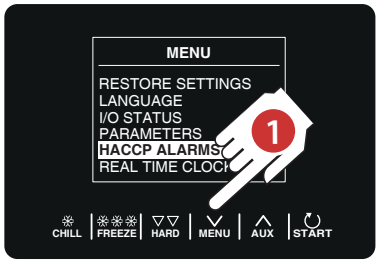
Internal status

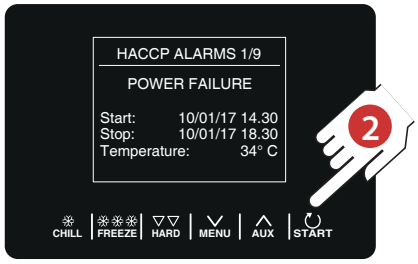
From the set-up menu it is possible to access the internal status visualisation menu.



To return to the previous screen from this menu, touch the key ***CHILL***.

HACCP Alarms





1 Press several times the ***MENU*** key to scroll along the several menu items to select ***ALLARMI HACCP - HACCP ALARMS***.

2 Confirm with the ***START*** key: the last 9 activated alarms will be displayed. If no ***HACCP alarm***is present, the display shows the message ***NO ALARM***.

If the equipment features an internal clock (RTC module) all alarms will be displayed with the respective activation date and time.

3 The alarms present in the HACCP list are:

- Duration of the chilling/deep freezing cycle
- Power failure
- Door open
- High temperature alarm
- Low temperature alarm

Operation cycles

The equipment is capable of managing the following *CHILLING* and *DEEP FREEZING* cycles:

***CHILLING* (allows the product core to quickly reach the temperature, either if fresh or already cooked, of +3°C).**

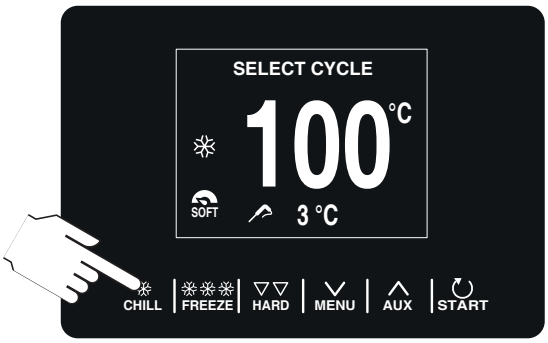
- chilling followed by a conservation phase with end of cycle controlled by probe.
- HARD chilling followed by a conservation phase with end of cycle controlled by probe.
- chilling followed by a conservation phase with end of cycle controlled by time.
- HARD chilling followed by a conservation phase with end of cycle controlled by time.

***DEEP FREEZING* (allows the product core to quickly reach the temperature, either if fresh or already cooked, of -18°C).**

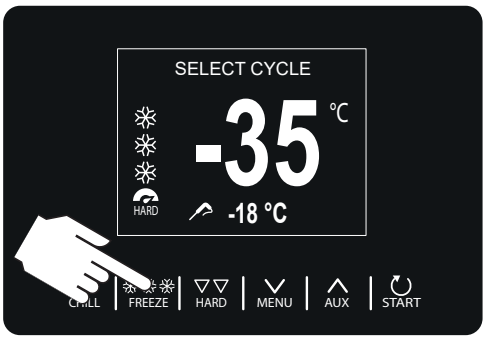
- deep freezing followed by a conservation phase with end of cycle controlled by probe.
- SOFT deep freezing followed by a conservation phase with end of cycle controlled by probe.
- deep freezing followed by a conservation phase with end of cycle controlled by time.
- SOFT deep freezing followed by a conservation phase with end of cycle controlled by time.

All ***CHILLING*** or ***DEEP FREEZING*** functions can be quickly accessed by pressing respectively the ***CHILL*** and ***FREEZE keys.***

CHILLING



DEEP FREEZING



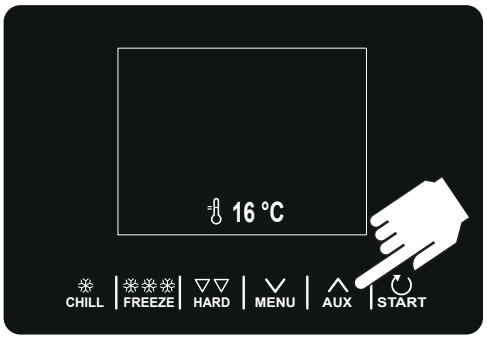
Special cycles

In addition to the ***CHILLING*** and ***DEEP FREEZING*****cycles,** the equipment is also capable of managing the following ***SPECIAL CYCLES***, some of which are always available, others are enabled/disabled by the ***PARAMETERS*** (see dedicated chapter on page. 33):

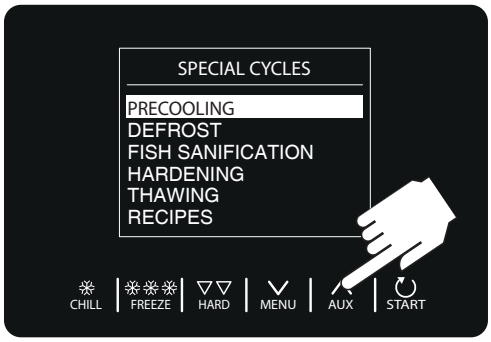
- ***pre-cooling***
- ***manual unbrining***
- ***fish sanitising*** (modifying the parameters)
- ***ice cream stiffening***
- ***rod probe heating*** (modifying the parameters)
- ***recipes*** (programmes with pre-defined cycles)

The ***SPECIAL CYCLES*** can be accessed by pressing the ***AUX*** key and scrolling along the several cycles available with the ***MENU*** and ***AUX*** keys. When the desired cycle is selected, confirm with the ***START*** key.

ACCESS TO SPECIAL CYCLES



SELECTION OF SPECIAL CYCLES



During the execution of the cycle, the display will show the most significant data:

1 when the equipment is in the cooling phase, the ***compressor*** icon lights up in the upper left corner;

2 when a recipe is in progress, the blue arrows alternate with the name of the recipe;

3 when an unbrining is in progress, the word "unbrining" is displayed above

It is possible to end the cycle at any moment by keeping pressed the ***START*** key for 2 seconds.

Test of the correct insertion of the rod probe

If the ***rod probe*** is enabled (or if parameter P3 is set to 1), the ***temperature-based cycles*** (these are the cycles that end when the rod probe detects that the product core has reached the set temperature), are preceded by a ***TWO-PHASE TEST*** to check the correct insertion of the rod probe.
If, otherwise, the rod probe is NOT enabled (or if parameter P3 is set to 0), the end of cycle can only be set ***TIME-BASED*** (the cycles end when the set time has elapsed)..

The test consists of two phases, the second of which is ONLY executed if the first one results as NOT SUCCESSFULLY COMPLETED:

- ***THE FIRST PHASE*** is considered successfully completed if the difference between the ***"temperature detected by the rod probe" and "cell temperature"*** is higher than the value established with ***parameter r17*** in at least in 3 controls out of 5 (the first control is executed after 10 seconds from the cycle start and then at intervals of 10 seconds between each other);

- ***THE SECOND PHASE*** is considered successfully completed if the deviation between the ***"temperature detected by the rod probe" and the "cell temperature"*** is higher than ***1°C/1°F***, regarding the same control previously executed, in at least in 6 controls out of 8 (the controls are executed at time intervals corresponding to 1/8 of the time established with parameter r18).

ATTENTION:
If the test result is not successful, or if the rod probe is not correctly inserted, the buzzer emits a sound and the ***TEMPERATURE-BASED CYCLE*** switches automatically ***TO TIME-BASED.***
To carry out the test, the device waits for the end of an eventual unbrining at the start of the cycle and the closing of the door.

Chilling and Deep freezing

Pressing the ***CHILL*** or the ***FREEZE*** key selects respectively a ***chilling*** cycle (+3°C) and a ***deep freezing*** cycle (-18°C). The cycles can end ***at the elapsing of a set time*** or when ***a set core temperature is reached*** (in this case it is necessary to use the rod probe, for more information see page 10).
Based on the setting of parameter P3, the device will propose as default the end of a time-based or temperature-based cycle (see page 26).
To pass from one modality to the other, press again the ***CHILL*** key or the ***FREEZE*** key .

Once the desired cycle is selected, by pressing the ***HARD*** key it is possible to add a ***PHASE*** (***HARD*** for chilling and ***SOFT*** for deep freezing) that will be executed before the standard phase, therefore passing from ***one-phase*** cycles to ***two-phase*** cycles.

