

ENGLISH

5 – 10 – 14 PANS



**INSTALLATION, OPERATING AND
MAINTENANCE INSTRUCTIONS FOR BLAST
CHILLER AND FREEZERS**

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2. WARNING

2.1. Introduction

This handbook contains useful information on how to correctly install and use the appliance. The user must read it carefully and refer to it at all times.

To avoid risks for people or things some useful information shall be highlight get before each operation. Such information is marked with the following symbol:



The manufacturer declines any responsibility if the indications mentioned in the handbook are not followed.

This appliance has been designed for professional use and therefore only qualified personnel should use it.

The manufacturer declines any responsibility for damage caused by wrong use or misuse, such as:

- Misuse by untrained personnel
- Unauthorized modifications or interventions on the appliance
- Use of wrong or non-original spare parts
- Failure, even if partial, to comply with the instructions in the handbook
- Departure, even if partial, from the operating modalities

All our appliances must be installed by specialized technicians who are qualified to intervene on electric circuits and refrigerating systems.

Ordinary and extraordinary maintainance(cleaning, intervention on the refrigerating system, etc) must be carried out by specialized and qualified technicians

2.2. General warnings



The appliance must be connected to the same electrical power supply as reported on the data plate.



The appliance must be connected separately to a differential magneto thermal cut out with a value not exceeding 30mA.



The appliance must be connected to an electric system with a unpotential protection circuit (earthing) that meets the standards in force.

2.3. Transporting, handling and unpacking the appliance

The modalities are the following:



Before transporting or handling the appliance, care must be taken to avoid damage to things and people.



Use means suitable for the appliance to be transported.



Use suitable gloves when handling the packaging and the wooden base board.



The packaging should be disposed of according to local laws and in any case not left in the environment.



The appliance should not be turned upside down.

2.4. Safety precautions

When using the appliance, never obstruct the air inlet when the appliance is on, so as not to compromise its performance and safety (see figures 2.41- 2.42).



If internal parts must be reached, disconnect the appliance from the electric power supply and allow it to cool down for at least an hour.



Use suitable gloves to touch internal parts of the appliance.



No object whatsoever should be introduced through the ventilation slots when the appliance is connected to the mains or when it is on.



The feeding cable should never be stretched for any reason.

3. INSTALLATION

3.1. Notes for the installer

This handbook provides useful information for installing the appliance correctly. The information not mentioned part of the knowledge and experience of any specialised technician who is qualified to intervene on electric circuits and refrigerating systems. Consult our technical assistance if there should be any doubts concerning installation.



The manufacturer declines any responsibility if the reported instructions or the basic installation rules are not respected.



The appliance must be installed and started up for testing according to accident prevention and fire regulation standards.



The installer shall check that the feeding of the user's power supply complies with the information on the data plate and that sizing and protections are correct.

3.2. Positioning the appliance

The following conditions are required for the appliance to perform well.



The appliance must be aligned before turning it on. If such alignment is not ensured, it can compromise correct drainage of condensation and defrosting water .



Leave a space of at least 2 metres at the front of the appliance as an air outlet and to open the door and at least 0.3 metres at the rear.



The appliance should not be placed close to heat sources or rooms that are usually or excessively dusty



Arrange suitable water drains, possibly with a drain trap.

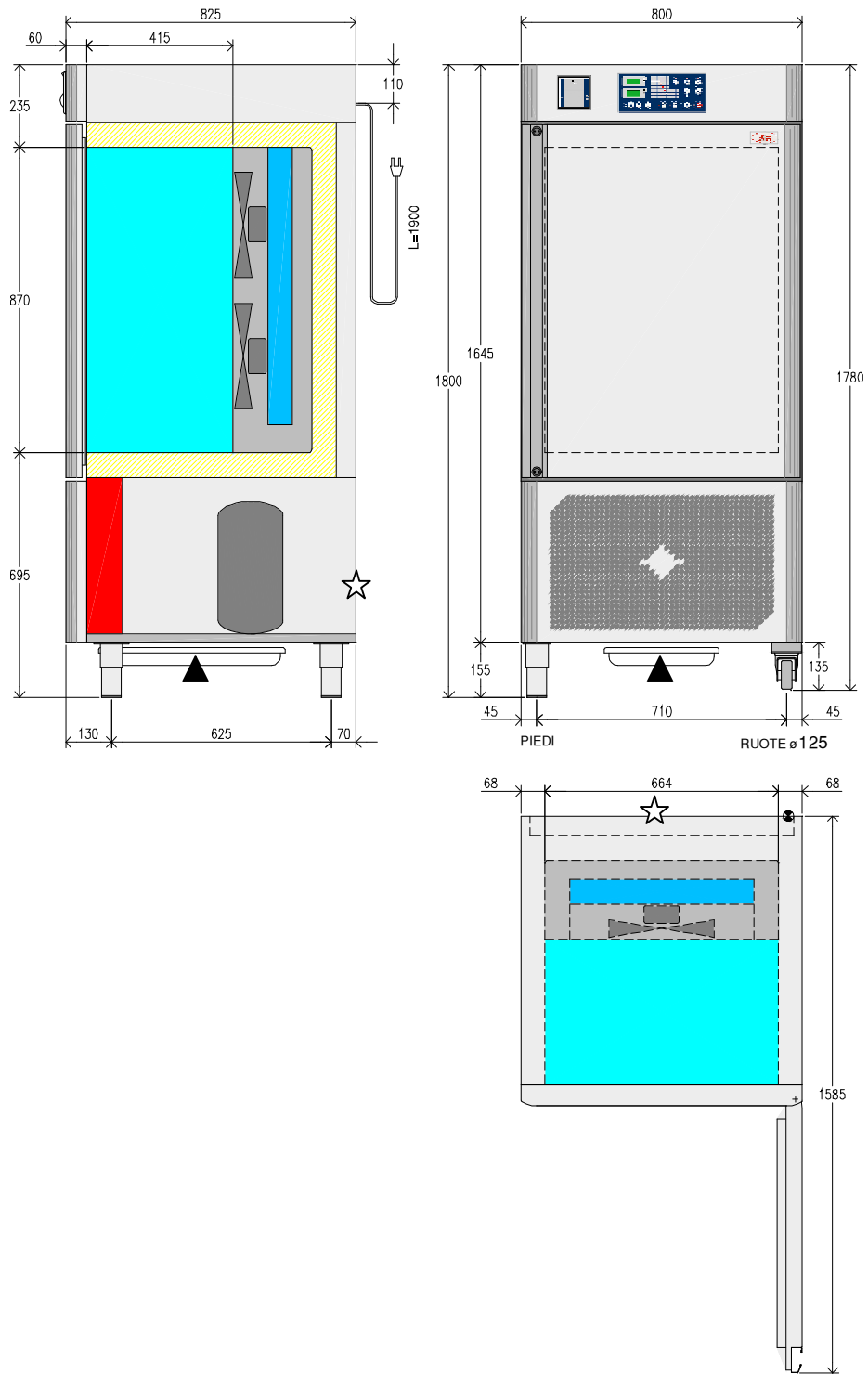
3.3. Room conditions

The performance of the appliance is guaranteed with a room temperature of 32°C. A higher temperature can compromise its performance and, in more serious cases, cause the appliance's protections to start (e.g. Max pressure switch).

Therefore, consider the most critical room conditions that can be reached in that position before choosing it (see overall dimensions paragraph 3.4 on the following page).

3.4. Overall dimensions

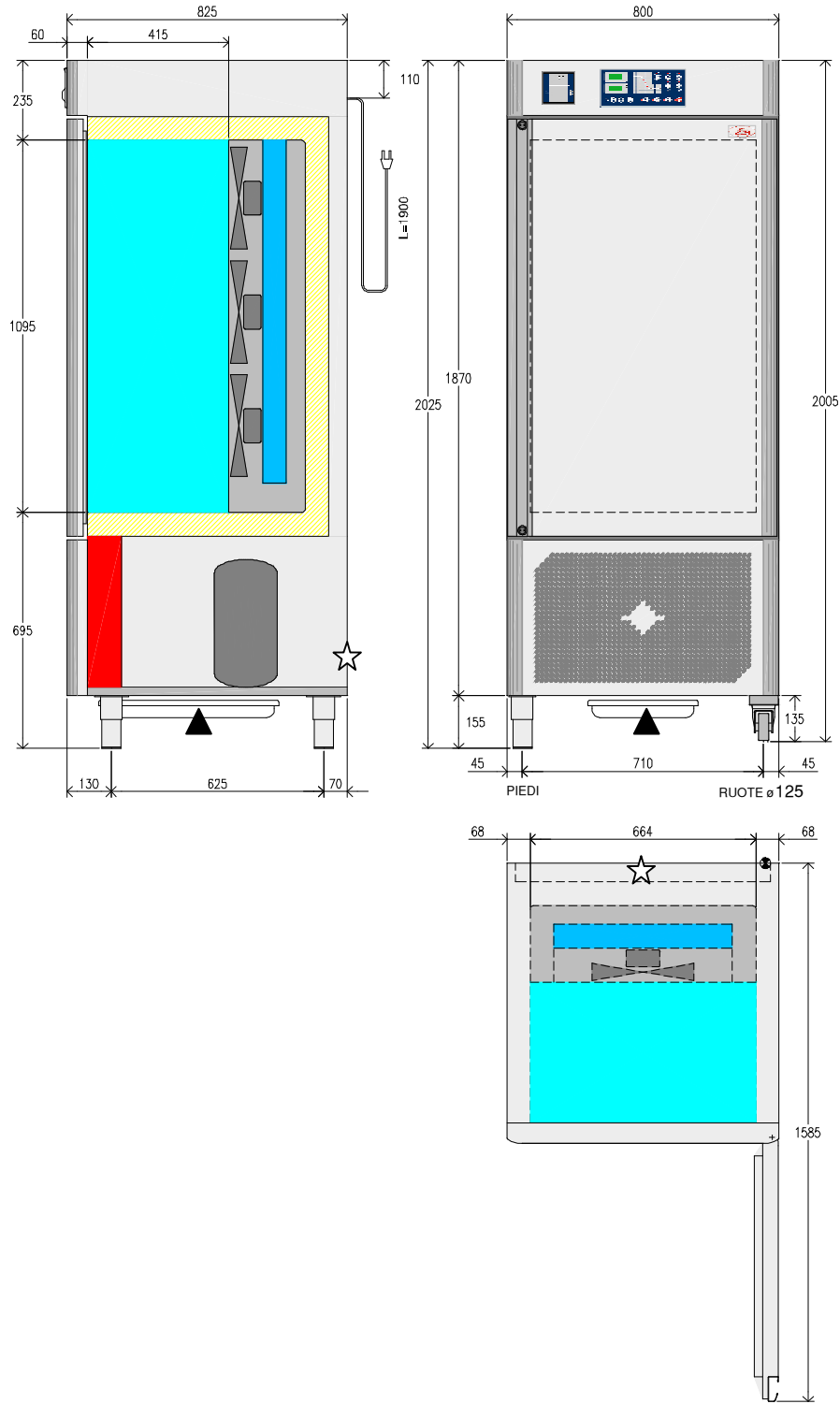
CHILLER WITH 10 PANS



▲ WATER DRAINAGE

☆ WATER INLET

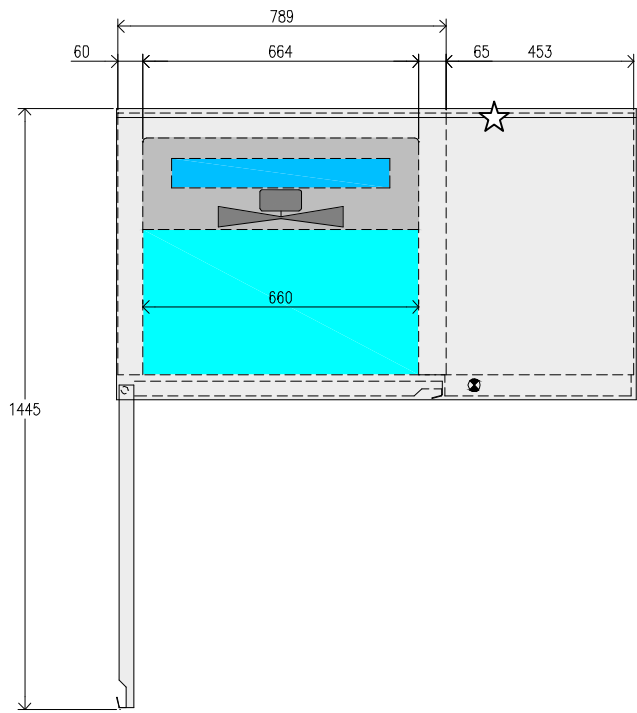
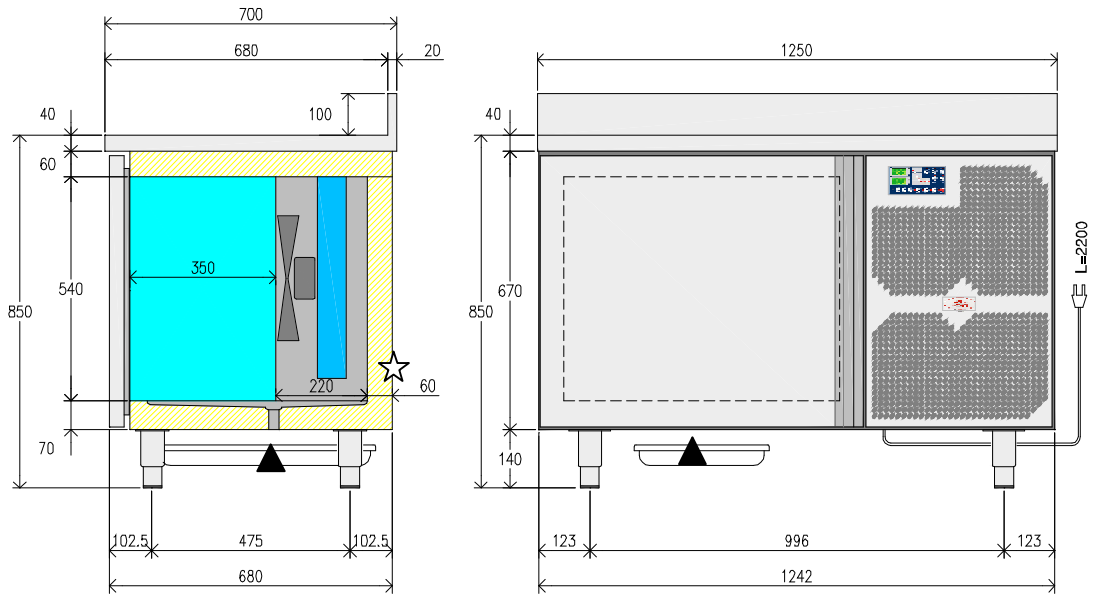
CHILLER WITH 14 PANS



