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# SERVICE MANUAL

## BLAST CHILLER LW

# Introduction / Index



Description

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# Electronic control

Cruise version



CRUISE version

air-o-chill

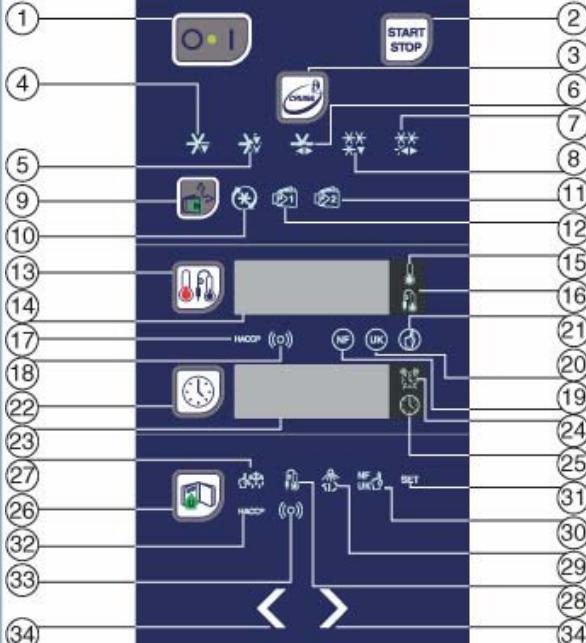


# Electronic main functions

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air-o-chill



DESCRIPTIONS			
1	ON/OFF switch	18	Service alarms" LED-
2	Start/stop cycle" key	19	NF standard LED
3	Cruise chilling" key- automatic cycle	20	UK standards" LED
4	SOFT chilling cycle" LED-	21	CUSTOM standards" LED
5	HARD chilling cycle" LED	22	Time" key
6	POSITIVE holding cycle" LED	23	Time display
7	NEGATIVE chilling cycle" LED	24	Remaining time estimate" LED
8	NEGATIVE holding cycle" LED-	25	Timed cycle LED
9	Programme selection turbo cooling, P1 or P2" key	26	Utility" key
10	Turbo cooling" LED-	27	manual defrost selection
11	Programme 1" LED	28	Shaft temperature selection
12	Programme 2" LED -	29	Germicide cycle selection
13	key Temperature	30	Standards" selection
14	displayTemperature -	31	User parameters" selection
15	Cell probe temperature " LED	32	HACCP alarms" selection
16	Shaft probe temperature" LED-	33	ALARM SERVICE" selection
17	HACCP alarm" LED-	34	Cycle selection/value" keys

# User interface analysys

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## ON/OFF SWITCH BUTTON

The electronic control is turned ON or OFF by pressing this button. All led will be activated for a few seconds to complete the check phase



## START/STOP CYCLE

The selected cycle starts immediately when the START/STOP button is pressed.

The working cycle is stopped if this button is kept pressed for at least 3 seconds. Each loads will be disabled and the timing completely reset. But it is possible to re-start the active working cycle simply by pressing again the START/STOP button.



If during the execution of any cycle the door will be opened for few seconds the led button become active and starts to flash.



# Starting phase

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At the beginning of each working cycle the unit starts the preparation phase. On the temperature display will appear the message "**PREP**".

This condition is due to preserve the performance of the unit during any chilling process.

If the evaporator temperature is less than the value given by the parameters **dSt** ( $7^{\circ}\text{C}$ ) or **IdSt** ( $7^{\circ}\text{C}$ ) the "preparation" phase (**PREP**) will start, otherwise the unit starts to work normally.

Each working cycle will be identified automatically by the electronic control with a "batch number" that is a progressive numbers (1,2,3...) given day by day.

**dSt** = defrost Stop temperature

**IdSt** = defrost Stop temperature at the begining of the cycle



# Impulse compressor START-UP

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Temperature ↑

If the unit has been inactive more than **24h (coFt)**, the compressor starts with a series of impulses in order to guarantee a maximum efficiency of the working process.

This is possible only if the compressor start-up is activated by "**CIS**".

**CtOn**

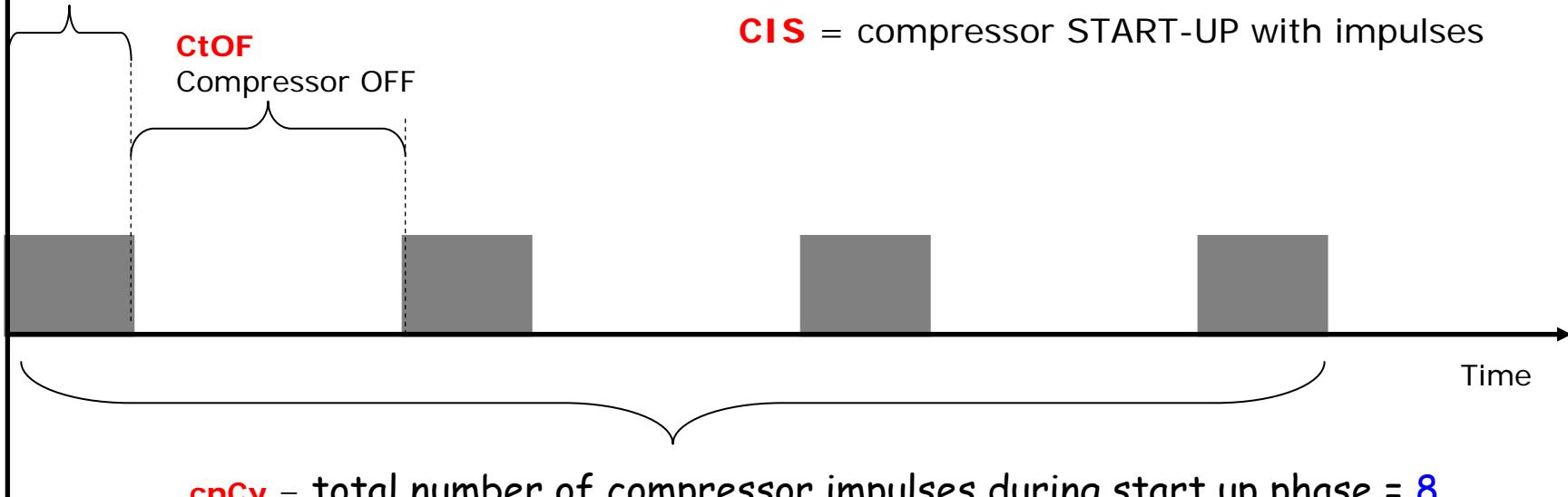
Compressor ON

**CtOF**

Compressor OFF

**coFt** = maximal time for compressor OFF

**CIS** = compressor START-UP with impulses

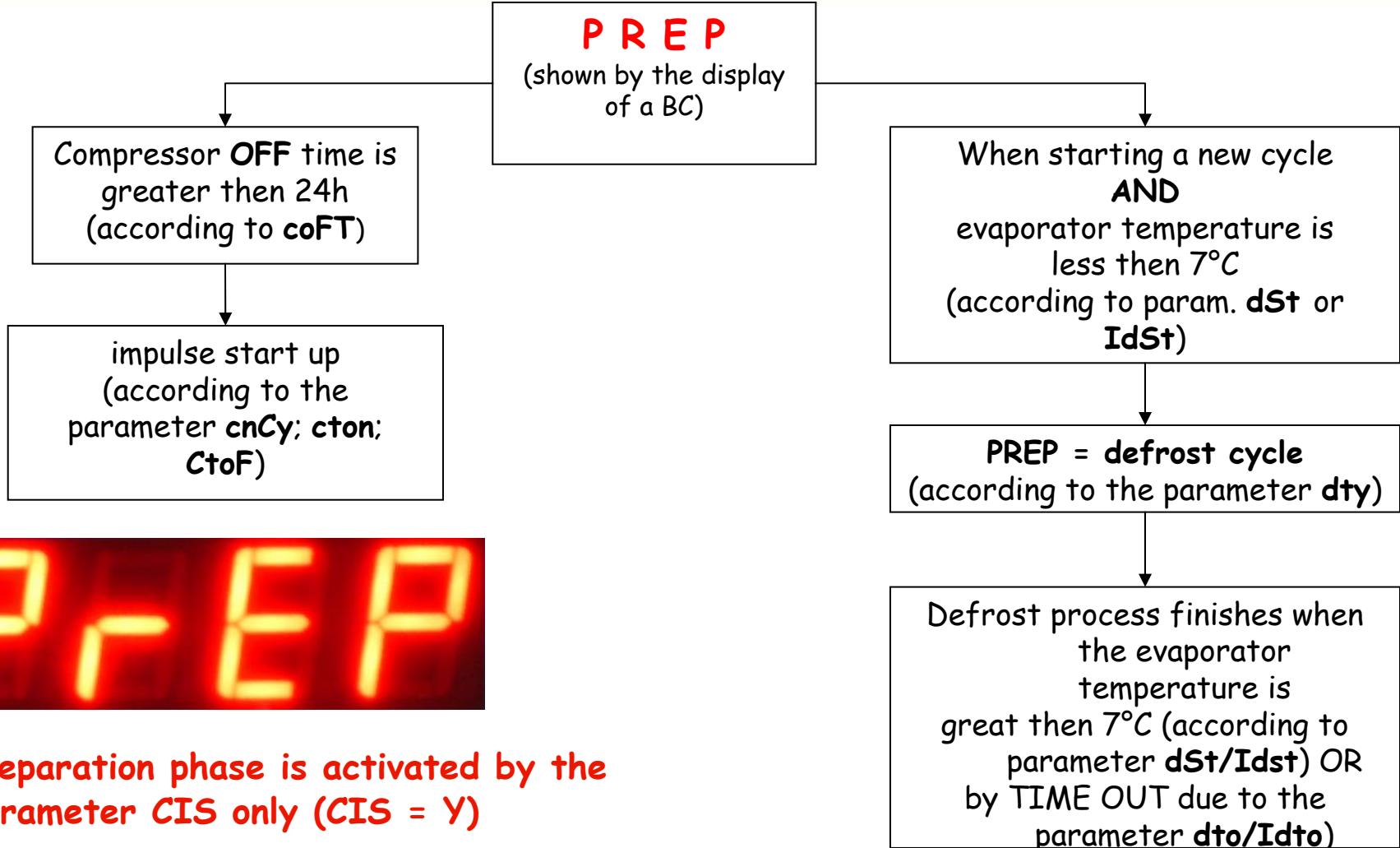


**cnCy** = total number of compressor impulses during start up phase = 8

# Impulse compressor START-UP

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# User interface analysys

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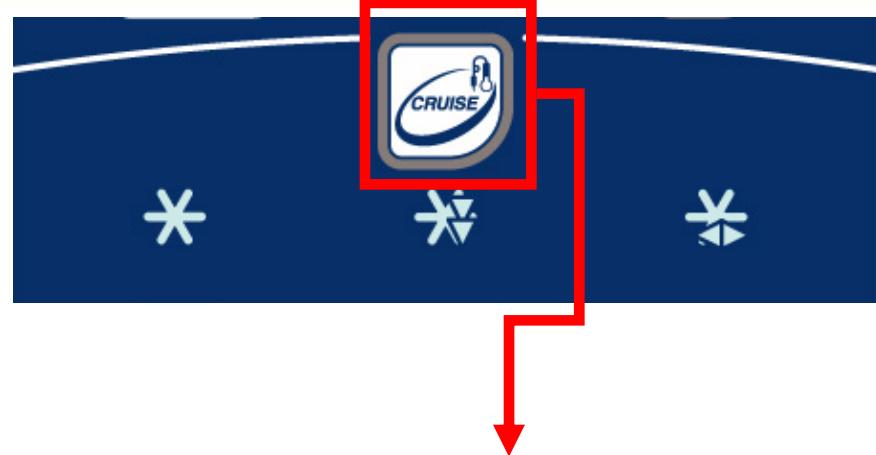
POSITIVE SOFT CHILLING



POSITIVE HARD CHILLING



POSITIVE PRESERVATION CYCLE



POSITIVE "CRUISE" CYCLE  
(used with food probe only)



IT IS POSSIBLE TO CHOOSE ONE OF THESE DIFFERENT WORKING CYCLE USING THE LEFT/RIGHT BUTTONS.

# What does SOFT and HARD chilling do

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Positive blast chilling brings the food within a specific interval time to 3°C or 10°C, according with the guidelines.



## SOFT CHILLING

Recommended for foods such as delicate vegetables or pieces of food which are not very large or thick (i.e. pizza). The cell temperature reach -2°C (according to the parameter SCA)



## HARD CHILLING

Recommended for larger sized pieces of food, underground grown vegetables and meat. The cell temperature reach -20°C (according to the parameter SCH).

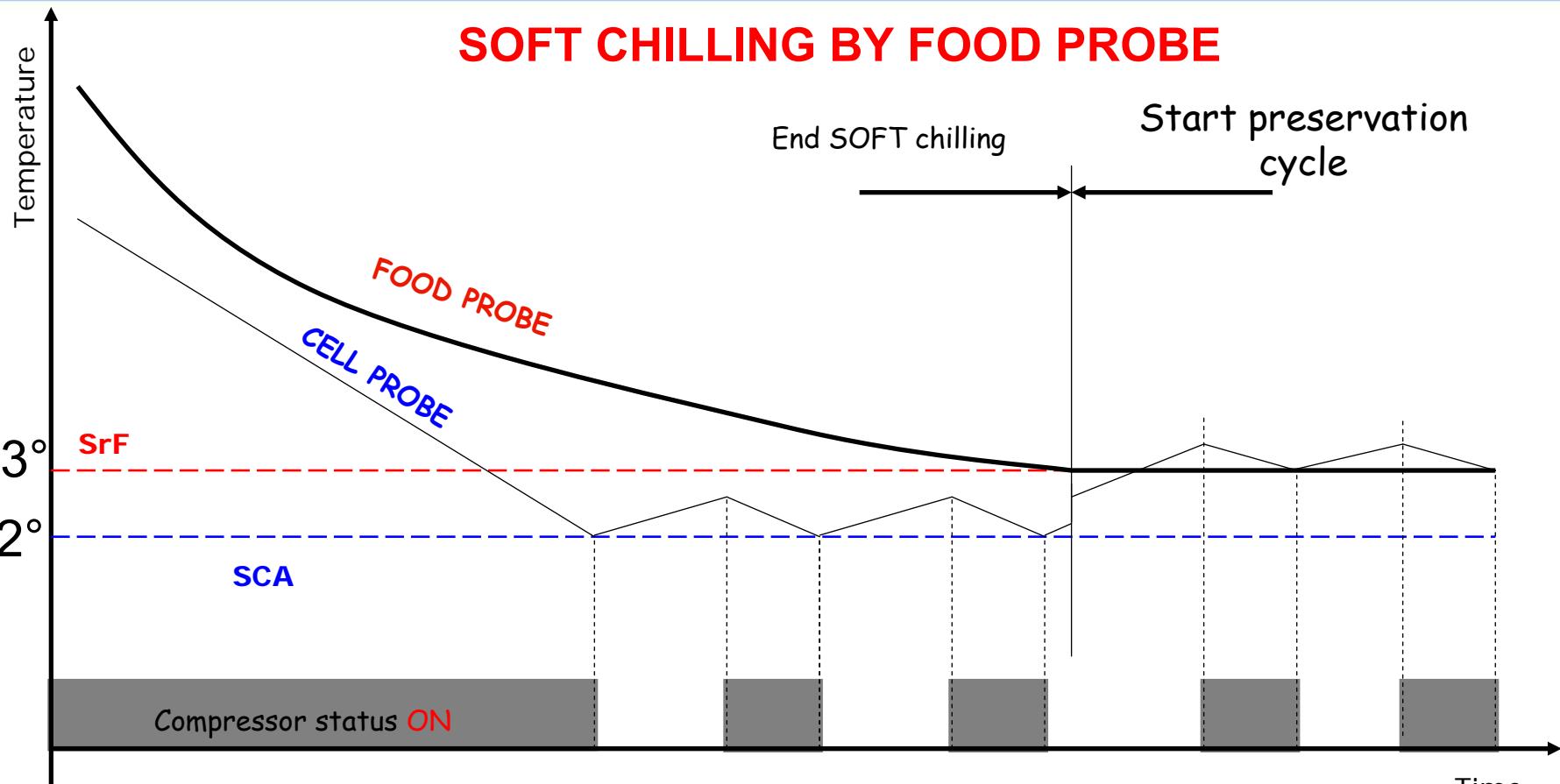
Both cycles can operate by food probe or by time. In first case the process finish when the chilling time is less than the interval time fixed according to the European guidelines (UK or NF).

# SOFT/HARD chilling cycle



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SCA = cell temperature Set-point for SOFT chilling (-2°C)

SrF = food preservation temperature Set-point for SOFT chilling (3°C)

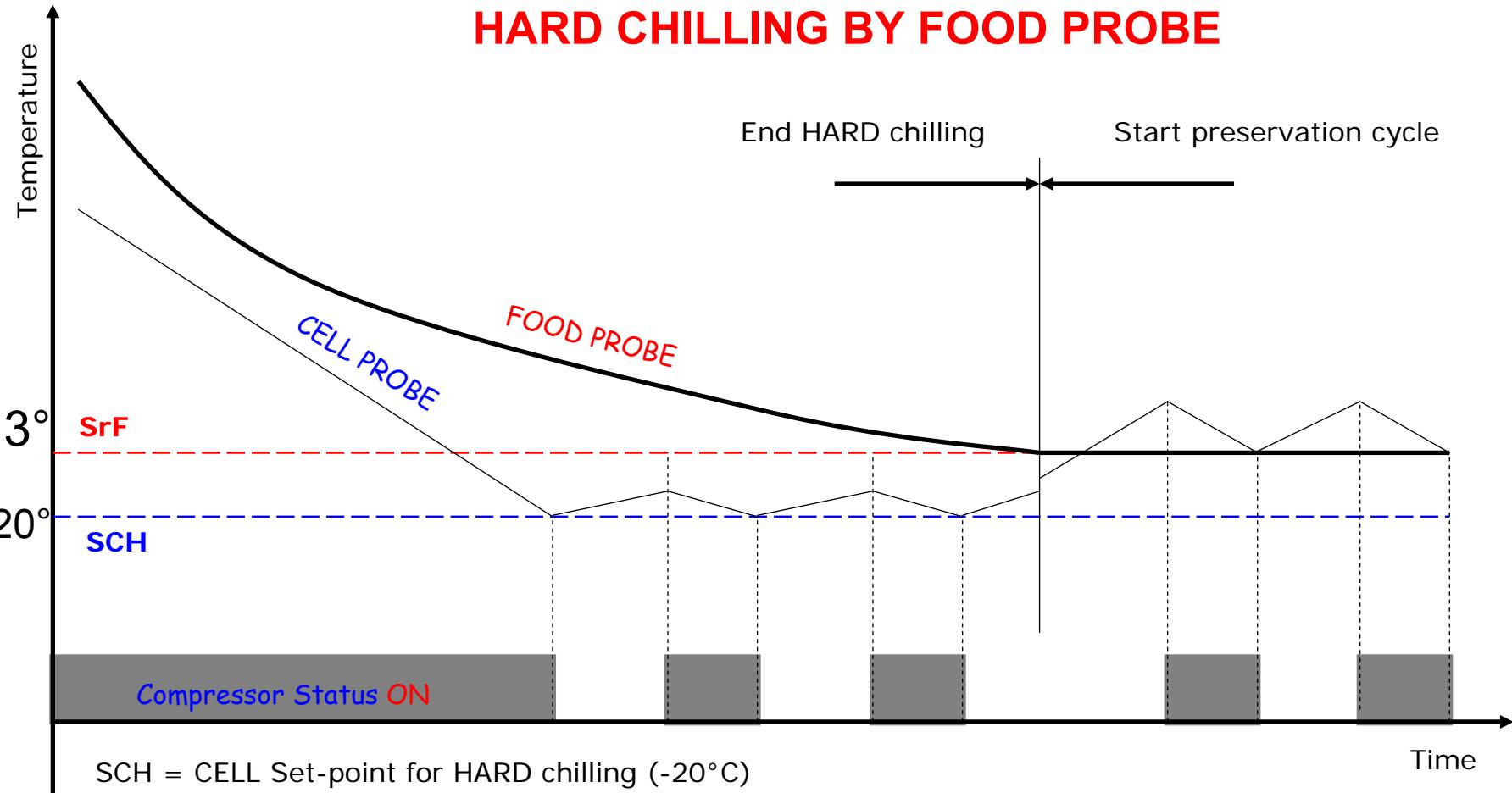
# SOFT/HARD chilling cycle



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## HARD CHILLING BY FOOD PROBE



# Cruise chilling cycle



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The Cruise chilling cycle works in according to a specific algorithm that respects the European guidelines (**UK** and **NF**).

During this process the BCF chill the food following the basics of **SOFT** and **HARD** chilling (i.e. temperature and time) and it works normally if the food probe is used only.



The units works with the cell temperature included between the value **-2°C (SCA)** and **-20°C (SCH)** and the algorithm can controls this temperature using three different steps in order to find the best setting temperature for different types of the product.

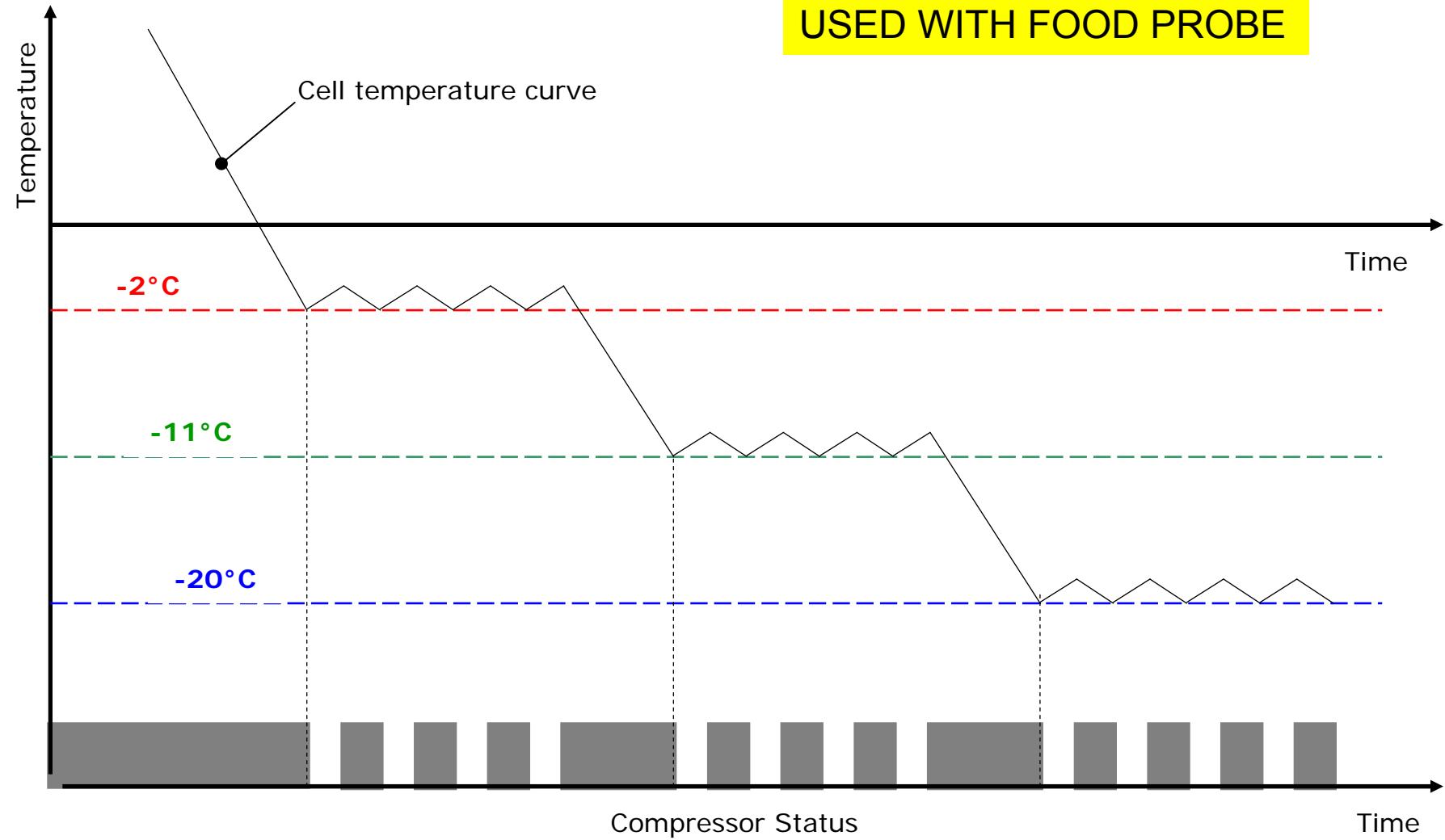


# Cruise chilling cycle



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# Cruise chilling cycle



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The chilling process starts when the food probe reach the value 70°C; the cell temperature decrease to -2°C (SOFT Cycle), so the compressor works using its normal duty cycle to keep the cell temperature at this value.