Example of a temperature-based CHILLING cycle (rod)

1 Start a temperature-based chilling cycle touching the ***CHILL*** key.

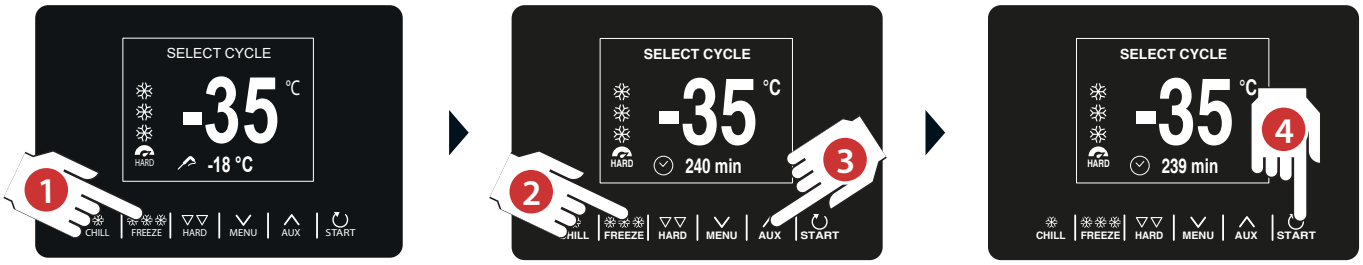
2 To a temperature-based chilling cycle, add the ***HARD*** phase by touching the corresponding key.

3 NOTE: The selected cycle will propose the pre-loaded settings for this cycle, or the settings of the last cycle executed.

4 If necessary, change the value of the ***ROD probe*** temperature touching the ***AUX*** or ***MENU*** key.

5 Start the cycle touching the ***START*** key.

Example of a DEEP FREEZING temperature-based cycle (rod)



1 Start a temperature-based deep freezing cycle touching the ***FREEZE*** key.

2 Convert the deep freezing cycle from "temperature-based" to "time-based" touching again the ***FREEZE*** key.

3 If necessary, change the temperature value of the ***ROD probe*** touching the ***AUX*** or ***MENU*** key.

4 Start the cycle touching the ***START*** key.

ATTENTION:
If the cycle is ***TEMPERATURE-BASED***, the test to check the correct insertion of the rod probe into the food piece to be chilled is performed.
If the test is NOT successful, the cycle switches automatically to the time-based modality:
the buzzer emits a sound and the type of cycle indication on the display is converted from temperature-based to time-based.

Conservation

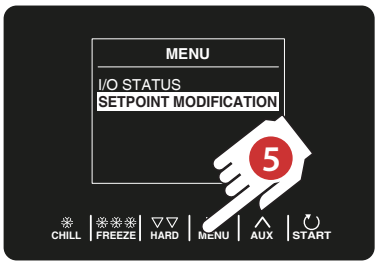
Once the ***CHILLING*** or ***DEEP FREEZING*** cycle has ended, (because the core temperature previously set was reached or because the pre-set time has elapsed), the buzzer sounds and the ***CONSERVATION*** phase starts automatically, maintaining the temperature foreseen for the cycle just finished (+3°C or -18°C) during an indefinite time, until the user removes the chilled or deep frozen food from the cell and presses the ***START*** key for two seconds.

1 The ***CONSERVATION*** phase is infinite and only ends when the ***START*** key is pressed for 2 seconds.

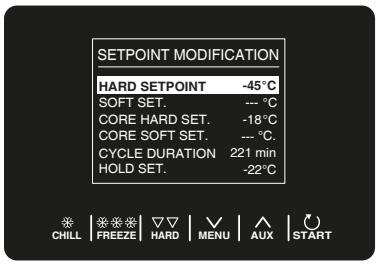
2 If the selected cycle was not successfully completed, the RED icon represented in the figure will appear.

3 However, during a conservation in progress, the foreseen automatic unbrining is carried out by the machine.

4 During the execution of a cycle, by pressing the ***MENU*** key it is possible to access an advanced page where the work setpoint for the cycle in progress can be changed (see page 26).

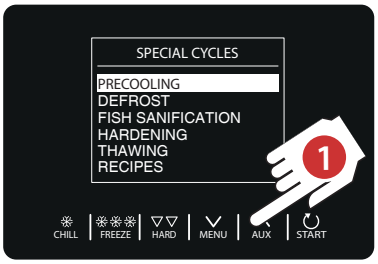


5 Press the ***MENU*** key again to visualise all ***INTERNAL STATUSES*** of the machine.

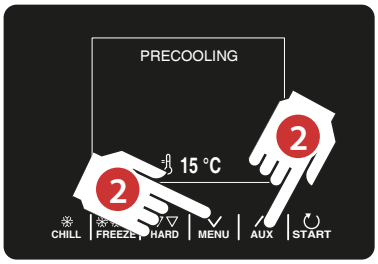


Pre-cooling

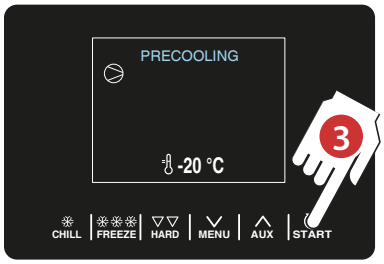
Before starting a ***Chilling*** or ***Deep freezing*** cycle it is better to pre-cool the cell and then load the foodstuff.
PRE-COOLING is a refrigeration cycle with infinite duration that can be used before any operation cycle.



1 To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key and select ***PRE-COOLING***.



2 The work SETPOINT set-up screen is displayed; the default value is the one foreseen by parameter r12 (for more information see page 26), which can be modified using the ***AUX*** and ***MENU*** keys.



3 The cycle will start by pressing ***START*** again.

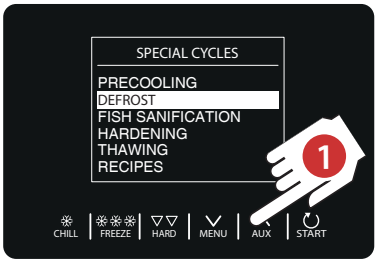
4 Once the foreseen cell temperature is reached, the buzzer sounds. The cycle continues maintaining the temperature reached by the cell until the ***START*** key is pressed for 2 seconds, or until the start of a chilling/deep freezing cycle.

5 If, otherwise, the ***CHILLING*** and ***DEEP FREEZING*** cycles are selected during the execution of a pre-cooling programme, the device will display the settings of the cycles.

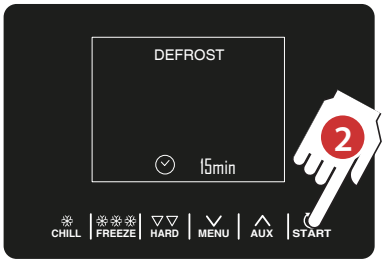
6 However, during a ***PRE-COOLING*** in progress, the foreseen automatic unbrining is carried out by the machine. in case the electric current is interrupted, eventual ***PRE-COOLING*** cycles in progress will be reactivated as soon the current is restored.

Manual unbrining

The machine performs automatically the ***UNBRINING*** cycles (automatic unbrining). In case of very high ambient temperatures, it is possible to start additional unbrining cycles ***MANUALLY***, besides those normally foreseen.



1 To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key and, using the ***AUX*** or ***MENU key,*** scroll along all items to select ***UNBRINING - DEFROST.***



2 Press the ***START*** key start the unbrining.

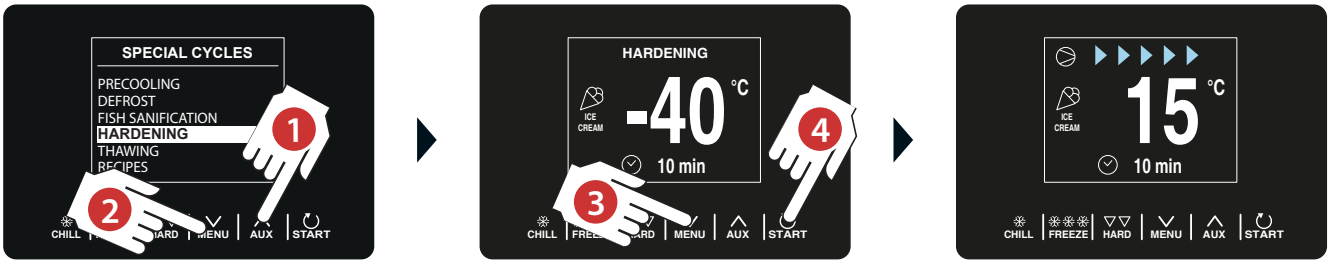
If the ***EVAPORATOR PROBE*** is present and if the conditions to carry out an unbrining are not fulfilled when the ***START*** key is pressed, the tab is taken to the ***SPECIAL CYCLES*** menu and the unbrining is NOT executed.
The ***UNBRINING*** must be executed with the ***DOOR OPEN***.