▲ WATER DRAINAGE

☆ WATER INLET

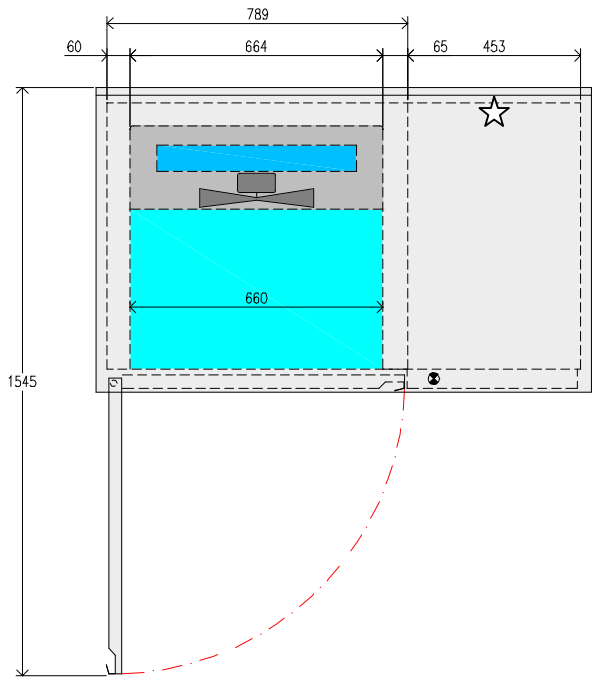
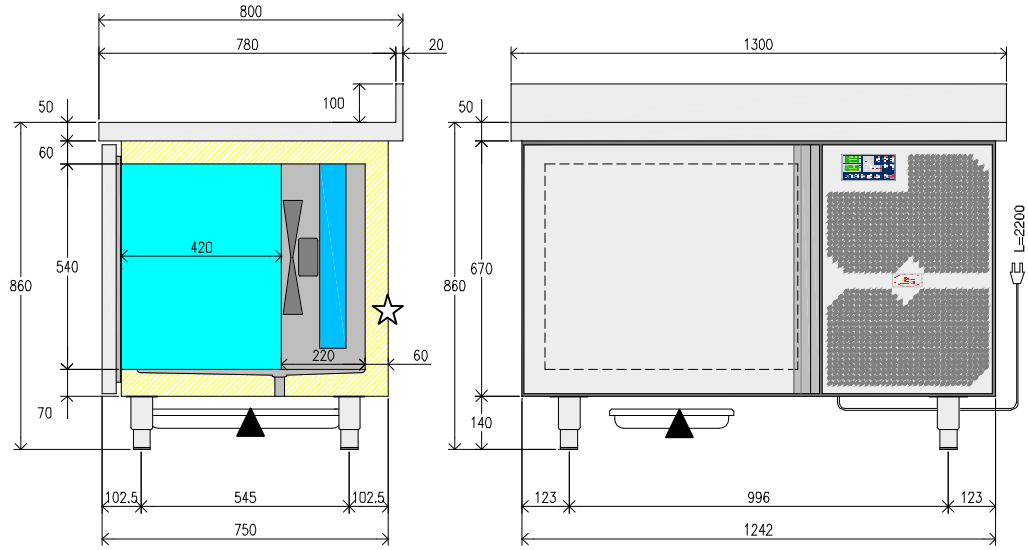
CHILLER 700 (Catering version)



▲ WATER DRAINAGE

☆ WATER INLET

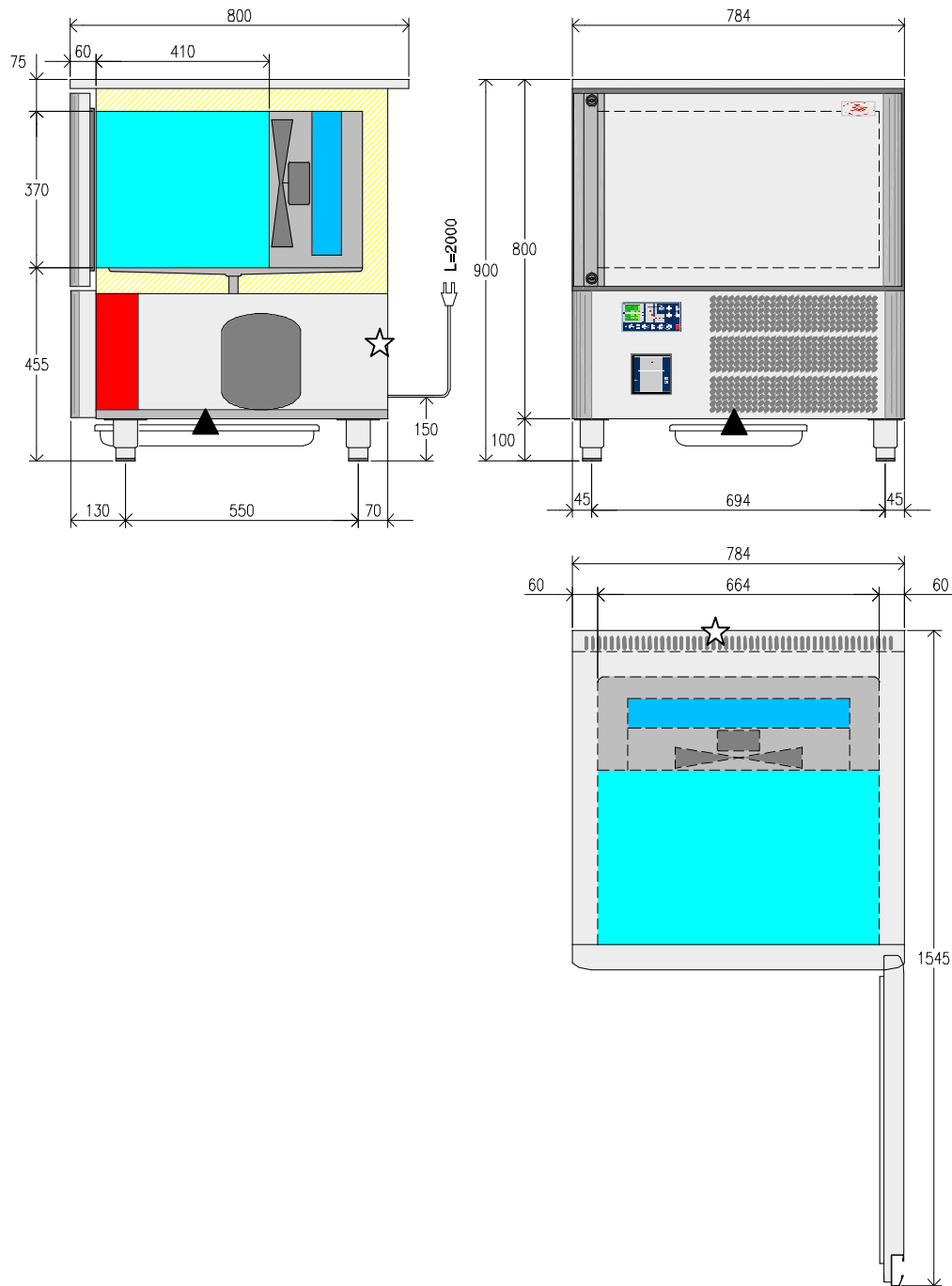
CHILLER 800 (Confectionery version)



▲ WATER DRAINAGE

☆ WATER INLET






CHILLER WITH 5 PANS



▲ WATER DRAINAGE

☆ WATER INLET

3.5. Technical data

Models	ABV0005	700	800	ABV1001	ABV1004
					
Productivity					
Positive cycle [kg]	18	18	18	30	50
Negative cycle [kg]	9	9	9	20	30
Work cycles					
Positive chilling (+70°C +3°C)	P	P	P	P	P
Negative chilling (+70°C -18°C)	P	P	P	P	P
Hard / soft cycle	P	P	P	P	P
Automatic cycle	P	P	P	P	P
Programme memory	P	P	P	P	P
External dimensions					
Width	784	1250	1300	800	800
Depth / with doors open	800/1545	700/1445	800/1545	825/1585	825/1585
Height	900	850	860	1800	2025
Set-up					
No. and type of shelves (provided)	-	-	-	-	-
Type of trays	GN 1/1 600x400 GE 360x165 H=120	GN 1/1 GE 360x165 H=120	600x400	GN 1/1 600x400 GE 360x165 H=120	GN 1/1 600x400
Maximum number of trays	5	5	5	10	14
Tray centre distance	70	92	92	75	67
Defrost type	Manual forced vent.	Manual forced vent.	Manual forced vent.	Automatic/Manual Hot Gas	Automatic/Manual Hot Gas
Compressor					
Evaporation T [°C]	-25	-25	-25	-25	-25
Cooling capacity [watt]	970	970	970	2030	2370
Refrigerant					
Type	R404a	R404a	R404a	R404a	R404a
Absorption [watt]	950	950	950	2500	3000
Supply voltage	230V, 1+N	230V, 1+N	230V, 1+N	400V, 3+N	400V, 3+N
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Alternative voltage [optional]	220V, 1+N 60Hz	220V, 1+N 60Hz	220V, 1+N 60Hz	-	-
Version with water condensation	P	P	P	P	P
Version with remote unit	0	0	0	P	P
Options	Heated sensor Germicide lamp HACCP printer	Heated sensor Germicide lamp	Heated sensor Germicide lamp	Heated sensor Germicide lamp HACCP printer	Heated sensor Germicide lamp HACCP printer
AS STANDARD	P	P	P	P	P
OPTIONAL	0	0	0	0	0
NOT AVAILABLE	0	0	0	0	0

3.6. Connection to the mains



The present appliance must be feeded trough the feeding cable which comes out from the rear side in case of 5-10-14 Pans blast chiller and from the frontal side on the 5- Pans blast chiller table.



It is mandatory to install a differential magneto thermal cut out leading into the appliance according to the procedures set forth in the applicable local safety laws. Make sure there is a unpotential protection circuit (earthing) in accordance with standards.

3.7. Connection to the drain

5 PANS

The defrosting water and the water that forms at the bottom of the refrigerating chamber during operation or during periodical internal cleaning must be drained through a prearranged hose with a minimum diameter 3/4" connected to the hose at the bottom of the chiller.

A drain trap should also be ensured. The drain must be in compliance with the standards.

The efficiency of the drains should be checked after installation by adjusting the alignment of the appliance if necessary.

10 PANS – 14 PANS

If a drip tray to collect the drain water below the chiller is not provided, the defrosting water and the water that forms at the bottom of the refrigerating chamber during operation or during periodical internal cleaning must be drained through a prearranged hose with a minimum diameter of 3/4" that must be connected to the pipe at the back of the chiller (see fig. 3.71).

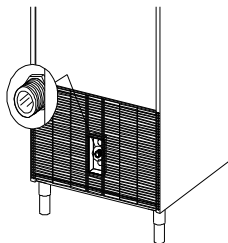


FIG. 3.71

A drain trap should also be ensured. The drain must be in compliance with the standards. The efficiency of the drains should be checked after installation by adjusting the alignment of the appliance if necessary.

3.8. Final checks

At leas the following should be checked after installation :

- Connection to the mains
- Functionality and efficiency of drains
- That there are no tools or materials left in the appliance that could jeopardise its functionality or even damage the appliance
- That the control panel shuts properly and that there is perfect correspondence between the door microswitch and the magnet
- Check that the door closes properly and that the door microswitch and magnet are perfectly aligned.
- Have the appliance perform at least a complete chilling/deep freezing cycle
- During the above mentioned cycles note pressure and input

4. GETTING STARTED

4.1. Control and safety device

During operation there are some controls that, in some cases regulate the correct running of the appliance and in others deactivate parts or all of the appliance for safety reasons. Here are the principal controls :

4.1.1. Door microswitch

If the door is opened, the magnetic switch located on the control panel opens and during chilling or freezing phases the evaporator fans are shut off, while at the same time an alarm signal appears on the display. This condition may also occur when the door is not perfectly aligned and closed against the control panel : in this case with the machine in the **STOP** phase, no cycle may be started, except for the defrost cycle for the 5 pan version.

If the appliance is not in operation, and it is fitted with a UV lamp that is operating, only this lamp will be turned off.

4.1.2. Safety pressure switch (10-14 pans only)

If, due to environmental conditions or faulty operation, the minimum/maximum pressure values in the refrigerating circuit should become excessive, the maximum/minimum safety pressure switch (in the 5 Pans version, only the maximum safety pressure switch) will operate to stop the appliance. The machine can be switched on again only after the pressure has returned to an acceptable value. If a high pressure alarm should occur, the wording "HP" will appear on the display. The wording "LP" will appear if there is a low pressure alarm.

4.1.3. Protection fuses

Fuses on the general power supply line intervene in case of overloads. Even the evaporator's fans are protected by fuses. Different fuses are present in the 10-14 pan versions for the evaporator fans.

4.1.4. Thermal relay (10-14 pans only)

In the case of faulty operation that results in exceeding the current absorption limits of the electric system, the thermal relay will operate to stop the machine. This intervention is shown on the display by means of the wording "HA". If the thermal relay has intervened it must be manually reset: to gain access to the thermal relay situated in the control compartment, follow the instructions at paragraph 4.31.

4.1.5. Temperature control

There are three probes that have three different functions:

- Refrigerating chamber probe: regulates compressor operation to make the refrigerating chamber reach the preset temperature.
- Evaporator probe: checks there is the right condition to finish the defrosting cycle. (not featured in the 5 Trays).
- Condenser probe : it has the function to check the overtaking of the set maximum temperature's limit for the condenser exit (only 5 pans)
- Core probe (Shaft): checks that the set temperature in the product core has been reached during the automatic chilling and freezing cycles and carries them out in optimal conditions.