If  $T_{fp} < T_n$   **GOOD**

If  $T_{fp} > T_n$   **BAD**

The food probe temperature has a trend shown on the diagram: its curve is less than the chilling curve and the logic controls checks each minute if this temperature reach the first point A.

If the food probe temperature reach the value  $T_n$  than the algorithm decide that its time to start the compressor in order to decrease the cell temperature till the value -11°C. The food temperature change its trend staying under the chilling curve.

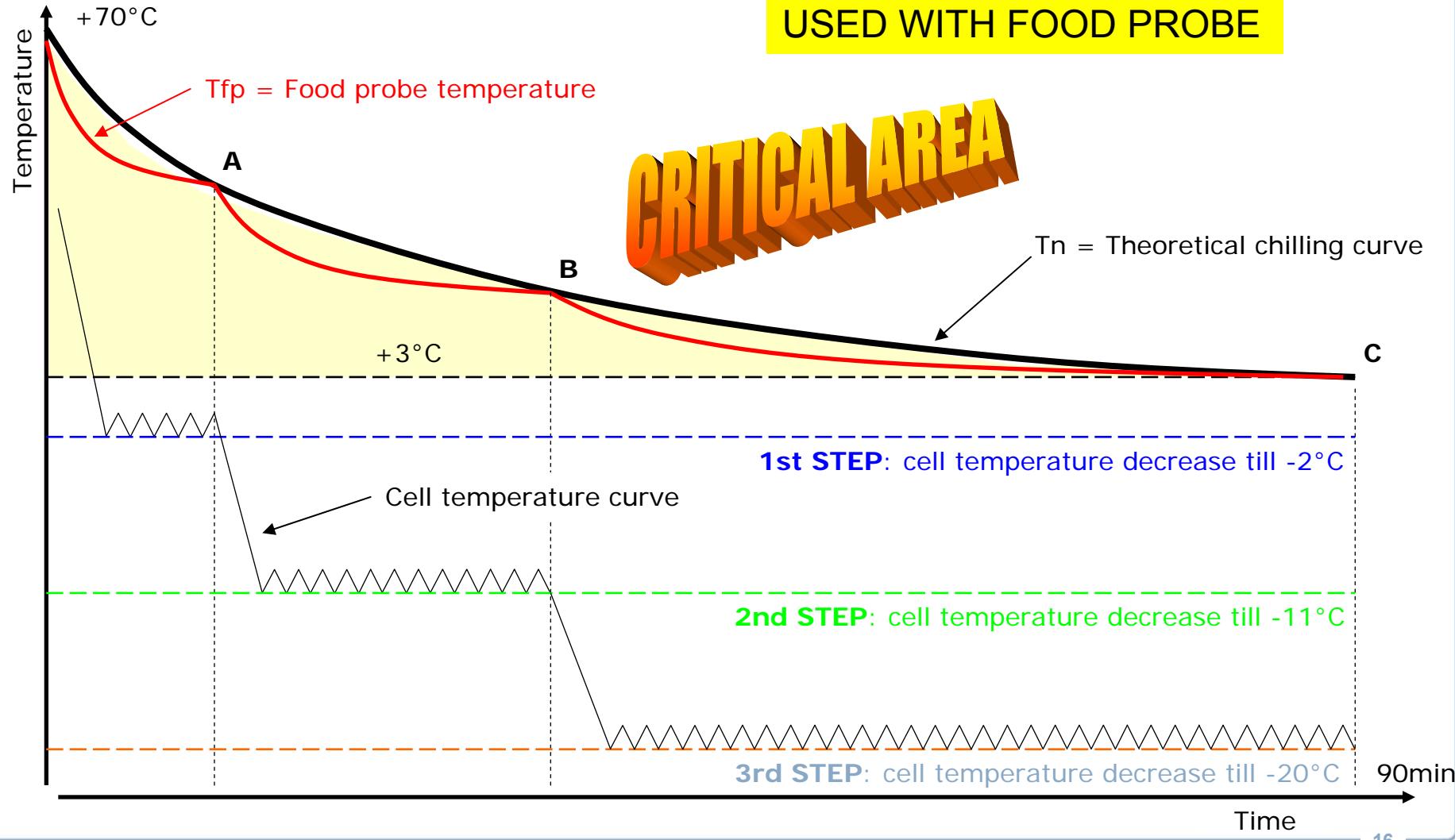
If necessary the electronic controls can decide to change further the cell temperature at **-20°C** to reach the food temperature **+3°C** in **90 mins**.

# Cruise chilling cycle



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# User interface analysys

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PUSH THIS BUTTON IN ORDER TO SWITCH FUNCTION TYPE:  
**TURBO COOLING CYCLE OR PROGRAMMING MODE**



**TURBO COOLING CYCLE**



**PROGRAMMING MODE: PROGRAM P1 AND P2**



IT IS POSSIBLE TO CHOOSE ONE OF THESE DIFFERENT WORKING CYCLE USING THE LEFT/RIGHT BUTTONS.

# Turbo cooling cycle



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How can it be possible to activate the Turbo cooling cycle ?

Press the MENU' button



Using the arrows buttons it is possible to select the turbo cooling function

Push the START/STOP button



in order to activate the selected cycle

Functional description

During this cycle the unit chill continuously and evaporator motor fan runs all the time.



It is possible to set the temperature using the temperature button

NOTE:

- The unit works without using the food probe
- European guidelines and HACCP alarms are not enabled

# Turbo cooling cycle



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## Functional description

- Temperature display shows the temperature of the chamber as default
- Set point temperature could be modified within the range given by the parameters **SnLP** (-20°C) and **SnHP** (+3°). The Set point is regulated by the factory to the value given by the parameter **SnLP**
- During the execution of the cycle the chamber's temperature could be modified
- **Defrost process** is automatically activated after a period given by the value of the parameter **Sdin** (2 hours).

It means that Turbo cooling cycle is active for a period (2 hours) and after that the defrost cycle starts to work properly. Then the working cycle returns to be active again.

- Turbo cooling cycle is independent from the guideline selected (NF or UK)

# Turbo cooling cycle



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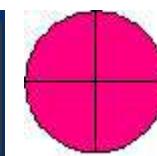
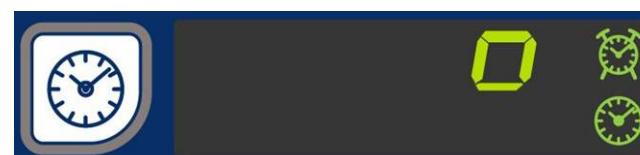
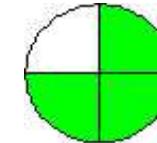
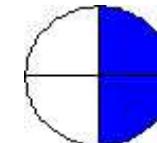
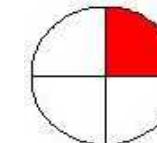
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## Functional description

During the TURBO COOLING a time estimation about next defrost starts is given continuously on the display.

- The display shows 4 circles  
1st quarter
- The display shows 3 circles  
2nd quarter
- The display shows 2 circles  
3rd quarter
- The display shows 1 circle  
4th quarter

Total time = 2 hours



# Turbo cooling cycle



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Temperature

**SnHP** = higher cell temperature Set point during Turbo cooling ( $-20^{\circ}\text{C}$ )

**SnLP** = lower cell temperature Set point during Turbo cooling ( $3^{\circ}\text{C}$ )

**SDIN** = defrost interval time for Turbo cooling only

3  
Set point value  
-20

Compressor status

Time

SDIN

DEFROST by hot gas  
Compressor ON

# Programming mode



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## What does a Program do?

For all standard working cycles (SOFT, HARD, FREEZING or PRESERVATION), it is possible to personalize the CHAMBER's temperature and/or the CYCLE's timing saving the changes in the memory for subsequent retrieval.

Referential guidelines, like UK or NF, are stored also, during the programming mode.

Before to start the user decides which standard cycle to use in order to customize a particular working cycle.

## How to activate the Programming mode ?

Press the MENU' button



Using the arrows buttons the user can choose two possibilities: P1 or P2



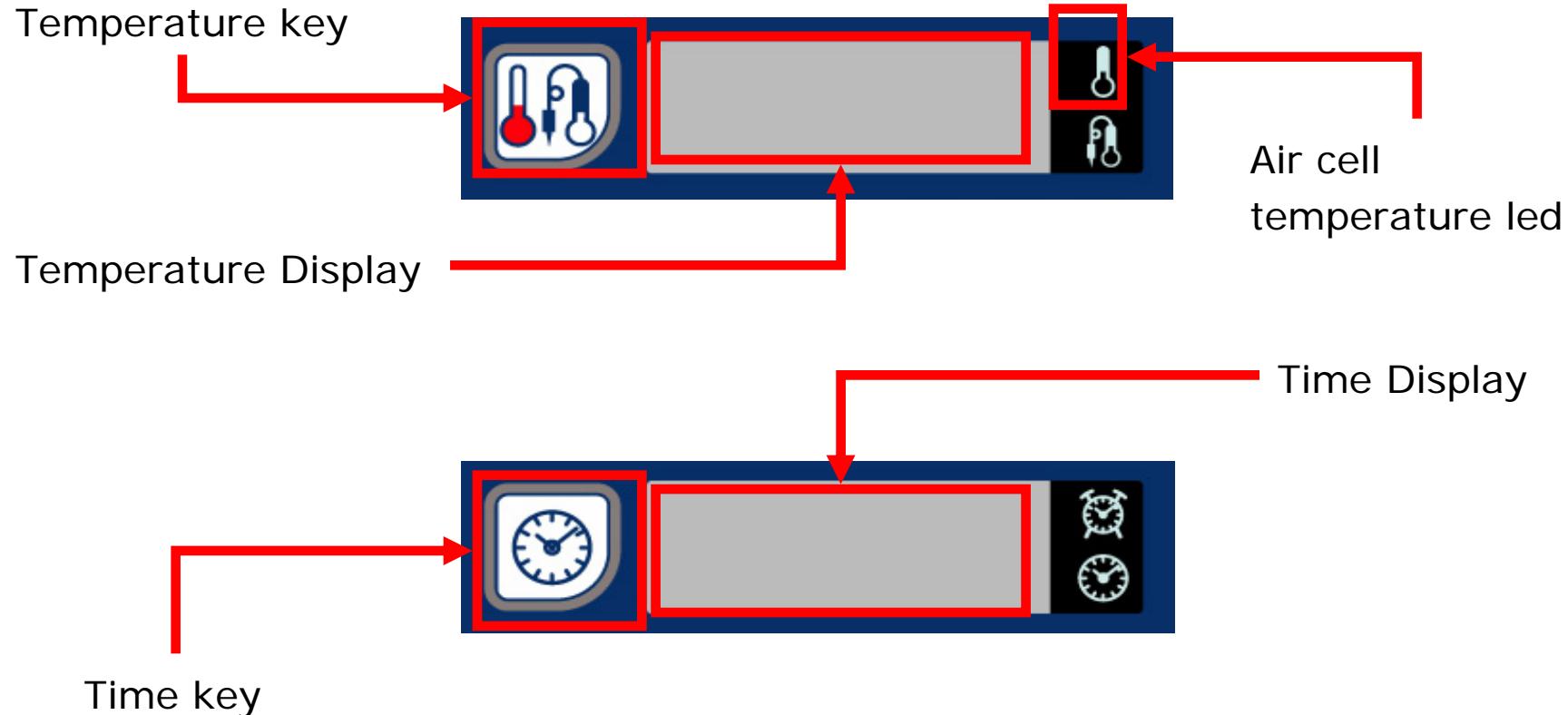
# Programming mode



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Air cell temperature and the working cycle time can be setted using the **TEMPERATURE** and **TIME** keys.



# Ice cream cycles



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There are available two different type of ice cream cycles, given by the selections P1 and P2. They becomes 2 different special working cycles dedicated for ice cream only. In this condition the program P1 and P2 are not more related to the standard code, as said before. In fact, the standard cycles leds are turned off. The user can decides himself if works with or without the ice cream mode. It can be enabled considering the User parameter "**EICE**".

**EICE** = n  Standard Unit

**EICE** = y  Unit works with ice cream cycle

# Ice cream cycle



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## How to activate the Ice cream Mode

- Use the UTILITY button and arrow keys to select the “**SET**” mode
- Confirm this selection pushing the UTILITY button again
- The displays shows the first parameters and its value
- Use the arrow keys in order to scroll all users parameters until the display shows **E ICE**.
- Changing the parameter value from “**n**” to “**y**” it will be possible to works with ice-cream cycles P1 and P2.

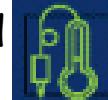


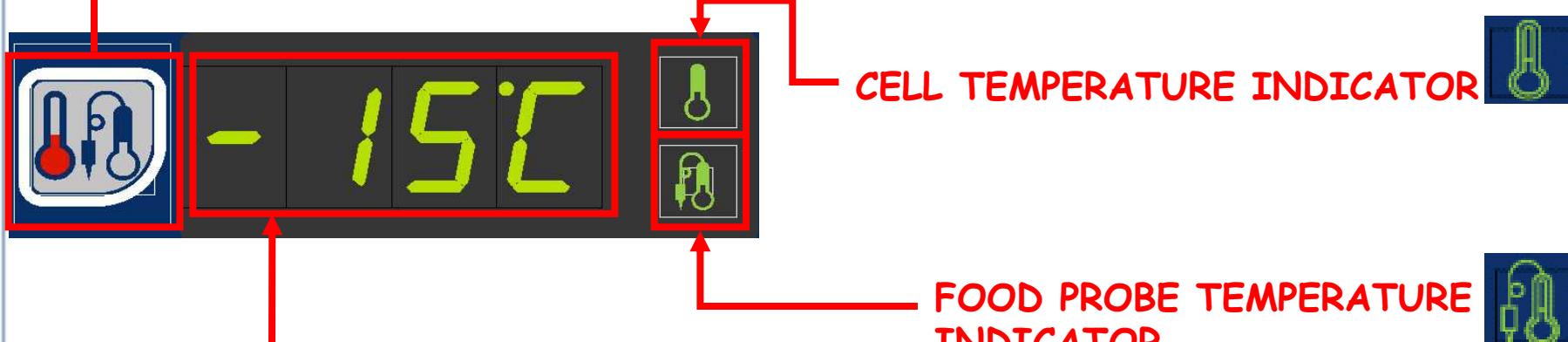
# User interface analysys

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## TEMPERATURE DISPLAY

- During any chilling cycle with food probe, this button  is used to switch type of temperature visualization.
- If the chilling cycle works by time the cell temperature can be visualized only.
- During any **Preservation** cycle or **Turbo Cooling** cycle the display gives the cell temperature only while the food probe led  is turned off.



The display gives indication of present temperature inside the cell or the temperature of the food probe. It depends on which of two leds is at present active.

## TEMPERATURE DISPLAY

- For all chilling cycles the **cell temperature set-point** can be changed during the programming mode
- For both preservation cycles the **cell temperature set-point** can be changed always in every time.
- The **food probe set-point** can never be modified.

## HOW CAN TEMPERATURE SET-POINT BE CHANGED

- Push the temperature button  for 2 seconds
- The value present on the display will be flashing (change mode is active)
- The time button  is disabled
- Using the LEFT/RIGHT button the temperature value can be modified

**IF MORE THAN ONE FOOD PROBES ARE INSTALLED (nFP=2 or 3) THE DISPLAY GIVES ALWAYS THE HIGHEST TEMPERATURE ESTIMATED**

# User interface analysys

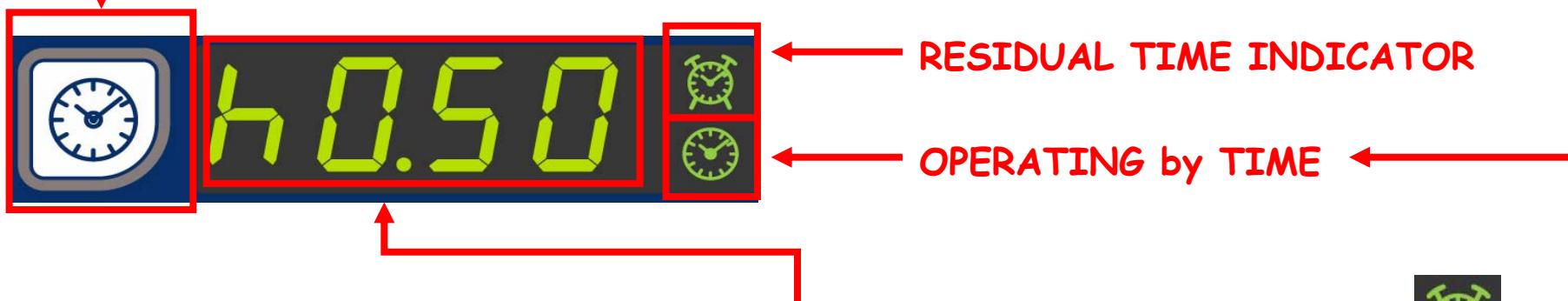
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## TIME DISPLAY

When chilling cycle is running without food probe, the time button light is turned **ON**

During the preservation cycle current time is visualized on the display. It is possible to set the time using time button.



During the chilling cycle the display give an estimation of the **RESIDUAL TIME**



- **by food probe:** countdown starts when the temperature reach the starting chilling temperature, given by the European guidelines (UK or NF)
- **by time:** it is possible to modify the time during the chilling process

**IF MORE THAN ONE FOOD PROBES ARE INSTALLED ( $nFP=2$  or  $3$ ) THE REFERENCE TEMPERATURE IS ALWAYS THE HIGHEST**

# User interface analysys

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## TIME DISPLAY

In any time is possible to check the SET POINT temperature and the time, using the buttons indicated below.



TEMPERATURE DISPLAY

TIME DISPLAY

**Chilling:** food probe temperature (at the end of the process) and the cell temperature SET POINT are visualized alternate on the temperature display; the chilling time, linked to the guidelines UK or NF, is visualized on the time display.

**Preservation:** the cell temperature SET POINT can be visualized on the temperature display.

# User interface analysys

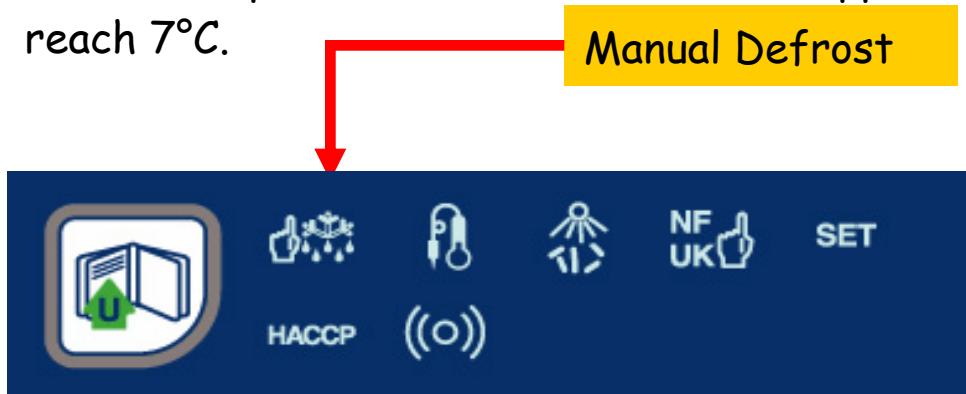


## Utilities functions

Use "UTILITY key" to select different functions.  
The button-LED is turned ON.

### Manual Defrost

The user can activate the defrost process manually. The temperature display shows the message "dEFr" which will hold over for all the time. If press two time the utility button when the icon defrost is ON the defrost will start,(with door closed by air inside cell, with door open with room air ) and it stopped when the temperature of evaporator reach 7°C.



At the end of the process  
the logic control return to  
stand by

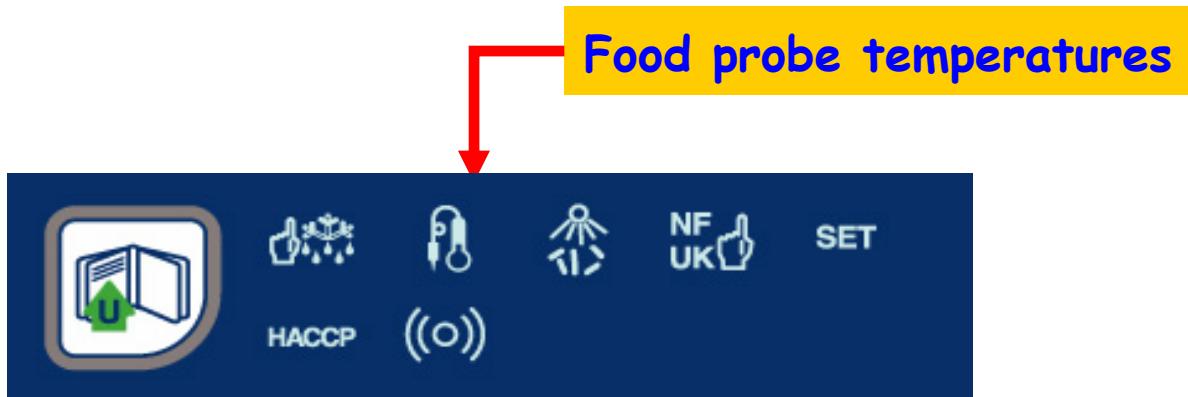
# User interface analysys

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## Food probes temperature

This function is used to show the different temperature measured by the food probes installed on board. If the parameter EhFP is not enabled (EhFP → n) than the display gives the food probes temperature only.

After a few seconds if no other choises are made by the user the logic control switch on Stand-by mode.



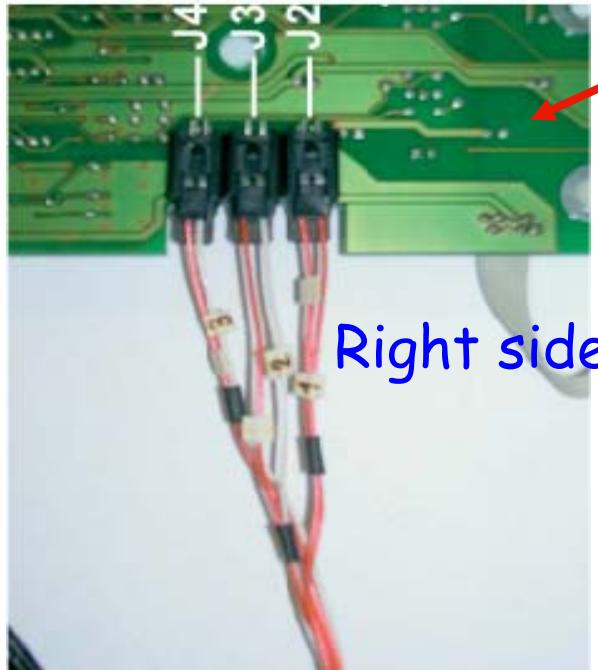
# Utilities function

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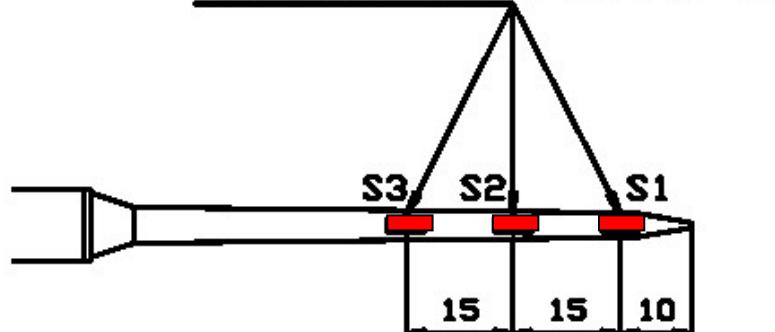
## Food probes with 3 contact sensor

The unit is provided as standard with a food probe (**091126**) with three contact sensors. This means that there are 3 different sensor positioned at different point across the stem in **USER BOARD**



POSIZIONAMENTO SENSORI

SENSORE DI TEMPERATURA  
NTC 10K SEMITEC 103 AT-II



# Utilities function

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## Food probe with single sensor

It is possible also to install a food probe temperature provided with single contact sensor. It is available as kits:

- **880089** - kit 1 extra sensor probe for aoc blast chillers/freezers.
- **880096** - kit 2 extra sensor-probes for aoc blast chillers/freezers



# User interface analysys



## Sterylizing Cycle (with UV lamp installed only)

The UV lamp has a direct germicidal action and it is used to sterilize the surfaces inside the chamber. This function is available if the parameter **EStc** is enable only (**EStc = Y**). Displays gives indications about chamber's temperature and the estimation time to the end of the cycle.