Automatic defrost

DEFROSTING is performed MANUALLY with the door open with the door stop.
The DEFROST cycle starts only if the temperature detected by the evaporator probe is below 8°C and stops when the evaporator temperature is above 8°C
If a pre-cooling cycle is in progress, it is not possible to start a defrost cycle.

Ice cream stiffening

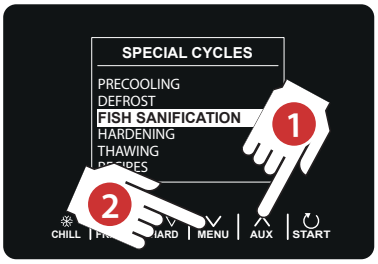
The ***ICE CREAM STIFFENING*** cycle is often used in the ice cream and pastry sectors to apply a "thermal shock " to the products in production. It consists of a ***continuous deep freezing cycle***: once the foreseen temperature is reached, the running of the time set with the ***parameter r24*** will restart upon every door opening.

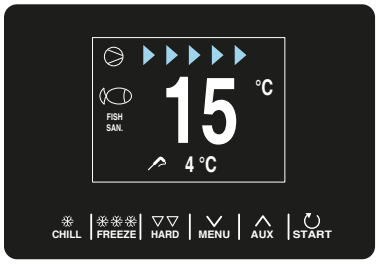


1. To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key.
2. Press the ***MENU*** key several times to roll along the many items of the menu to select ***ICE CREAM STIFFENING.***
3. The activation screen will open, where it is possible to adjust the time of the timer with the keys ***AUX*** and ***MENU***.
4. By pressing ***START*** again, the cycle will start and the running of the timer will be signalled with the sounding of the buzzer. The cycle will proceed until the ***START*** key is pressed for 2 seconds.

Fish sanitising

The ***FISH SANITISING*** cycle is only available if the ***ROD PROBE*** is present.





1. To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key.
2. Press several times the ***MENU*** key to scroll along the several menu items to select ***FISH SANITISING.***
3. Confirm touching the ***START key.***
4. This is a ***SPECIAL CYCLE*** composed by the following 3 phases: ***Negative chilling*** default value of -40°C (parameter r19) until the rod probe reaches -20°C (parameter r20).
   - ***Maintenance*** for 24 hours (parameter r21) with the Chamber default value at -20°C (parameter r20).
   - ***Negative conservation*** with Chamber setpoint at -20°C (parameter r22).

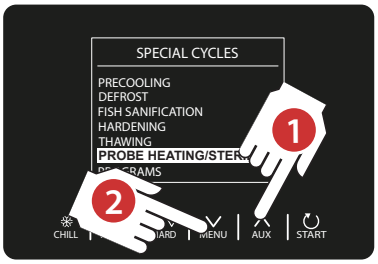
During the execution of a ***SANITISING***, the device will always display the cell temperature, and according to the phase in progress, the ***TEMPERATURE*** to end the chilling or the ***DURATION*** of the maintenance.

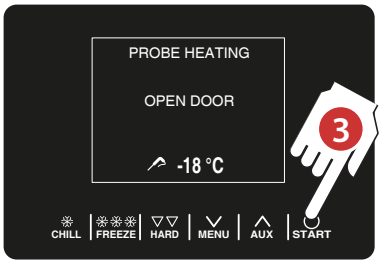
The ***SANITISING*** cycle starts with the ***CHILLING*** phase. When the temperature detected by the ***ROD PROBE*** reaches the end of chilling temperature, the device will pass automatically to ***MAINTENANCE***.
The end of chilling ***TEMPERATURE*** (established by r20) represents also the work setpoint during the maintenance.
When the time set for the ***MAINTENANCE*** has elapsed, the device passes automatically to ***CONSERVATION***.
The ***rod insertion test*** is always carried out at the start of the cycle: if the test is not completed, the buzzer sounds and the cycle is interrupted.
The cycle can be interrupted in advance by pressing the ***START*** key for 2 seconds.
The start of a ***FISH SANITISING*** cycle ***blocks*** an eventual pre-cooling cycle in progress.

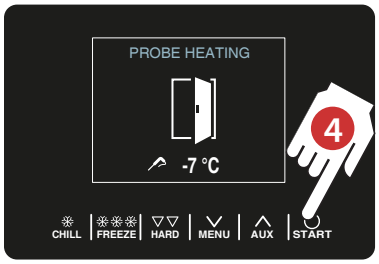
ANISAKIS Anisakis is a parasite infection of the gastrointestinal tract caused by the ingestion of raw or not sufficiently cooked fishery products, containing the Anisakis simplex larvae: if the larvae penetrates into the gastric mucosa they cause a strong abdominal pain, followed by nausea and vomit. In this case, one or two weeks after the infection, they work their way to the intestine and may give way to a serious immunity response, accompanied by intermittent abdominal pain, nausea, diarrhoea and fever or intestinal perforation.

Heating of the rod probe

The function is helpful to speed up theextraction of the rod from the product after a ***DEEP FREEZING*** cycle.
The ***PROBE HEATING*** must be performed with the door open, the eventual closing of the door with the cycle already in progress does not affect its operation.







1 To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key.
2 Press several times the key ***MENU*** to scroll along the several menu items to select ***ROD HEATING***

3 Confirm with the ***START*** key: a screen is displayed indicating that the cell door must be opened.

4 Confirm touching the ***START*** key.

The heating time ***OF THE ROD PROBE*** is variable and depends on the setting of ***parameters u8 and u7*** (see page 31).
If it is desired to interrupt the function in advance, keep the ***START*** key pressed for around 2 seconds.

At the conclusion of the function, the buzzer sounds for one second and the display returns to the principal page - ***Home***.

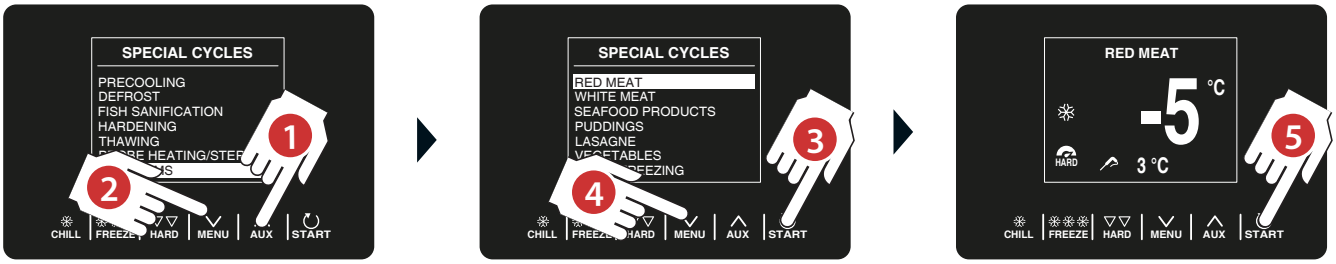
Recipes

The ***RECIPES*** are programmed ready to use and stored at the Builder's plant, each of them designed to process several kinds of food pieces (ex. Red meat, Cream, etc...).
7 pre-inserted programmes are available, ready to use and offering a series of optimised cycles according to the food piece varieties.
During the programming phase, ***parameter P3*** is set to 0, the use of the rod probe is disabled; therefore the ***RECIPES*** requiring this probe are not viewed.

ATTENTION:
These 7 recipes can be modified before the start of the cycle, but cannot be saved nor overwritten.