Irregularities of these probes are signalled through error signals (see the table at the end of the manual).

4.1.6. Notes on alarms systems

To ensure the correct performance of a temperature-regulated chilling/ deep freezing cycle/phase the probe pin should be placed correctly inside the product; at the beginning of the cycle the device checks the correct introduction of the probe pin. An alarm signal will alert you if the check is negative; otherwise the cycle/phase can be started (see the table at the end of the manual).

The electronic board has two temperature alarms that can be turned off: this type of alarm makes the intermittent buzzer sound and simultaneously makes the display flash a correct temperature value alternating with an alarm code (see table at the end of the manual).

The thermostat has two temperature alarms that can be excluded: this type of alarm makes the intermittent buzzer start and shows the correct temperature on the display. Other irregular operating conditions (incorrect type of probe, faulty probe, temperature not within limits set by the probe being used) set off the buzzer and a flashing alarm shows alarm codes on the display. This makes it possible to find the irregularity quickly and to eliminate the causes (see the table at the end of the manual).

4.1.7. Evaporator Fan Micro

If there is forced ventilation manual defrost (5 Trays only), this micro, located on the evaporator deflector, stops the fan working when the deflector is opened to inspect the evaporator.

4.2. Description of the cycles

The following are brief descriptions and types of operating cycles.

4.2.1. AUTOMATIC chilling

This cycle makes it possible to lower the temperature at the core of the product from +70°C to +3°C in the shortest possible time and within a maximum time of 90 minutes. During this cycle, the control box processes the data transmitted by the core probe and based on this data automatically sets the best operating mode, NORMAL or INTENSIVE.

4.2.2. AUTOMATIC freezing

This cycle makes it possible to lower the temperature at the core of the product from +70°C to -18°C in the shortest possible time and within a maximum time of 270 minutes. During this cycle, the control box processes the data transmitted by the core probe and based on this data automatically sets the best operating mode, NORMAL or INTENSIVE.

4.2.3. Normal timed chilling

This cycle makes it possible to lower the temperature at the core of the product from +70°C to +3°C in the amount of time that you choose to set. We would suggest running some automatic test cycles first in order to determine how much time is required to chill the products properly. We would also like to remind you that the times which are acquired and stored in memory should be considered as valid only for the same type of product with the same quantity per cycle. The use of this cycle is advisable for foods of a reduced thickness, or for foods which would undergo changes in their nutritional qualities due to water loss.

4.2.4. Intensive timed chilling

For the use of this cycle, the information contained in the previous paragraph is applicable concerning the time which can be set and the final temperature of the product.

The use of this function, which makes it possible to reduce chilling times, is recommended for foods with the following characteristics :

- Packaged foods or foods in containers
- Foods with a thickness of greater than 50 mm
- Foods with a high fat content

4.2.5. Intensive timed freezing

This cycle makes it possible to lower the temperature at the core of the product from +70°C to -18°C in the amount of time that you choose to set. We would suggest running some automatic test cycles first in order to determine how much time is required to chill the products properly. We would also like to remind you that the times which are acquired and stored in memory should be considered as valid only for the same type of product with the same quantity per cycle.

4.2.6. Normal timed freezing

For the use of this cycle, the information contained in the previous paragraph is applicable concerning the time which can be set and the final temperature of the product.

The use of this cycle is recommended for foods which would suffer from a strong initial thermal shock or foods with ingredients of different makeup (e.g. ravioli) and which therefore require a slower, more uniform freezing process.

4.2.7. Conservation

At the end of each cycle described above, whether it is AUTOMATIC or TIMED, a conservation cycle for an indefinite time is started. The cell temperature will be that of the most recently concluded cycle:

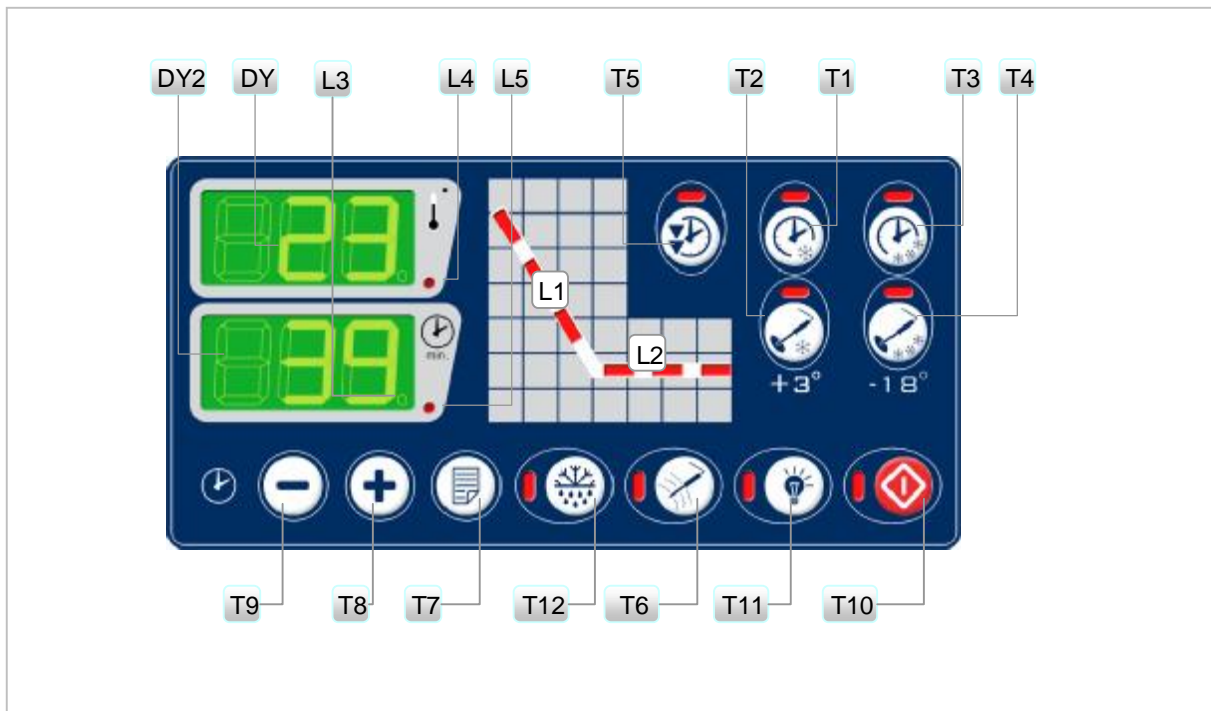
+ 3°C for chilling cycles

-25°C for freezing cycles

Attention: use of this cycle is recommended only for short periods prior to storage of the product in a storage unit or in case of emergency, so as to avoid such a limited use of a machine with such high potential.

4.3. Control panel

Hereunder is a brief description of the various functions performed by the control panel keys :



START Cycle button (T10)

Once the cycle has been selected, pressing this key starts the machine (the corresponding LED comes on). If instead this key is pressed during operation, the following occurs (the corresponding LED goes off) :

- The machine stops operating
- All times are reset
- The settings of the previous cycle remain in effect, so re-start may occur immediately
- When the cycle is complete and for an indefinite period of time, it makes it possible to stop the conservation cycle

With the machine stopped, pressing for at least four seconds puts the machine in standby mode :

- all outputs are de-activated
- no key presses will have any effect
- only three dashes are shown on the display

To restart the machine, press again for at least four seconds

Chilling Keys : Timed manual / automatic (T1-T2)

Key T1 makes it possible to choose the timed manual chilling cycle (the corresponding LED comes on)

Key T2 makes it possible to choose the timed automatic chilling cycle (the corresponding LED comes on)

(+70°C à +3°C)

Freezing Keys : Timed manual / automatic (T3-T4)

Key T3 makes it possible to choose the timed manual freezing cycle (the corresponding LED comes on)

Key T4 makes it possible to choose the timed automatic freezing cycle (the corresponding LED comes on)

(+70°C à -18°C)

Hard/Soft cycle selection key (T5)

Key T5 is active only in timed manual cycles:

if pressed after selecting a chilling cycle +70°C à +3°C, (the corresponding LED comes on) it activates the intensive function: see suggestions for use in paragraph 3.24

if pressed after selecting a chilling cycle +70°C à -18°C, (the corresponding LED goes off) it activates the normal function: see suggestions for use in paragraph 3.26

If pressed for 5 seconds with the machine stopped, it makes it possible to set the current time, day and year.

Manual Defrost Key (T12)



With the machine stopped, if pressed for more than five seconds it starts a defrost cycle (the corresponding LED comes on) :

5 pan model : timed defrost, with forced ventilation, with door either open or closed. It is possible to interrupt the defrost cycle in advance by pressing the key again. It is preferable to defrost with the door open.

This cycle is not included during the conservation phase.

10/14 pan model : hot gas defrosting with interruption only upon reaching the set temperature.

This cycle is automatically activated during the conservation phase.

Germicide lamp button (T11)



With the machine stopped and the door closed, this makes it possible to switch on an internally located UV lamp (if installed) for a set time. This lamp sterilises the refrigerating chamber at the beginning and at the end of the day after it has been cleaned.

Heated probe key (T6)



For units in which the shaft probe can be heated, this key, when pressed with the machine stopped, makes it possible to heat the shaft probe so that it is easier to pull it out of the frozen product.

If during a chilling / freezing cycle the "shaft probe not inserted" alarm is signalled (see paragraph on alarms), press the key to silence the alarm after checking that the shaft probe is properly inserted into the product, then restore automatic operation.

Program Selection Key (T7)



With the machine stopped, it makes it possible to recall and/or memorize 99 timed chilling or freezing programs.

Time increase/decrease keys (T8 - T9)



If timed chilling/freezing mode has been selected, these keys make it possible to set the number of minutes the cycle will last. This setting is made prior to pressing the start key.

If the T8 key is pressed during automatic temperature-regulated chilling / freezing, it makes it possible to change from the display of the shaft temperature to the display of the cell temperature (display DY1).

If the T9 key is pressed during chilling / freezing, it makes it possible to change from the display of the time remaining to the time elapsed since the start of the cycle (display DY2).

Pressing both keys simultaneously makes it possible to enter parameter programming mode :

the required password is provided along with the SERVICE manual to qualified personnel.

4.4. Indication on the control panel

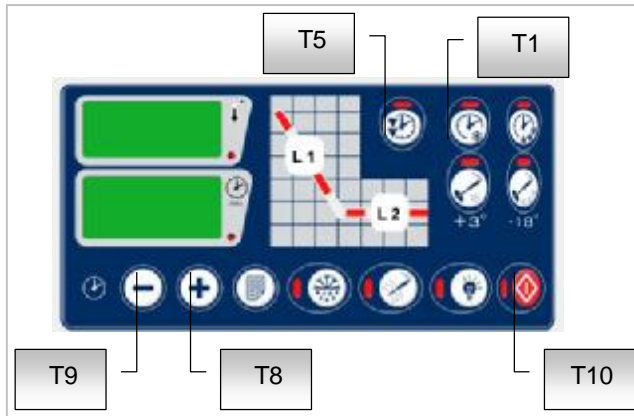
<i>Signal</i>	<i>Indication</i>
Display DY1 shows the message "dEF"	A defrost cycle is in progress
Display DY1 shows the flashing message "dEF"	Standing by for defrost cycle start
Led L1 are on	A chilling / freezing cycle is in progress
Led L2 are on	A conservation cycle is in progress
Led L3 is on	A defrost cycle is in progress, or else the temperature measured by the shaft probe exceeds +65° C
Led L3 flashes	Cycle time countdown is in progress
Led L4 is on	The automatic temperature-regulated chilling / freezing mode has been selected
Led L5 is on	The manual timed chilling / freezing mode has been selected
Led T1 is on	A timed chilling cycle has been selected
Led T2 is on	An automatic temperature-regulated chilling cycle has been selected
Led T3 is on	A timed freezing cycle has been selected
Led T4 is on	An automatic temperature-regulated freezing cycle has been selected
Led T5 is on	The intensive chilling / intensive freezing mode has been selected
Led T6 is on	Shaft probe heating cycle active: display DY1 shows the message Prb.
Led T10 is on	A cycle is in progress: chilling, freezing or conservation.
Led T11 is on	A sterilization cycle with UV lamp is being performed
Led T12 is on	Defrosting cycle active: display DY1 shows the message dEF.

4.5. Operation

Chilling or freezing can be controlled by a pre-set time or by reaching a pre-set core temperature (+3 / -18 °C). Normally, the pre-set time for a certain load is obtained by carrying out temperature chilling tests, in order to get an average value which is to be increased and used as a reference for timed chilling:

also see paragraphs 3.21 ÷ 3.26

TIMED CHILLING

4.5.1. Timed chilling $+70^{\circ}\text{C} > +3^{\circ}\text{C}$ 

Select positive chilling by pressing key **T1** (the corresponding LED comes on) confirmed by the lighting of LED **L5**

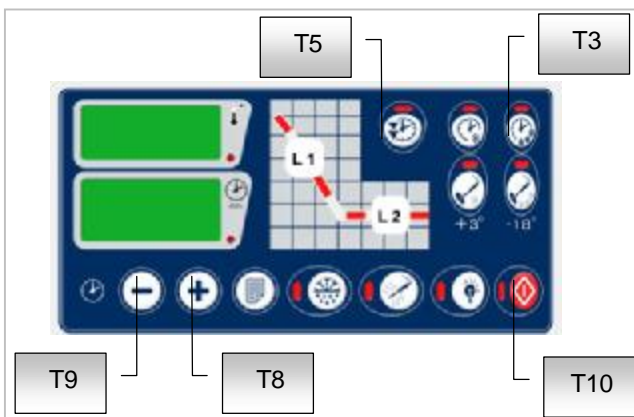
To select chilling time press arrows + and - (**keys T8-T9**)

If you wish to choose the intensive chilling cycle, press key **T5** (the corresponding LED comes on): the duration of this phase is calculated automatically by the control box based on the set time; the final part of the cycle does however take place in normal mode to avoid surface freezing of the product and is confirmed by the extinguishing of the LED that corresponds to

key**T5**.