During the cycle the Sterylizing-LED is turned **ON**

The appliance is provided with a safety device that switch off the lamps if the door will be opened (see electrical wiring diagram).

In this case the internal clock will be temporarily stopped.

Sterylizing Cycle



The sterylization cycle is regulated by the factory at **10 minute**

If the chamber's temperature is **less than 15°C** the cycle can't be active.

# User interface analysys

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## European Guidelines

The appliance can work according to three different regulation:

- NF Regulation (French)
- UK Guidelines (British)
- Customized (defined by the customer)

Any regulation is possible if no working cycle is active.

The user can customize the temperature and time value both changing some parameters values.

Working guidelines



# User interface analysys



		<b>BLAST CHILLING</b>	<b>BLAST FREEZING</b>		
EUROPEAN GUIDELINES	START CHILLING TEMPERATURE	CHILLING END TEMPERATURE	CHILLING INTERVAL TIME	FREEZING END TEMPERATURE	FREEZING INTERVAL TIME
NF	+63°C	+10°C	110'	-18°C	270'
UK	+70°C	+3°C	90'	-18°C	240'
CUSTOM	CbSt	CCEt	CCtl	CFEt	CFtl

## SET Function - User parameters

The user can check and modify some parameters, according to the parameter list. The temperature display shows the parameter's label and time display shows its value.

### How to change the parameter value

- Select the **SET** function using the arrow keys 
- Pushing the **UTILITY** key the first user parameter will appear on the temperature display
- To set each value use the **TIME** button  and arrow keys



It is possible to set the parameter value if no working cycle are still active otherwise the parameter can be visualized only

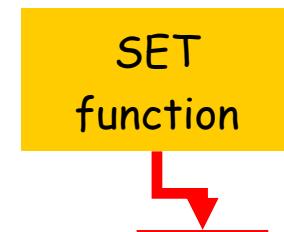


## SET Function - Factory parameters

The user can check and modify factory parameters, according to the parameter list.  
The temperature display shows the parameter's label while time display shows its value.

### How to change the parameter value

- Select the SET function using the arrow keys
- Pushing the arrow key at the same time for few seconds the first factory parameter will appear on the temperature display
- To set each value use the TIME button and arrow keys



# Special functions

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## How to restore all factory parameter

- The user can select the Utility function, using the U key 
- Select the **SET** function using the arrow keys 
- Push the arrow keys  at the same time until the display shows the label **FACT**
- Now use the following combination to reset internal control logic and to restore all factory parameters



# HACCP and Service Alarms



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The HACCP-led is blinking on the unit control panel.

an HACCP alarm is due to the following reasons:

- chamber's temperature reach an high value.

If the alarm condition is still active the display shows the following information:

**Batch (number) Ht (maximum temperature reached) Start Date Time End ---**

i.e Batch 01 Ht 15C Start 25-10-01 15.48 End ----

otherwise it means that the alarm condition is finished and the message will be the following

**Batch (number) Ht (maximum temperature reached) Start Date Time End Date Time**

i.e. Batch 01 Ht 15C Start 25-10-01 15.48 End 25-10-01 17.48



- chilling process ended abnormally (i.e. chilling time out of limits).  
The time display gives a short description of the alarm condition.

Batch (number) **Ot** (chilling time) **MIN** Start Date Time **End Date Time**

i.e. BATCH 01 Ot 120MIN Start 25-10-01 15.48 End 25-10-01 17.48.

## What is a BACH NUMBER

Each blast chilling cycle (SOFT/HARD chilling, freezing) will be identified by a progressive number (1,2, ... ), known as the "BATCH NUMBER".

This refers to the current day and will be reset to '0' at the start of each new calendar day.



## Service warning alarms

There are two types of service alarm:

1. type "b" (user) which do not require any service assistance and it is not necessary to switch off the unit

SYMBOL	DESCRIPTION	ACTION
b1	Condenser temperature high	Clean condenser - Check the motor fan of condenser- Check air circulation around condenser
b2	Door open	Close door - Microswitch door faulty
b3	Memory Full ( HACCP ALLARMS)	Reset haccp allarms
b4	Power failure	Check plug properly inserted in power supply socket; Check electrical system

# HACCP and Service Alarms



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2. Type "E" which requires the service assistance and it is not necessary switch off the unit.

SYMBOL	DESCRIPTION	ACTION
E1	Minimum cell temperature	CALL SERVICE CENTRE
E2	Minimum Evaporator temperature	
E3	Cell probe malfunction or disconnected	
E4	Evaporator probe malfunction or disconnected	
E5	Ambient probe malfunction or disconnected	
E6	Condenser probe malfunction or disconnected	
E7	Food probe 1 malfunction or disconnected	
E8	Food probe 2 malfunction or disconnected	
E9	Food probe 3 malfunction or disconnected	
E10	Pressure switch tripped	
E11	Compressor over load	
E12	Evaporator fan failure	
E13	Real time clock failure	

# Special functions

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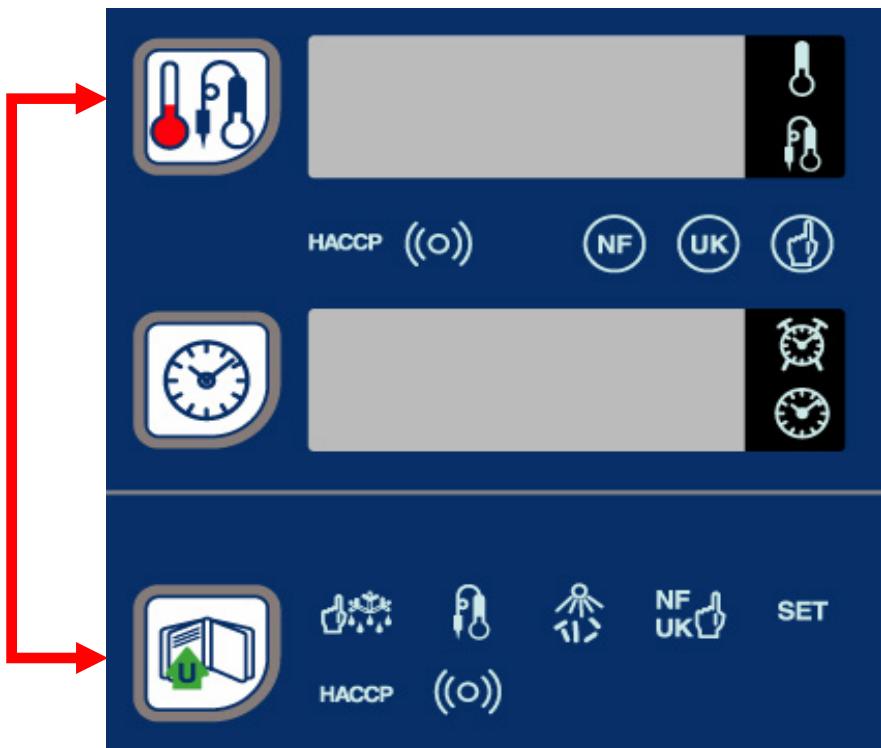
## How to check all probes temperature

This function allow to control in any time all probes temperature. In order to check all temperature value is necessary to push TEMPERATURE and UTILITY buttons both, as shown.

The temperature display shows the label **CELL** and the time display its value.

Using the arrow keys  is possible to show all other temperature values:

**EVAP, COnd, rOOM, FP1, FP2 and FP3**



# Special functions

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## What is DEMO MODE function

When **DEMO MODE** function is enabled, it is possible to work without using any unit's load like compressor, fans, heating elements. During DEMO MODE each control panel buttons becomes active but without controlling any actions into the unit, so that no working cycle should be really enabled. This new programming mode is suitable to use during trainings or exhibitions.

## How to active DEMO MODE function

The control panel has to be powered ON, using the ON/OFF button. No working cycle has to be active yet (STAND BY mode). This feature can be enabled by selecting a FACTORY parameter.

Push the UTILITY button



and select the "**SET**" mode, using arrow keys



The **SET mode** is now active and led is turned ON (orange light).



# Special functions

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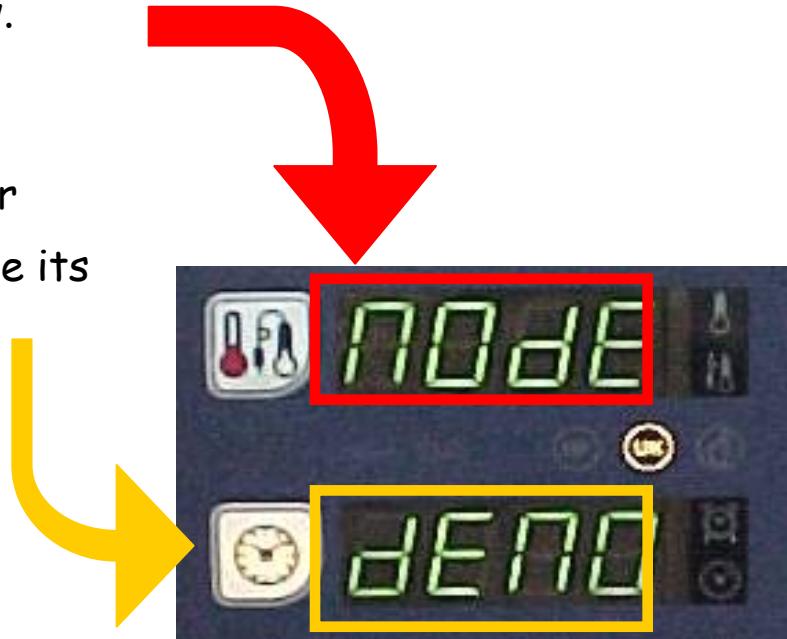
Keep pressed arrow keys both for few seconds  until on upper display will be shown the message "**FACT**"

Using arrow keys it is possible to scroll and check all factory parameters.  
Temperature display gives the parameter type and Time display gives its value.

Select the parameter "**MOdE**", as shown below.

Push Time button  to enable parameter modification and then use key arrows to change its value (see on picture).

Push the button  to complete the modification or wait a few seconds and automatically the process will finish.



# Special functions

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After the parameter setting the unit is ready to work in DEMO mode and the display will show this information whichever is the working cycle selected. Up to this condition the unit can be used normally without enable any load.

## TEST function

During the service it is possible to complete a simple procedure that gives information to the technician if the appliance's installations has been made with success or not.

## How to set up the TEST function

- The control panel has to be powered ON, using the ON/OFF button.  
No working cycle has to be active yet (the unit has to be in STAND-BY mode).
- This feature can be enabled by selecting MODE FACTORY parameter and set up it choosing the value **TEST**

# Special functions

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- By pressing the START/STOP  button the procedure will start
- The temperature display shows the label TEST DISPLAY and after 5 seconds the unit launch the lamp-test: all user interface's led are turned ON for 3 seconds.
- After 3 seconds the procedure starts to perform considering the following loads:
  - COMPRESSOR and COMPRESSOR MOTOR FAN
  - EVAPORATOR MOTOR FAN
  - ELECTRO-VALVE
  - PROBES
  - WORKING CYCLE
  - DEFROST CYCLE
- At the end of this quick check up phase the display shows **GOOD** or **BAD**



# Special functions

Thinking of you

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## How to PRINT the complete parameter list (FACTORY PARAMETER)

If an external printer (881532) is connected with the appliance it is possible to print all parameters list using the following procedure:

- Use the UTLITY button and select the SET function
- Press together the arrow keys to select the Factory parameters
- Keep pressed together the buttons   for a second



NOTE: in order to print all USER PARAMETER it is necessary to select the user parameter mode and repeat the steps above.

# Special functions

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In standard configuration the printer prints the temperature according to parameter list:

**tPrA** = intervall of print ( it is possible to decide interval of prints in minutes \* standard is 5 minutes)

**tPrC**= intervall of print during maintenance, if value is 0 does not print anything.

**PALL**=enable the print of probes temperature:

Y= print all probes temperature

N=print temperature of cell and food probe

**E485**= external connection

- Prn=external printer

- PC= personal computer

# Remote Alarm

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It is possible to connect the unit with external alarm signal using connection pins J5-1 and J5-2 on the main board

Connecting a relay to 12/14 V DC max -input 400mW and connect it to an accessory by buzzer or by light in the pin will be :

- Allarm on in the pin J1-2 power on by 12Vdc
- Alarm off in the pin J5 1-2 power off by 0V dc

In the parameter list check the parameter **RCFG**:

**RCFG**= if "0" (the pin J5 on only service alarm is active)

**RCFG**= if "1" (the pin J5 on only in case end cycle)

**RCFG**= if "2" (the pin J5 on when there is the service alarm is active and end cycle)



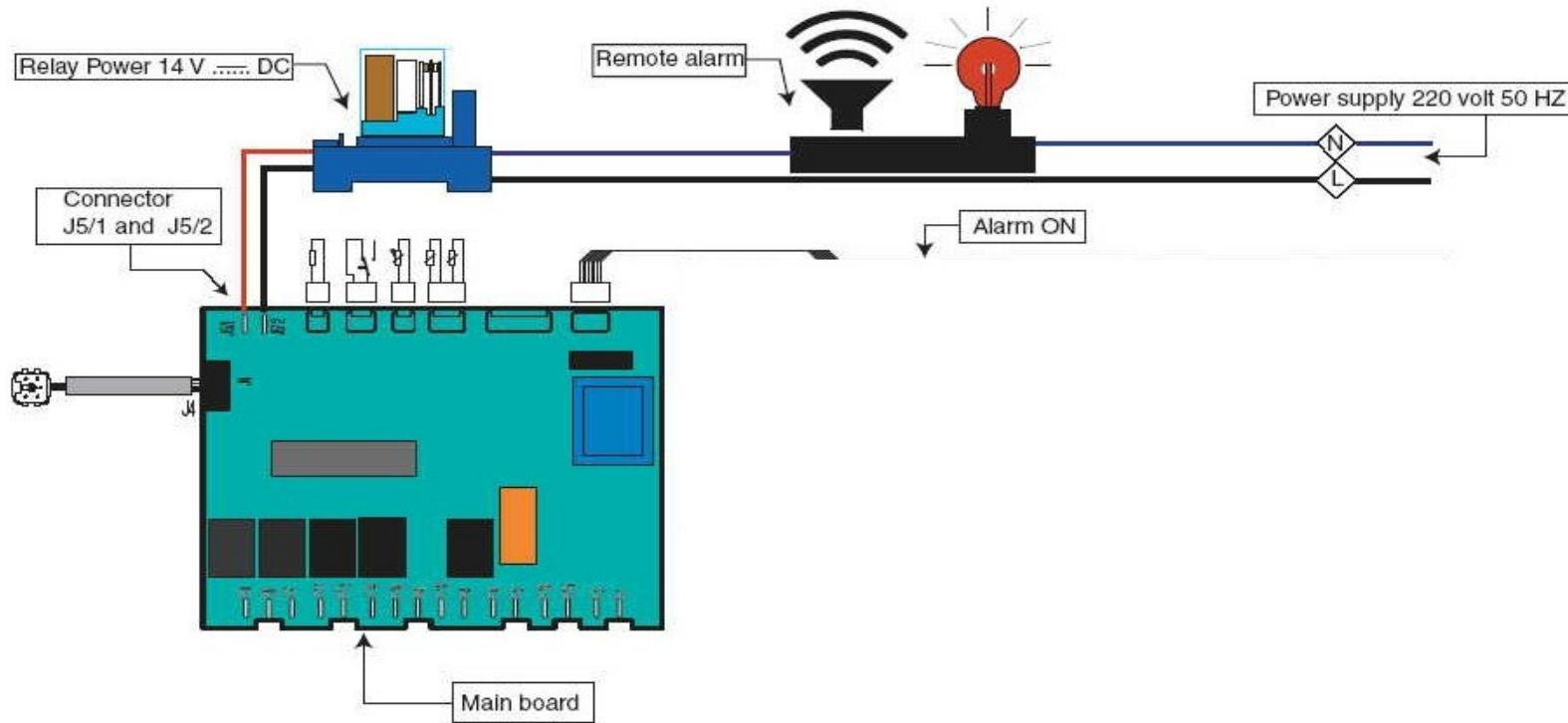
# Remote Alarm

Thinking of you

 Electrolux

## Remote signaling management

Possibility to connect an external device to signal end of cycles or alarms





# Blast Chiller or Freezer

*First point installation - Code check - Safety device –*

**Description**

*Thinking of you*

**Electrolux**

# Easy Seven point to help you



	<b>Index</b>	<b>page</b>
1.	<b>First points checking</b>	1
2.	<b>Model identification – data plate</b>	3- 4
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4.	<b>Voltage adaptor Fuse</b>	6
5.	<b>Magnetic thermic switch</b>	7-8
6.	<b>High pressure pressostat</b>	9
7.	<b>Compressor thermic protection</b>	10

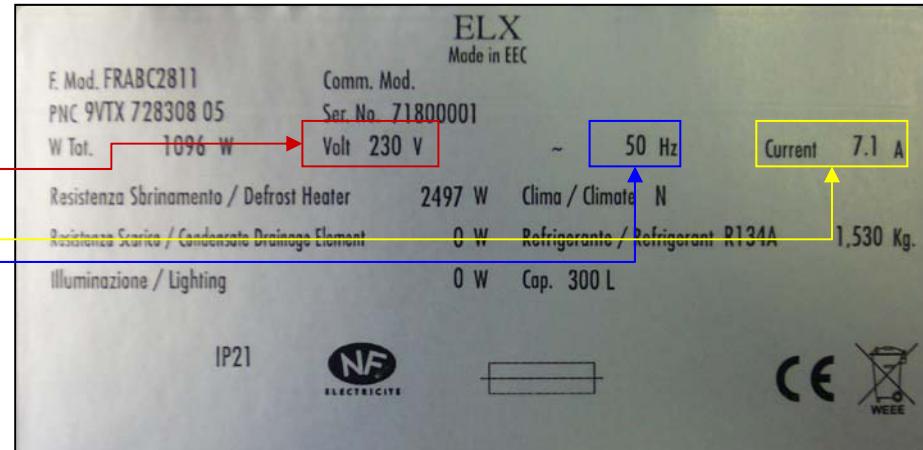
# First checks during an installation

Thinking of you

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1. **Level unit by moving the feet to avoid vibrations.**
2. **Connect at power supply:** check the correct power supply in data plate (i.e. Volt – HZ – Max Ampere)
3. **Test all components:** start the “Test” mode
4. **After “test” check in the cooling unit:**

**Liquid inspection glass** : if in the inspection glass device appears the colour green is ok; with yellow colour in the circuit is present humidity. (if it doesn't disappear after some cycles make a good vacuum, change the dehydrator filter and re-gas).



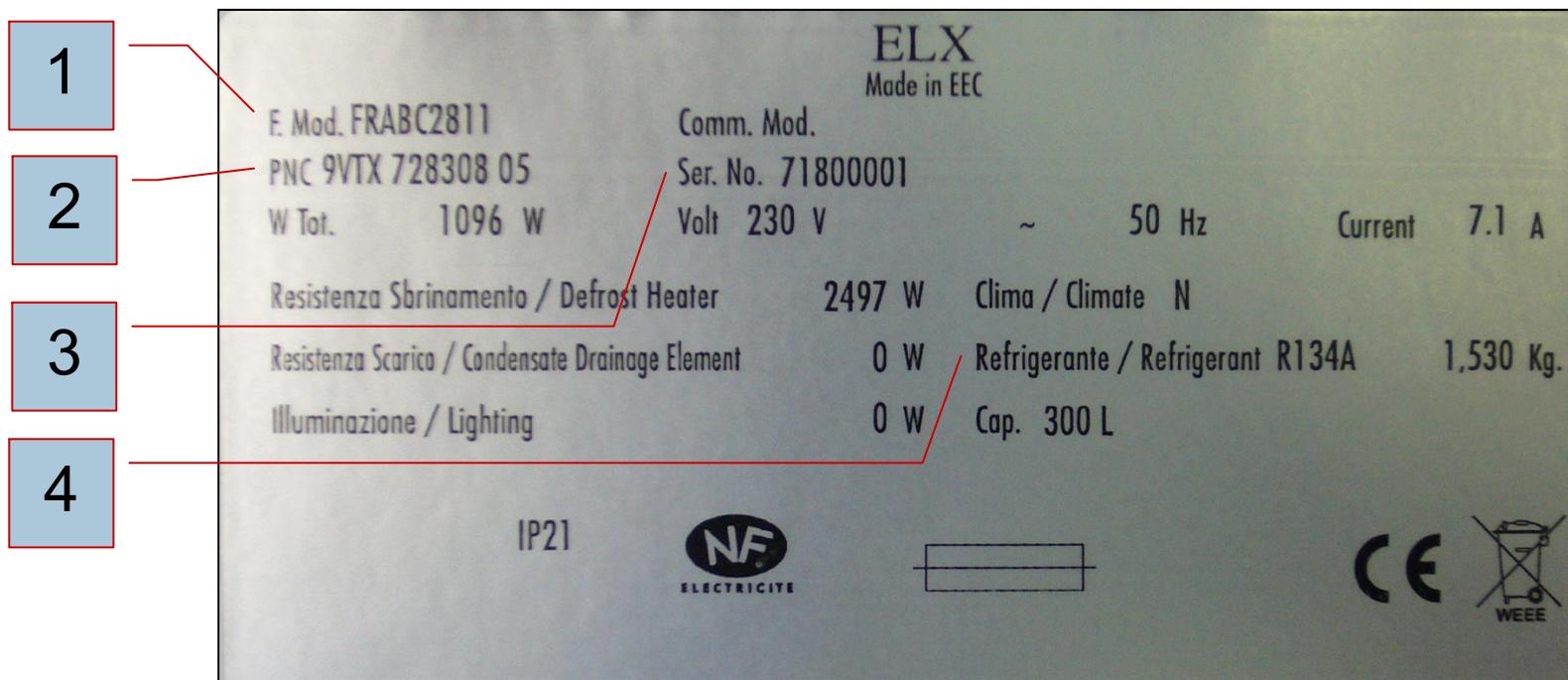
**Oil inspection (if present)** : check the oil level in the compressor on inspection glass; it must be between MAX and Min. In case of oil low level re-fill with the same type as described in the compressor data plate. Start compressor without oil can damage it.

# Model identification - Data plate

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1. F. Mod. = Factory model (FRABC2811)
2. PNC= Product Number Code (728308 05)
3. Ser. No. = Serial Number ("7"/"18"/"00001") "Year"/"week"/"progressive N°"
4. Refrigerant= Type and quantity of refrigerant (R134A) 1,530kg



# Model identification - Data plate

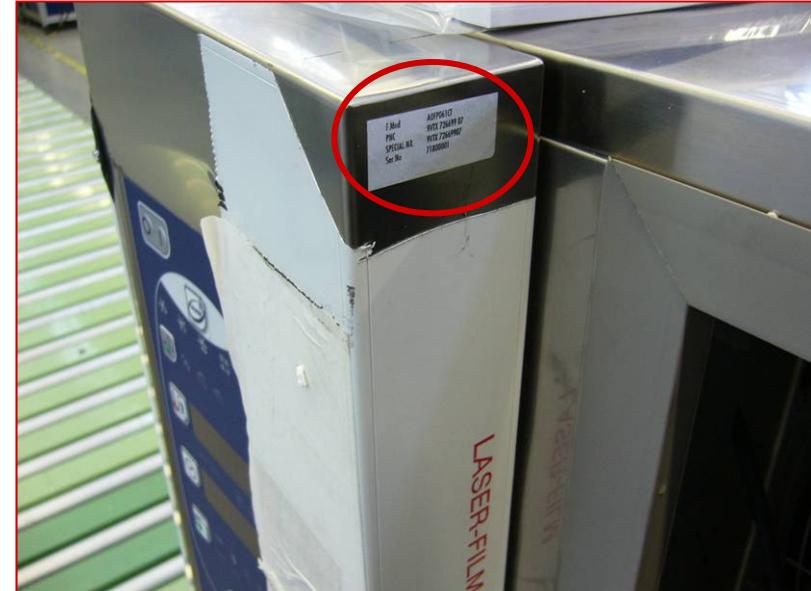


The data plate is positioned :

- In the back of the unit near the compressor

PNC and Serial Number can also be found:

- In the control panel
- Under the brand in the control panel



# SAFETY DEVICE

## Main fuse

Thinking of you

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It's installed in all BC&BCF and cut off power supply to the **main board** in case of short circuit.