Default parameters of the recipes

	Phase 1	Phase 2	Phase 3	Conservation Phase
	RED MEAT WITH ROD			
Set Cell	-25 °C	-5 °C	--	2 °C
Set Rod	20 °C	3 °C	--	--
	WHITE MEAT			
Set Cell	-25 °C	-5 °C	--	2 °C
Time	27'	63'	--	--
	FISHERY PRODUCTS			
Set Cell	-25 °C	-5 °C	--	2 °C
Time	27'	63'	--	--
	CREAM			
Set Cell	-5 °C	--	--	2 °C
Time	90'	--	--	--
	LASAGNA			
Set Cell	-5 °C	--	--	2 °C
Time	90'	--	--	--
	VEGETABLES			
Set Cell	-5 °C	--	--	2 °C
Time	90'	--	--	--
	QUICK DEEP FREEZING WITH ROD			
Set Cell	0 °C	-12 °C	-30 °C	-20 °C
Set Rod	3 °C	-3 °C	-18 °C	--



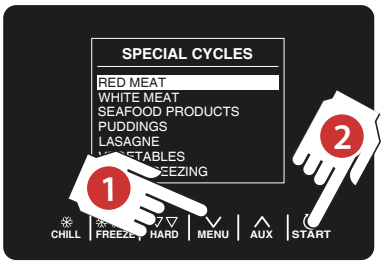
1. To access the ***SPECIAL CYCLES*** menu, touch the ***AUX*** key.
2. Press several times the ***MENU*** key to scroll along the several menu items to select ***PROGRAMMES.***
3. Confirm with the ***START*** key.
4. With the ***AUX*** and ***MENU*** keys, select the recipe that mostly fulfils its own requirements. If needed, the default parameters of the recipes can be modified (see the table below), but the changes made will be temporary, while the Builder's recipes cannot be permanently changed, cancelled or overwritten.
5. Confirm touching the ***START*** key.

Additional recipes

In addition to the 7 standard recipes (unchangeable), the device makes available ***another 20 programmes*** (from P1 to P20) that can be applied by the user to save the settings of an own recipe.

The other 20 programmes are listed just after the 7 pre-set recipes and are identified by three dashes ***(- - -)*** that indicate that the position is empty.
At the moment when the settings of recipe are stored, the letters ***(Px)*** will appear automatically, depending on the position where they are saved.

To ***save or overwrite*** one of the 20 recipes proceed as follows:



1. Press several times the ***MENU*** key to find the position of the desired point to save the recipe.
2. Confirm with the ***START*** key.

- for ***chilling***, press the ***CHILL*** key to change the mode from ROD to TIME and vice versa.
- for ***deep freezing***, press the ***FREEZE*** key to change the mode from ROD to TIME and vice versa.

- by pressing the ***HARD*** key it is possible to change from the ***SOFT*** mode to the ***HARD*** mode and vice versa.

- press the ***MENU*** key to enter in the modes of ***modification and scroll*** of the cycle values.

- press the ***MENU*** key to enter in the ***selected value***:
- modification with the keys ***AUX and MENU***;
- confirmation by pressing ***START*** again.
- get out without changing by pressing ***CHILL.***

- When returning to the principal screen to start the cycle, the icon  appears on the display to indicate that the recipe ***was stored***.

- press the ***AUX*** key to ***save it***.

- press the ***START*** key to ***start the cycle***.

Door frame heating

The ***Door frame heating*** function is automatically activated when the display turns on or a function is in progress, and the cell temperature decreases below +2 °C (default value given by parameter u5).
The resistance inside the door is deactivated when the cell temperature rises above +2° C.
If a ***cell probe error*** is present, the resistances are not activated, or are deactivated if already active.
The opening of the door ***deactivates*** the resistance.

Compressor

The ***COMPRESSOR*** management can be different depending on the active cycle, as specified below.

CHILLING, DEEP FREEZING, PRE-COOLING, ICE CREAM STIFFENING, SANITISING
The compressor is activated if the cell temperature is higher than the setpoint adjusted for type of cycle in progress + the hysteresis given by parameter r0; it is deactivated when the temperature decreases below the setpoint value adjusted for the phase in progress.
The turning on and off of the compressor must be in accordance with the safety times defined by parameters C0, C1, C2 and C3.
Additionally, the dripping times must be observed in case of activation after an unbrining.
If the cell probe presents a fault during a conservation cycle, the compressor is activated cyclically based on the value of parameters C4 and C5, in the case of conservation after a chilling; or based on the value of parameters C4 and C9, in the case of conservation after a deep freezing.

UNBRINING
During an ***UNBRINING***, the status of the compressor depends on the value of parameter d1.
If d1 is equal to 0, 2 or 3, the compressor will turn off.

Evaporator fans

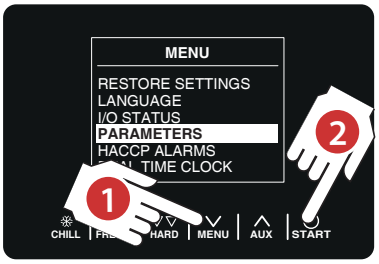
The management of the evaporator fans depend on the cycle that is active, as specified below. Additionally, the management modality changes depending on the presence of the evaporator probe, which is enabled if parameter P4 is set to 1.

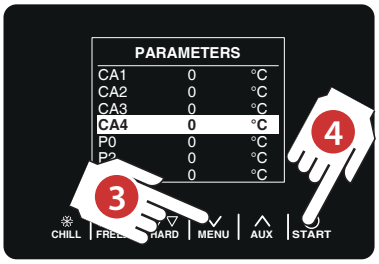
CHILLING, DEEP FREEZING, ICE CREAM STIFFENING, FISH SANITISING, PRE-COOLING
The fans are always on and are only turned off if the cell temperature is higher than or equal to parameter F17 + F8 and/or if the evaporator probe temperature is higher than or equal to parameter F1 + F8. They turn on again if the cell temperature goes below F17 and if the evaporator probe temperature goes below F1.

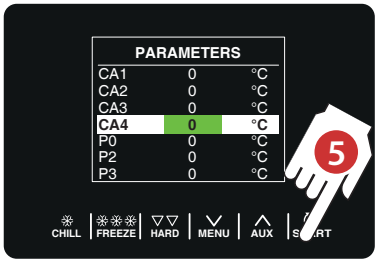
CONSERVATION
The operation of the fans in conservation depends on parameter F49: if set to 0 (default), they will work in parallel with the compressor, if set to 1 they will be always active.

UNBRINING
During the unbrining, the evaporator fans are on.

The access to this section is dedicated to ***qualified personnel*** and is protected by password provided by the Builder, to prevent inadequate interventions that may affect the equipment operation, and consequent damages not covered by the warranty.







1 To access, press several times the ***MENU*** key to scroll along the several menu items to select ***PARAMETERS***. 2 Confirm with the ***START*** key and enter the password -19.

3 Using the ***MENU*** and ***AUX*** keys, select the parameter intended to be changed;

4 press ***START*** to insert the respective setting.

5 Using the ***MENU*** and ***AUX***keys, insert the desired value and press ***START*** to confirm the inserted value.

The ***PARAMETERS*** are set by default in ***°C*** and the respective values and limits are indicated in the table with this measure unit.
To view the values in ***°F***, set ***parameter P2 to 1*** and after the change, ***cut and restore the voltage to the board***.

Eventual ***CHILLING*** and ***DEEP FREEZING*** programmes previously stored will be reset to the default value every time ***P2*** is set again.

ATTENTION!

- ***Be aware that improper settings may affect the equipment operation with consequent damages not covered by the warranty.***
- ***It is not possible to set a value that exceeds the minimum (MIN) and maximum (MAX) limits indicated in the table.***
- ***After a parameter change, it is recommended to cut and restore the voltage to the board.***

The following table illustrates the meaning of the set-up parameters.