Start the cycle by pressing key **T10**(the corresponding LED comes on)

The start of the cycle is also confirmed by LED L1 coming on

4.5.2. Timed freezing $+70^{\circ}\text{C} > -18^{\circ}\text{C}$ 

Select freezing by pressing key**T3**(the corresponding LED comes on) confirmed by the lighting of LED **L5** : in this cycle the intensive function is activated automatically (the corresponding LED comes on, **T5**)

To select desired freezing time press arrows + and - (keys T8-T9)

If you wish to choose the soft freezing cycle, **press key T5** (the corresponding LED goes off) : the duration of this phase is calculated automatically by the control box based on the set time; the final part of the cycle does however take place in intensive mode to ensure complete

freezing of the product and is confirmed by the extinguishing of the LED that corresponds to key **T5**.

Start the cycle by pressing key **T10**(the corresponding LED comes on)

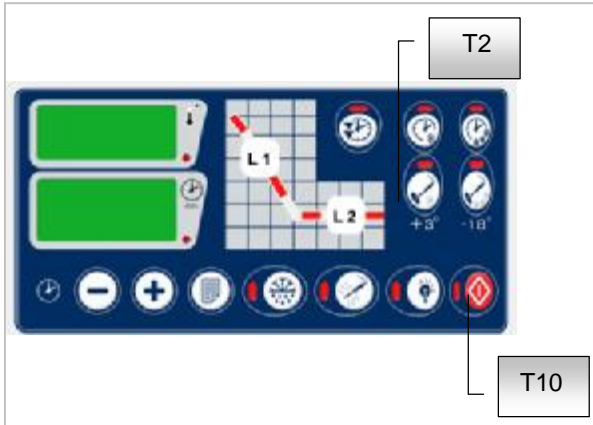
The start of the cycle is also confirmed by LED L1 coming on

Note:

Proper termination of a timed chilling / freezing cycle is indicated by the message "END" on the display DY2 and by an intermittent sound that lasts a few seconds.

At the end of a chilling / freezing cycle, a conservation cycle is automatically started (LED L1 goes off and LED L2 come on) for an indefinite period of time. This cycle can be stopped by pushing key **T10**(the corresponding LED goes off).

TEMPERATURE-REGULATED CHILLING

4.5.3. Temperature-regulated chilling $+70^{\circ}\text{C} > +3^{\circ}\text{C}$ 

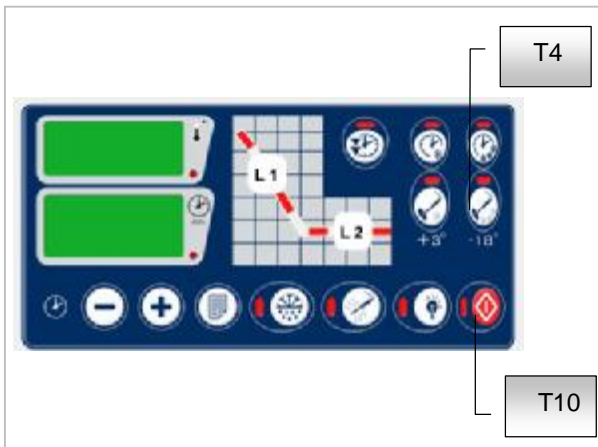
Select positive chilling by pressing key **T2** (the corresponding LED comes on) confirmed by the lighting of LED **L4**

Display DY2 shows the maximum possible time for this cycle: 90 minutes.

Normal or intensive mode will be automatically activated based on the data processed by the control box when the cycle is run.

Start the cycle by pressing key **T10**(the corresponding LED comes on)

The start of the cycle is also confirmed by LED L1 coming on

4.5.4. Automatic temperature-regulated deep freezing $+70^{\circ}\text{C} > -18^{\circ}\text{C}$ 

Select freezing by pressing key **T4** (the corresponding LED comes on) confirmed by the lighting of LED **L4**

The display DY2 shows the maximum possible time for this cycle: 270 minutes.

Normal or intensive mode will be automatically activated based on the data processed by the control box when the cycle is run.

Start the cycle by pressing key **T10**(the corresponding LED comes on)

The start of the cycle is also confirmed by LED L1 coming on

Note:

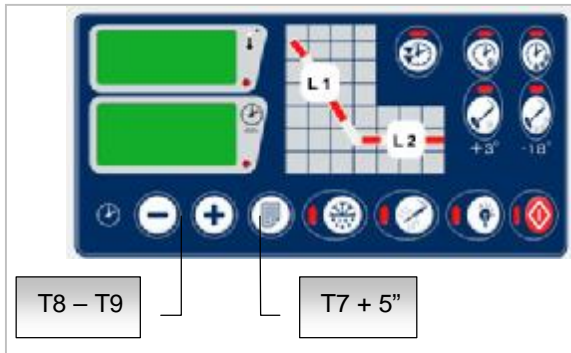
During the first minutes of operation, the control box checks that the shaft probe is working properly. The appearance on the display DY1 of the message "o - -" along with an intermittent sound signal means that the result of the check was not positive. Therefore, since the reading of the shaft probe is not considered reliable, the control box activates a timed safety cycle that lasts 270 minutes. (LED L4 goes off and LED L5 comes on). To silence the alarm and re-activate the automatic temperature-regulated cycle, put the shaft probe back in place and then press key T6 (LED L5 goes off and LED L4 comes on).

Proper termination of an automatic temperature- controlled chilling / freezing cycle is indicated by the message "END" on the display DY1 and by an intermittent sound that lasts a few seconds.

At the end of a chilling / freezing cycle, a conservation cycle is automatically started (LED L1 goes off and LED L2 comes on) for an indefinite period of time. This cycle can be stopped by pushing key T10(the corresponding LED goes off).

If a chilling / freezing cycle is not terminated within the established maximum time for that particular cycle, the following messages will be displayed: "END" on the display DY1 and "OUT" on the display DY2.

4.5.5. Memorization of timed chilling / freezing programs.



To memorize a timed chilling cycle, set it as if it were a timed program in standby condition.

Press for at least five seconds on key **T7**. A beep from the buzzer will confirm access to program memorization; release the key (the corresponding LED comes on).

Display DY1 will show the flashing code P1 which corresponds to the first program which can be memorized. Use the + and - arrows to select the number of the program to be memorized.

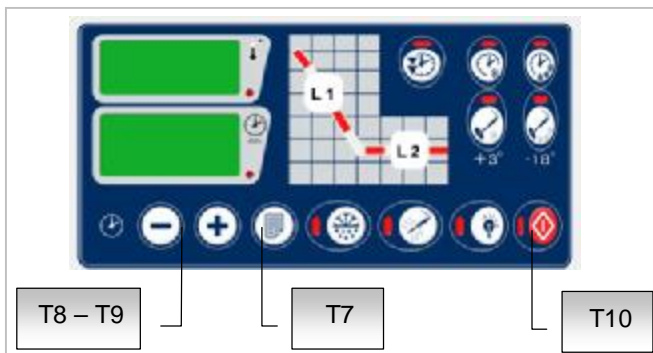
The display DY2 will show the message "USE" if the program is already used.

Press key **T7** again to confirm the memorization.

Note:

If you select a program with data that is already set, this program will be overwritten with the newly set data. If more than ten seconds have passed since the last key press, the temperature display will once again display the temperature. You will exit programming and the program will not be memorized.

4.5.6. Recalling timed chilling / freezing programs.



With the machine stopped, press and release key **T7**(the corresponding LED comes on) .

The temperature display shows the code P followed by the program number, for example P1, while the time display shows the memorized set time and the LED indicators that correspond to the selected operating mode come on.

Select the desired program with the + and - arrows.

If you select a program that has not been memorized, the time display will show " --- " and the chilling mode LED indicators will remain off.

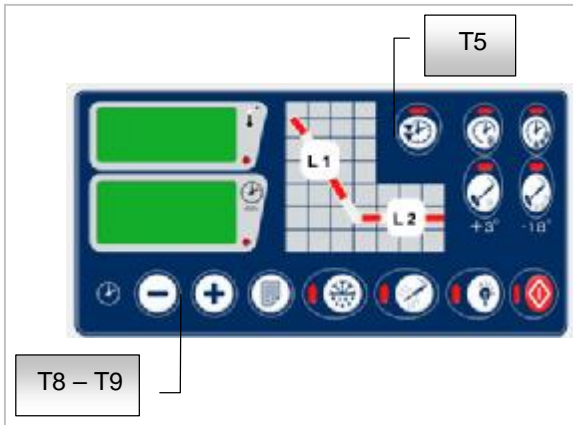
Once the required programme has been selected, press the **T10** key to start the cycle.

If more than ten seconds have passed since the last key press, the temperature display will once again show the temperature, and the LED of key **T7** stays on to indicate the selection of a memorized program.

4.5.7. Setting the time and date



Ensure that the machine is in standby status.



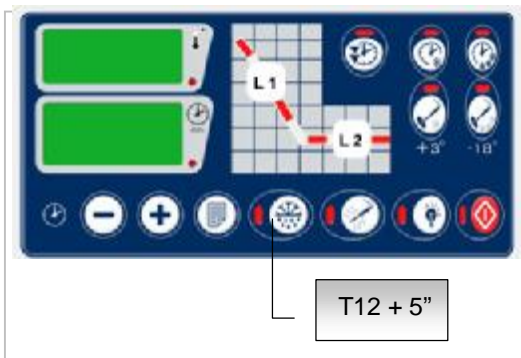
To access time setting, press for at least five seconds on key **T5**.

The upper display will show the labels **Hr** (hours), **Mn** (minutes), **dA** (day), **Mo** (month) and **Yr** (year), while the lower display will show the settings corresponding to the labels of the upper display in turn.

Press key **T5** to scroll the labels, and use the increase and decrease keys to update the corresponding values. You can exit time setting by pressing key **T5** after displaying the label **Yr** (year) or after an elapsed time of ten seconds.

The new data set for the timer is applied immediately

4.5.8. Manual defrost



After several consecutive chilling / freezing cycles with a product at a high initial temperature resulting in a substantial quantity of humidity being absorbed by the evaporator, it is advisable to run a defrost cycle to rid the evaporator of any frost which may have formed, thus restoring the machine to its original efficiency. With the machine stopped, press for more than five seconds on key **T12**(the corresponding LED will come on) :

5 pan model - defrosting takes place for a pre-set time, by means of the activation of the evaporator fan, and may occur with the door either open or closed:

recommended with door open to obtain best results using

the warm air present in the room as an alternative, it is possible to do this with the door closed, previously inserting the load of warm product which upon completion of defrosting will be chilled / frozen. This has two advantages:

by taking advantage of the heat released from the product, a flow of air is guaranteed that makes the defrosting process very efficient; during the defrost cycle, heat is removed from the product resulting in a lowering of the temperature, which will make subsequent chilling / freezing faster.

The cycle can be stopped at any time by pressing the key **T12**(the corresponding LED goes off)

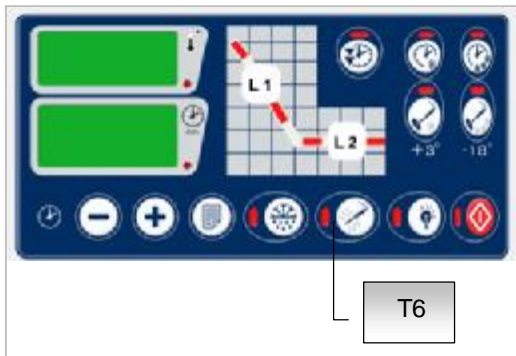
This cycle is not included during the conservation phase.

10/14 pan model - defrosting continues until the preset temperature is reached or for a maximum allowed time through the use of hot gas.

Once started, this cycle cannot be interrupted manually.

This cycle is automatically activated during the conservation phase.

4.5.9. Shaft probe heating (optional)



At the end of a chilling / freezing cycle, press the key **T6** (the corresponding LED comes on) to activate shaft probe heating, which will make it easier to extract the probe from the frozen product.

This function is not active if:

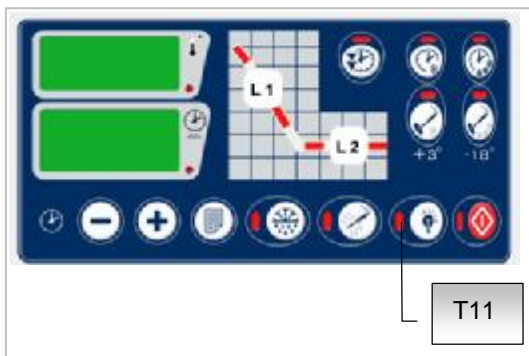
The shaft probe provided is not a type which can be heated
The temperature of the shaft probe is greater than 0°C

The cycle is automatically interrupted at the end of the established time.

4.5.10. UV lamp



(optional)



After use, and after cleaning the cell, press key **T11** (the corresponding LED will come on) to activate sterilization of the cell with ultraviolet light.

This cycle can be started only with the door closed, and it will immediately be interrupted if the door is opened during sterilization.

For correct machine efficiency and hygiene, it is in any case advisable to clean the cell thoroughly each time you finish using the machine.

The cycle is automatically interrupted at the end of the established time.

4.5.11. HACCP data printer (optional)



At the end of a chilling / freezing cycle, at the moment the conservation cycle is stopped, it is possible to print the data.

The following events are printed:

printout heading : date, time and selected cycle;

cycle start : cell and shaft temperature;

alarms : type of alarm, time, cell and shaft temperature;

cycle end : time, cell and shaft temperature;

conservation start : time, cell and shaft temperature;

defrost : time, cell and shaft temperature;

alarms : type of alarm, time, cell and shaft temperature;

conservation record : time, cell and shaft temperature every **X** set minutes : the print interval during conservation can be set only by qualified technical personnel, at the moment of installation. This time may vary from 1 minute to 99 minutes

Alarms which can be printed out are:

DOOR →Door open **DFL** →Evaporator deflector

HP →High pressure **LP** →Low pressure

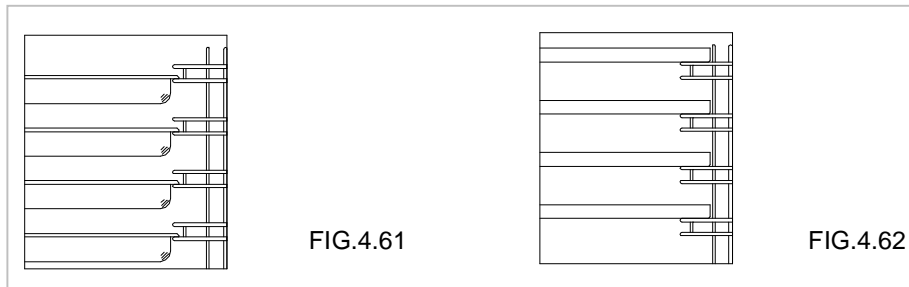
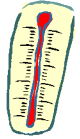
HT →High condensation T **HA** →Compressor thermal switch

AL →Cell high temperature alarm(**HACCP**)

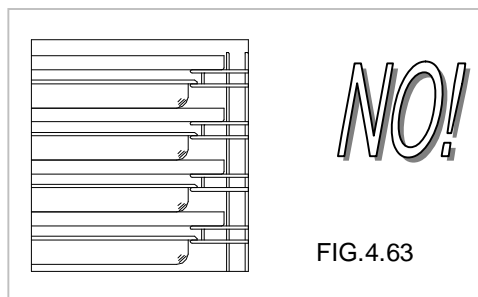
4.6. Hints on proper use

Here are some hints on how to get the best out of your appliance.