*It means that main board is disabled.* It's positioned on a clamp inside of the electric box, in order to guarantee an easy replacement.

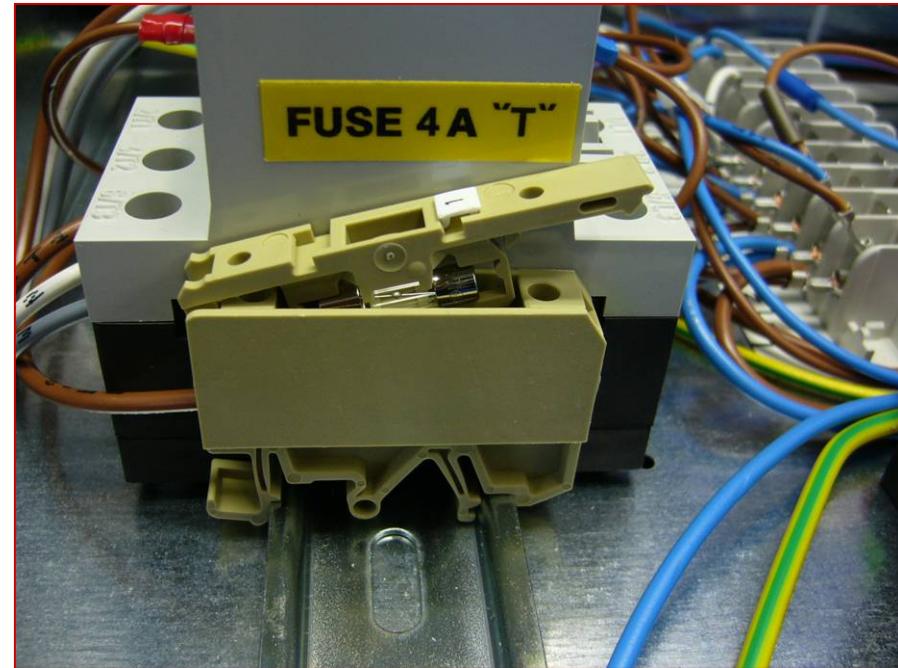
Technical data:

Type: Fuse from 2 or 4 Amp

Dimension: 5x20mm

“T”= delayed-action

“F”= fast



# SAFETY DEVICE

## Voltage adaptor Fuse

Thinking of you

Electrolux

It's installed in all BC&BCF and cut off power supply to the **door frame heater** in case of short circuit.

*It means that the hot cable inside of the door frame will be off.*

*Normally the door frame heater is ON if the difference of temperature between the cell and ambient is higher than parameter value [dFt](#) (i.e. -30°C).* It's positioned inside the electric box, on Voltage adaptor from 230/42V

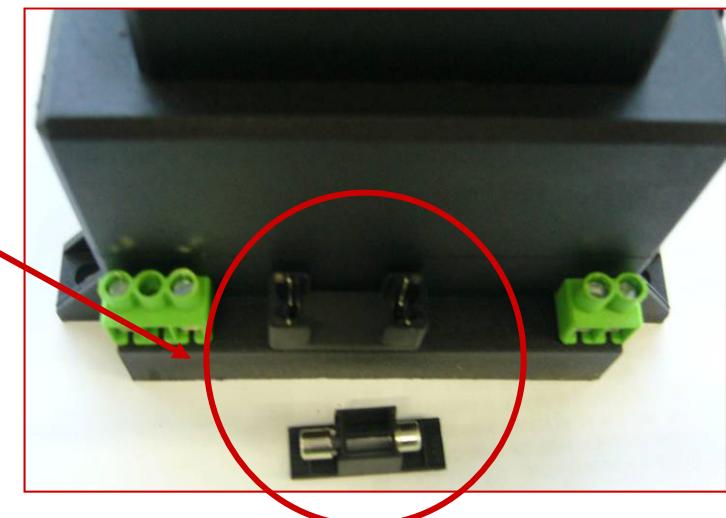
### Technical data:

Type: Fuse from 0.63 Amp

Dimension: 5x20

"T"= delayed-action

"F"= fast



# SAFETY DEVICE

## Magnetic thermic switch

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It is used to protect the **compressor** and/ or **motor ventilator cell** with 400 V supply and in case of overload cut off the power supply at device connected.

When the button black “start” is pressed the device is connected .

In the upper part of it there is a modular setting where it is possible to set the cut off current.

The red button “stop” if pressed simulate a over load.



Suggestion: if you start a cycle but the compressor or the cell ventilator does not run, first check this switch.

# SAFETY DEVICE

## Magnetic thermic switch

Thinking of you  
 Electrolux

Setting examples:

13 A



5A



8A



23A



Spc Magnetic T.S.	Field setting AMPERE
043472	From 4 to 6.3
083508	From 6.3 to 10
083898	From 10 to 16
085841	From 20 to 25

# SAFETY DEVICE

## High-Pressostat

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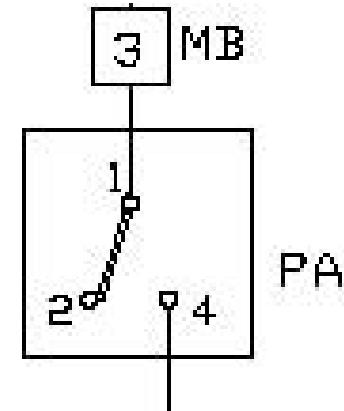
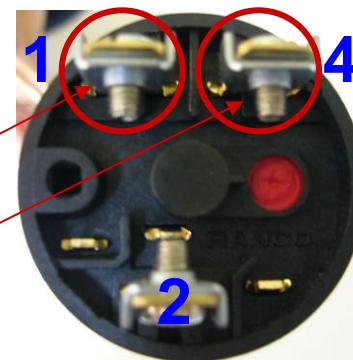
It's installed in the liquid line in outlet pipe condenser, and in case of high pressure cut off the compressor. The condenser motor ventilator will be ON until the pressure is back to the correct value

Specifications are:

OUT 30 bar – IN 23 bar.

The electric contact are 1 and 4

The main causes of contact 1-4 closed are : condenser motor ventilator OFF- dirty condenser - defective pressostat - solenoid valve blocked - clogged circuit.



# SAFETY DEVICE

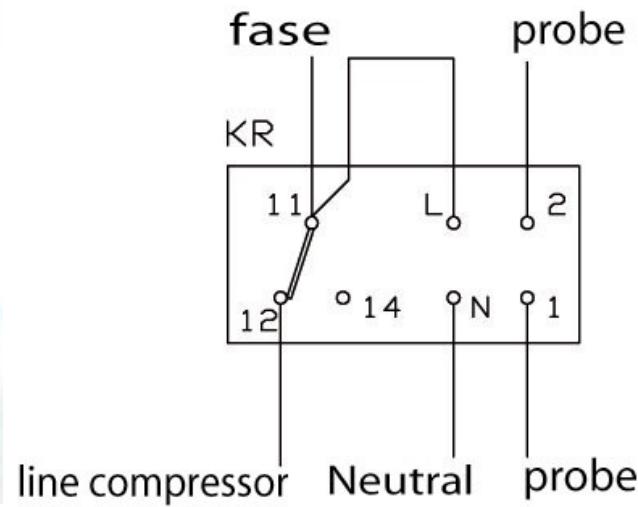
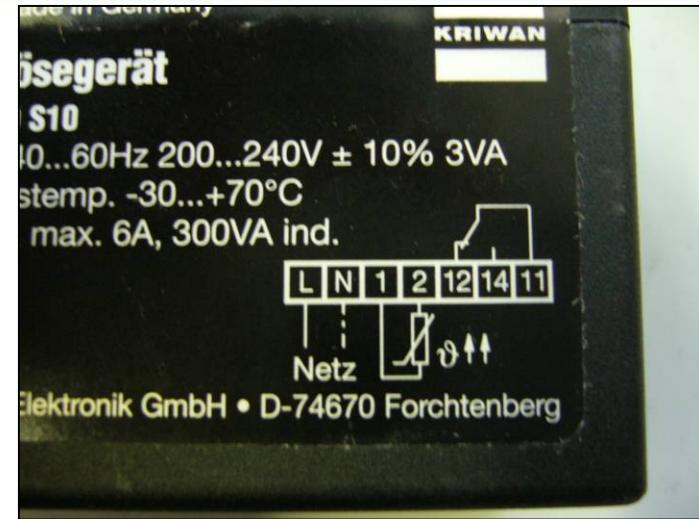
## Compressor thermic protection (KRIVAN)

Thinking of you

 Electrolux

You can find the "Krivan" on electric boxes of some BC&BCF (100kg – 180 kg and remote units). Its function is to preserve the compressor from High or Low temperature. In fact it is connected with a probe installed inside the compressor that check the temperature (too high) due to empty circuits or (too low) due to fluid blast.

If the temperature is below - 30°C or above + 70°C the contact 11-12 will be open and the compressor is stopped.

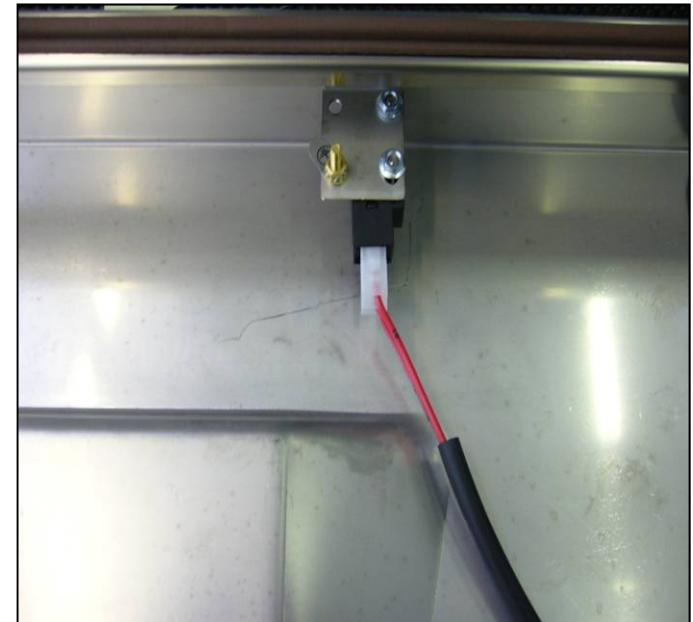


# Micro switch Door Device

Thinking of you

 Electrolux

It's a magnetic switch that in case of door open the led start/stop button will be flashing ,the cell motor ventilator will be off and if keep more then 30 second also the compressor will be off ; more of 5 minutes whit door open will appear in the display the alarm b4 (door open cycle active only). The magnetic, to close the circuit of micro switch, is positioned inside the door (foamed) and it's not possible replace .  
The magnetic switch is positioned inside of control panel and it is fixing with screws.





# TROUBLESHOOTING

## *Checking the alarms shown on the display*

This document gives support to the technician in case of Alarms (HACCP or Service) during the working cycle of the appliance. See the indications on the following pages in order to eliminate the presence of any failure. This alarm can be divided in two groups:

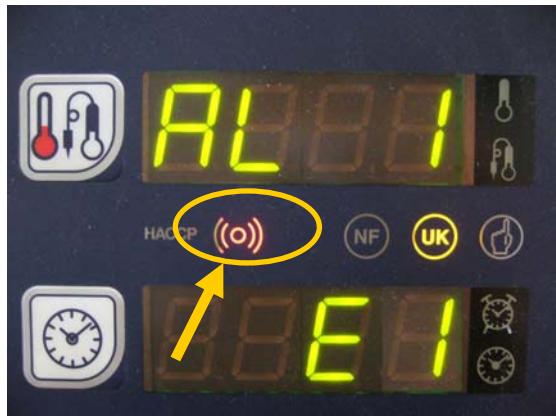
- alarms that doesn't stop the functioning of the unit (type B)
- alarms that doesn't stop the functioning of the unit but is necessary call the service (type E)

Alarm Code	Description	Reference Page
E1	Low Cell Temperature	2
E2	Low Evaporator Temperature	3
E3	Storage Sensor failure	4
E4	Evaporator Sensor failure	5
E5	Room Sensor failure	6
E6	Condenser Sensor failure	6
E7	Food probe #1 failure	7
E8	Food probe #2 failure	7
E9	Food probe #3 failure	7
E10	High pressure circuit warning	8
E11	Compressor overload	9
E12	Evaporator motor fan failure	10
E13	Real Time Clock failure	11
B1	Maximum Condenser Temperature	12
B2	Door Open	13
B4	Power failure	14



## ERROR CODE E1: LOW TEMPERATURE IN THE CELL

**THIS IS A SERVICE ALARM AND IT COULD APPEAR DURING THE MAINTENANCE CYCLES ONLY.**



The display on the user interface shows the ERROR code "E1" and the ALARM SERVICE Led is blinking if this conditions is still present, otherwise it remains completely activated if the critic condition is terminated and the operator hasn't see the Alarm yet.

### ALARM CONDITIONS

**A low temperature Alarm is activated when:**

Cell Temperature

<

Maintenance Temperature Set - LAC

- It could be visualized on the display after a delay time depending by the parameters Ady, Aor or dFO;

**The Alarm due to a low temperature cell will terminate when:**

Cell Temperature

>

Maintenance Temperature Set - LAC + AFd

\*Lac= Low alarm cell

\*Afd= Differential for high/low alarm temperature



## ERROR CODE E2: LOW EVAPORATOR TEMPERATURE

**THIS IS A SERVICE ALARM AND IT COULD APPEAR DURING THE MAINTENANCE CYCLES ONLY.**



The display on the user interface shows the ERROR code "E2" and the ALARM SERVICE Led is blinking. This condition causes the following event:

- The Alarm Service Led is blinking or turned ON
- The buzzer is active
- The display shows the ERROR code number

### ALARM CONDITIONS

If the evaporator temperature is lower than the parameter LTE (*evaporator low temperature set point*), the alarm "E2" become active.

**THE ALARM "E2" REMAIN ACTIVED UNTIL THE EVAPORATOR TEMPERATURE REACH A VALUE HIGHER THAN THE PARAMETER "LTE",**

The working cycle is stopped by the electronic control and the appliance returns to a Stand-by condition. Any other cycles will be activated again if the evaporator temperature reaches over "LTE".

### CAUSES:

- The evaporator probe could be faulty and it measures wrong values
- Evaporator motor fans could be damaged: they don't run during a normal working cycle.



## ERROR CODE E3: STORAGE SENSOR FAILURE



This condition causes the following event:

- The Alarm Service Led is blinking
- The buzzer is active
- The display shows the ERROR code "E3"

**THIS ALARM DOSEN'T STOP THE WORKING CYCLE (CHILLING OR FREEZING) BECAUSE THE CHECK CONTROL TEMPERATURE WILL BE DONE BY EVAPORATOR PROBE BUT IT IS NECESSARY TO CALL THE SERVICE to changed the probe.**

## ALARMS CONDITIONS

This type of error causes the following possible events:

- (*if present*)The sterilize process is stopped and the germicidal light turned off (*if present*), according to the parameter *Ods* (see reference parameter list)
- The door heating element is always active
- During maintenance the temperature control turn to the evaporator probe, according to positive or negative evaporator set point (PScF or nScF).

**SWICHT OFF ALARMS :  
ONLY REPLACEMENT THE PROBE**



## ERROR CODE E4: EVAPORATOR SENSOR FAILURE



### DISPLAY

The display on the user interface shows the ERROR codes. This condition causes the following event:

- The Alarm Service Led is blinking
- The buzzer is active
- The display shows the ERROR code "E4"

THIS ALARM DOESN'T STOP THE WORKING CYCLE (CHILLING OR FREEZING) BUT IT IS NECESSARY TO CALL THE SERVICE TO REPLACE THE PROBE

### ALARMS CONDITIONS

This type of error causes the following possible events:

- In any time chilling or freezing cycle works normally according to the set-point values.
- Defrosting cycles operates by time.
- Fan delay starts after drainage time, according to the parameter *drFd*, takes double time in order to decrease the evaporator temperature.

**SWICHT OFF ALARMS :**

**ONLY REPLACEMENT THE PROBE**



## ERROR CODE E5–E6: ROOM/CONDENSER SENSOR FAILURE



The display on the user interface shows the ERROR codes. This condition causes the following event:

- The Alarm Service Led is blinking
- The buzzer is active
- The display shows the ERROR code "**E5**" or "**E6**"

### ALARMS CONDITIONS

This type of error causes the following possible events:

- In any time chilling or freezing cycle works normally according to the set-point values.
- In any time the defrosting cycles operates normally by time or by temperature
- During any working cycle (chilling/freezing or maintenance cycles) and if the room sensor become faulty (E5), the door heating element is active always.

**SWICTH OFF ALARMS :  
ONLY REPLACEMENT THE PROBE**



## ERROR CODE E7 – E8 – E9 : FOOD PROBE FAILURE



Picture 1: ERROR CODE E7



Picture 2: Food probe faulty

The display on the user interface shows the ERROR codes. It means that on the temperature display will be visualized the message "--" first. Than, the Alarm Service led become flashing and it causes the following event:

- The buzzer is active
- The display shows the ERROR code "**E7**" or "**E8**" or "**E9**" (see Picture 1)

### ALARMS CONDITIONS

This type of error causes the following possible events:

- Any chilling or freezing cycles works normally but they will operate by time only
- In any time the defrosting cycles operates normally by time or by temperature

### CAUSES

The food probe is damaged and it must be replaced with new one.

**SWICTH OFF ALARMS :**

**ONLY REPLACEMENT THE PROBE**



## ERROR CODE E10: HIGH PRESSURE CIRCUIT WARNING



This type of Alarm is activated by the digital input J6 (3-4) on the main board and it causes an interruption of the working cycle in progress. It generates an alarm connected with the pressure switch. The display on the user interface shows the ERROR codes. This condition causes the following event:

- The red Alarm Service Led is flashing
- The buzzer is active
- The display shows the ERROR code "**E10**"

### ALARMS CONDITIONS

The alarm occurs when one of those conditions is satisfied:

- during the execution of any working cycle (chilling, freezing or maintenance) the number of times that the pressure switch is activated is over than the parameter "**PAL**" (Pressostat Active Times)
- during any working cycle (chilling, freezing or maintenance) the pressure switch is ON more than the value "**PAT**" (Pressostat Active Time minutes)

### CAUSES

- the condenser is dirty



- the condenser motor fan doesn't run
- start-up condenser for condenser fan is faulty
- the pressostat doesn't set well following the condensation temperature

#### **SWICTH OFF ALARMS :**

All the functions could be restored automatically and a new cycle can re-start again when the pressure switch becomes disabled.



## ERROR CODE E11: COMPRESSOR OVERLOAD



The compressor could be protected against overloads by thermistor devices.

This type of Alarm is activated by the digital input J6 (7-8) on the main board and it causes an interruption of the working cycle in progress. Setting the parameter "**Cpt**" on the unit is possible enable or disable this digital inputs.

All functions could be restored automatically and a new cycle can restart again when the cause of the alarm is ended.

The display on the user interface shows the ERROR codes. This condition causes the following event:

- The red Alarm Service Led is flashing
- The buzzer is active
- The display shows the ERROR code "**E11**"

### ALARMS CONDITIONS

High or Low temperature in the compressor due to at flash gas or air flow compressor stopped  
Or compressor windings faulty



## ERROR CODE E12: EVAPORATOR FAN FAILURE



This alarm is connected with the evaporator fans and it is activated by the digital input J6 (5-6) on the main board.

It causes an interruption of the fans and compressor both, but the working cycle in progress remains still active.

When the digital input on terminals 5-6 become inactive fans and compressor starts again automatically in order to complete the cycle.

The display on the user interface shows the ERROR codes. This condition causes the following event:

- The red Alarm Service Led is flashing
- The buzzer is active
- The display shows the ERROR code "E12"

### ACTION:

Check the magnetic micro switch if is ON or Off

Check motor ventilator cell and in replace it



## ERROR CODE E13: REAL TIME CLOCK FAILURE



Picture 1: ERROR CODE E13

When happens an Alarm due to Real time clock failure the red Alarm Service led is flashing and the buzzer is active. The display on the user interface shows the **ERROR codes E13** (see Picture 13).

This type of error causes the following possible events:

- The electronic control loses data and time setting values.  
*Check all of User's parameters and if is necessary regulate them  
Following this sequence: months -year- Days - hours- minutes.*
- Internal battery is completely discharged and the main board can't save anything in the data storage.

**SWICHT OFF ALARMS :**

**SET THE DATA**

**OR**

**REPLACE THE MAIN BOARD**



---

**ERROR CODE *b1*: HIGH CONDENSER TEMPERATURE (NOT PRESENT ON REMOTE UNIT)**



The display on the user interface shows the ERROR codes. This condition causes the following event:

- The Alarm Service Led is flashing
- The buzzer is active
- The display shows the ERROR code "*b1*"

### **ALARMS CONDITIONS**

This type of error occurs when the condensing temperature reach a value higher than the parameter "HTC" (HTC = condenser higher temperature alarm set).

### **CAUSES**

- the condenser is dirty
- the condenser motor fan doesn't run
- the probe condenser can be miscalibrated



## ERROR CODE **b2: DOOR OPEN**



This type of Alarm is activated by the digital input J8 (1-3) on the main board and occurs when the door remains opened more than the parameter "*Odt*" (*Odt* = open door time).

In this case this condition causes the following event:

- the Alarm Service Led is flashing
- the buzzer is active
- the display shows the ERROR code "**b2**"
- evaporator fans will be stopped
- the germicidal light is OFF (if foreseen)
- the button "Start Stop" blinking

If the defrost cycle is active and the digital input enable the alarm, evaporator fans will be stopped and the countdown of the process is temporarily stopped also. It will reprise when the door is closed.

### ACTION:

- Close door
- Check the micro switch door
- Check connection on main board of the micro switch door



## ERROR CODE **b4: POWER FAILURE**



The display on the user interface shows the ERROR codes **b4**.  
This condition **causes** the following event:

- The red Alarm Service Led is flashing
- The buzzer is active
- The display shows the ERROR code "**b4**"

### **ALARMS CONDITIONS**

This alarm occurs when the power failure last over the time due to the parameter "**Pf**", otherwise the working cycle restart again when the cause of the alarm is ended.

The parameter "**Pf**" indicate the maximum time for power failure.

**Causes:**

Main cut off of Power failure

The cycle has been stopped without used the button Start Stop , but ON OFF



Identification: E6-E7  
Bulletin no: VTX2006-07  
Date: 19-09-06  
Issuer: Customer Support Dept.  
Factory: Pordenone (Italy)

**Subject:**

## **Reset Led service alarm**

**Model:** BC-BCF Length wise “**only cruise version**”

**Problem:** **Led service alarm always ON without alarm storage**

**Reason:** **In some conditions can happen that led of alarm stay always on, due to appliance switch off the during a cycle .**

**Action in Factory:** Resetting the FACT parameter

**Action in Field:** Resetting the FACT parameter

When the condition above descript appear follow this instruction:

1. Press the button  until the led  is On (light orange) 
2. Keep press for 5 second together buttons  until in the display appear the label “FACTORY” 
3. Keep press together the buttons  +  until appear in the display the label “RES” and all led of the user main are on. 
4. Release the buttons and the led  will be off.