Parameter	Default	MIN	MAX	Meas. unit	ANALOGICAL INLETS
CA1	0	-25	25	°C	cell probe offset
CA2	0	-25	25	°C	evaporator probe offset (if P4=1)
CA3	0	-25	25	°C	condenser probe offset (if P4=2)
CA4	0	-25	25	°C	rod probe offset (if P3 = 1)
P0	1	0	1	----	type of probe 0 = PTC 1 = NTC
P2	0	0	1	----	temperature measurement unit 0 = °C 1 = °F
P3	1	0	1	----	enabling of the rod probe 0 = none 1 = yes
P4	1	0	3	----	setting of the third measurement entry 0 = entry disabled 1 = evaporator probe 2 = condenser probe
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**PRINCIPAL REGULATOR**
r0	2	1	15	°C	difference of the cell setpoint in the cycles of chilling, deep freezing, sanitising, ice cream stiffening

r1	90	1	500	min	duration of the time-based chilling
r2	240	1	500	min	duration of the time-based deep freezing
r3	3	-50	99	°C	product temperature to end the temperature-based chilling and to end the soft phase in the temperature-based soft deep freezing; see also parameter r5
r4	-18	-50	99	°C	product temperature to end the temperature-based deep freezing; see also parameter r6
r5	90	1	500	min	maximum duration permitted for temperature-based chilling; see also parameter r3
r6	240	1	500	min	maximum duration permitted for temperature-based deep freezing; see also parameter r4
r7	0	-50	99	°C	cell temperature setpoint during chilling and during the soft phase of the soft deep freezing; see also parameter r0
r8	-40	-50	99	°C	cell temperature setpoint during the deep freezing and during the ice cream stiffening; see also parameter r0
r9	-25	-50	99	°C	cell temperature setpoint during the hard phase of the hard chilling; see also parameter r0
r10	2	-50	99	°C	cell temperature setpoint during the post-chilling conservation and the hard chilling; see also parameter r0
r11	-20	-50	99	°C	cell temperature setpoint during the post-deep freezing conservation and the soft deep freezing; see also parameter r0
r12	12	-50	99	°C	cell temperature setpoint during the pre-cooling; see also parameter r0
r13	15	-50	99	°C	product temperature to end the hard phase of the temperature-based hard chilling
r14	60	10	100	%	duration of the hard phase of the time-based hard chilling (understood as a percentage of the value established with parameter r1); duration of the soft phase of the soft time-based deep freezing (understood as a percentage of the value established with parameter r2)
r15	65	-50	199	°C	product temperature below which the counting of the maximum duration of the chilling or of the temperature-based deep freezing starts
r17	5	0	99	°C	minimum deviation between the product temperature and the cell temperature used to consider as successfully completed the first phase of the test to check the correct insertion of the rod probe 0 = the test is disabled and the rod probe is considered continuously inserted
r18	80	10	999	s	duration of the second phase of the test to check the correct insertion of the rod probe
r19	-40	-50	+99	°C	cell temperature setpoint for the first sanitising phase
r20	-20	-50	99	°C	product temperature setpoint for the first sanitising phase and cell temperature setpoint for the second sanitising phase
r21	24	0	24	h	duration of the second sanitising phase
r22	-20	-50	99	°C	cell temperature setpoint for the third sanitising phase
r23	5	1	99	h	maximum duration of the first sanitising phase
r24	10	1	400	min	duration of the ice cream stiffening cycle
r35	0	0	1	- - - -	value that can be set in the quick modality, in the cycle selection phase before starting the respective cycle 0 = work setpoint during the cycle (the setpoint of the final phase of the cycle for 2-phase cycles) 1 = rod temperature at the end of cycle (for temperature-based cycles) or cycle duration (for time-based cycles)
r36	0	0	1	- - - -	storing of the value set in the quick modality of the cycle selection phase 0 = none: at the start of the next cycle, the default values of the parameters are proposed again 1 = yes: at the start of the next cycle, the values with which the last cycle of the same type was executed are proposed again

r37	80	-50	99	°C	maximum cell temperature setpoint that can be set
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**COMPRESSOR PROTECTIONS**
C0	0	0	240	min	minimum time between a power restoration, after an interruption during an operation cycle, and the starting of the compressor
C1	5	0	240	min	minimum time between two consecutive starts of the compressor
C2	3	0	240	min	minimum time between the turning off of the compressor and the next start
C3	0	0	240	s	minimum time with the compressor on
C4	10	0	240	min	compressor off time during the cell probe error (code "***CELL PROBE***") that takes place during the post-chilling conservation and the deep freezing; see also parameters C5 and C9
C5	10	0	240	min	time of compressor on during the cell probe error (code "***CELL PROBE***") that takes place during the post-chilling conservation; see also parameter C4
C6	80	0	199	°C	condenser temperature above which the condenser overheating alarm is activated (code "***COND OVERHEATING***")
C7	90	0	199	°C	condenser temperature above which the compressor blocking alarm is activated (code "***BLOCKED COMP***"), after the time C8
C8	1	0	15	min	activation delay of the blocked compressor alarm (code "***BLOCKED COMP***") for exceeding limit C7
C9	30	0	240	min	time of compressor on during the cell probe error (code "***CELL PROBE***") that takes place during the post-deep freezing conservation; see also parameter C4

Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**DEFROSTING**
d0	0	0	99	h	unbrining interval 0 = unbrining in conservation will not be activated again
d1	2	0	3	- - - -	type of unbrining ***0 = electrical*** (during the unbrining the compressor is turned off, the unbrining outlet is activated and the evaporator fan is turned off) ***1 = hot gas*** (during the unbrining the compressor is turned on, the unbrining outlet is activated and the evaporator fan is turned off) ***2 = air*** (during the unbrining the compressor is turned off, the unbrining outlet is activated; the evaporator fan is turned on regardless of the door conditions or of the status of the micro door inlet) ***3 = air with open door*** (during the unbrining the compressor is turned off, the unbrining outlet is activated; the evaporator fan is turned on provided the door is open, or provided that the micro door inlet is active and that parameter i0 is set with values different from 0)
d2	8	-50	99	°C	evaporator temperature to end the unbrining; see also parameter d3

d3	15	0	99	min	if the evaporator probe is not present (P4=0) defines the duration of the unbrining if the evaporator probe is present (P4=1) defines the maximum duration of the unbrining; see also parameter d2 0 = the unbrining will not be activated again
d4	0	0	1	- - - -	enabling of unbrining at the start of the chilling and at the start of the deep freezing 0 = none 1 = yes
d5	30	0	99	min	unbrining delay from the start of the conservation 0 = the unbrining starts as soon as the conservation is activated and is repeated as established with parameter d0
d7	0	0	15	min	dripping time after an unbrining, in which the compressor and the evaporator fan remain off and the unbrining inlet is deactivated
d15	0	0	99	min	minimum consecutive duration of compressor on to start the hot gas unbrining, if d1 is set to 1
d16	0	0	99	min	pre-dripping time, if d1 is set to 1 (hot gas unbrining), in which the compressor and the evaporator fan turn off and the unbrining outlet remains activated
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**TEMPERATURE ALARM**
A1	10	0	99	°C	cell temperature below which the minimum temperature alarm is activated (regarding the work setpoint, or "r10–A1" during the post-chilling conservation and "r11–A1" during the post-deep freezing conservation; (code "***LOW TEMPERATURE***"); see also parameter A11
A2	0	0	1	- - - -	enabling of the minimum temperature alarm (code "***LOW TEMPERATURE***"): 0 = none 1 = yes
A4	10	0	99	°C	cell temperature below which the maximum temperature alarm is activated (regarding the work setpoint, or "r10+A4" during the post-chilling conservation and "r11+A4" during the post-deep freezing conservation (code "***HIGH TEMPERATURE***"); see also parameter A11 (4)
A5	0	0	1	- - - -	enabling of the maximum temperature alarm (code "***HIGH TEMPERATURE***"): 0 = none 1 = yes
A7	15	0	240	min	delay of temperature alarm (code "***HIGH TEMPERATURE***" and code "***LOW TEMPERATURE***")
A8	15	0	240	min	delay of the maximum temperature alarm (code "***HIGH TEMPERATURE***") from the start of the conservation
A10	15	0	240	min	duration of a power failure which causes the storage of the power failure alarm (code "***POWER FAILURE***") when the power is restored 0 = the alarm will not be signalled
A11	2	1	15	°C	difference between parameters A1 and A4
A12	5	0	240	s	duration of the buzzer activation at the end of the chilling and of the deep freezing
A13	60	0	240	s	duration of the buzzer activation due to alarm
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**EVAPORATOR AND CONDENSER FANS**
F1	30	-50	99	°C	evaporator temperature above which the evaporator fan is turned off during pre-cooling/chilling/deep freezing/sanitising/ice cream stiffening see also parameter F8