- Never place hot food (above 65°C) in the appliance. Not only does this overload the appliance, it can initially start off some protections that lengthen the chilling cycle. It is wiser to leave food outside the appliance to cool.
- The chilling data refers to standard products (low fat content) that is no thicker than 50mm. Never put one piece of food on top of the other or insert much thicker pieces because this would lengthen chilling time. Distribute the product in pans and trays or reduce the pieces to chill they are too thick.
- There should be enough space between the trays and pans to ensure sufficient air flow around the entire product (see figures 4.61 e 4.62).



The following positions of pans and trays should be avoided:



- Never obstruct the inlet of the evaporator fan.
- Products that are more difficult to chill because of their composition and size should be placed in the middle.



Frozen products can produce ice burns. Use protective gloves when you take them out of the appliance.

After chilling/deep freezing the product, it can be stored in a suitable appliance after having been duly protected; a tag should be applied describing the contents of the product, chilling/deep freezing date and expiry date.

Chilled products should be stored at a constant temperature of **+2°C** , deep frozen products should be stored at a constant temperature of **-20°C**.

The chiller should be used for storage for short periods only.



WARNING !!!



**For avoiding biological contaminations among products ,
the product probe must be disinfected after each use.**

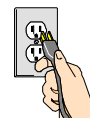
5. MAINTENANCE

5.1. Safety precautions

The following operations must be performed by an authorised installer or by trained personnel only. Here are the safety precautions that are also listed at paragraph 2.4.



Unplug the appliance and allow it to cool down for at least an hour before reaching its internal parts.



Use protective gloves before touching the internal parts of the appliance.



Never insert any object through the ventilation slots when the appliance is on or connected to the mains.



Never obstruct the air inlets when the appliance is on because this would compromise its performances and safety.



Never stretch the power cable.



Never make holes in the piping or open gas cocks when the circuit is under pressure.



Never remove or disable the safety devices of the appliance even during maintenance. The manufacturer declines any responsibility for damage caused by such removal.

5.2. Ordinary maintenance

The following operations should be done regularly to ensure correct performance of the appliance.

- Cleaning of the condenser
- Cleaning of the refrigerating chamber

The following cleaning instructions should be preceded by the safety precautions described at paragraph 5.1.



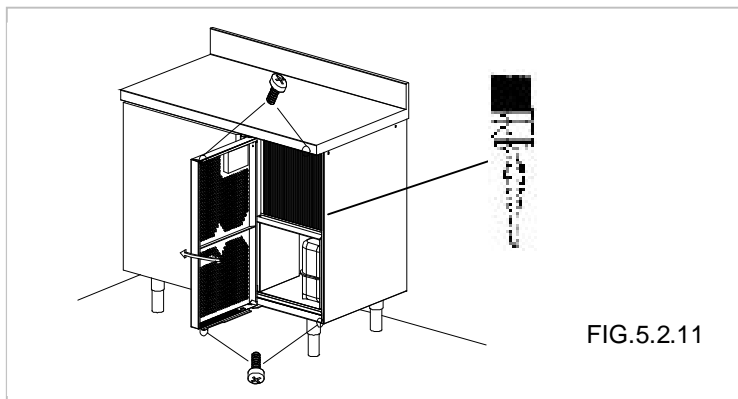
Use protective gloves when operating with the sharp finned part of the condenser. Use protective masks and glasses if there is dust.



5.2.1. Cleaning the condenser

BLAST CHILLER COUNTERS

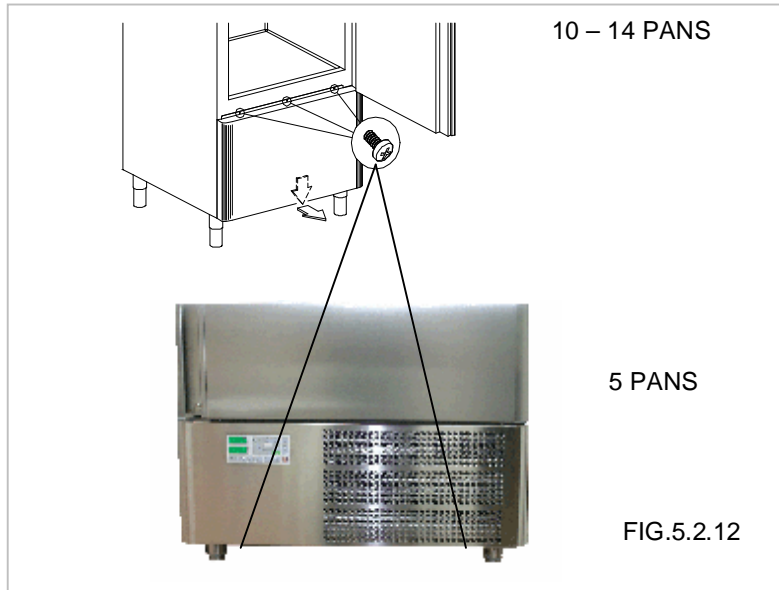
- After having disconnected the appliance from the mains, take out the screws that fix the control panel (see fig.5.2.11).



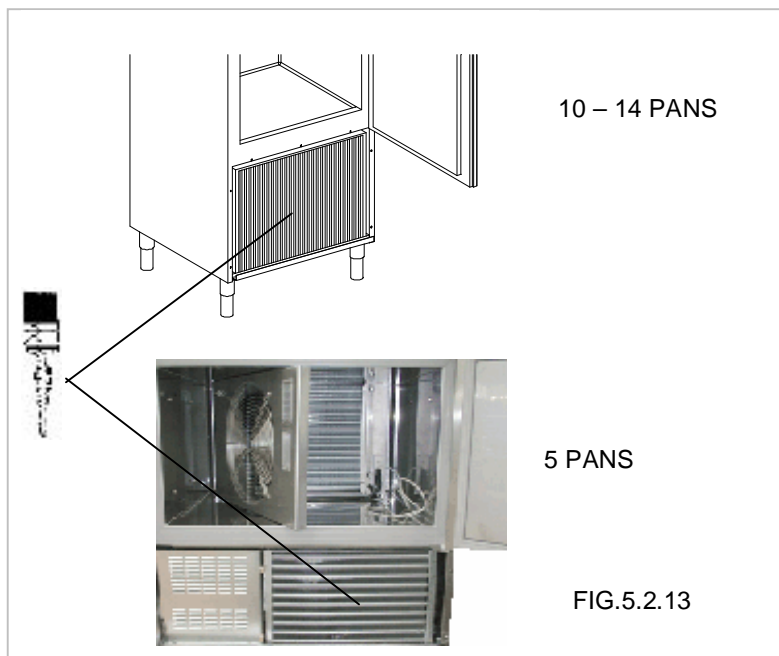
- Rotate the panel by applying leverage to the right hand side.
- If there is dust on the finned part of the condenser, it should be removed using a vacuum cleaner or a brush only with vertical movements along the fins, taking care not to deform the finning because this would compromise the efficiency of the appliance.
- After cleaning the appliance, reassemble the control panel and fix it with the screws removed beforehand.

5 – 10 – 14 PANS

- It is now possible to clean the finned part of the condenser using suitable tools and protection devices (see fig. 5.213)
- If there is dust on the finned part of the condenser, it should be removed using a vacuum cleaner or a brush only with vertical movements along the fins, taking care not to deform the finning because this would compromise the efficiency of the appliance.



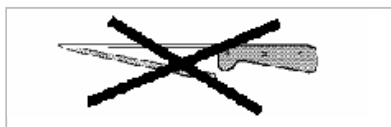
- After cleaning the appliance, reassemble the efficiency of the appliance.
- After cleaning the appliance, reassemble the control panel and fix it with the screws removed beforehand.



5.2.2. Cleaning the refrigerating chamber



Never use sharp objects, abrasive detergents, solvents or thinners but rather mild detergents, water and a cloth or sponge.



- Remove the left and right runners.



- Remove any residual food before cleaning with a damp cloth or sponge.
- Use little water.
- Never spray water or direct it towards the evaporator through the ventilation slots.

5.3. Extraordinary maintenance



The following operations should be carried out by specialised personnel only, authorised to work on the electric circuits of the appliance. Furthermore, the safety precautions already described for ordinary maintenance should be followed.

5.3.1. Replacing the fuses

5 - PANS

The fuses are in the lower part of the components compartment. To reach them, open the control panel by following the instructions given to reach and clean the condenser.

10-14 PANS

The fuses are located in the top part of the chiller. To gain access to them, simply open the control panel by loosening the two screws located at the bottom of the panel and then turn it upwards. After having rotated the control panel, make sure that it does not fall back down (see fig. 5.3.11 and 5.3.12).

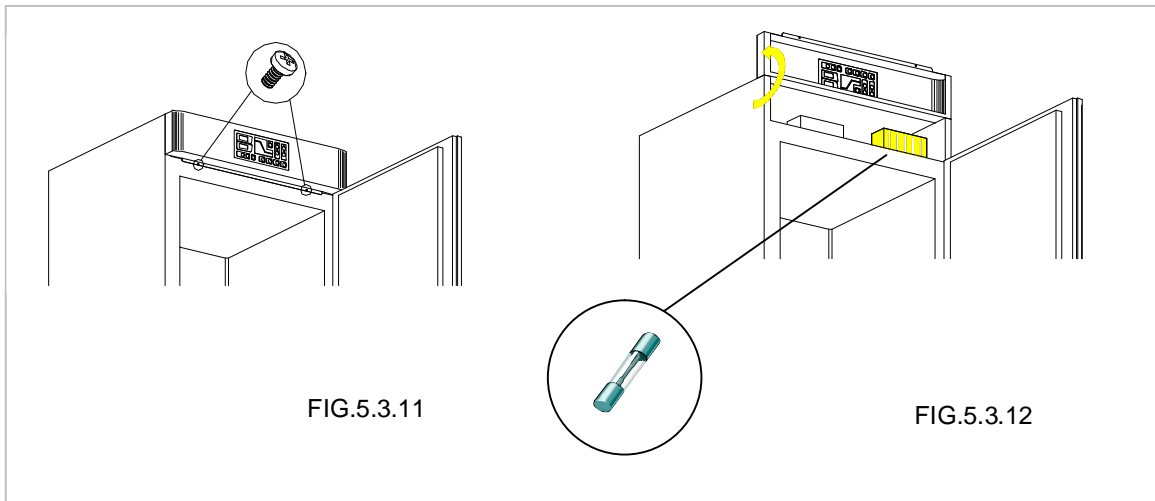


FIG.5.3.11

FIG.5.3.12

5.3.2. Removing the condenser

BLAST CHILLER COUNTERS

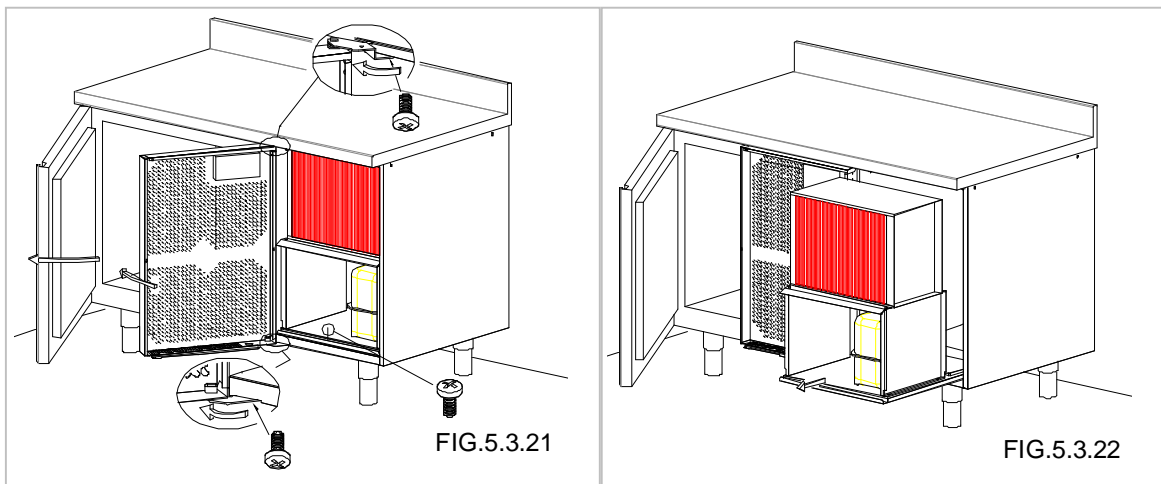
To take the condenser out, open the control panel a little more, otherwise the front opening will not be wide enough to allow the base, which the main components of the control panel are fixed to, to slide out.

To widen the opening of the control panel:

- Open the chiller door to allow a complete opening of the control panel.
- After performing the operations to clean the condenser, unscrew the two screws on the hinges at the top and bottom of the control panel (see fig. 5.3.21)
- To remove the components compartment from the front, loosen the sliding surface screw in the center (see fig. 5.3.21).
- Completely pull-out the shelf on which the condenser is placed, until it reaches the stops (See fig. 5.3.22).

Once maintenance is over make sure that:

- No parts are fixed incorrectly
- No tools or other objects are left in the components compartment
- The cables do not touch parts that could move or reach high temperatures.