# in any case checked all parameters with parameters list

Identification: E 22 / E 23  
Technical Bulletin: VTX2009-06  
Date: 06 July 2009  
Issuer: Giusti Lorenzo - Customer Support  
Factory: VTX - Refrigeration - Pordenone



**Subject:** Alarm E13 (REAL TIME CLOCK FAILURE)

**Model :** Blast chiller and freezer CW and LW

**Reason :** The correct sequence can be used to reset the alarm E13

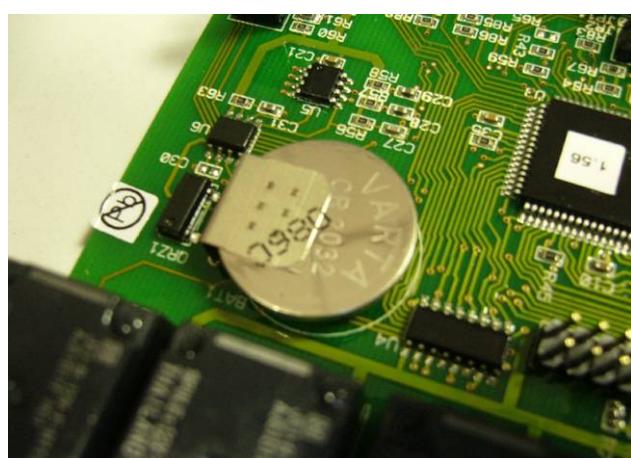
**Action in Factory:**  
/

**Action in Field:** When alarm E13 appears, first all set the year-month- Day - hours- minutes.

**ERROR CODE E13: REAL TIME CLOCK FAILURE**



Picture 1: ERROR CODE E13



Picture 2: Internal battery

When an Alarm appears due to Real time clock failure the red Alarm Service led is flashing and the buzzer is active. The display on the user interface shows the ERROR codes E13 (see Picture 1).

This type of error causes the following possible events:

1. The electronic control looses data and time setting values.

Check all of User's parameters and if is necessary regulate them

**This is the exact sequence to set: year -month- Day - hours-minutes. Other sequences can cause possible un-reset of the alarm E13**

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If the internal battery is completely discharged and the main board can't save anything in the data storage: At the moment the internal battery can not be replaced, because it's welded, We are evaluating to introduce in the next future the possibility to replace that.

So in this case if internal battery is completely discharged you must replace the main board following the pnc on spc.

**ELECTROLUX PROFESSIONAL SPA**

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**TELEPHONE**

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**TELEFAX**

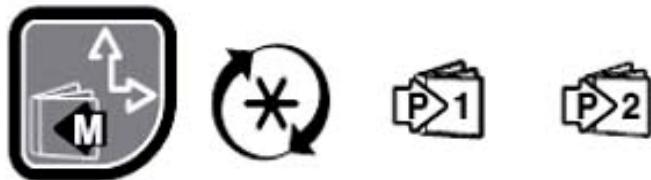
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Lorenzo.giusti@electrolux.it

**SMART electronic control parameters list**  
**Mappe parametri per schede elettroniche SMART**

# Blast Chiller / Freezer



**Units from serial n° 71600001**

**LENGTH WISE MODEL\_Electrolux**

**LENGTH WISE MODEL\_Zanussi**

**LENGTH WISE MODEL\_Alpeninox**

**Pag. / Page**

**Indice**

**Index**

2  
3, 9

Codici apparecchiature  
Mappe parametri

Appliance codes  
Parameters List

Document release: M5082\_03 (dated 03/08/09).

Following Parameter list has been updated: from code 411R01901 to code 411R01902; from code 411R02101 to code 411R02102; from code 411R02301 to code 411R02302; from code 411R03501 to code 411R03502; from code 411R07100 to code 411R07101. Added two new parameter list with factory code 411R19200 and 411R19300 (BCF LW 30kg and 50kg ICE CREAM RANGE)



Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
<b>SET RTC</b>														
MIN	Minuts	min		0	0	0	0	0	0	0	0	0	0	0
HOUR	Hour	hour		0	0	0	0	0	0	0	0	0	0	0
DAY	Day	d		0	0	0	0	0	0	0	0	0	0	0
MON	Month	M		0	0	0	0	0	0	0	0	0	0	0
YEAR	Year	Y		0	0	0	0	0	0	0	0	0	0	0
<b>SET POINT</b>														
DIFP	POSITIVE DIFFERENTIAL (re-start compressor). Reached the setpoint, the compressor will start again at "Setpoint+DIFP". <b>DIFFERENZIALE POSITIVO.</b> Raggiunto il set point il compressore ripartirà al valore di temperatura "Setpoint+DIFP".	°C/°F	1	*	*	*	*	*	*	*	*	*	*	*
DIFN	NEGATIVE DIFFERENTIAL (stop compressor). Reached the setpoint, the compressor will stop at "Setpoint-DIFN" <b>DIFFERENZIALE NEGATIVO</b> Raggiunto il setpoint il compressore si fermerà al valore di temperatura "Setpoint-DIFN"	°C/°F	1	*	*	*	*	*	*	*	*	*	*	*
HSP	HIGHER SETPOINT (chilling food preservation, only) <b>DIFFERENZIALE NEGATIVO</b> Raggiunto il setpoint il compressore si fermerà al valore di temperatura "Setpoint-DIFN"	°C/°F	10	*	*	*	*	*	*	*	*	*	*	*
MSP	LOWER SETPOINT (chilling food preservation) HIGHER SETPOINT (freezing food preservation) <b>MASSIMO SETPOINT IMPOSTABILE PER MANTENIMENTO POSITIVO.</b>	°C/°F	-2	0	0	*	*	*	0	*	0	*	*	*
LSP	LOWER SETPOINT (freezing food preservation, only). <b>MINIMO SET POINT IMPOSTABILE PER MANTENIMENTO NEGATIVO.</b>	°C/°F	-25	0	0	*	*	*	0	*	0	*	*	*
SCA	CELL SETPOINT (for soft chilling). Cell temperature setpoint for running compressor during a soft chilling cycle. <b>SET CELLA ABBATTIMENTO SOFT.</b> Temperatura di termostatazione del compressore durante la fase di abbattimento del ciclo soft.	°C/°F	-2	*	*	*	*	*	*	*	*	*	*	*
SCH	CELL SETPOINT (for hard chilling). Cell temperature setpoint for running compressor during a hard chilling cycle <b>SET CELLA ABBATTIMENTO HARD.</b> Temperatura di termostatazione del compressore durante la fase di abbattimento del ciclo hard	°C/°F	-20	*	*	*	*	*	*	*	*	*	*	*
ESCC	CRUISE CHILLING CYCLE TIME OPTIMIZATION. <b>OTTIMIZZAZIONE TEMPO DI ABBATTIMENTO CRUISE CHILLING</b>	INT	0	*	*	*	*	*	*	*	*	*	*	*
tSCC	CRUISE CHILLING CYCLE SETPOINT FOR TIME OPTIMIZATION. <b>SOGLIA PER OTTIMIZZAZIONE TEMPI CRUISE CHILLING.</b>	°C/°F	7	*	*	*	*	*	*	*	*	*	*	*
SCC	CELL SETPOINT (for blast freezing cycle). Cell temperature setpoint for running compressor during a freezing cycle. <b>SET SURGELAZIONE PER CICLO CONGELAMENTO.</b> Temperatura di termostatazione del compressore durante la fase di congelamento	°C/°F	-36	*	*	-41	-41	-41	*	-41	*	-41	-41	-41
SrF	FOOD PRESERVATION SETPOINT (after blast chilling cycle). <b>SETPOINT DI MANTENIMENTO/CONSERVAZIONE DOPO CICLO DI ABBATTIMENTO.</b>	°C/°F	3	*	*	*	*	*	*	*	*	*	*	*
SFF	FOOD PRESERVATION SETPOINT (after blast freezing cycle) <b>SETPOINT DI MANTENIMENTO/CONSERVAZIONE DOPO CICLO DI CONGELAMENTO.</b>	°C/°F	-22	0	0	*	*	*	0	*	0	*	*	*
PScF	EVAPORATOR POSITIVE SETPOINT (in case of cell probe failure). In case of cell probe failure the temperature control turn to the evaporator probe in according to this setpoint (available for positive food preservation only) <b>SETPOINT POSITIVO EVAPORATORE PER GUASTO SONDA CELLA</b> Nel caso di guasto sonda cella il controllo viene fatto sulla temperatura evaporatore con setpoint definito dal parametro (vale solo in conservazione/mantenimento positivo).	°C/°F	2	*	*	*	*	*	*	*	*	*	*	*
nScF	EVAPORATOR NEGATIVE SETPOINT (in case of cell probe failure). In case of cell probe failure the temperature control turn to the evaporator probe in according to this setpoint (available for negative food preservation only). <b>SETPOINT NEGATIVO EVAPORATORE PER GUASTO SONDA CELLA</b> Nel caso di guasto sonda cella il controllo viene fatto sulla temperatura evaporatore con setpoint definito dal parametro (vale solo in conservazione/mantenimento negativo).	°C/°F	-26	*	*	*	*	*	*	*	*	*	*	*
<b>ALARMS</b>														
LAC	ΔT FOR LOW TEMPERATURE ALARM (in cell). ΔT linked to the food preservation setpoint: below the temperature "setpoint-ΔT" the alarm is turned on, until the temperature rise to "setpoint+(par.)Afd" (available for food preservation only) <b>ΔT PER ALLARME BASSA TEMPERATURA CELLA.</b> ΔT relativo al set di conservazione del ciclo selezionato, sotto il quale, viene generato un allarme di bassa temperatura. Questo allarme permane fino a che la temperatura non sale oltre questo set point piu' un differenziale (par. Afd). Vale solo in conservazione/mantenimento	°C/°F	5	*	*	*	*	*	*	*	*	*	*	*

Param.	Description	Unit	*Default	A	B	C	D	E	F	G	H	I	L	M
HAC	<p>ΔT FOR HIGH TEMPERATURE ALARM (in cell). ΔT linked to the food preservation setpoint: over the temperature "setpoint+ΔT" the alarm is turned on, until the temperature fall down to "setpoint-(par.)Afd" (available for food preservation only)</p> <p><b>ΔT PER ALLARME ALTA TEMPERATURA CELLA.</b> DT relativo al set di conservazione del ciclo selezionato, sopra il quale, viene generato un allarme di alta temperatura. Questo allarme permane fino a che la temperatura non scende sotto questo set point meno un differenziale (par. Afd). Vale solo in conservazione/mantenimento.</p>	°C/F	5	*	*	*	*	*	*	*	*	*	*	*
Afd	<p>DIFFERENTIAL FOR HIGH/LOW ALARM TEMPERATURE.It is used to reset an alarm temperature, if this condition is satisfy:</p> <p><b>DIFFERENZIALE ALLARME BASSA/ALTA TEMPERATURA</b> Differenziale per regolare l'allarme di alta/bassa temperatura cella.</p>	°C/F	1	*	*	*	*	*	*	*	*	*	*	*
Ady	<p>DELAY FOR HIGH/LOW ALARM TEMPERATURE (not available during blast chilling or freezing cycles).</p> <p><b>RITARDO ALLARME ALTA/BASSA TEMPERATURA</b> (non vale durante gli abbattimenti).</p>	MIN	60	*	*	*	*	*	*	*	*	*	*	*
Aor	<p>ALARM DELAY AFTER POWER ON (not available during blast chilling or freezing cycles).</p> <p><b>RITARDO ALLARME DOPO POWER ON</b> (non vale durante gli abbattimenti).</p>	HOUR	1	*	*	*	*	*	*	*	*	*	*	*
dFO	<p>ALARM BYPASS AFTER DEFROSTING.It represents the time, after a defrost cycle, when the LAC and HAC are disabled</p> <p><b>TEMPO PER RITARDO ALLARMI DOPO SBRINAMENTO.</b> Rappresenta l'intervallo di tempo successivo alla fase di sbrinamento nel quale gli allarmi di alta/bassa temperatura cella sono esclusi.</p>	MIN	35	*	*	*	*	*	*	*	*	*	*	*
PFt	<p>POWER FAILURE MAXIMUM TIME.It represents the maximum time for a power failure during a blast chilling or freezing cycle, after that an alarm will start blinking on the display.</p> <p><b>DURATA MASSIMA DI POWER FAILURE.</b> Indica il tempo massimo di durata di power failure durante un ciclo di abbattimento. Una mancanza di tensione superiore causerà la segnalazione a display dell'allarme relativo.</p>	MIN	10	*	*	*	*	*	*	*	*	*	*	*
CdIF	<p>TYPE OF TEMPERATURE NOTIFICATION FOR ALARMS:d=differential; A=absolute</p> <p><b>MODO DI RILEVARE LE TEMPERATURE PER GLI ALLARMI:</b>d=differenziale; A=assoluto.</p>	FLAG	D	*	*	*	*	*	*	*	*	*	*	*
LTE	<p>LOWER TEMPERATURE EVAPORATOR ALARM SETPOINT.</p> <p><b>ALLARME DI BASSA TEMPERATURA NELL'EVAPORATORE.</b></p>	°C/F	-42	-30	-30	-46	-46	-46	-30	-46	-30	-46	-46	-46
HTC	<p>HIGHER TEMPERATURE CONDENSER ALARM SETPOINT.</p> <p><b>ALLARME DI ALTA TEMPERATURA NEL CONDENSATORE.</b></p>	°C/F	70	*	*	*	*	*	*	*	*	*	*	*
<b>COMPRESSOR</b>														
CdP	<p>DELAY BETWEEN (COMPRESSOR) POWER-ON.</p> <p><b>TEMPO RITARDO TRA LE ACCENSIONI DEL COMPRESSORE.</b></p>	MIN	0	2	2	2	2	2	2	2	2	2	2	2
Pat	<p>MAXIMUM TIME FOR PRESSOSTAT ACTIVATION.represents the maximum time of pressostat activation, after that the cycle will be stopped. It is necessary to disarm the pressostat to start again a cycle.</p> <p><b>TEMPO MASSIMO DI INTERVENTO PRESSOSTATO.</b> Rappresenta la durata massima di attivazione del pressostato durante un ciclo, oltre il quale si ha il blocco del ciclo in corso. Il ripristino è automatico ed un nuovo ciclo potrà essere lanciato alla successiva disattivazione dell'ingresso pressostato.</p>	MIN	30	*	*	*	*	*	*	*	*	*	*	*
PAL	<p>MAXIMUM NUMBER OF PRESSOSTAT ACTIVATION.It represents the maximum number of pressostat activation, during a cycle, after that the cycle will be stopped. It is necessary to disarm the pressostat to start again a cycle</p> <p><b>MASSIMO NUMERO DI INTERVENTI PRESSOSTATO.</b> Rappresenta il massimo numero di attivazioni del pressostato durante l'attivazione di un ciclo oltre il quale si ha il blocco del ciclo in corso.</p>	INT	10	*	*	*	25	*	*	*	*	*	*	25
Cpt	<p>TERMISTORS PROTECTION FOR COMPRESSOR</p> <p><b>PROTEZIONE A TERMISTORI DEL COMPRESSORE.</b></p>	FLAG	N	*	*	*	*	*	*	Y	Y	Y	*	*
CIS	<p>COMPRESSOR STARTUP WITH IMPULSES (after inactivity time bigger then par. coFt).</p> <p><b>AVVIAMENTO AD IMPULSI PER IL COMPRESSORE</b> (dopo tempo di inattività maggiore di coFt).</p>	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
coFt	<p>MAXIMUM TIME FOR COMPRESSOR OFF.</p> <p><b>MASSIMO TEMPO DI INATTIVITA COMPRESSEORE.</b></p>	HOUR	24	*	8	*	*	8	8	8	8	8	*	*
cnCy	<p>NUMBER OF IMPULSES (ON/OFF) AT COMPRESSOR STURTUP.</p> <p><b>NUMERO DI CICLI (ON/OFF) ALL'ACCENSIONE DEL COMPRESSORE.</b></p>	INT	3	8	8	8	8	8	8	8	8	8	8	8

Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
cton	ON TIME (IMPULSE CYCLES STURTUP). <b>PERIODO ON NEL CICLO AD IMPULSI</b>	10"	<b>5</b>	*	*	*	*	*	*	*	*	*	*	*
Ctof	OFF TIME (IMPULSE CYCLES STURTUP). <b>PERIODO OFF NEL CICLO AD IMPULSI</b>	10"	<b>50</b>	*	80	*	*	80	80	80	80	80	*	*
dtMP	TEMPERATURE FOR COMPRESSOR CHECK.DT evaporator for compressor check. <b>TEMPERATURA PER IL CONTROLLO COMPRESSORE.DTevaporatore per controllo durante il funzionamento del compressore.</b>	°C/°F	<b>1</b>	*	*	*	*	*	*	*	*	*	*	*
dtIM	TIME FOR COMPRESSOR CHECK. <b>TEMPO PER IL CONTROLLO COMPRESSORE</b>	MIN	<b>0</b>	*	*	*	*	*	*	*	*	*	*	*
<b>GERMICIDAL LIGHT</b>														
SLd	ON TIME (FOR GERMICIDAL LIGHT). <b>TEMPO ATTIVAZIONE LAMPADA GERMICIDA</b>	MIN	<b>10</b>	*	*	*	*	*	*	*	*	*	*	*
SLt	MINIMUM CELL TEMPERATURE NECESSARY FOR GERMICIDAL LIGHT ON. <b>TEMPERATURA MINIMA IN CELLA PER MANTENERE ATTIVA LA LAMPADA GERMICIDA.</b>	°C/°F	<b>15</b>	*	*	*	*	*	*	*	*	*	*	*
OdS	GERMICIDAL LIGHT ACTIVATION (if cell probe is faulty) <b>LAMPADA GERMICIDA ATTIVA (se sonda cella guasta).</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	*
EStc	GERMICIDAL LIGHT PRESENCE. <b>PRESENZA LAMPADA GERMICIDA.</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	*
<b>FOOD-PROBE</b>														
Dsr	DELAY TIME BEFORE SELECTION (of cycle type: time or food-probe). <b>TEMPO CHE DELIMITA LA FASE DI SCELTA DEL TIPO DI REGOLAZIONE(a tempo, o a spillone).</b>	SEC	<b>30</b>	*	*	*	*	*	*	*	*	*	*	*
DPS	ΔT FOR DETECTING IF FOOD-PROBE IS (OR NOT) INTO THE FOOD. <b>AT PER IL CONTROLLO DELLA SONDA SPILLONE INSERITA NELL'ALIMENTO (OPPURE NO).</b>	°C/°F	<b>10</b>	*	*	*	*	*	*	*	*	*	*	*
FPht	ENDURANCE TIME FOR FOOD PROBE WORM-UP. <b>DURATA PRERISCALDAMENTO SPILLONE</b>	SEC	<b>20</b>	*	*	*	*	*	*	*	*	*	*	*
nFP	NUMBER OF FOOD PROBE. <b>NUMERO SPILLONI</b>	INT	<b>1</b>	3	3	3	3	3	3	3	3	3	3	3
EhFP	WORMED-UP FOOD PROBE. <b>PRESenza SPILLONE RISCALDATo.</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	*
EFPPh	ENABLE THE MANAGING OF HACCP ALARMS FOR EACH FOOD-PROBES. <b>GESTIONE ALLARMi HACCP SEPARATA PER OGNI SPILLONE.</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	*
<b>DOOR FRAME HEATER</b>														
dFt	DOOR FRAME HEATER IS ON IF (Cell.T-Amb.T) IS ≤ dFt. <b>RESISTENZA CORNICE PORTA E' ATTIVA SE (T.Cell.-T.Amb.)≤ dFt.</b>	°C/F	<b>-30</b>	*	*	*	*	*	*	*	*	*	*	*
<b>DEFROST</b>														
dcs	DEFROST INTERVAL TYPE (abS: by counting the turn on time of the appliance; HCP: by counting the real time of compressor on) <b>DEFROST INTERVAL TYPE</b> (abS: by counting the turn on time of the appliance; HCP: by counting the real time of compressor on)	FLAG	<b>ABs</b>	*	*	*	*	*	*	*	*	*	*	*
dlo	DISPLAY READ-OUT:0=displays the temperature read by the cold cell sensor;1=displays the temperature read by the cold cell sensor at the defrosting start;2=display "dEFr". <b>VISUALIZZAZIONE DURANTE LO SBRINAMENTO:</b> 0=visualizza la temperatura letta dalla sonda cella;1=visualizza il valore di temperatura all'inizio dello sbrinamento;2=visualizza "dEFr"	FLAG	<b>2</b>	*	*	*	*	*	*	*	*	*	*	*
dty	DEFROST TYPE .EL=electric defrost; in=hot gas;Air=free <b>TIPO DI SBRINAMENTO.</b> EL=con resistenza elettrica;IN=gas caldo;Air= ad aria	FLAG	<b>in</b>	Air	Air	*	*	EL	Air	EL	Air	EL	*	*
din	DEFROST INTERVAL TIME. <b>INTERVALLO FRA DUE SBRINAMENTI SUCCESSIVI.</b>	HOUR	<b>8</b>	6	6	*	*	*	6	*	6	*	*	*
dSt	DEFROST STOP TEMPERATURE. <b>TEMPERATURA DI FINE SBRINAMENTO</b>	°C/F	<b>7</b>	*	*	*	*	4	*	4	*	4	*	*
dto	DEFROST ENDURANCE TIME. <b>TEMPO CICLO SBRINAMENTO.</b>	MIN	<b>25</b>	30	30	15	15	30	30	30	30	30	15	15
IdSt	DEFROST STOP TEMPERATURE (at start). <b>TEMPERATURA DI FINE SBRINAMENTO INIZIALE.</b>	°C/F	<b>7</b>	*	*	*	*	*	*	*	*	*	*	*

Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
ldto	DEFROST ENDURANCE TIME (at start). <b>TEMPO CICLO SBRINAMENTO (INIZIALE).</b>	MIN	5	*	*	*	*	*	*	*	*	*	*	*
ctld	CELL TEMPERATURE FOR DEFROST (at start).In BCF (freezer) models it represents the cell temperature for selecting the defrost type: below this temperature the defrost type is according to "dty", otherwise it is by air.  <b>TEMPERATURA CELLA SBRINAMENTO INIZIALE.</b> Nella versione BCF (freezer) il parametro definisce la soglia di temperatura cella al sotto della quale lo sbrinamento iniziale è del tipo definito da "dty", altrimenti lo sbrinamento è ad aria.	°C/°F	5	*	*	*	*	-30	*	-30	*	-30	*	*
FSt	FAN STOP TEMPERATURE.It represents the evaporator temperature over that the evaporator fan is stopped.  <b>TEMPERATURA BLOCCO VENTOLE.</b> Rappresenta il valore di temperatura dell'evaporatore sopra il quale il ventilatore dell'evaporatore è fermo.	°C/°F	20	*	60	*	*	60	60	60	60	60	*	*
drt	DRAINAGE TIME (dripping time). <b>TEMPO DI SGOCCIOLAMENTO</b>	MIN	2	0	0	*	0	5	0	5	0	5	*	*
drFd	FAN DELAY AFTER DRAINAGE TIME. <b>TEMPO RITARDO VENTOLE DOPO SGOCCIOLAMENTO.</b>	MIN	1	0	0	*	0	*	0	*	0	*	*	*
odto	CELL FAN ENDURANCE TIME (with door open).  <b>TEMPO CICLO ATTIVAZIONE VENTOLE CELLA (con porta aperta)</b>	MIN	10	*	*	*	*	*	*	*	*	*	*	*
EdSc	DEFROST BEFORE FOOD-PRESERVATION CYCLE.It allows to enable/disable a defrost cycle before a food-preservation (after any blast chilling/freezing cycle).  <b>SBRINAMENTO PRIMA DELL'INIZIO DELLA CONSERVAZIONE</b> Permette di abilitare/disabilitare lo sbrinamento all'inizio della conservazione dopo ogni ciclo di abbattimento.	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
iddl	DEFROST DELAY TIME BEFORE FOOD-PRESERVATION.It sets the delay time to start a defrost cycle after any blast chilling/freezing cycle.  <b>RITARDO ATTIVAZIONE SBRINAMENTO INIZIO CONSERVAZIONE</b> Definisce dopo quanto tempo dalla fine abbattimento parte lo sbrinamento	MIN	20	*	*	*	*	*	*	*	*	*	*	*
dfen	DEFROST DURING FREEZING CYCLE.;If evap.T = dfet then:cell.T. - evap.T. < dfdt → DEFROST or cell.T. - evap.T. > dfdt → NO DEFROSTING  <b>ABILITA LO SBRINAMENTO DURANTE CICLO CONGELAMENTO;</b> Se Temperatura_evaporatore = dfet allora : Temperatura_cell- Temperatura_evaporatore < dfdt → SBRINAMENTO ;Temperatura_cell - Temperatura_evaporatore > dfdt → NO SBRINAMENTO	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
dfet	EVAPORATOR TEMPERATURE TO START DEFROST (during freezing cycle).  <b>TEMPERATURA EVAPORATORE DA VERIFICARE PER ATTIVARE LO SBRINAMENTO</b> (durante un ciclo di congelamento).	°C/°F	-5	*	*	*	*	*	*	*	*	*	*	*
dfdt	DT (CELL-EVAPORATOR) TO START DEFROST (during freezing cycle).  <b>DT (CELLA-EVAPORATORE) PER ATTIVARE LO SBRINAMENTO</b> (durante un ciclo di congelamento).	°C/°F	0	*	*	*	*	*	*	*	*	*	*	*
cdSt	DEFROST STOP TEMPERATURE (during freezing cycle).  <b>TEMPERATURA DI FINE SBRINAMENTO</b> (durante un ciclo di congelam.)	°C/°F	5	*	*	*	*	*	*	*	*	*	*	*
cdto	DEFROST ENDURANCE TIME (during freezing cycle).  <b>TEMPO CICLO SBRINAMENTO</b> (durante un ciclo di congelamento).	MIN	8	*	*	*	*	*	*	*	*	*	*	*
dbY	DEFROST BYPASS DURING PREP CYCLE.  <b>BYPASS DEFROST DURANTE LA FASE DI PREP</b>	FLAG	N	*	*	Y	Y	Y	*	Y	*	Y	Y	Y