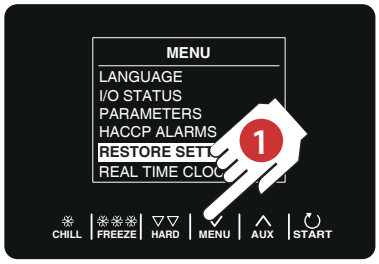
F3	2	0	15	min	duration of the stop of the evaporator fans (during the evaporator fans stop the compressor can be on, the unbrining outlet remains deactivated and the evaporator fan remains off)
F8	2	1	15	°C	difference between parameters F1 and F17
F15	15	0	240	s	evaporator fans delay from the closing of the door, or deactivation of the micro door inlet
F17	90	-50	199	°C	cell temperature above which the evaporator fan is turned off during pre-cooling/chilling/deep freezing/sanitising/ice cream stiffening; see also parameter F8
F46	15	0	99	°C	condenser temperature above which the condenser fan turns on
F47	30	0	240	s	delay of the condenser fan turning off after the compressor turning off (only if the condenser probe is not present)
F48	0	0	1	- - - -	Condenser fan status during unbrining 0 = off 1 = on
F49	0	0	1	- - - -	fan operation mode in conservation 0 = in parallel with the compressor 1 = always on

Parameter	Default	MIN	MAX	Meas. unit	DIGITAL INLETS
i0	2	0	2	- - - -	effect caused by the opening of the door, or by the activation of the micro door inlet 0 = no effect and no signalling 2 = the evaporator fan will turn off and the cell light will go on; after the time established with parameter i2 has elapsed, the device will display the alarm and the buzzer is activated (until the door is closed); see also parameter F15
i1	1	0	1	- - - -	polarity of the micro door inlet 0 = normally open (inlet active with contact closed) 1 = normally closed (inlet active with contact open)
i2	5	-1	120	min	duration of door opening to activate the open door alarm and to deactivate all outlets, except lights and alarm; -1 = the alarm will not be signalled
i5	0	0	2	- - - -	function associated to the multifunction digital inlet: 0 = pressure switch for maximum 1 = pressure switch for minimum 2 = compressor thermal protection
i6	1	0	1	- - - -	polarity of the multifunction inlet 0 = normally open (inlet active with contact closed) 1 = normally closed (inlet active with contact open)
i7	5	-1	240	s	delay of the multifunction alarm signalling -1 = the alarm will not be signalled
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**DIGITAL OUTLETS**
u1	0	0	2	- - - -	utility managed by outlet K4 0=door frame resistance 1=condenser fan 2=/
u2	2	0	3	- - - -	utility managed by outlet K5 0=cell light 1=UV lamp 2= rod probe resistance 3=alarm

u5	8	-50	99	°C	cell temperature above which the door resistance turns off
u6	5	1	240	min	Duration of the UV light on for the sterilisation cycle
u7	40	-50	199	°C	end of heating temperature of the rod probe; see also parameter u8
u8	2	0	240	min	maximum duration of the rod probe heating; see also parameter u7 0 = the rod probe is disabled
u11	0	0	1	- - - -	enabling of the evaporator ventilation during sterilisation (valid only if u1=1) 0=none 1=yes
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**EVLINK SECURITY and DATA-LOGGING**
Hr0	1	0	1	- - - -	enables the clock 0=none 1=yes
Loc	- - - -	- - - -	- - - -	- - - -	reserved
SEn	70	60	120	- - - -	Setting of the key sensitiveness
PAS	-19	-99	999	- - - -	Setting of password to modify parameters Depending on the set value, it is always possible to access the parameter modification using the super password 743
PA1	426	-99	999	- - - -	1st level password EPoCA
PA2	824	-99	999	- - - -	2nd level password EPoCA
rE0	5	1	240	min	EVLINK data registration interval during chilling, deep freezing, ice cream stiffening and fish sanitising
rE1	1	0	2	- - - -	Selection of values sampled by EVLINK 0 = none 1 = HACCP data (cell temperature, rod, cycle duration, type of cycle, total chilling time, alarms HACCP) 2 = SERVICE data (all temperatures, all events, all alarms, all cycles)
bLE	1	0	99	- - - -	Serial port configuration for connectivity 0 = free 1 = forced by EPoCA 2-99 = local net address EPoCA
Parameter	**Default**	**MIN**	**MAX**	**Meas. unit**	**MODBUS**
LA	247	1	247	- - - -	device address
Lb	3	0	3	- - - -	baud rate 0 = 2,400 baud 1 = 4,800 baud 2 = 9,600 baud 3 = 19,200 baud
LP	2	0	2	- - - -	parity 0 = none (no parity) 1 = odd (uneven) 2 = even (pair)

Data resetting

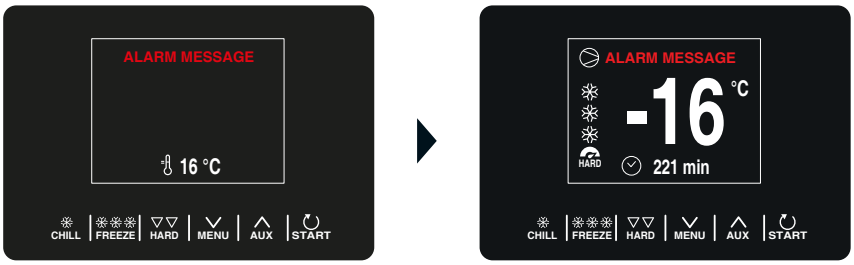
Access the ***SET-UP*** menu with the ***MENU*** key, select ***DATA RESETTING*** and press ***START*** 1 .



The sub-menu ***PARAMETER RESETTING*** can be accessed by typing previously the password 149.

Alarms

The ***ALARMS*** that interrupt or activate a cycle are viewed on the ***Home*** page; or, if they allow the continuation of the cycle in progress they will assume the task of the ***cycle advance bar*** until the end of the cycle.



1 Cycle interrupted by ***ALARM***

2 ***ALARM*** with cycle in progress

The following table illustrates the alarm list.

Code	Meaning
RTC	***Clock error.*** Solutions: - set again the present day and time. Principal consequences: - the device does not store the date and time in which a HACCP alarm has appeared. - the alarm outlet is activated.
CELL PROBE	***Cell probe error.*** Solutions: - check the value of parameter P0 - check the integrity of the probe - check the device-probe connection - check the cell temperature. Principal consequences: - if the error is detected during the "stand-by" status, no starting of operation cycle will be permitted - if the error is detected during chilling or deep freezing, the cycle continues and the compressor works continuously - if the error is detected during conservation, the compressor activity will depend on parameters C4 and C5 or C9 - the minimum temperature alarm will not be activated again - the maximum temperature alarm will not be activated again - the door resistances will not be turned on again - the alarm outlet is activated.
EVAPORATOR PROBE	***Evaporator probe error.*** Solutions: - the same of the cell probe error but applied to the evaporator probe. Principal consequences: - if parameter P4 is set to 1, the unbrining will take the time established with parameter d3 - parameter F1 will have no effect - the alarm outlet is activated.

Code	Meaning
ROD PROBE	***Rod probe error.*** Solutions: - the same of the cell probe error but applied to the rod probe. Principal consequences if parameter P3 is set to 1: - if the error is detected during the "stand-by" status, the temperature-based operation cycles will be activated as time-based - if the error is detected during the temperature-based chilling, the chilling will take the time established with parameter r1 - if the error is detected during the temperature-based deep freezing, the deep freezing will take the time established with parameter r2 - if the error is detected during the rod probe heating, the heating will be interrupted - the alarm outlet is activated.
HIGH PRESSURE	***High pressure alarm (for 1ph models)*** ***High pressure / compressor thermal alarm (for 3ph models)*** Solutions: - check the multifunction inlet conditions - check the value of parameter i6. Principal consequences: - if the cycle in progress foresees the use of the compressor, the cycle is interrupted - the alarm outlet is activated - the condenser fan turns on.
DOOR OPEN	***Door open alarm*** Solutions: - check the door conditions. Principal consequences: - all outlets are deactivated except the light and the alarm outlets.
HIGH TEMPERATURE	***Maximum temperature alarm (HACCP alarm)*** Solutions: - check the cell temperature - check the value of parameters A4 and A5. Principal consequences: - the device will store the alarm - the alarm outlet is activated.
LOW TEMPERATURE	***Minimum temperature alarm (HACCP alarm)*** Solutions: - check the cell temperature - check the value of parameters A1 and A2. Principal consequences: - the device will store the alarm - the alarm outlet is activated.
CYCLE DURATION	***Alarm of temperature-based chilling or temperature-based deep freezing not completed within the maximum duration (HACCP alarm).*** Solutions: - check the value of parameters r5 and r6. Principal consequences: - the device will store the alarm - the alarm outlet is activated.
POWER FAILURE	***Alarm of power source interruption (HACCP alarm).*** Solutions: - check the device-source connection Principal consequences: - the device will store the alarm - the eventual cycle in progress will restart when the power source is restored - the alarm outlet is activated.