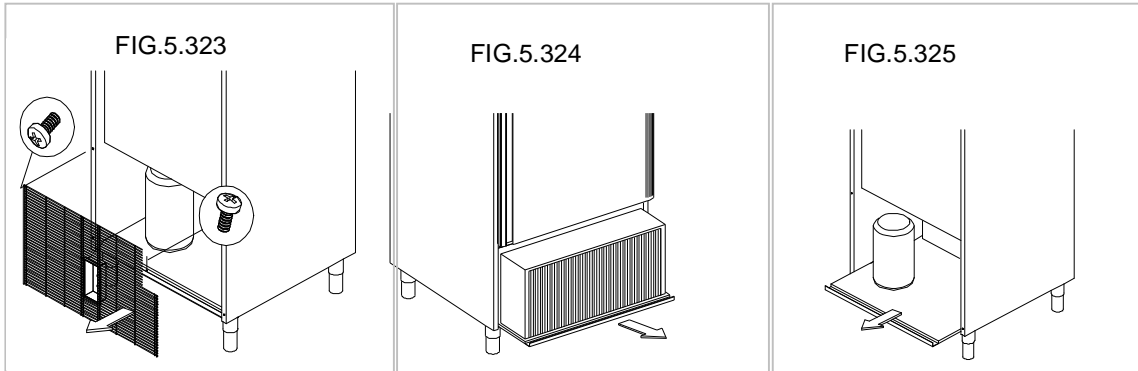
10 – 14 PANS

To take the condenser out, start by repeating the operations described for cleaning the condenser. In addition, follow the directions hereunder:

If it is necessary to gain access to the components in the condenser, this will be possible by partially pulling out the condenser base (from the front or back) that slides on runners. Before doing this, any obstacles to moving parts must be removed (e.g. cable ducting, etc.) and great care must be taken when handling pipes.

The steps to follow are described hereunder:

- Remove the screw that fixes the base and that is situated at the centre of the rear side (see 5.323)



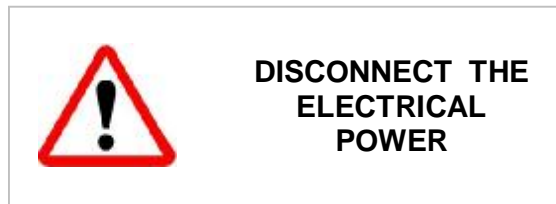
- If maintenance is needed on the condenser fans, pull-out the condenser from the front (see fig. 5.324)
- For all other condenser components, pull the condenser out from the back (see fig. 5.325)

Once maintenance is over make sure that:

- No parts are fixed incorrectly
- No tools or other objects are left in the components compartment
- The cables do not touch parts that could move or reach high temperatures.

5.3.3. Cleaning the evaporator

To access the evaporator proceed as follows :



Loosen the screws that fix the guides and remove them

Unscrew the two screws on the right of the evaporator

Turn the deflector to the left

Only a brush must be used to clean with: do not use jets of liquid or sharp instruments.

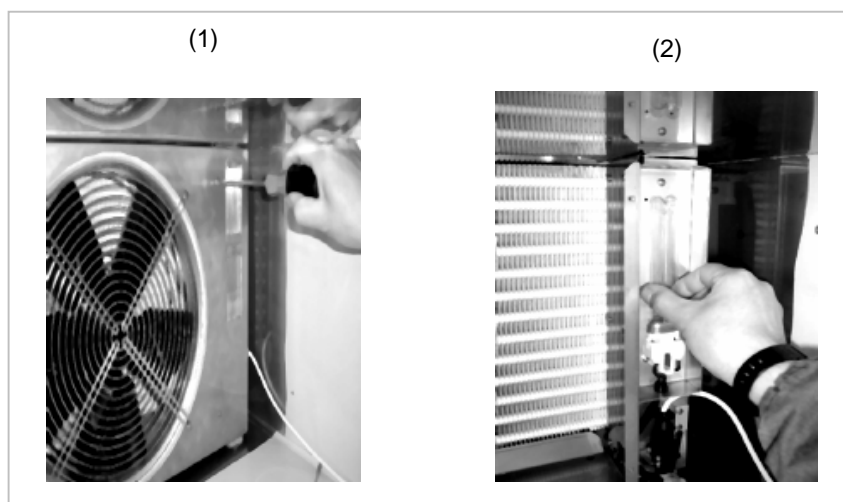
5.3.4. Replace UV lamp



The following operations must be done by an authorised operator only or by a person who is sufficiently instructed in order to operate without any risk on the machine. Moreover the machine must be unplugged.

5 Pans version

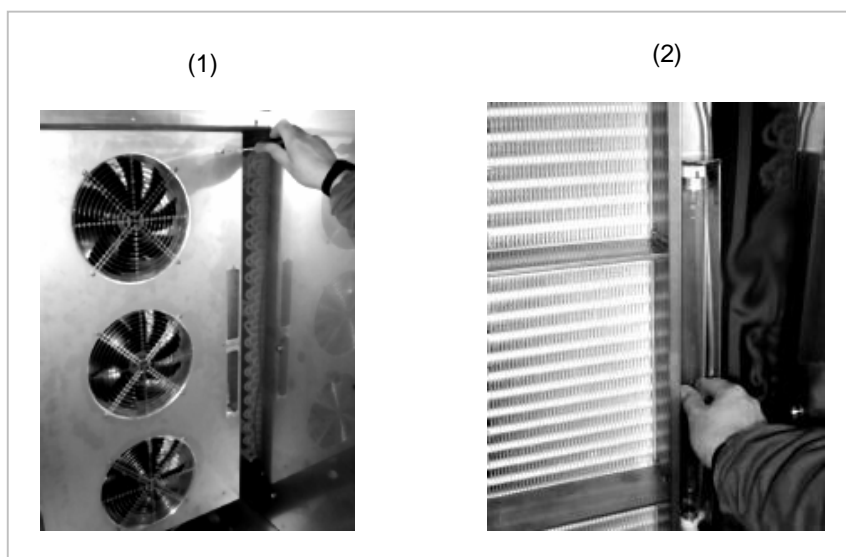
In the 5 trays version, after having removed the flush sliders, you must proceed for removing the screws which fix the deflector evaporator on the right side (1).



Once you have removed the screws, you can open, turning it, the deflector evaporator and switch on the UV lamp. That lamp can be removed being slipped out from the upper side (2). Remake all the operations backwards after having replaced the UV lamp.

10-14 Pans version

In the 10 -14 trays version as in the 5 trays one, after having removed the flush sliders, you must remove the screws on the right side which fix the deflector evaporator (1).










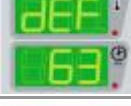
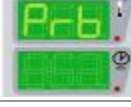
Once you have removed the screws, you can open, turning it, the deflector evaporator and switch the UV lamp. That lamp can be removed turning it (2). Remake all the operations backwards after having removed the U lamp.