#### DOOR CONTROL

Odt	ALARM DELAY FOR DOOR OPEN.  <b>RITARDO ALLARME PER PORTA APERTA</b>	MIN	5	*	*	*	*	*	*	*	*	*	*	*
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#### BUZZER

bCCy	BUZZER SETTING FOR RIGHT CHILLING/FREEZING CYCLE.  <b>MODALITA BUZZER PER FINE CICLO ABBATTIMENTO CORRETTO</b>	FLAG	BBL	*	*	*	*	*	*	*	*	*	*	*
bFCy	BUZZER SETTING FOR WRONG CHILLING/FREEZING CYCLE.  <b>MODALITA BUZZER PER FINE CICLO ABBATTIMENTO ERRATO</b>	FLAG	BBL	*	*	*	*	*	*	*	*	*	*	*
bAll	BUZZER SETTING FOR GENERIC ALARM.  <b>MODALITA BUZZER PER ALLARME GENERICO</b>	FLAG	BBL	*	*	*	*	*	*	*	*	*	*	*

#### CUSTOM NORMATIVE

CCEt	END TEMPERATURE FOR CHILLING CYCLE.  <b>LIMITE TEMPERATURA DI FINE ABBATTIMENTO POSITIVO.</b>	°C/°F	10	*	*	*	*	*	*	*	*	*	*	*
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Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
<b>CCtl</b>	END TIME FOR CHILLING CYCLE. <b>LIMITE TEMPO DI FINE ABBATTIMENTO POSITIVO.</b>	MIN	<b>110</b>	*	*	*	*	*	*	*	*	*	*	*
<b>CFEt</b>	END TEMPERATURE FOR FREEZING CYCLE. <b>LIMITE TEMPERATURA DI FINE ABBATTIMENTO NEGATIVO.</b>	°C/F	<b>-18</b>	*	*	*	*	*	*	*	*	*	*	*
<b>CFtl</b>	END TIME FOR FREEZING CYCLE. <b>LIMITE TEMPO DI FINE ABBATTIMENTO NEGATIVO.</b>	MIN	<b>270</b>	*	*	*	*	*	*	*	*	*	*	*
<b>CbSt</b>	STARTING TEMPERATURE FOR CHILLING/FREEZING CYCLE. <b>TEMPERATURA INIZIO ABBATTIMENTO.</b>	°C/F	<b>63</b>	*	*	*	*	*	*	*	*	*	*	*
<b>TURBO COOLING AND ICE CREAM</b>														
<b>SnLP</b>	LOWER SETPOINT (TURBO COOLING cycle). <b>MINIMO SETPOINT IMPOSTABILE PER TURBO COOLING.</b>	°C/F	<b>-20</b>	*	*	-41	-41	-41	*	-41	*	-41	-41	-41
<b>SnHP</b>	HIGHER SETPOINT (TURBO COOLING cycle). <b>MASSIMO SETPOINT IMPOSTABILE PER TURBO COOLING</b>	°C/F	<b>3</b>	*	*	*	*	*	*	*	*	*	*	*
<b>SECI</b>	FOOD PRESERVATION and FOOD-PROBE SETPOINT (ICE P1 CYCLE). <b>SETPOINT SPILLONE E MANTENIMENTO PER CICLO ICE P1.</b>	°C/F	<b>-14</b>	*	*	*	*	*	*	*	*	*	*	*
<b>LSPI</b>	FOOD PRESERVATION and FOOD-PROBE LOWER SETPOINT (ICE P1 CYCLE). <b>MINIMO SETPOINT IMPOSTABILE SPILLONE E MANTENIMENTO CICLO ICE P1</b>	°C/F	<b>-20</b>	*	*	-25	-25	-25	*	-25	*	-25	-25	-25
<b>HSPI</b>	FOOD PRESERVATION and FOOD-PROBE HIGHER SETPOINT (ICE P1 CYCLE). <b>MASSIMO SETPOINT IMPOSTABILE SPILLONE E MANTENIMENTO CICLO ICE P1</b>	°C/F	<b>-7</b>	*	*	*	*	*	*	*	*	*	*	*
<b>btOI</b>	END TIME FOR ICE P1 CYCLE. <b>LIMITE TEMPO DI FINE CICLO ICE P1</b>	MIN	<b>360</b>	*	*	*	*	*	*	*	*	*	*	*
<b>CdSt</b>	DEFROST STOP TEMPERATURE (ICE P1 CYCLE). <b>TEMPERATURA DI FINE SBRINAMENTO CICLO ICE P1.</b>	°C/F	<b>7</b>	*	*	-50	-50	-50	*	-50	*	-50	-50	-50
<b>Cdto</b>	DEFROST TIME-OUT (ICE P1 CYCLE). <b>TIME-OUT SBRINAMENTO CICLO ICE P1.</b>	MIN	<b>25</b>	8	8	8	8	8	8	8	8	8	8	8
<b>ESdF</b>	ENABLE PROGRAMMED or BEFORE PRESERVATION DEFROST CYCLE (ICE P1 CYCLE). <b>SBRINAMENTI INIZIO CONSERVAZIONE/PERIODICI CICLO ICE P1</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	*
<b>ECdF</b>	ENABLE PROGRAMMED DEFROST CYCLE (ICE P2 CYCLE). <b>SBRINAMENTI PERIODICI CICLO ICE P2</b>	FLAG	<b>N</b>	Y	Y	*	*	*	Y	*	Y	*	*	*
<b>Sdin</b>	DEFROST INTERVAL TIME (TURBO COOLING CYCLE). <b>INTERVALLO DI SBRINAMENTO DURANTE TURBO COOLING.</b>	HOUR	<b>2</b>	*	*	*	*	*	*	*	*	*	*	*
<b>EICE</b>	ENABLE ICE P1 AND P2 CYCLES. <b>ABILITAZIONE CICLI ICE P1 E P2.</b>	FLAG	<b>N</b>	*	*	*	*	*	*	*	*	*	*	Y
<b>Idsr</b>	DELAY TIME BEFORE SELECTION (of cycle type: time or food-probe). ICE P1 CYCLE. TEMPO CHE DELIMITA LA FASE DI SCELTA DEL TIPO DI REGOLAZIONE (a tempo, o a spillone). DURANTE CICLO ICE P1	SEC	<b>360</b>	*	*	*	*	*	*	*	*	*	*	*
<b>IdPS</b>	DT FOR DETECTING IF FOOD-PROBE IS (OR NOT) INTO THE FOOD. ICE P1 CYCLE. DT PER IL CONTROLLO DELLA SONDA SPILLONE INSERITA NELL'ALIMENTO (OPPURE NO).DURANTE CICLO ICE P1.	°C/F	<b>4</b>	*	*	*	*	*	*	*	*	*	*	*
<b>IBLP</b>	LOWER SETPOINT (ICE P1 CYCLE). <b>MINIMO SETPOINT IMPOSTABILE PER CICLO ICE P1</b>	°C/F	<b>-20</b>	*	*	-41	-41	-41	*	-41	*	-41	-41	-41
<b>IBHP</b>	HIGHER SETPOINT (ICE P1 CYCLE). <b>MASSIMO SETPOINT IMPOSTABILE PER CICLO ICE P1</b>	°C/F	<b>3</b>	*	*	*	*	*	*	*	*	*	*	*
<b>MISCELLANEOUS</b>														
<b>Fre</b>	VOLTAGE FREQUENCY. <b>FREQUENZA TENSIONE ALIMENTAZIONE</b>	°C/F	<b>50</b>	\	\	\	\	\	\	\	\	\	\	\
<b>ACFG</b>	APPLIANCE CONFIGURATION: A= ELECTROLUX; B=ZANUSSI. <b>CONFIGURAZIONE MACCHINA:</b> A=ELECTROLUX; B=ZANUSSI.	FLAG	<b>A</b>	*	*	*	*	*	*	*	*	*	*	*
<b>BT</b>	APPLIANCE CONFIGURATION: A= ELECTROLUX; B=ZANUSSI. <b>CONFIGURAZIONE MACCHINA:</b> A=ELECTROLUX; B=ZANUSSI.	FLAG	<b>Y</b>	N	N	*	*	*	N	*	N	*	*	*
<b>Dro</b>	MODEL IDENTIFICATION: Y=negative model; N=positive model. IDENTIFICAZIONE MODELLO POSITIVO O NEGATIVO:Y= versione BT; N=versione TN.	INT	<b>C</b>	*	*	*	*	*	*	*	*	*	*	*
<b>CAL</b>	CELL PROBE CALIBRATION. <b>CALIBRAZIONE SONDA CELLA</b>	°C/F	<b>-2</b>	0	0	0	0	0	0	0	0	0	0	0

Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
<b>CALF</b>	FOOD-PROBE CALIBRATION. <b>CALIBRAZIONE SONDA SPILLONE.</b>	°C/°F	-1	*	*	*	*	*	*	*	*	*	*	*
<b>TCND</b>	CONDENSER PROBE.(*)TCND=N must be set for all remote appliances. <b>SONDA CONDENSATORE.(*) TCND=N per tutte le apparecchiature in versione remota.</b>	FLAG	Y	*	N	*	*	N	N	N	N	N	*	*
<b>dLEV</b>	SOLENOID VALVE ON TIME SETTING (before compressor ON). <b>REGOLAZIONE ELETTROVALVOLA.</b>	SEC	0	*	*	*	*	*	30	30	30	30	*	*
<b>rCFG</b>	REMOTE ALARM OUTPUT:0=service alarms, only;1=end cycle, only;2=service alarms and end cycle. <b>REGOLAZIONE USCITA ALLARME REMOTO:</b> 0=segnalazione allarmi di servizio1=segnalazione di fine abbattimento2=segnalazione di allarmi di servizio e fine abbattimento	INT	2	*	*	*	*	*	*	*	*	*	*	*
<b>DIR</b>	DISPLAY RESOLUTION:INT=full number; HAL=decimal number with resolution 0.5°C/°F. <b>RISOLUZIONE DISPLAY:</b> INT=solo numeri interi; HAL=numeri decimali con risoluzione 0.5°C/°F.	FLAG	int	*	*	*	*	*	*	*	*	*	*	*
<b>Efd</b>	STOP CELL FAN DELAY (after defrost at start).It represents the delay time where the cell fan isn't turned on with the compressor, after the defrost at start. <b>RITARDO BLOCCO VENTILATORE CELLA</b> (dopo lo sbrinamento iniziale).Rappresenta il tempo in cui il ventilatore cella non è agganciato al compressore dopo lo sbrinamento iniziale.	MIN	1	0	0	*	*	*	*	0	*	*	*	*
<b>dtMt</b>	DT EVAPORATOR TEMPERATURE TO STOP EVAPORATOR FAN. <b>DT TEMPERATURA PER IL CONTROLLO VENTOLE EVAPORATORE.</b>	°C/°F	25	*	*	*	*	*	*	*	*	*	*	*
<b>dMMt</b>	MAXIMUM TIME TO STOP THE EVAPORATOR FAN. <b>TEMPO PER IL CONTROLLO VENTOLE EVAPORATORE.</b>	MIN	60	*	*	*	*	*	*	*	*	*	*	*
<b>dMt</b>	DELAY TIME FOR EVAPORATOR FAN. <b>RITARDO PER IL CONTROLLO VENTOLE EVAPORATORE.</b>	MIN	40	*	*	*	*	*	*	*	*	*	*	*
<b>tPrA</b>	PRINTING MODE DURING CHILLING/FREEZING CYCLE (0=start and stop temperatures, only). <b>INTERVALLO DI STAMPA IN ABBATTIMENTO</b> (0=solo le temperature all'inizio e alla fine ciclo)	MIN	5	*	*	*	*	*	*	*	*	*	*	*
<b>tPrC</b>	PRINTING MODE DURING FOOD-PRESERVATION (0=no print). <b>INTERVALLO DI STAMPA IN MANTENIMENTO/CONSERVAZIONE</b> (0=nessuna stampa).	MIN	30	*	*	*	*	*	*	*	*	*	*	*
<b>PALL</b>	PRINTING PROBE TEMPERATURE.Blast chilling/freezing cycle: Y=all probes temperatures; N= cell and max food-probe temperatures. Food preservation: Y=all probes temperatures (NO food-probe); N=cell temperature,only. <b>ABILITA STAMPA TEMPERATURE SONDE</b> Ciclo di abbattimento: Y=stampa completa delle temperature di tutte le sonde e spilloni; N=stampa solo le temperature di cella e massimo spillone. Conservazione/mantenimento: Y=stampa completa delle temperature di tutte le sonde; N=stampa della sola temperatura in cella.	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
<b>PrnL</b>	PRINTING LANGUAGE <b>CONFIGURAZIONE LINGUA DI STAMPA</b>	INT	Gb	*	*	*	*	*	*	*	*	*	*	*
<b>Adr</b>	NETWORK ADDRESS. <b>INDIRIZZO DI RETE</b>	HEX	01	*	*	*	*	*	*	*	*	*	*	*
<b>E485</b>	EXTERNAL CONNECTION:Prn=printer via TTL; PC=Personal Computer via RS485. <b>CONNESSIONI ESTERNE</b> :Prn=stampante via TTL; PC=Personal Computer via RS485.	FLAG	PC	*	*	*	*	*	*	*	*	*	*	*
<b>PrtY</b>	SERIAL CONFIGURATION:0=none (8 bits data); 1=software (9 bits data). <b>CONFIGURAZIONE PARITA' SERIALE</b> 0= nessuna parità (dati a 8 bits); 1= parità software (dati a 9 bits).	FLAG	0	*	*	*	*	*	*	*	*	*	*	*
<b>ELOG</b>	ENABLE EEPROM LOG. <b>ABILITA EEPROM LOG.</b>	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
<b>LENG</b>	LENGTHWISE (Y) CROSSWISE (N)	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
<b>nOr</b>	REFERENCE NORMATIVE (NF, UK, Custom). <b>NORMATIVA DI RIFERIMENTO (NF, UK, Personalizzata).</b>	INT	UK	*	*	*	*	*	*	*	*	*	*	*
<b>MOdE</b>	APPLIANCE CONFIGURATION <b>CONFIGURAZIONE MODALITA' APPARECCHIATURA</b>	FLAG	STD	*	*	*	*	*	*	*	*	*	*	*
<b>dCCH</b>	CHECKING TEMPERATURE DURING TEST MODE CYCLE <b>TEMPERATURA PER IL CONTROLLO CICLO DURANTE IL TEST</b>	°C/°F	5	*	*	*	*	*	*	*	*	*	*	*

Param.	Description	Unit	* Default	A	B	C	D	E	F	G	H	I	L	M
tCCH	CHECKING TIME DURING TEST MODE TEMPO PER IL CONTROLLO CICLO DURANTE IL TEST	MIN	10	*	*	*	*	*	*	*	*	*	*	*
ddCH	CHECKING TEMPERATURE DURING TEST MODE CYCLE TEMPERATURA PER IL CONTROLLO CICLO DURANTE IL TEST	°C/°F	2	*	*	*	*	*	*	*	*	*	*	*
tdCH	CHECKING TIME DURING DEFROST ON TEST MODE CYCLE TEMPO PER IL CONTROLLO SBRINAMENTO DURANTE IL TEST	MIN	5	*	*	*	*	*	*	*	*	*	*	*
Enor	ENABLE NORMS LED	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
ACt	ENABLE ACTIVE VERSION	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
ELEd	ENABLE p1/p2 BLINKING LED	FLAG	Y	*	*	*	*	*	*	*	*	*	*	*
Ch1	ENABLE CHECK-IN n.1 ABILITAZIONE TAGLIANDO 1	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
Ch2	ENABLE CHECK-IN n.2 ABILITAZIONE TAGLIANDO 2	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
Ch3	ENABLE CHECK-IN n.3 ABILITAZIONE TAGLIANDO 3	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
Ch4	ENABLE CHECK-IN n.4 ABILITAZIONE TAGLIANDO 4	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
Ch5	ENABLE CHECK-IN n.5 ABILITAZIONE TAGLIANDO 5	FLAG	N	*	*	*	*	*	*	*	*	*	*	*
hCh1	WORKING DAYS BEFORE CHECK-IN n.1 GIORNI DI FUNZIONAMENTO PER TAGLIANDO 1	INT	200	*	*	*	*	*	*	*	*	*	*	*
hCh2	WORKING DAYS BEFORE CHECK-IN n.2 GIORNI DI FUNZIONAMENTO PER TAGLIANDO 2	INT	400	*	*	*	*	*	*	*	*	*	*	*
hCh3	WORKING DAYS BEFORE CHECK-IN n.3 GIORNI DI FUNZIONAMENTO PER TAGLIANDO 3	INT	600	*	*	*	*	*	*	*	*	*	*	*
hCh4	WORKING DAYS BEFORE CHECK-IN n.4 GIORNI DI FUNZIONAMENTO PER TAGLIANDO 4	INT	800	*	*	*	*	*	*	*	*	*	*	*
hCh5	WORKING DAYS BEFORE CHECK-IN n.5 GIORNI DI FUNZIONAMENTO PER TAGLIANDO 5	INT	1000	*	*	*	*	*	*	*	*	*	*	*
REL	RELEASE. VERSIONE FIRMWARE (SOLA LETTURA).	INT	U	U	U	U	U	U	U	U	U	U	U	U

U

# Remote cooling unit information

What you must know to respect a correct  
installation



*Thinking of you*

 **Electrolux**

# Water condensing remote cooling unit

*Thinking of you*

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- 880032 – (UW50TN) - WATER REMOTE UNIT BLAST CHILLER LW 50Kg
- 880033 – (UW50BT) - WATER REMOTE UNIT BLAST C/FREEZER LW 50KG
- 880058 – (UW70LW) - WATER REMOTE UNIT CHILLER+C/FREEZER 70KG
- 880034 – (UW100TN) - WATER REMOTE UNIT BLAST CHILLER CW 100KG
- 880035 – (UW100BT) - WATER REMOTE UNIT BLAST C/FREEZER CW 100KG
- 880052 – (UW180NF) - WATER REMOTE UNIT CHILLER+C/FREEZER 180KG

# Water condensing remote cooling unit

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	Compressor	Refrigerant Power (W)*	Power consumption (W)*	Motor fan power cons. (W)	MAX Ampere	Water In-Out pipe (inch)	Liquid line (mm)	Gas line (mm)
880032	<b>H 280 CC</b>	<b>5950</b>	<b>3170</b>	--	<b>7,1</b>	<b>½"- ½"</b>	<b>18</b>	<b>12</b>
880033	<b>H 290 CS</b>	<b>6910</b>	<b>3800</b>	--	<b>7,3</b>	<b>½"- ½"</b>	<b>22</b>	<b>12</b>
880058	<b>H 390 CS</b>	<b>9320</b>	<b>4970</b>	<b>2x130</b>	<b>10,8</b>	<b>¾"- ¾"</b>	<b>28</b>	<b>16</b>
880034	<b>H 503 CC</b>	<b>12160</b>	<b>6000</b>	--	<b>17</b>	<b>¾"- ¾"</b>	<b>28</b>	<b>16</b>
880035	<b>H 503 CS</b>	<b>13930</b>	<b>6900</b>	--	<b>17</b>	<b>¾"- ¾"</b>	<b>35</b>	<b>16</b>
880052	<b>H 750 CS</b>	<b>20200</b>	<b>8880</b>	--	<b>17</b>	<b>¾"- ¾"</b>	<b>35</b>	<b>16</b>

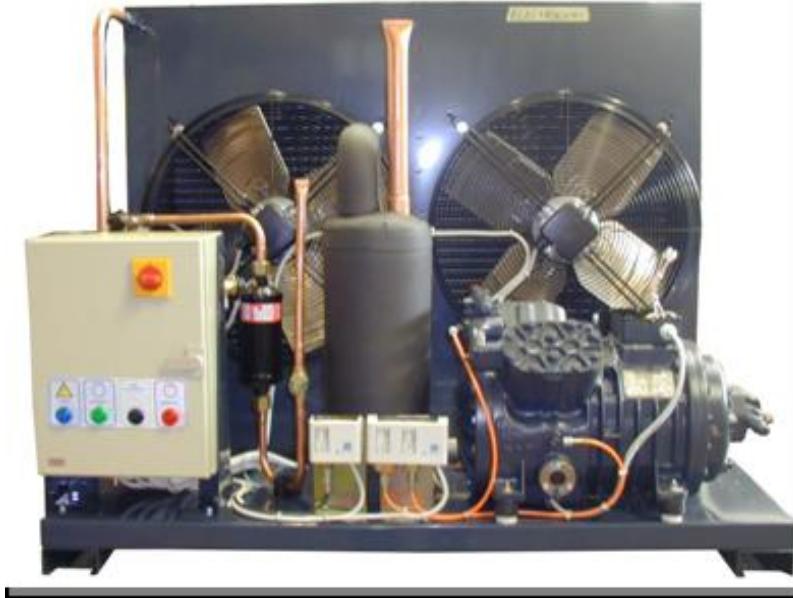
▪ Maximum water temperature 32°C

▪ (\*) AT @32°C, ET @-10°C, CT @+45°C; gas R404a;

# Air condensing remote cooling unit

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- 880029 - AIR REMOTE UNIT BLAST CHILLER LW 50KG
- 880030 - AIR REMOTE UNIT BLAST C/FREEZER LW 50KG
- 880057 - AIR REMOTE UNIT CHILLER+C/FREEZER 70KG
- 880031 - AIR REMOTE UNIT CHILLER+C/FREEZER CW 100KG
- 880051 - AIR REMOTE UNIT CHILLER+C/FREEZER 180KG
- 881015 - AIR REMOTE UNIT BC+BCF 180KG 2X20 GN1/1

# Air condensing remote cooling unit

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	Compressor	Refrigerant Power (W)*	Power consumption (W)*	Motor fan power cons. (W)	MAX Ampere	Liquid line (mm)	Gas line (mm)
880029	H 280 CC	5950	3170	2x185	9,1	18	12
880030	H 300 CC	6910	3470	2x185	11,4	22	12
880057	H 390 CS	9320	4970	2x185	11,4	28	16
880031	H 503 CS	13930	6900	2x330	20,4	35	16
880051	H 750 CS	20200	8880	2x330	20,4	35	16
881015	H 1000 CS	26880	12270	--	30	35	16

▪ (\*) AT @32°C, ET @-10°C, CT @+45°C; gas type R404a

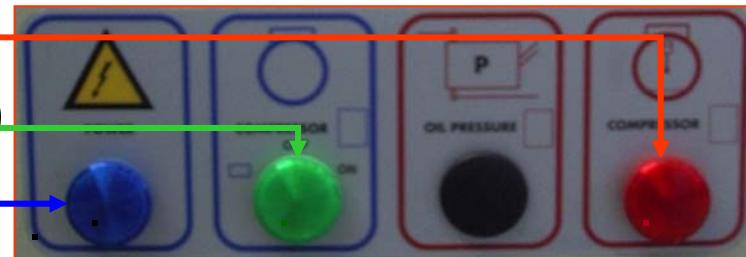
# Standard components in the unit

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- Electric box
- Pressostat (compressor and motor ventilator)
- Light alarm (red)
- Light for on/off compressor(green)
- Light for power supply (Blue)
- Tank of liquid
- Liquid indicator
- Deidrator filter
- Compressor
- Fans
- Basement