Code	Meaning
ROD INS SANITISING	***Sanitising alarm.*** Solutions: - check the correct insertion of the rod probe and the value of parameters r17 and r18. Principal consequences: - the sanitising cycle will be interrupted.
SANITISING DURATION	***Sanitising alarm not cancelled within the maximum duration of the first phase.*** Solutions: - check the value of parameters r23 Principal consequences: - the device will store the alarm - the cycle in progress will be interrupted - the alarm outlet is activated.
ROD INS	***Rod not inserted alarm.*** Solutions: - check the correct insertion of the rod probes and the value of parameters r17 and r18. Principal consequences: - the temperature-based cycle in use is switched to time-based cycle
COMMUNICATION ALARM	***Communication error in the user-module control interface.*** Solutions: - check the connection of the user-control module interface. Principal consequences: - all outlets are deactivated.

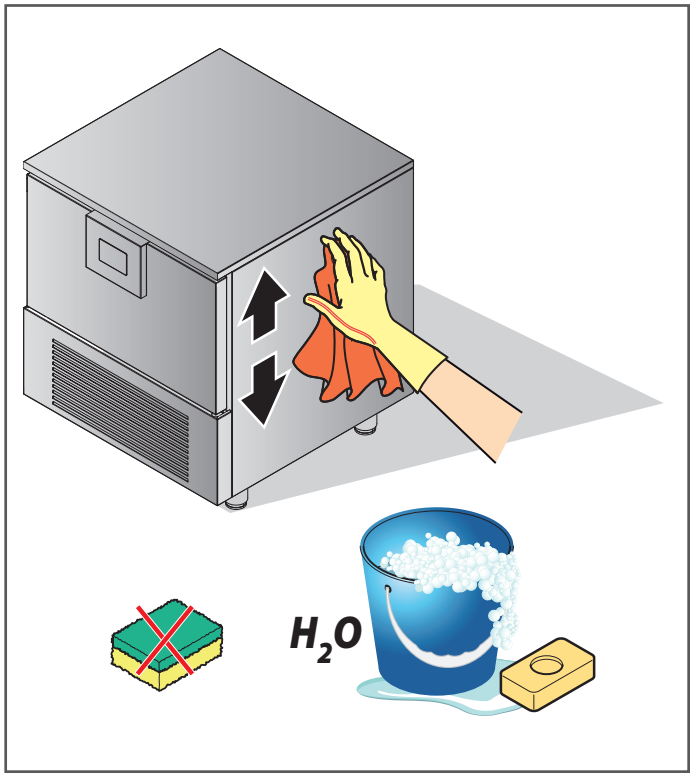
BEFORE CARRYING OUT ANY MAINTENANCE INTERVENTION, IT IS NECESSARY TO DISCONNECT THE ELECTRICAL SOURCE OF THE EQUIPMENT AND WEAR ADEQUATE PERSONAL PROTECTIVE DEVICES (EX. GLOVES, ETC...).

THE USER MUST CARRY OUT ONLY ORDINARY MAINTENANCE OPERATIONS (UNDERSTOOD AS CLEANING). IN CASE OF EXTRAORDINARY MAINTENANCE, ENTER IN CONTACT WITH AN ASSISTANCE CENTRE AND REQUEST THE INTERVENTION OF AN AUTHORISED TECHNICIAN.

THE WARRANTY WILL BE VOIDED IN CASE OF DAMAGES BY THE LACK OF OR INCORRECT MAINTENANCE (EX. USE OF NOT ADEQUATE DETERGENTS).

To clean any component or accessory DO NOT use:
- abrasive or powder detergents;
- aggressive or corrosive detergents (ex. hydrochloric/muriatic or sulphuric acid, caustic soda, or with pH >10). Attention! Do not use these substances, even to clean the pavement under the equipment;
- abrasive or sharp utensils (ex. abrasive sponges, scrapers, steel brushes, etc...);
- vapour or pressurised water jets.

On the first use wash the pans and the chamber with a cloth damped with hot water and soap and end with rinsing and drying. To eliminate work residues, make the equipment work empty for around 30 minutes.



Cleaning of the equipment chamber

Clean the equipment chamber daily to ensure optimum hygiene levels and machine performance.
For this cleaning, use a cloth damp with water and soap, ending with rinsing and drying.

Touch screen

Use a cloth slightly damped with a product specific for crystals, following the instructions of the detergent manufacturer.
Do not spray too much product to prevent infiltrations that can damage the screen.

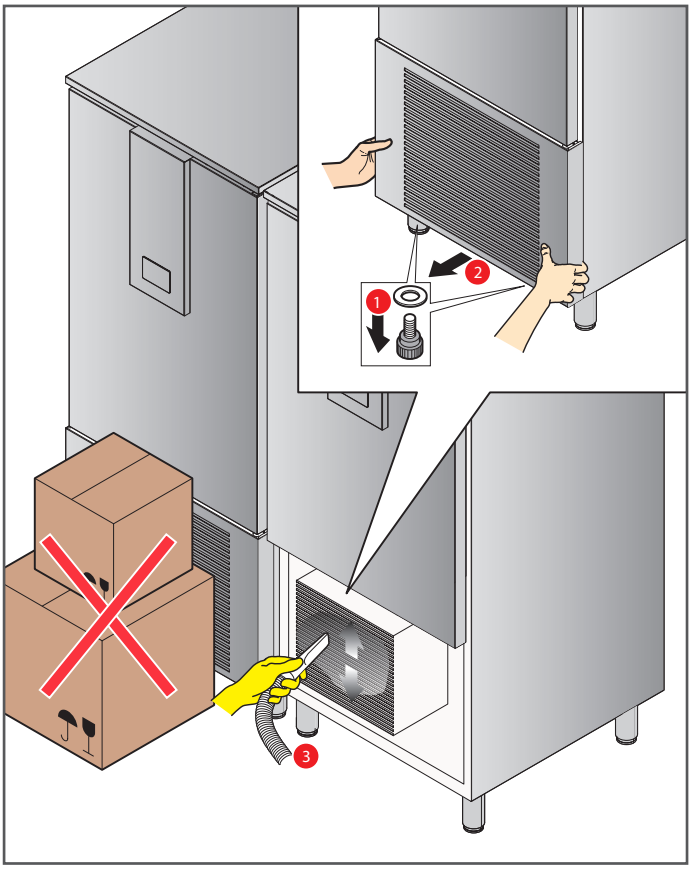
Cleaning of the grilles

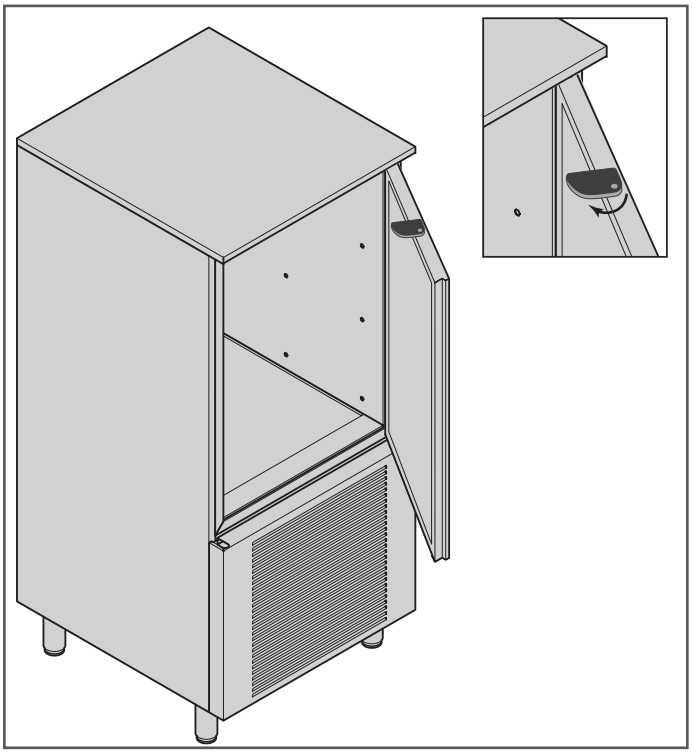
Keep the grilles free of obstructions and dust by cleaning them frequently with a regular vacuum cleaner or a brush.
It is recommended to remove the front panel once a week following the instructions in the figure and to clean the filter with hot water and soap. Should a replacement be necessary, enter in contact with the builder to order spare parts.