6. ENCLOSED DOCUMENTATION

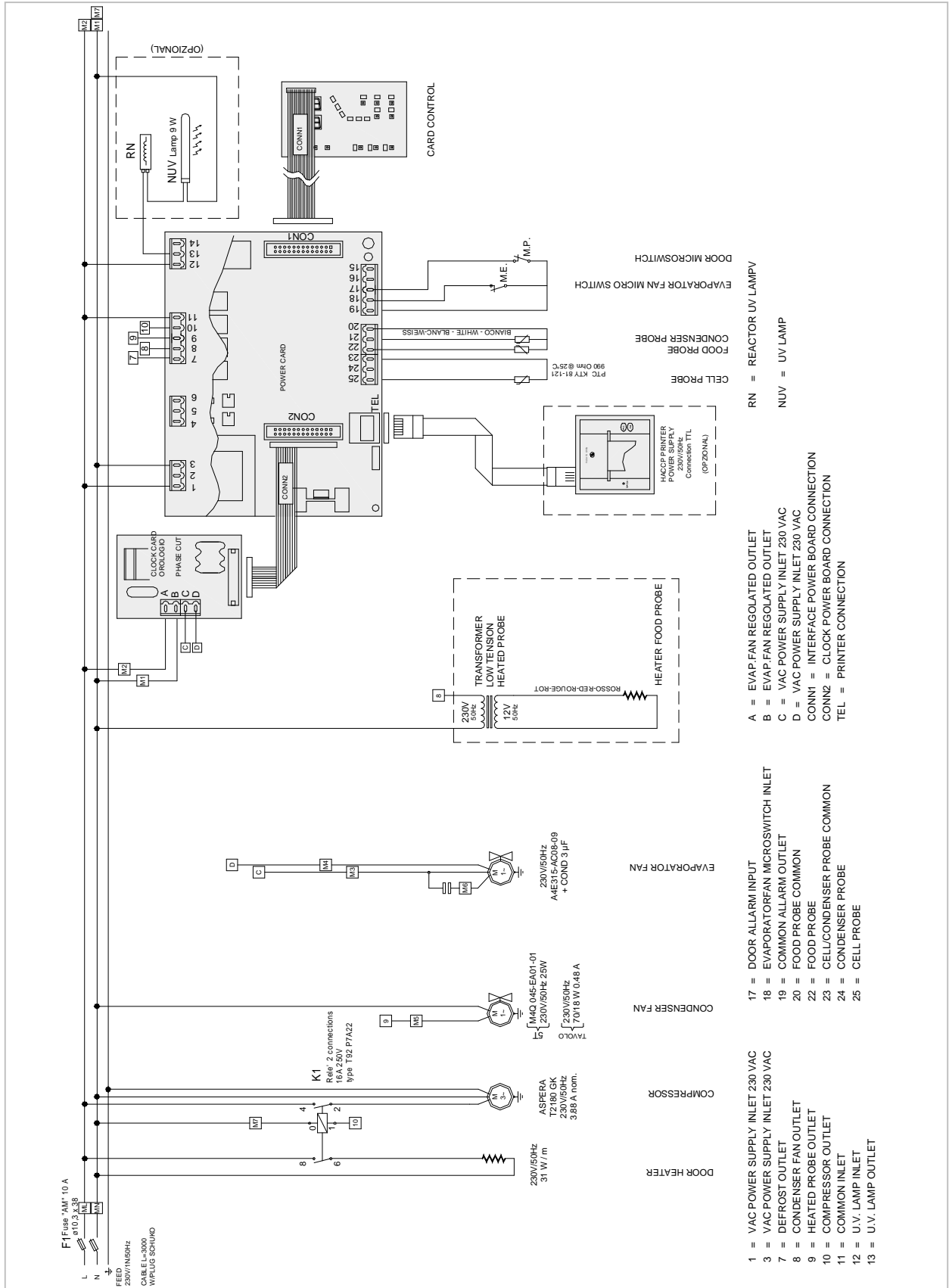
6.1. Messages / Alarms



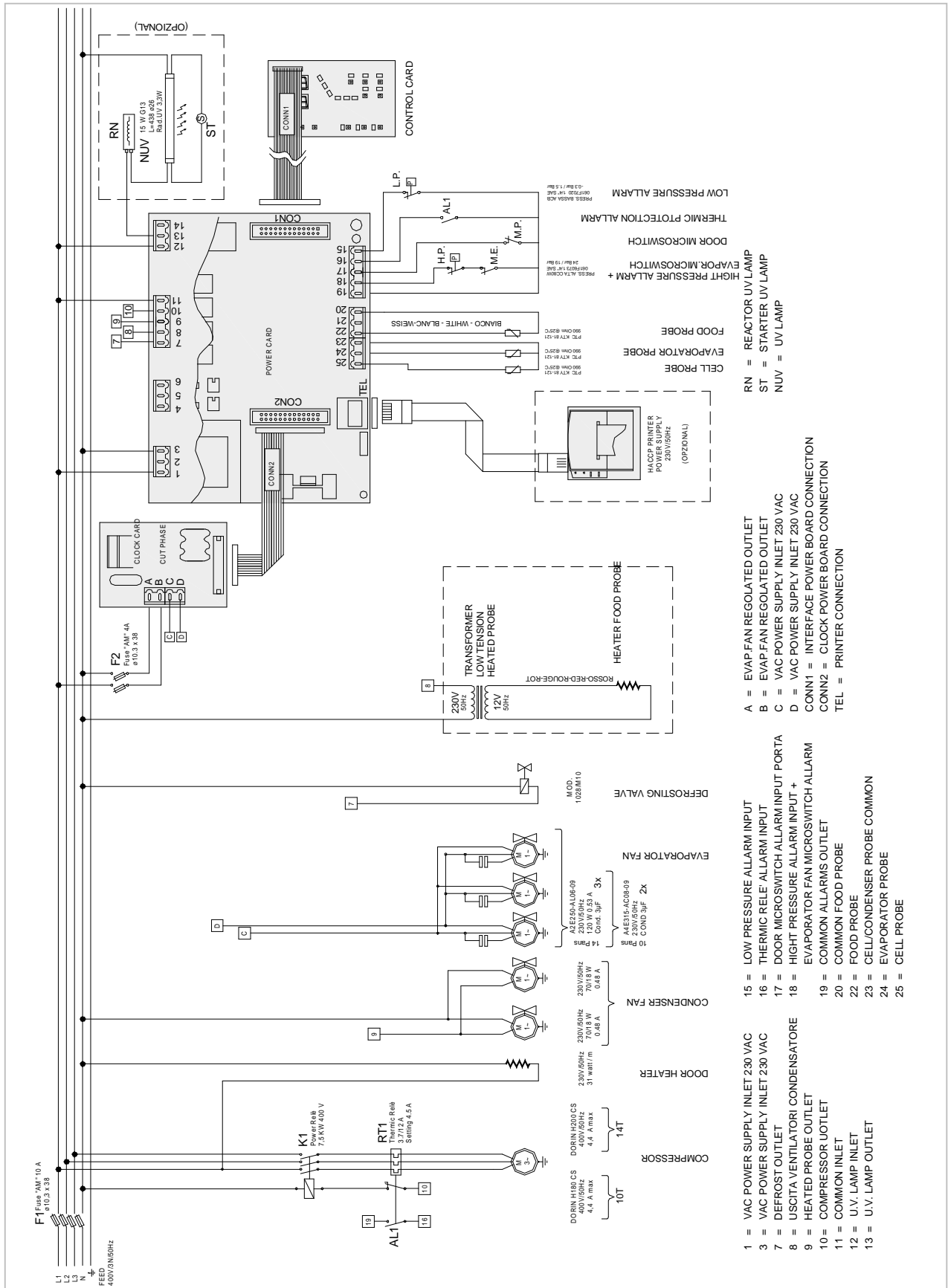
	Display	Alarms	Causes	Solutions	Effects
1		On the display DY1 the message "E0" flashes and the buzzer emits an intermittent sound: cell probe error	The type of probe is not correct - the cell probe is defective - there is a problem in the instrument/cell probe connection - the temperature detected by the cell probe exceeds the limits permitted by the cell probe in use	Check that the probe is a PTC type - check the integrity of the cell probe - check for proper instrument/dell probe connection - check that the temperature near the cell probe does not exceed acceptable limits.	if the alarm occurred during STOP status, it keeps a cycle from starting - if the alarm occurred during the START status (not in conservation) it terminates the cycle immediately - if the alarm occurred during START status with the machine in conservation , the compressor output remains activated in the mode established by the reference parameters
2		on the display DY1 , the message "E1" flashes alternately with a temperature value and the buzzer emits an intermittent sound: evaporator probe error (only 10/14 pans)	the same as in the previous case but concerning the evaporator probe	the same as in the previous case but concerning the evaporator probe	defrosting terminates due to maximum acceptable duration (only 10/14 pans)
3		on the display DY1 , the message "E2" flashes alternately with a temperature value and the buzzer emits an intermittent sound: condenser probe error (only 5 pans)	the same as in the previous case but concerning the condenser probe	the same as in the previous case but concerning the condenser probe	the high condensation temperature alarm is not dealt with (only 5 pans)
4		on the display DY1 , the message "E3" flashes alternately with a temperature value and the buzzer emits an intermittent sound: pin probe error	the same as in the case of cell probe error but concerning the pin probe	the same as in the case of cell probe error but concerning the pin probe	with the machine in STOP status, it prevents the start of any cycle. With the machine in START status it concludes the cycle in progress for the maximum established time.
5		on the display DY1 , the message "AL" flashes alternately with a temperature value and the buzzer emits an intermittent sound: temperature alarm	the temperature detected by the cell probe in conservation mode exceeds HACCP limits	check that the temperature detected by the cell probe is returning to within the established set	no effect
6		on the display DY1 , the message "HP" flashes alternately with a temperature value and the buzzer emits an intermittent sound: high pressure alarm (only 10/14 pans)	- The pressure detected by the maximum pressure switch exceeds the limit value.	Check that: the ambient T° is within limits - the condenser is clean - the condenser fans are working properly - the shutdown solenoid valve opens when the compressor is in operation	Immediate shutdown of operation.
7		on the display DY1 , the message "Ht" flashes alternately with a temperature value and the buzzer emits an intermittent sound: high condensation temperature alarm (only 5 pans)	- The condenser output pressure exceeds the limit value.	Check that: the ambient T° is within limits - the condenser is clean - the condenser fans are operating properly	Immediate shutdown of operation.
8		on the display DY1 , the message "LP" flashes alternately with a temperature value and the buzzer emits an intermittent sound: low pressure alarm (only 10/14 pans)	- The pressure detected by the minimum pressure switch is below the limit value.	Check that: the ambient T° is within limits - the circuit has not suffered gas leakage - the shutdown solenoid valve opens when the compressor is in operation	Immediate shutdown of operation.
9		on the display DY1 , the message "HA" flashes alternately with a temperature value and the buzzer emits an intermittent sound: maximum electrical input exceeded alarm (only 10/14 pans)	- The compressor's electrical input has exceeded the maximum established limit: manually reset magnetothermal switch cuts in	Check that: the ambient T° is within limits - the condenser is clean - the condenser fans are working properly - the shutdown solenoid valve opens when the compressor is in operation	Immediate shutdown of operation.
10		on the display DY1 , the message "dFI" flashes alternately with a temperature value and the buzzer emits an intermittent sound	- the evaporator deflector is open or the microswitch is not working properly.	- Check that the evaporator deflector is alongside.	Immediate shutdown of operation.

	Display	Alarms	Causes	Solutions	Effects
11		on the display DY1 , the message "o.." flashes alternately with a temperature value and the buzzer emits an intermittent sound (pin probe test concluded unsuccessfully)	the test to check proper insertion of pin probe was not successful	press key T 6 for manual confirmation of proper insertion of pin probe	The cycle / phase of chilling / freezing by temperature concludes at the end of the maximum time established for the cycle
18		on the display DY1 the message ']-]' flashes alternately with a temperature value and the buzzer emits an intermittent sound (door microswitch input active)	the door is open - the door magnet and the door microswitch with magnetic switch on the control panel are misaligned	check that the door is closed - check the alignment of the microswitch and the magnet on the door - check that the cable of the door microswitch is properly connected to the card	immediate shutdown of evaporator fan
12		the display DY1 shows the la temperature, the viewer DY2 flashes with the message "OUT" and the buzzer emits an intermittent sound for a few seconds (temperature-regulated chilling / freezing cycle exceeds maximum time)	at the end of the established time for the cycle, the temperature detected by the pin probe has not reached the established set point for the end of the cycle.	wait for the end of the temperature-regulated chilling / freezing cycle	the involved outputs remain active
13		on the display DY1 the message "End" flashes, the viewer DY2 shows "---" and the buzzer emits an intermittent sound for a few seconds (temperature-regulated chilling/freezing cycle completed successfully)	a temperature-regulated chilling/freezing cycle has terminated successfully, and the instrument has started the conservation phase	press key T8 to display the cell temperature; press key T9 to display the cycle time; press key T10 to end the cycle.	the involved outputs remain active
14		the display DY1 shows the message "End", the viewer DY2 shows the message "Out" and the buzzer emits an intermittent sound for a few seconds (temperature-regulated chilling / freezing cycle exceeds maximum time)	a temperature-regulated chilling/freezing cycle has terminated with a time overrun, and the instrument has started the conservation phase	press key T8 to display the cell temperature; press key T9 to display the cycle time; press key T10 to end the cycle.	the involved outputs remain active
17		the display DY1 shows the temperature, the viewer DY2 flashes with the message "End" and the buzzer emits an intermittent sound for a few seconds (time-regulated chilling / freezing cycle concluded successfully)	a time-regulated chilling/freezing cycle has terminated successfully, and the instrument has started the conservation phase	press key T9 to display the set cycle time; press key T10 to end the cycle.	the involved outputs remain active
15		the display DY1 shows the message 'StE' (sterilisation cycle in progress)	A cell sterilisation cycle with U.V. lamp is in progress.	press key T11 to end the cycle manually.	The UV lamp power supply output is active for the established time
16		the display DY1 shows the message 'dEF' (defrost cycle in progress)	A defrost cycle is in progress.	Only on the 5-pan model is it possible to interrupt it by means of key T11 .	the involved outputs remain active
17		the display DY1 shows the message 'Prb' (shaft probe heating cycle)	The shaft probe heating cycle is in progress.		Power is supplied for probe heating for the established time

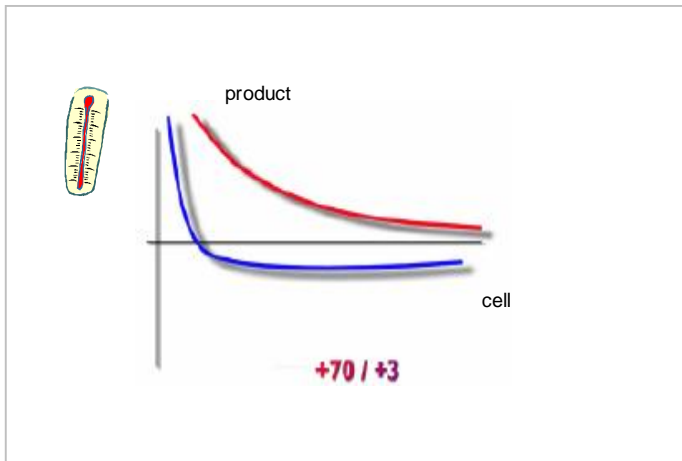
6.2. Wiring diagram 5 Pans



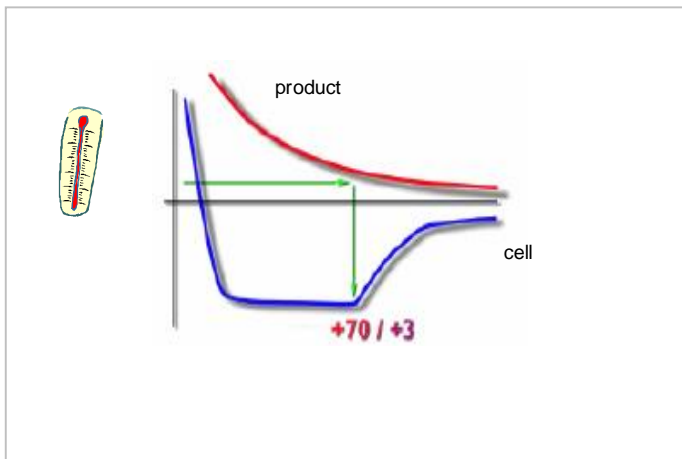
6.3. Wiring diagram 10 -14 Pans



6.4. Hints for use

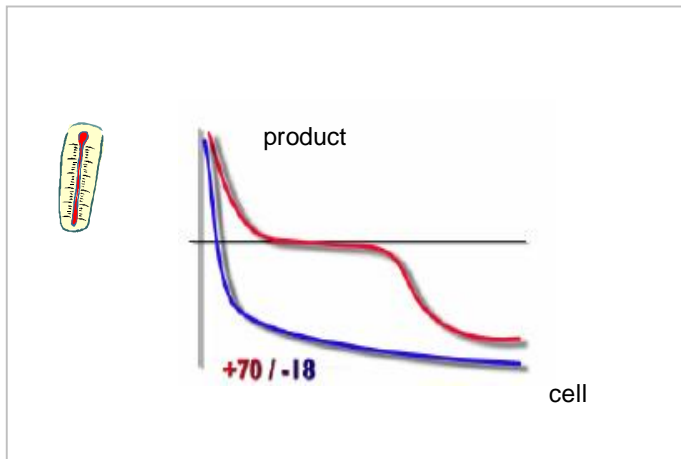
Positive normal chilling

With this operating modality the chiller keeps the temperature of the refrigerating chamber close to zero during the entire chilling process to ensure a gradual drop in the temperature of the product to +3°C. In this way, ice crystals do not form on the surface of the product. This chilling modality should be used preferably for products that are not packed and whose physical/organoleptic characteristics could be damaged by the formation of superficial ice (e.g. fish). The minimum temperature of the refrigerating chamber can be modified by adjusting the parameters on the electronic control unit.

Intensive positive chilling

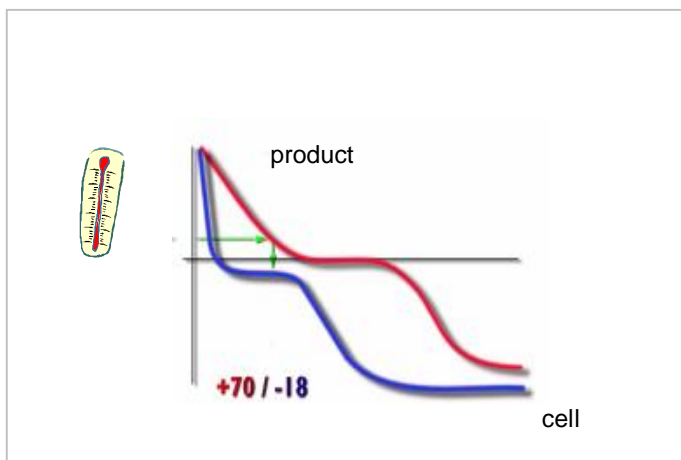
With this operating mode, at the beginning the chiller maintains the temperature of the refrigerating chamber at a negative value, much lower than the value set for normal chilling, in order to accelerate the drop in temperature of the product. When the product reaches the temperature fixed by the parameters for the exchange of refrigerator temperature (temperature at which ice could form on the product) the internal temperature of the refrigerating chamber rises to the temperature set for normal positive chilling. This type of chilling should be preferred for packed products or products whose physical/organoleptic characteristics would not be damaged by superficial ice. The maximum and minimum temperatures of the refrigerating chamber and the exchange temperature of the product can be modified by adjusting the electronic unit parameters that are flexible enough to meet any requirements of the user.

Intensive deep freezing



With this chilling modality the chiller maintains the temperature value below -18°C which is the end temperature of deep freezing. For deep freezing to be successful and fast, food should be in small pieces, especially if it has a high fat content. The largest pieces should be placed in central pans. If it takes longer than standard time to deep freeze and the sizes cannot be reduced, decrease the quantity and precool the chiller chamber by starting an empty deep freezing cycle before deep freezing the product.

Normal deep freezing



In this case, the deep-freezing cycle is divided in two phases that differ depending on the chamber set point used. The first phase consists in a cycle around the chamber set point defined for normal chilling. The second phase starts when the core-probe reaches a pre-defined temperature exchange value (temperature-regulated cycle) or when the time elapsed is equal to a pre-set percentage of the total time. In the second phase, the chamber reference set point will be the same as the intensive deep-freezing one. During the first phase of the cycle, the intensive button led will stay off but it will flash in the second phase. This type of deep-freezing allows a more even freezing of the product, avoiding the external formation of ice when the core temperature is still high.