Alarm E10 –E12



Alarm E10=Pressostat  
E12=Thermic compressor



# External Environment Condition

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In the Winter Minimum -4°C



In the summer max 40°C



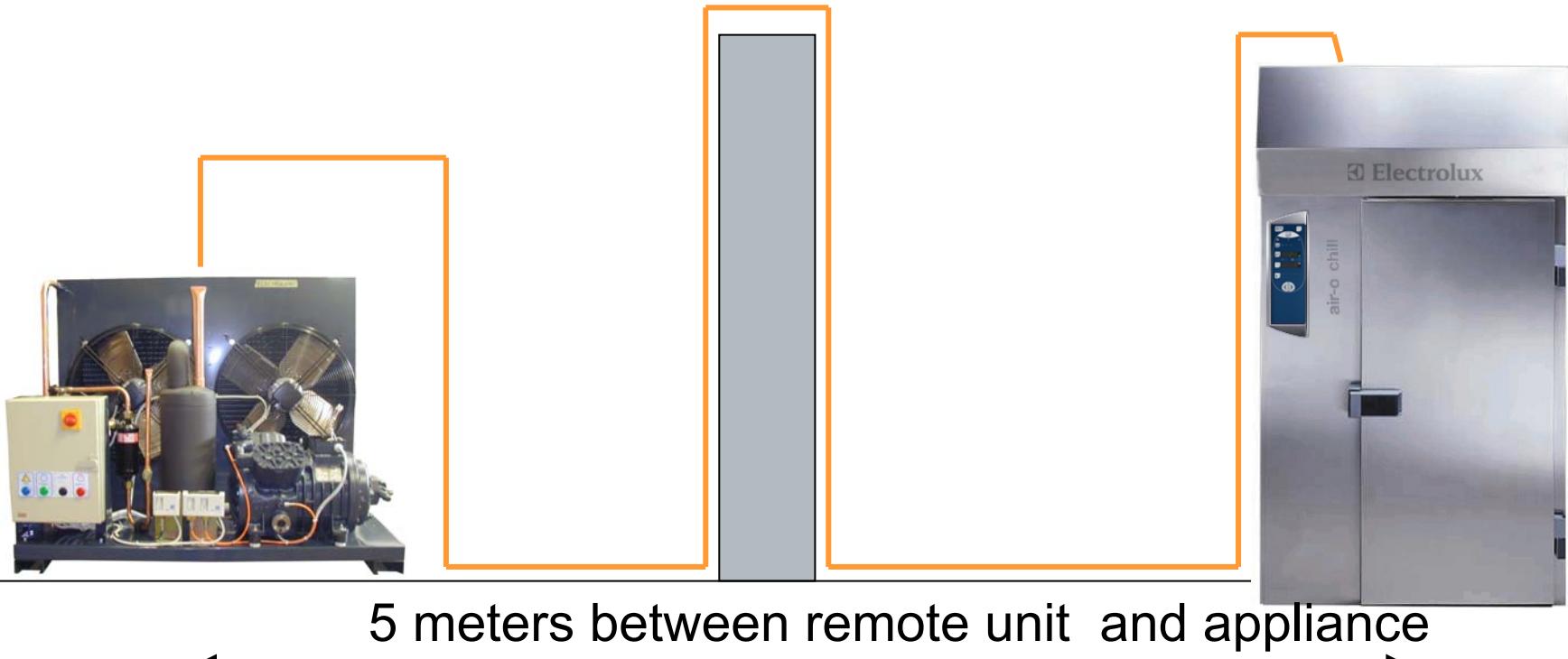
For lower or higher temperatures contact the Customer Support  
for an exact order with added functions

# Max pipe length

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**30 METERS LENGTH OF THE PIPES! BAD PERFORMANCE**

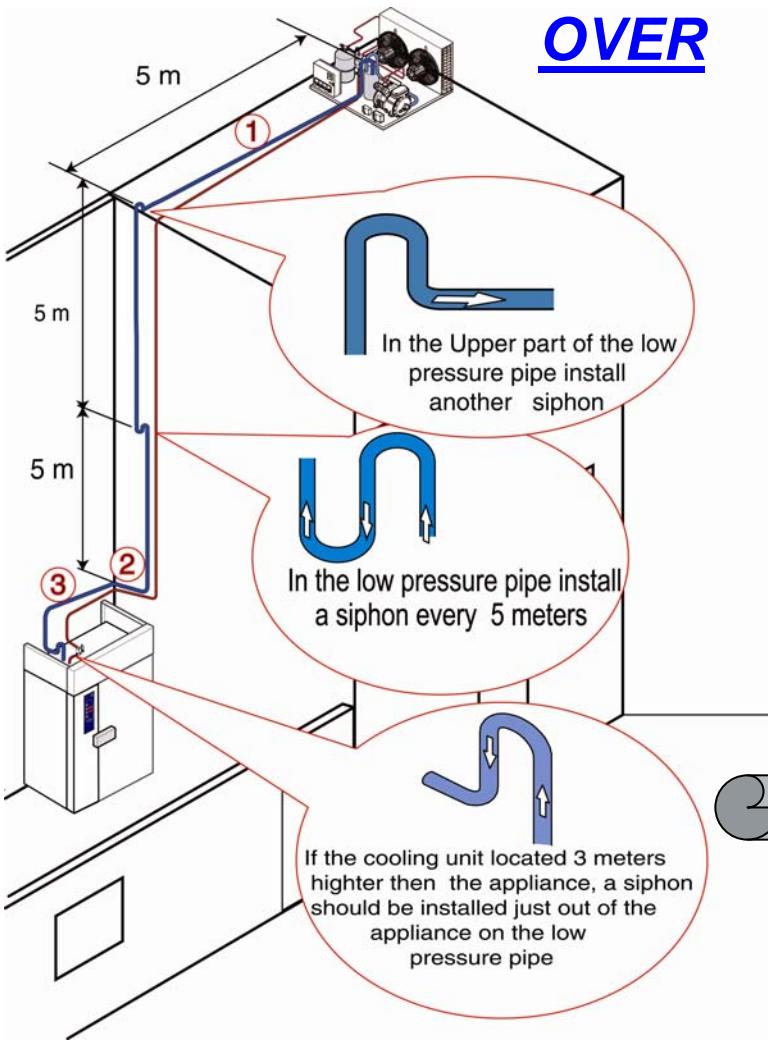


The performance of the remote cooling unit is guaranteed for lenght of pipes of max 15-18 meters, over these lenght you must contact the Costumer Support for a correct order OF REMOTE UNIT

# EXAMPLE OF INSTALLATION

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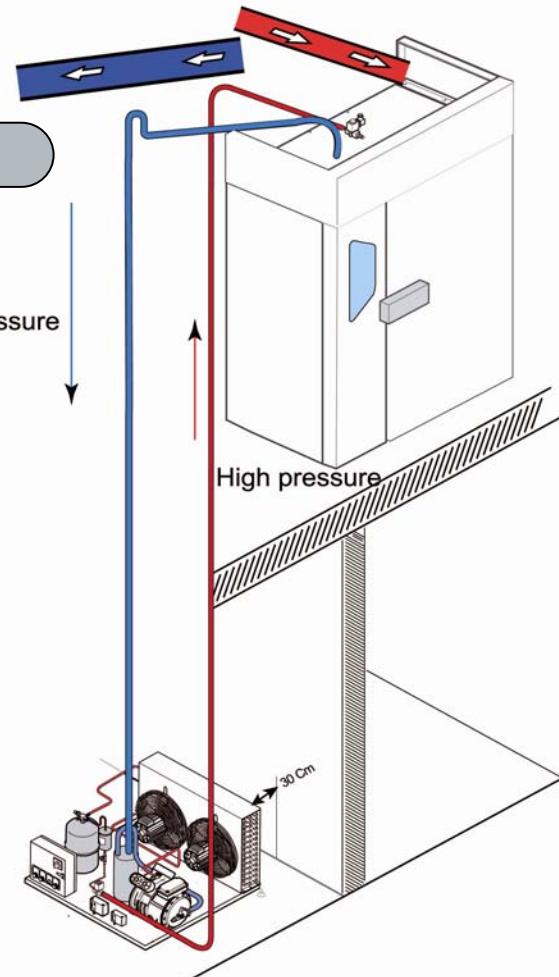
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OVER

**ALWAYS  
RESPECT  
THE MAX  
LENGTH OF  
PIPES OF  
15-18  
METERS**

To respect the inclination of 12mm/M



UNDER

\$\$\$

# What is important to provide for a correct installation

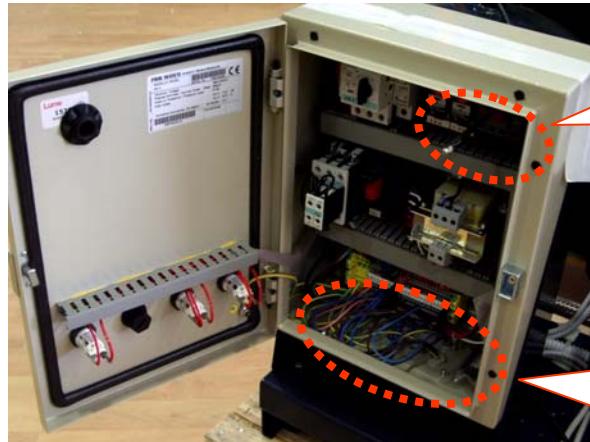


1. Forsee a coverage for external installation
2. a good ventilation in case of internal installation and respect a minimum distance to the wall (*at least 45-50 cm*)
3. Respect the inclination of pipes (*12mm every meter*)
4. Respect the lenght of pipes (*max 15/18 meters*)
5. Respect the siphon every 5 meters in height (*low pressure side*)
6. Respect the pipe diameter starting from the remote cooling unit till to appliance.
7. Respect the correct installation of the solenoid valve (*in the new release of main board it must be installed near the evaporator to avoid that liquid goes back to the compressor*)
8. *Respect the suggested environment temperature (- 4°/40°C or ask a special code)*

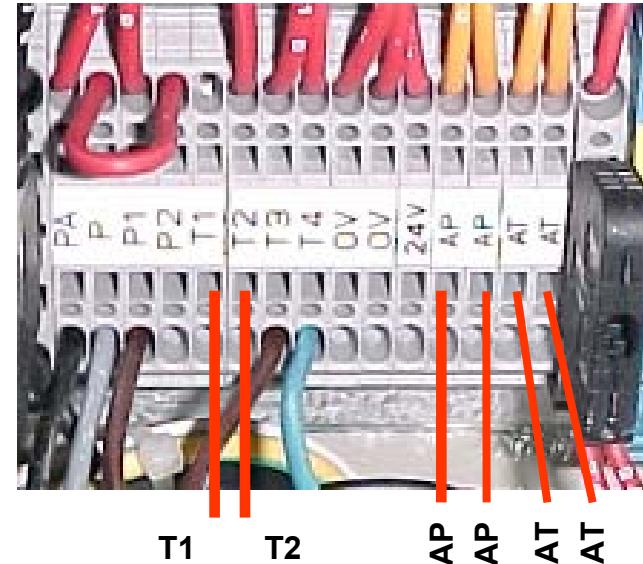
# Electrical connection

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Find the terminals  
inside the electrical box



# Where you must connect in the electrical box.

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1. Predispose a cable with **six** conductors ( $\varnothing 1,5 \text{ mm}$ ) to connect the remote unit to appliance.
2. Connect the cables in the clamps following the indication of the electrical wiring diagram on the remote unit (i.e. T1-T2 -AT-AT-AP-AP)
3. Connect the power supply (380-400 V separately to appliance) in the clamp of the remote cooling unit on N-R-S-T(check the Amps by cable)

# Evacuating the lines and charging with refrigerant gas



## Leakage test

Wash the inlet and delivery pipes with pressurised dry nitrogen;  
Connect a nitrogen cylinder to the high and low pressure connectors, making sure to also install a pressure gauge (using a "T" union), and charge the high and low pressure lines with gas to a pressure of approximately 15 bar (217.5 psi);  
Close the cylinder cock and, after at least 1 hour, check that the pressure has not dropped below the previous reading level;

## Vacuum

Empty the circuit manually by opening the cocks on the unions;  
Connect the pipes to a vacuum pump (preferably a twostage model with vacuum gauge and high and low pressure connectors);  
Reach a vacuum level equal to or lower than 70mTorr (0,0931 mbar / 0.00135 psig).  
On reaching this vacuum level, maintain it for at least 30 minutes;  
Charge the unit as follows:

# Evacuating the lines and charging with refrigerant gas



## Refrigerant charging

Charge the high and low pressure lines with liquid refrigerant for R404A until the pressure between the cylinders and the circuit is balanced  
(the initial charge of fluid is approximately 20÷30% the total charge);

Shut off the high pressure line, start the compressor and charge with gas slowly until the bubbles in the fluid indicator disappear;

# ELECTROLUX

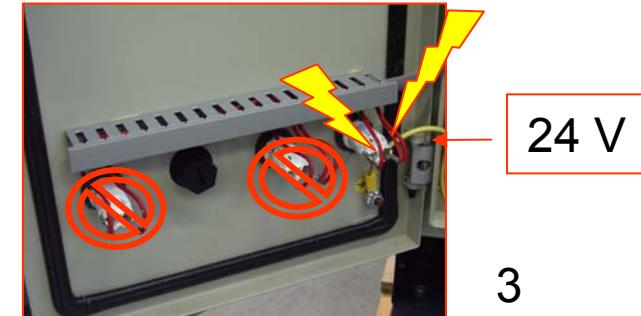
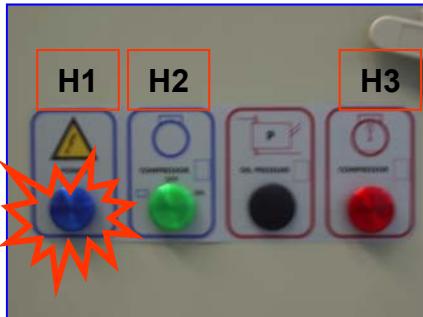
- ALL THESE TEST MUST BE MAKE FROM PROFESSIONAL PEOPLE
- The manufacturer declines any liability for operations carried out on the equipment without following the instructions given in this manual.

# Chek list in case of the alarm E11 between Blast chiller/frezeer and remote cooling unit

## 1.1 Alarm E11 : compressor thermic protection alarm

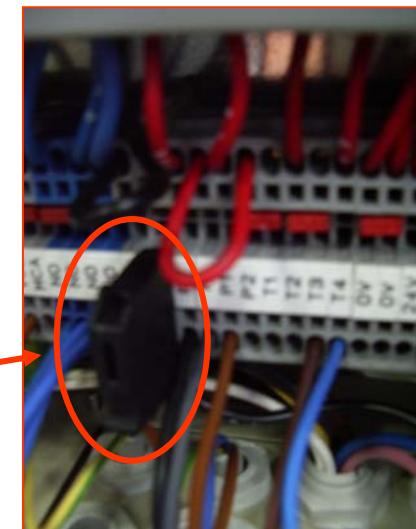
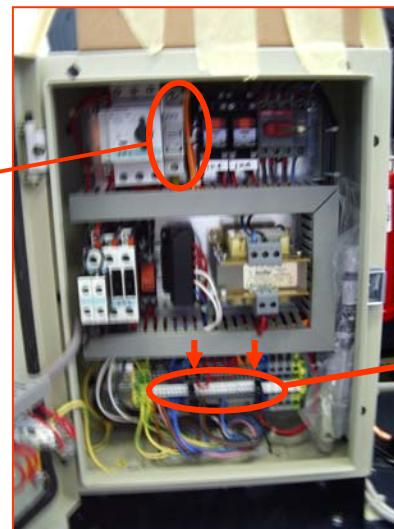
Electric wiring closes between AT & AT in the terminal board (as electric wiring diagram)

1. Open the electric box and turn on the swicth 11Q1(picture 3)
2. Check the power supply (24) in the **Blue light** (H1)in the box of the remote cooling unit



## 1.2 Without power suppy on (**H1 blue light**)or blue light wicthed off in the electric box:

1. Check the power supply 380V on internal electric box (11Q1)
2. Check the fuses in the electric box

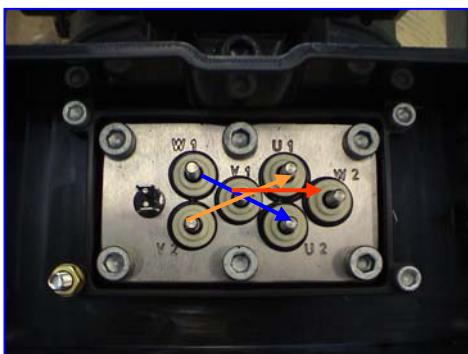


### 1.3 With lights blue and red on (H1)-(H3):

- 1.. Check the thermic protection of the compressor on position 1(1Q1)
2. Check the calibration of the thermic protection according to the data plate of the compressor



3. If the thermic protection (1Q1) does stay in the position 1, check the winding of the compressor between **W1 & U2** –**V2 & U1** –**V1 & W2** with digital multimeter and in case of infinity or 0 value change the compressor.([picture1 without connection](#))
- Check the power supply (24) between **A1** and **A2** of the coil **1K5** with digital multimeter as electric wiring diagram of the cooling unit ([picture 2](#))
5. With power supply (24 V) between **A1** and **A2** of the coil **1K5** check the electric wiring **T12-T11** of the **Krivan**.([picture 3](#))
6. If the electric wiring **T12-T11** are closed, probably the thermic protection of the compressor (krivan) is connected wait until the temperature of the compressor returned in the normally way.
6. If the electric wiring **14-11** are closed and in the coil **1K5** there is no power supply,change the relay **1k5**. ([picture 2](#))



Pic.1



Pic.2

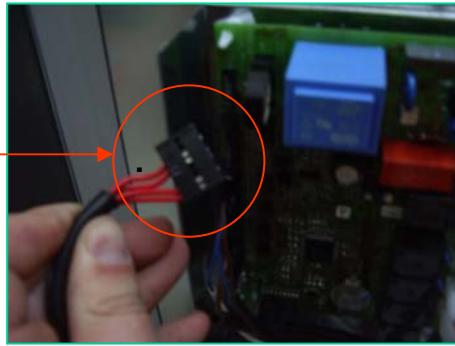


Pic.3

7. If the compressor has a normal temperature and the electric wirings in the krivan **T11-T12** are closed with coil **1K5** without power supply , **change the krivan**.

## 1.4 With (H1) blue light on and red light (H3) off in the remote cooling unit and there is still alarm blinking E11 in the main board :

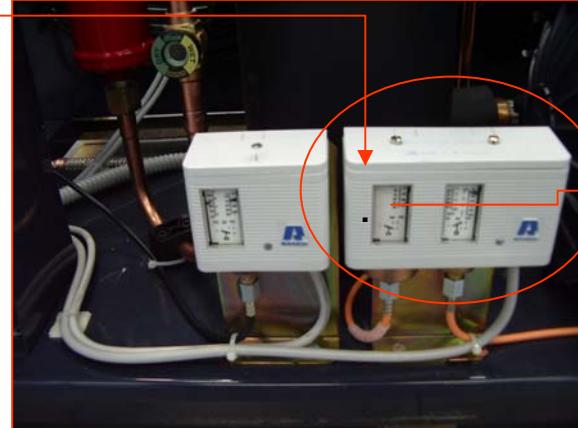
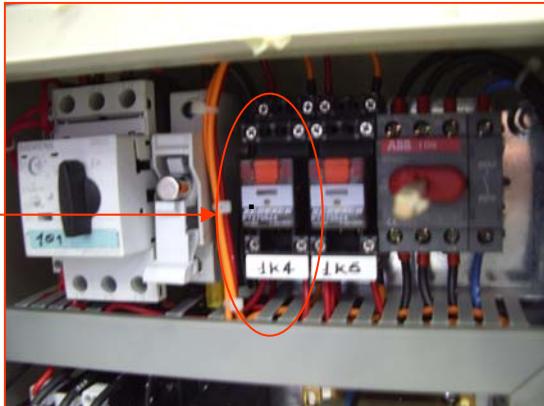
1. Check electric wiring in the main board J6 (disconected and clean and reconnect)
2. If the electric wirings on J6 are clean and there is still the alarm blinking, change the main board.



## Allarm E10 (alarm Pressostat compressor) :

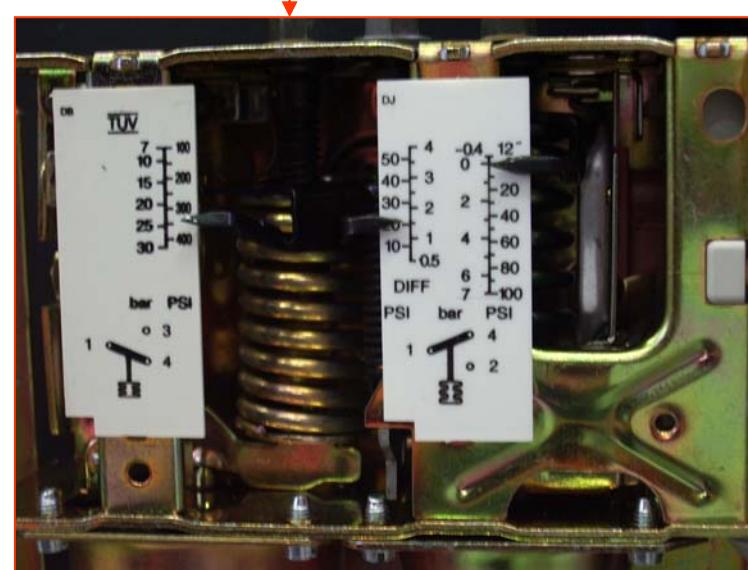
Electric wirings closes between AP & AP in the terminal board (as electric wiring diagram)

1. Check as 1.1 -1.2 1.3/3 from page 1
2. Check the supply (24V) between A1 and A2 of the coil 1K4 with digital multimeter as electric wiring diagram (picture 1)
3. With power supply (24) in the coil 1k4 check the electric wiring 1-4 in the pressostat .(picture2)



## 1.5 If the electric wirings **1- 4** are open the double pressostat is activated verify the following point :

- Check the condenser motor ventilator (start or no)
  - Check the solenoid valve (start or no)
  - Check the charge of GAS
  - Check the calibration of the pressostat, in case change it or change the pressostat.
1. If the electric wirings **1- 4** are closed with power supply in the coil **1K4**, change the relay **1K4** (picture page 3 alarm E10)
  2. If there is still the alarm **E10** follow the points described in page 3 point 1.4



Identification: E22-23  
**Technical Bulletin:** **VTX2011-07**  
 Date: **02 NOVEMBER 2011**  
 Issuer: Lorenzo Giusti – TDS  
 Factory: VTX - Refrigeration - Pordenone



<b>Subject</b>	<b>NEW FIRMWARE</b>
<b>Model</b>	<b>Blast chiller and freezer CW - LW previous and currently</b>
<b>PNC</b>	<b>All (in and out of production)</b>
<b>Modified</b>	<b>New main board release</b>
<b>Action in Field</b>	<ol style="list-style-type: none"> <li>1. Identify the membrane present of the unit.</li> <li>2. Set the main board following combinations of the button.</li> <li>3. Set the parameters with the parameter list in the web site.</li> </ol>
<b>Action in Factory</b>	<b>Change the main board with new firmware 1.72 ahead</b>

The spare parts code 093158, replace all previous spare parts code as: 099911-090018-090019-088344-099177-099160-091330-092521-092214-092765-092854-OTTD58.

Together with main board you will find the instructions that could help you to set the correct parameters as old or new unit, CW or LW, with or without Cruise, with or without turbo cooling.