Inactivity periods

During inactivity periods, disconnect the electrical and hydraulic sources. Protect the equipment's external steel parts wiping them with a smooth cloth slightly damped with Vaseline oil.
Leave the door ajar with the door stop to guarantee a correct air exchange.
For reactivation, before using:
- carry out an careful cleaning of the equipment and accessories;
- reconnect the equipment to the electrical and hydraulic sources;
- carry out an equipment inspection before reusing it;
- restart the equipment at low temperature for at least 60 minutes with no food inside.

To be sure that the equipment is maintained in perfect use and safety conditions, we recommend the execution of a maintenance and inspection service by an authorised assistance centre, at least once a year.





Type of problem	Before seeking contact with an assistance centre, check that...
The equipment is completely shut off.	- ...that electrical voltage is present on the equipment and that the plug was not detached.
The equipment does not chill sufficiently	- ...there is no effect of an external heat source; - ...the doors close perfectly; - ...the condenser filter is not clogged; - ...the front ventilation grilles are not obstructed by objects or dust; - ...the food is evenly distributed inside the cell and does not obstruct the ventilation inside the cell; - ...the equipment is not overloaded with food (comply with the equipment load indications affixed on it).
The equipment is very noisy	- ...there is no contact between the equipment any other object or machine; - ...the equipment is perfectly levelled; - ...the visible bolts are well tightened.

Do not try to repair the equipment by yourself, this may cause damages, even serious, to persons, animals and objects, and cause the voiding of the Warranty.
Always look for an assistance centre authorised by the builder and order ORIGINAL spare parts.

Post sales assistance

If the equipment does not work or if functional or structural changes are noticed:
- disconnect it from the electrical and hydraulic sources;
- consult the table below to check the proposed solutions;

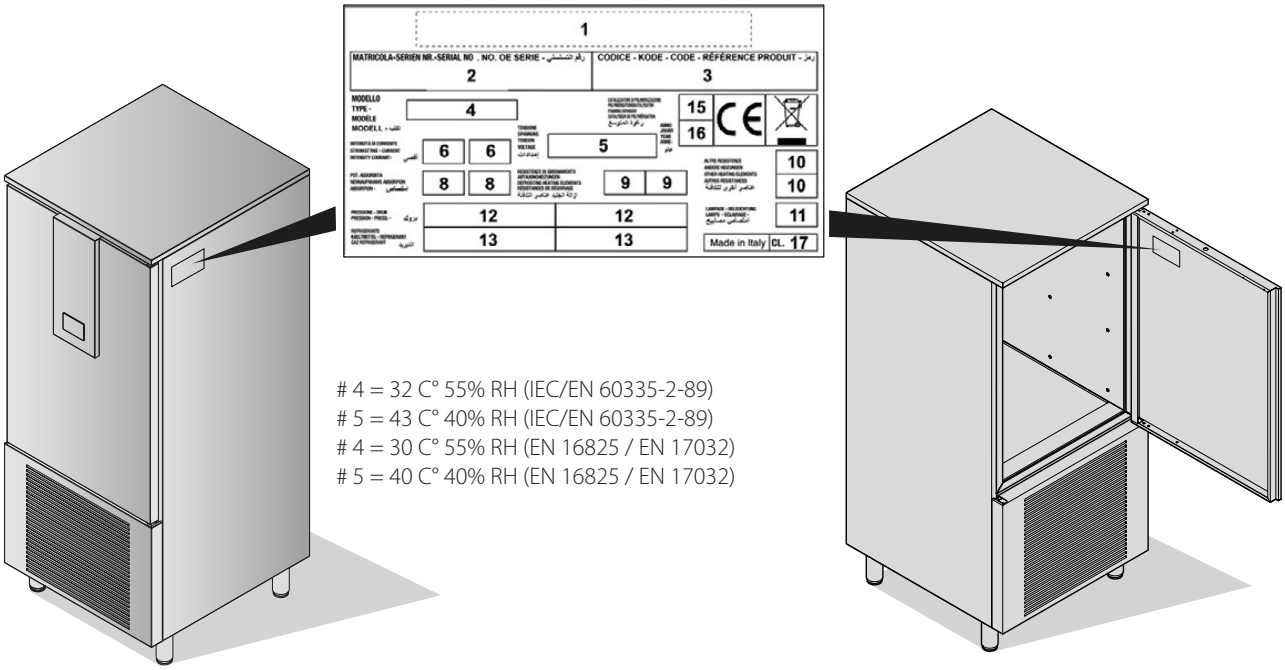
Should the solution not be present in the table, enter in contact with the assistance centre authorised by the builder, communicating:
- the type of fault;
- the code and the serial number of the equipment that can be found on its characteristics plate.

For repairing give preference to original spare parts: the builder declines any responsibility and does not grant the right of warranty when non-original spare parts are used.

To be sure that the equipment is maintained in perfect use and safety conditions, we recommend the execution of a maintenance and inspection service by an authorised assistance centre, at least once a year.

Builder data:
F.R.C.
Via Treviso, 4 33083 - Taiedo di Chions (PN) - Italy
Tel. +39.0434.635411 - Fax. +39.0434.635414

1 Builder
2 Serial number
3 Code
4 Model
5 Voltage
6 Current absorbed in operation
8 Power of the unbrining resistance
9 Power of the unbrining resistance
10 Nominal power of other resistances
11 Lamp power
12 Minimum and maximum pressure
13 Refrigeration gas, type and quantity
15 Expanding gas in the insulation
16 Year of manufacture
17 Climatic class (#)



4 = 32 C° 55% RH (IEC/EN 60335-2-89)
5 = 43 C° 40% RH (IEC/EN 60335-2-89)
4 = 30 C° 55% RH (EN 16825 / EN 17032)
5 = 40 C° 40% RH (EN 16825 / EN 17032)

Disposal and end of service life

The defrosting operations of the electrical and hydraulic circuits must be carried out exclusively by qualified technicians.
If present, remove them and dispose them off in a correct manner:
- refrigeration gas;
- anti-freeze solutions present in the hydraulic circuits,
avoiding spillage or losses in the environment.

According to art.13 of Legislative Decree no. 49 of 2014 "Application of Directive RAEE 2012/19/EU on residues of electrical and electronic equipment"

The mark with stripes on the stripped dumpster specifies that the product was placed on the market after August 13, 2015, and that, at the end of its service life, must not be mixed with other residues, but disposed off separately.
The whole equipment was built with recyclable metallic materials (stainless steel, iron, aluminium, zinc-coated plates, copper, etc.) in percentage above 90% of the weight.
Render the equipment unusable when disposing off by removing the power source cable and any other device that closes the compartments or cavities (where present).
Care must be taken in the management of this product at the end of its service life, to mitigate negative impacts on the environment and improve the effectiveness of the use of resources, applying the principles of "who pollutes pays", prevention, preparation for re-utilisation, recycling and recovery.
We remind that the uncontrolled or incorrect disposal of the product is liable to the application of the sanctions foreseen in the present legal standards.

Information about disposal in Italy

In Italy, RAEE equipment must be delivered to:
- Collection Centres (also known as ecological islands or ecological platforms)
- the dealers in which new equipment can be purchased, which are requested to collect it free of charge (collection "one for one");

Information about disposal in the European Union nations

The community Directive on RAEE equipment was accepted in different ways by each nation, therefore, if this equipment must be disposed off, we suggest a contact with the local authorities or the Dealers about the correct disposal method.

While waiting for demolition or disposal, the equipment can be temporarily stored, also in open air, because the unit has its electrical, refrigeration and hydraulic circuits integrated and closed. However, make sure that the doors cannot be closed to avoid entrapment.
The laws in force in the user's country concerning environment protection must also be observed.

Warranty

The builder obligation regarding the warranty that covers the equipment and other parts produced by it is valid for a period of 1 year as of the invoice date, and consists of the supply free of charge of parts that must be replaced that, at its own discretion, are considered defective.
It will be the builder's duty to solve eventual faults and defects, provided the equipment is correctly installed and operated in accordance with the instructions contained in the manual. Any damage arising from calcareous incrustations, over voltage or tampering by not authorised or not qualified personnel will void the warranty.
Consumption components such as glass, aesthetic parts, seals, lamps and parts that wear off after the utilisation, are excluded from the warranty.
During the warranty period, it will fall on the purchaser the expenses concerning providing of services, travels or transfers, transport of parts and eventual replacement equipment.
The materials replaced under warranty will remain of our property and must be returned at the purchaser's care and expenses.

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