6.5. Connecting the condensing unit to the water supply

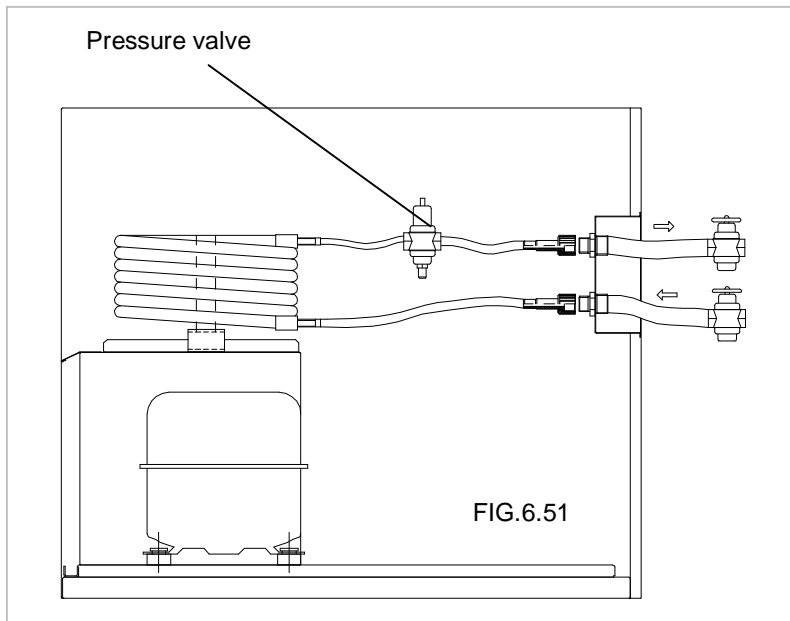
The chiller cabinets with water condensation have been designed to use normal tap water (Max. 3 atm).

The machine must be connected to the water supply before turning it on. In fact, if the condensing circuit is not cooled, before long the maximum pressure switch turns the machine off. The machine must also be checked for leaks that could interfere with electrical parts and cause short-circuits.

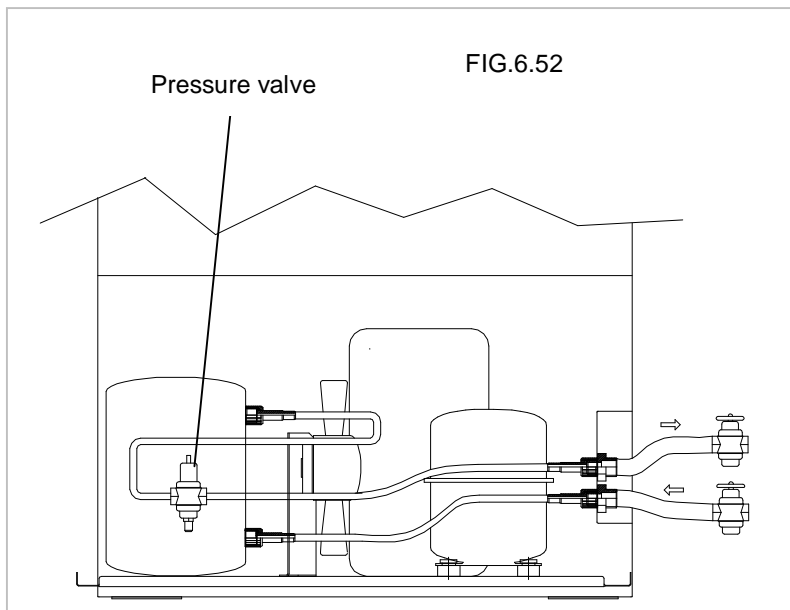
It is preferable for both the water drain and supply pipes to be fitted with cocks to stop the water supply to the machine during maintenance.

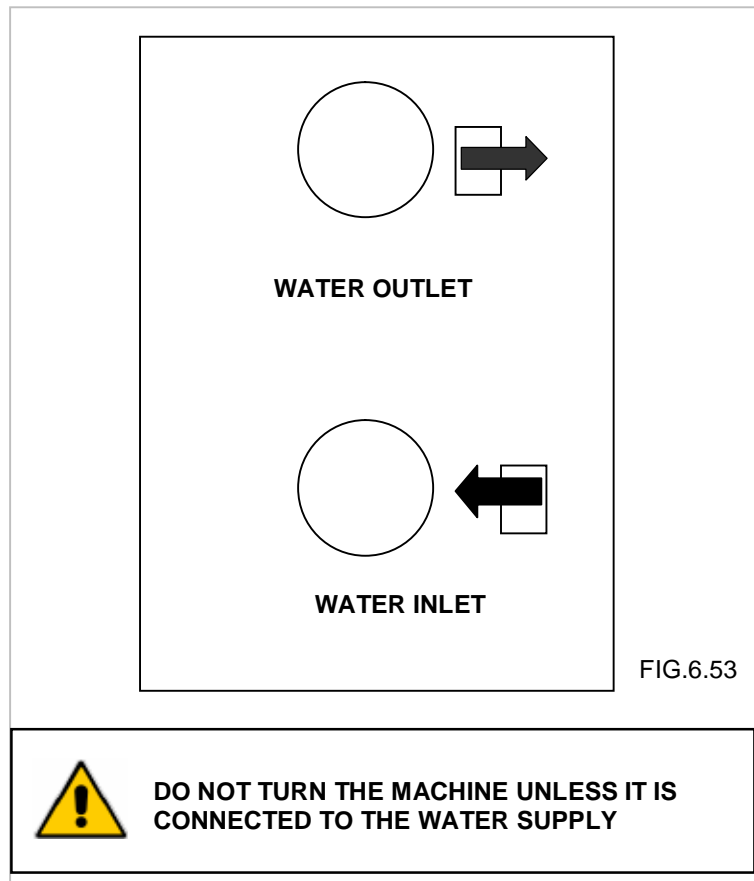
Both water inlet and drain pipe connections are 3/4". To know which to use, simply follow the indications in fig. 6.51-6.52 (the same indications should be found near the water supply connections).

Blast chiller counters



10 – 14 Pans





If the water has a high mineral salt content (i.e. if it is too hard), to ensure long and efficient life to the exchanger we suggest you install a water softener at the water inlet(see fig. 6.53).

The pressure valve (see fig. 6.51 - 6.52) has been calibrated before leaving the factory. Notwithstanding this, after having connected the machine to the water supply and turned on the any cocks installed, check for water leaks from the drain when the machine is at a standstill.

In case of a leak, adjust the pressure valve until the leak stops.

6.6. Remote condensing unit

When installing a remote condensing unit, the same precautions must be taken as for the installation of the machine with an integrated condensing unit. In particular, it is important to respect the electric installation rules, the fire-prevention rules and to keep in mind that under certain circumstances coolant gas may be released into the environment (it must be possible to air the room).

The versions with a remote condensing unit are defrosted by forced air instead of by hot gas.

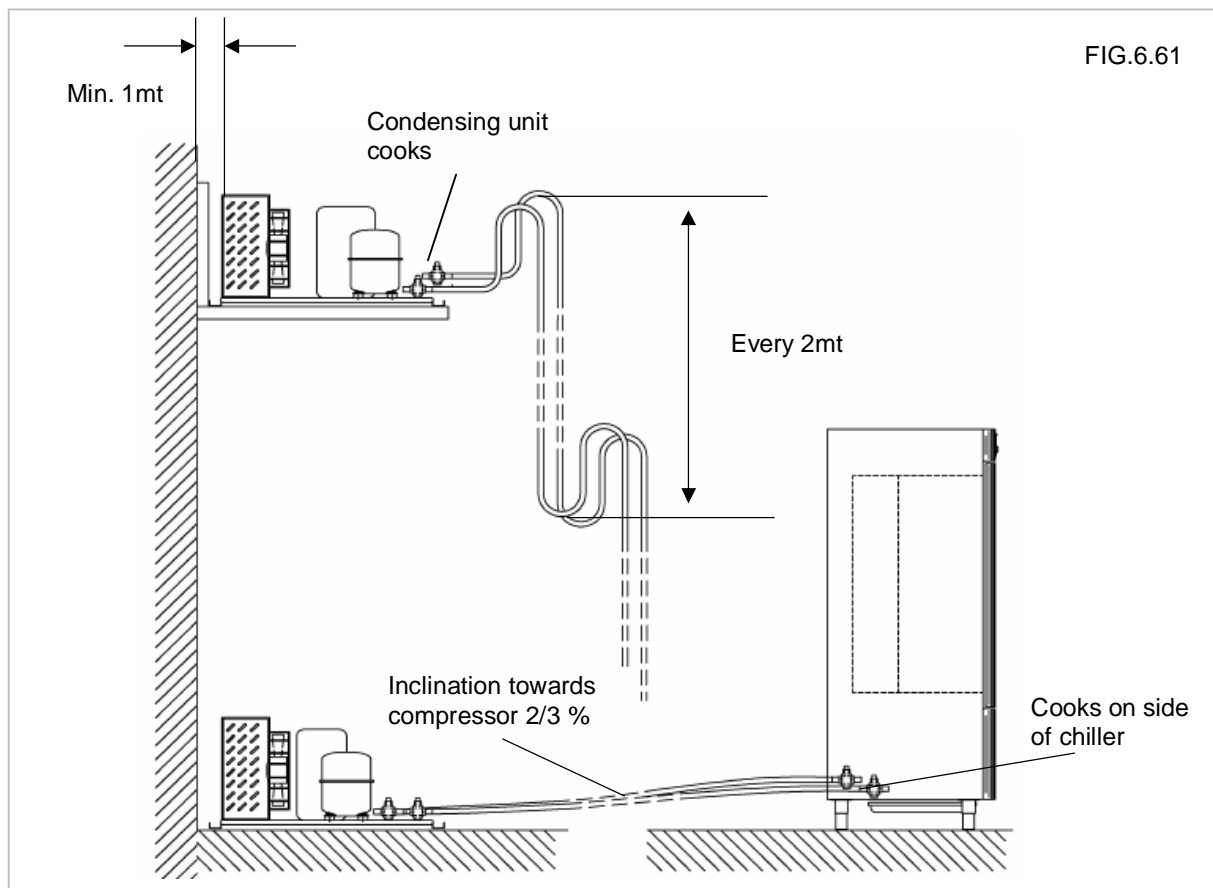
Performance is guaranteed for remote unit installations up to a distance of 10 m and with an insulated suction pipeline (insulation must be at least 13 mm thick). We suggest the following pipe diameters:

	Pipe diameter (mm)
Delivery line	10
Suction line	16

Both the condensing unit and the coolant circuit are under pressure using nitrogen therefore the seal of the circuits can be checked when turning on the cocks.

After having connected the delivery and suction pipes and having created a vacuum and then loaded the pipes, make sure that the welded parts are hermetically sealed and that there are no leaks.

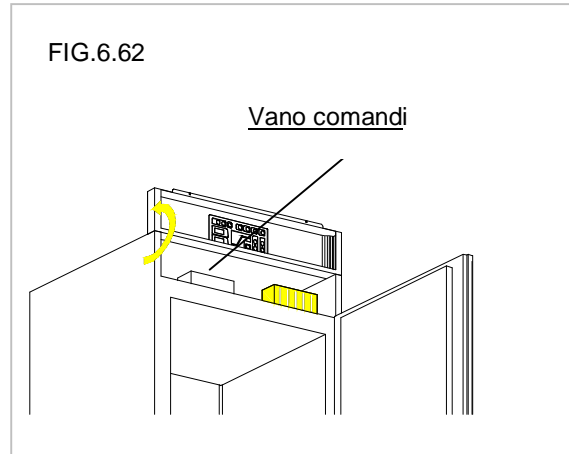
The gas load must be checked through the gas conduit indicator located on the condensing unit.



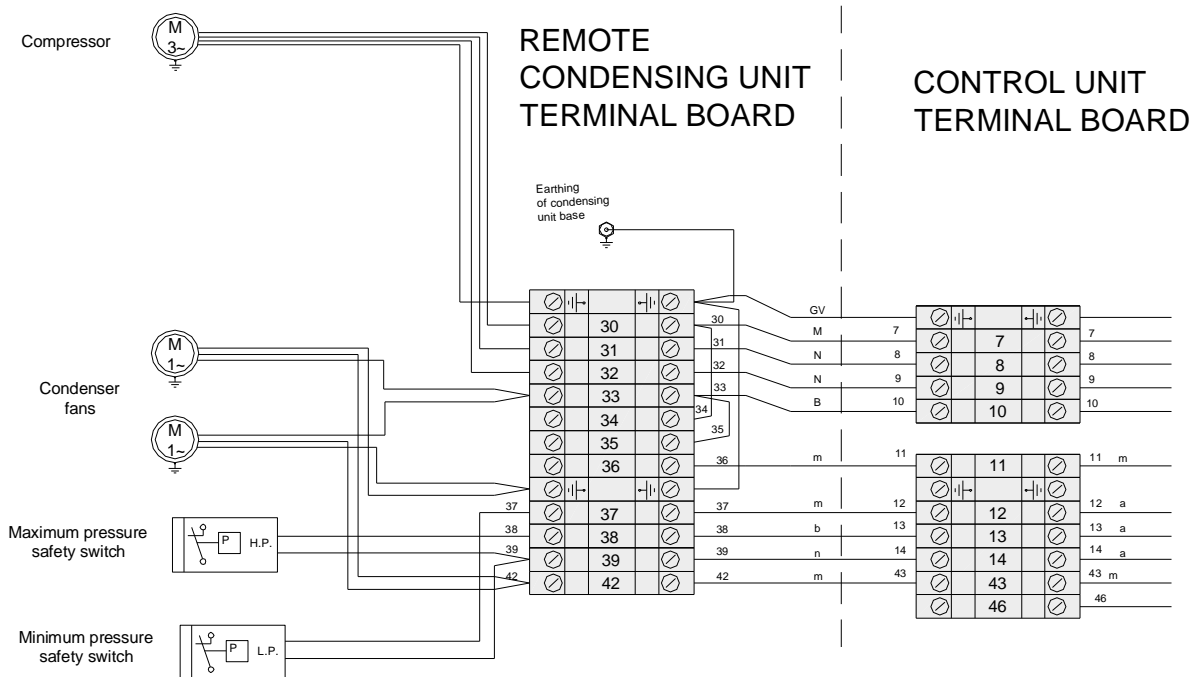
For installations at the same height or at different heights, kindly follow the indications at fig. 6.61. In particular, if the remote unit is installed higher than the chiller, a siphon must be created at every departure/arrival or ascent. If the remote unit is installed at a lower level than the chiller, siphons are unnecessary.

The manufacturer guarantees an **IP21** rated protection. If greater protections are required, the installer must consider the use of additional guards that do not limit the exchanging capacity of the condenser.

The chiller and the remote condensing unit must be electrically connected using cables with a cross-section of at least 1.5mm. The terminal board located in the controls area on the chiller (see fig. 6.62 – for access, consult instructions at paragraph 5.3.1) must be connected to the terminal board inside the wiring box on the remote unit.



CONNECTING WIRING DIAGRAM





CE

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