When you have identified the correct membrane, as showed in following pages, that is present in the unit where has been installed the new main board, you must set the main board, reading the instruction attached;

# Electrolux

## 1.0 LW Sticker control identifications

### Versions without Cruise



#### 1.1 Configuration without Cruise button:

- EN) **If the main boards upper shown are present, modify the following parameters :**



- Keep pressed the button  while switching ON 
- Enter the factory setting and modify the parameters under mentioned:

OLdU = y

ACFG = A

LENG = Y

**SET ALL THE OTHER PARAMETERS FOLLOWING THE PARAMETERS LIST, PRESENT IN WEB PAGE, ACCORDING TO THE PNC OF THE UNITS. THE PARAMETERS, THAT ARE NOT PRESENT ON THE PARAMETERS LIST IN THE WEB PAGE, MUST BE SET, FOLLOWING THE TAB 6.1 AT PAG. 6/7.**

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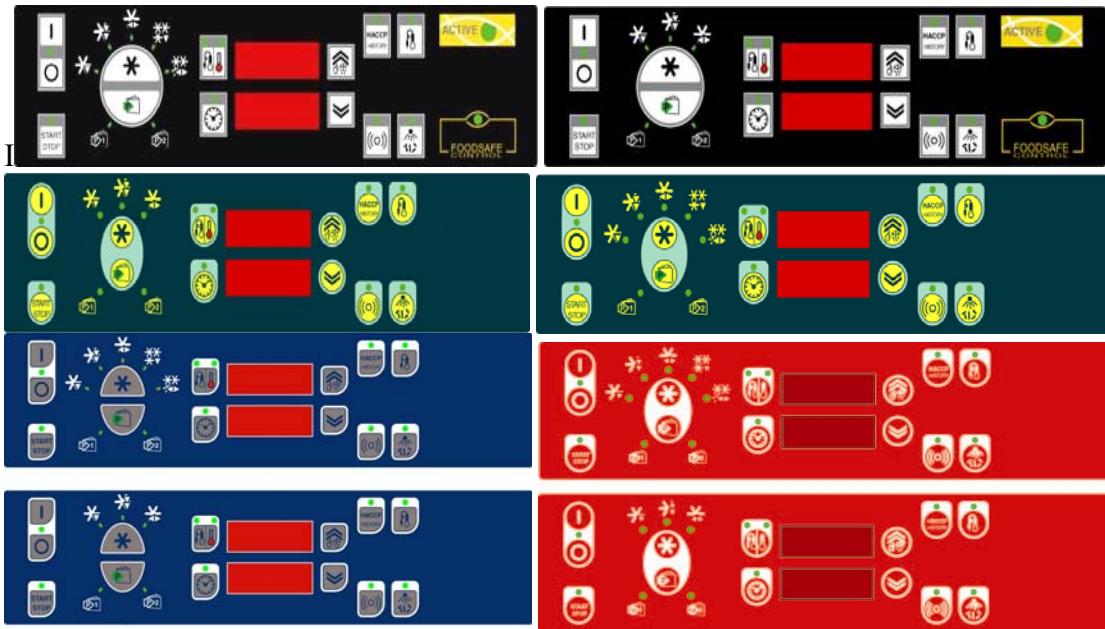
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# Electrolux 2.0 CW Membrane identifications

Version of the User Interface without turbocooling CW



## 2.1 Configuration CW without c \*

- *If the main boards upper shown are present, modify the following parameters :*



- *Keep pressed the button  while switching ON *
- *Enter the Factory setting and modify the parameter under mentioned:*

**OLdU = y**

**ACFG = B**

**LENG = n**

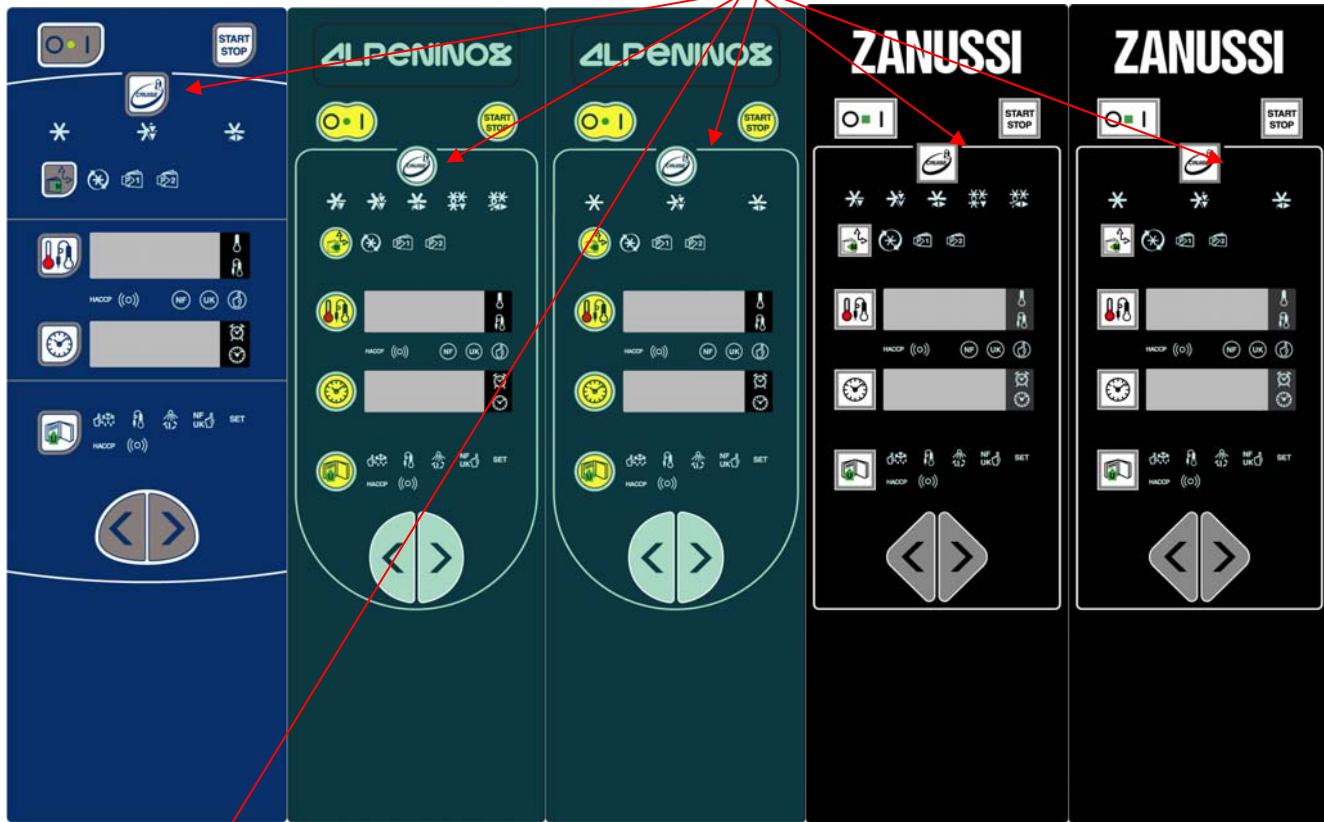
**SET ALL THE OTHER PARAMETERS FOLLOWING THE PARAMETERS LIST, PRESENT IN WEB PAGE, ACCORDING TO THE PNC OF THE UNITS.**

**THE PARAMETERS, THAT ARE NOT PRESENT ON THE PARAMETERS LIST IN THE WEB PAGE, MUST BE SET, FOLLOWING THE TAB 6.1 AT PAG, 6/7.**

# Electrolux

## 3.0 LW Sticker control identifications

Versions *with Cruise* control LW



### 3.1 Configuration *with Cruise button* :

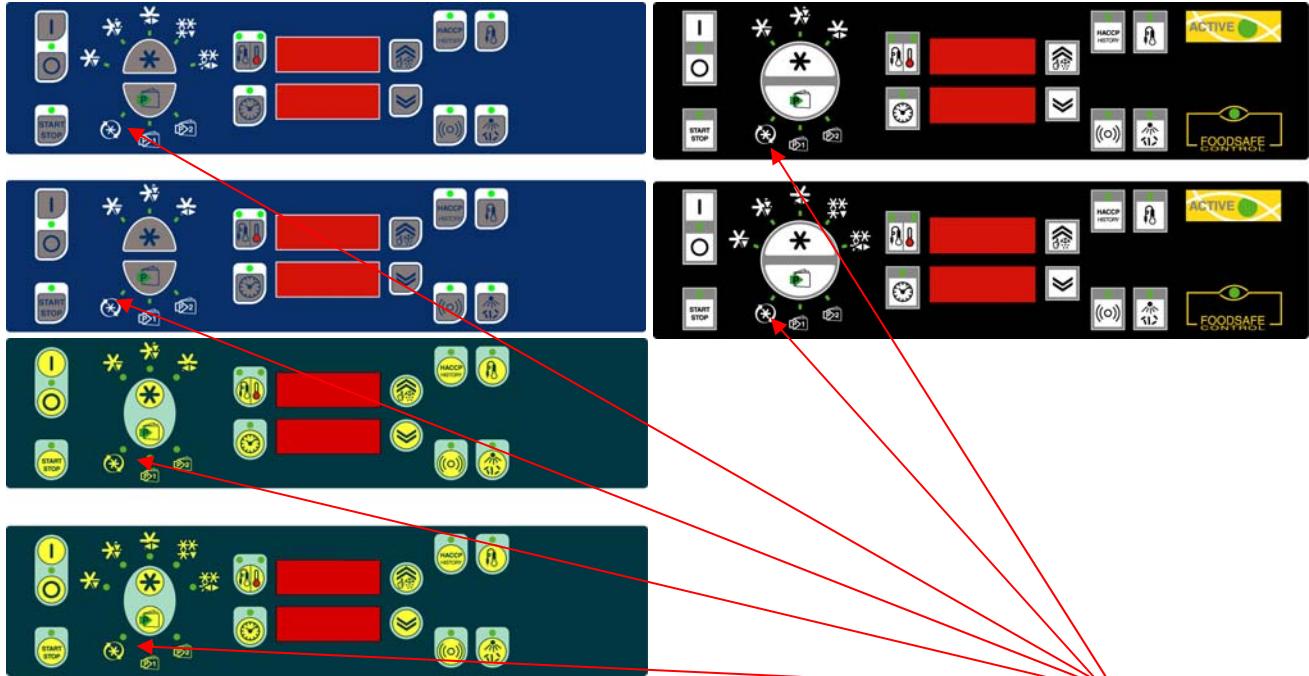
- EN) *If the main boards upper shown are present, modify the following parameters :*
- Keep pressed the button  while switching ON 
- Enter the factory setting and modify the parameters under mentioned:

OLdU = N  
ACFG = A  
LENG = Y

**SET ALL THE OTHER PARAMETERS FOLLOWING THE PARAMETERS LIST, PRESENT IN WEB PAGE, ACCORDING TO THE PNC OF THE UNITS.**

# Electrolux 4.0 CW Membrane identifications

Version of the User Interface with Turbocooling  CW



## 4.1 Configuration CW with Turbocooling :

- *If the main boards upper shown are present, modify the following parameters :*



- *Keep pressed the button *
- *Enter the Factory setting and modifyy the parameter under mentioned:*

**OLdU = n**

**ACFG = B**

**LENG = n**

**SET ALL THE OTHERS PARAMETERS FOLLOWING THE PARAMETERS LIST, PRESENT IN WEB PAGE, ACCORDING TO THE PNC OF THE UNITS.**

## 6.0 Parameters added in new release 1,72

**Tab 6.1**

N°	Par.		U.M.	Default
8	ESCC	Impostare il valore di default/ set default value	INT	0
9	tSCC	Impostare il valore di default/ set default value	°C/F	7
40	EFPPh	Impostare il valore di default/ set default value	Flag	N
63	dbY	Impostare il valore di default/ set default value	Flag	N
73	SnLP	Impostare il valore di default/ set default value	°C/F	-20
74	SnHP	Impostare il valore di default/ set default value	°C/F	3
75	SECI	Impostare il valore di default/ set default value	°C/F	-14
76	LSPI	Impostare il valore di default/ set default value	°C/F	-20
77	HSPI	Impostare il valore di default/ set default value	°C/F	-7
78	btOI	Impostare il valore di default/ set default value	MIN	360
79	CdSt	Impostare il valore di default/ set default value	°C/F	7
80	Cdto	Impostare il valore di default/ set default value	MIN	25
81	ESdF	Impostare il valore di default/ set default value	Flag	N
82	ECdF	Impostare il valore di default/ set default value	Flag	N
83	Sdin	Impostare il valore di default/ set default value	HOUR	2
84	Idsr	Impostare il valore di default/ set default value	SEC	360
85	IdPS	Impostare il valore di default/ set default value	°C/F	4
86	IBLP	Impostare il valore di default/ set default value	°C/F	-20
87	IBHP	Impostare il valore di default/ set default value	°C/F	3
88	ACFG	Gia impostato automaticamente/ Already setted automatically	A/B	*
94	dLEV	Impostare il valore di default/ set default value	SEC	10
95	dLEC	Impostare il valore di default/ set default value	SEC	10
96	dLCC	Impostare il valore di default/ set default value	SEC	4
97	dLCM	Impostare il valore di default/ set default value	SEC	4
98	rCFG	Impostare il valore di default/ set default value	INT	2
101	dMt	Impostare il valore di default/ set default value	MIN	1
102	tPrA	Impostare il valore di default/ set default value	MIN	5
110	LENG	Gia impostato precedentemente / Already setted previously	Flag	*
111	OLdU	Gia impostato precedentemente / Already setted previously	Flag	*
112	nor	Impostare il valore di default/ set default value	INT	UK
113	MOdE	Impostare il valore di default/ set default value	INT	STD
114	dCCH	Impostare il valore di default/ set default value	°C/F	5
115	tCCH	Impostare il valore di default/ set default value	MIN	10
116	ddCH	Impostare il valore di default/ set default value	°C/F	2
117	tdCH	Impostare il valore di default/ set default value	MIN	5
118	Enor	Impostare il valore di default/ set default value	Flag	Y
119	ACt	Impostare il valore di default/ set default value	Flag	n
120	ELED	Impostare il valore di default/ set default value	Flag	Y
121	Ch 1	Impostare il valore di default/ set default value	Flag	N
122	Ch 2	Impostare il valore di default/ set default value	Flag	N
123	Ch 3	Impostare il valore di default/ set default value	Flag	N

<b>124</b>	<b>Ch 4</b>	Impostare il valore di default/ set default value	Flag	<b>N</b>
<b>125</b>	<b>Ch 5</b>	Impostare il valore di default/ set default value	Flag	<b>N</b>
<b>126</b>	<b>hCh1</b>	Impostare il valore di default/ set default value	INT	<b>200</b>
<b>127</b>	<b>hCh2</b>	Impostare il valore di default/ set default value	INT	<b>400</b>
<b>128</b>	<b>hCh3</b>	Impostare il valore di default/ set default value	INT	<b>600</b>
<b>129</b>	<b>hCh4</b>	Impostare il valore di default/ set default value	INT	<b>800</b>
<b>130</b>	<b>hCh5</b>	Impostare il valore di default/ set default value	INT	<b>1000</b>
<b>131</b>	<b>EICE</b>	Impostare il valore di default/ set default value	Flag	<b>N</b>

## 5.0 Parameters List not longer present

Tab.5.1

Par.	U.M.	Range	Default
<b>dtMP</b>	°C/°F	1..30	<b>1</b>
<b>dtIM</b>	MIN	0..30	<b>0</b>
<b>FrE</b>	INT	50 60	<b>50</b>
<b>dtMt</b>	°C/°F	50.125	<b>25</b>
<b>SEA</b>	°C/°F	50.125	<b>3</b>
<b>SEH</b>	°C/°F	50.125	<b>3</b>
<b>SEC</b>	°C/°F	50.125	<b>-18</b>
<b>dMMt</b>	MIN	1..360	<b>60</b>

# Extraordinary maintenance



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## **WARNING**

Extraordinary maintenance must be carried out by specialised personnel, provided with adequate personal protection equipment (safety shoes and gloves), tools and ancillary means, who can ask the manufacturer to supply a servicing manual.

Before carrying out any cleaning or maintenance operation, disconnect the appliance from the power supply. For details read the Electrical Connection paragraph in the handbook present on website, referring to the pnc.

Do not touch the appliance with wet hands or feet or when barefoot.

Do not remove the safety guards.

Use a ladder with suitable protection for work on appliances with high accessibility.

All scrapping operations must occur with the machine stopped and cold and the electrical power supply disconnected.

Work on the electrical equipment must only be carried out by specialised personnel, with the power supply disconnected.

During disassembly and handling of the various parts, the minimum height from the floor must be maintained.

# Extraordinary maintenance (30-50-70-100KG)



## Replacing the power cable

To replace the power cable for units **50 KG** and **70 KG**, proceed as follows:

- disconnect the power supply;
- remove the screws that hold the rear protection grid;
- remove the electrical system protection;
- replace the power cable;
- put the protections back in place;
- reconnect the power supply.

To replace the power cable for units **30 KG** and **100 KG**, proceed as follows:

- disconnect the power supply;
- remove the screws that hold the rear protection grid;
- remove the 2 screws that hold the front control panel  
(remove the lower screws). Slide the control panel up to remove it;
- still from in front of the unit, slide out the electrical system box;
- replace the power cable;
- position the electrical system box;

# Extraordinary maintenance (30-50-70-100KG)

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- move behind the chiller and extend the power cord;
- put the protection grid and the control panel back in place;
- switch the power on.

## CAUTION

Use an H07RN-F power cable (code 60245IEC66) for the permanent connection to the mains; in case of replacement, use a type having at least these characteristics.

When replacing the cable, the earth wire must be kept longer than the live and neutral wires.

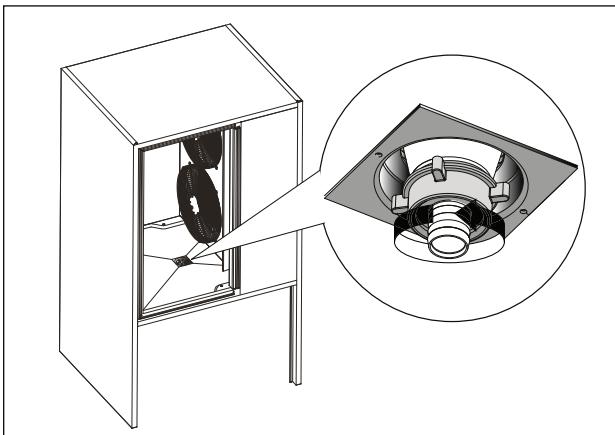
# Extraordinary maintenance (30-50-70-100KG)

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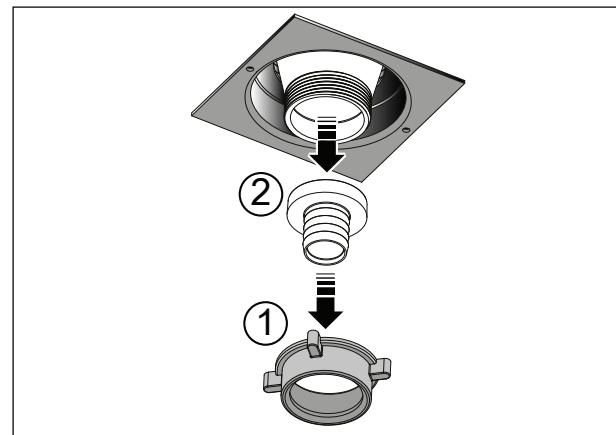
## Cleaning of the cell drain

If an extraordinary maintenance of the drain should be necessary, proceed as follows:

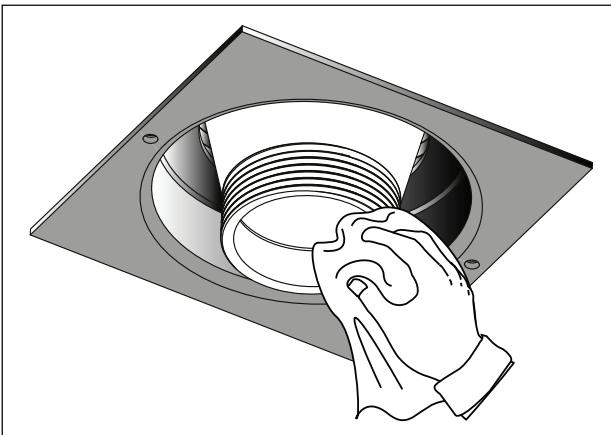
1. unscrew the nut, as shown:



2. remove the nut and unthread the rubber drain support



3. proceed with the cleaning of the drain.



# Extraordinary maintenance (120-180KG)

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## Replacing the power cable

To replace the power cable, proceed as follows:

- disconnect the power supply;
- remove the control panel;
- replace the power cable;
- refit the upper front control panel;
- reconnect the power supply.

## Replacing the power cable for models arranged for remote unit

To replace the power cable, proceed as follows:

- disconnect the power supply;
- remove the electrical system box cover located on the external roof of the appliance;
- replace the power cable;
- refit the electrical system box cover;
- reconnect the power supply.



### CAUTION

Use an H07RN-F power cable (code 60245IEC66) for the permanent connection to the mains; in case of replacement, use a type having at least these characteristics. When replacing the cable, the earth wire must be kept longer than the live and neutral wires.

# Extraordinary maintenance (120-180KG)



## Replacing the UV lamp

To replace the inside UV lamp, proceed as follows:

- disconnect the power supply;
- open the evaporator casing;
- remove the lamp protection grille;
- remove the electrical box cover;
- replace the lamp with one of the same power (see dataplate inside the evaporator casing);
- close the lamp cover, making sure to correctly refit the seal;
- fix the lamp box with grille in the original position;
- close the evaporator casing;
- reconnect the power supply;

## Replacing the uv lamp ballast

To replace the ballast, proceed as follows:

- disconnect the power supply;
- remove the control panel;
- replace the ballast;
- refit the upper front control panel;
- reconnect the power supply;

# Extraordinary maintenance (30-50-70-100-180KG)



## Cleaning the evaporator coil

The evaporator coil must be cleaned periodically to ensure efficient appliance operation. Also in this case, cleaning can be done with a brush, provided the bristles are not in iron or a material that can compromise efficient evaporator operation. Be very careful not to bend the evaporator coil fins, as this would cause a reduction in the heat exchange. Alternatively, it is advisable to use a specific product such as "SGRASS CLEANER" degreaser, sprayed directly on the part to be cleaned, left to act and rinsed off with a gentle jet of water (not pressurised). It is a non-toxic (in any case, take the due precautions during use), non-flammable degreasing product, environmentally friendly and 90% biodegradable.

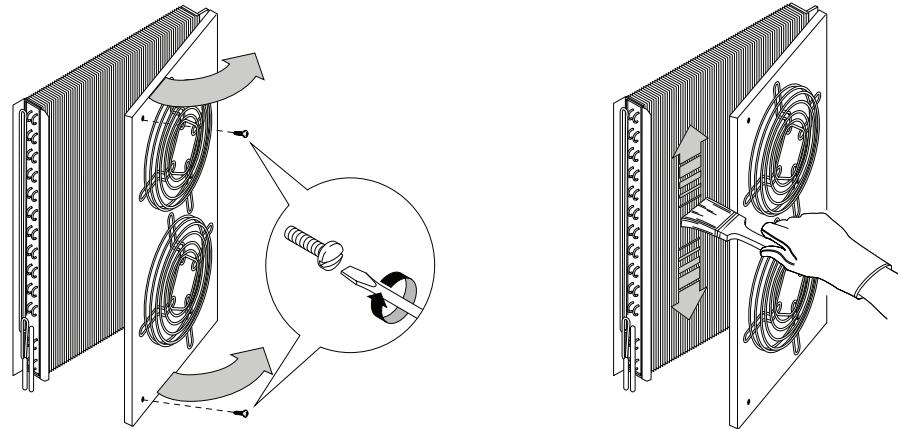
To access the evaporator coil, proceed as follows:

- disconnect the power supply;
- remove the pan trolley inside the compartment;
- remove the 4 screws (2 front and 2 rear) fixing the deflector plates to the evaporator casing;
- remove the 2 screws fixing the inner inspection casing and open it;

# Extraordinary maintenance (30-50-70-100-180KG)

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- clean the evaporator coil using a brush or a vacuum cleaner, being careful not to bend the evaporator fins;
- close the casing, refit the deflector plates and reconnect the power supply;



# Extraordinary maintenance (30-50-70-100-180KG)



## Maintenance frequency

In order to guarantee constant machine efficiency, it is advisable to carry out the checks with the frequency given in the following table:

MAINTENANCE, INSPECTIONS, CHECKS AND CLEANING	FREQUENCY
<b>Routine cleaning</b> General cleaning of machine and surrounding area	Daily
<b>Mechanical protection devices</b> Check condition, and for any deformation, loosening or removed parts.	Monthly
<b>Control</b> Check mechanical part, for any breakage or deformation, tightening of screws. Check readability and condition of words, stickers and symbols and restore if necessary.	Yearly
<b>Machine structure</b> Tightening of main bolts (screws, fixing systems, etc.) of machine.	Yearly
<b>Safety signs</b> Check readability and condition of safety signs.	Yearly
<b>Electrical control panel</b> Check electrical components installed inside the Electrical Control Panel. Check wiring between the Electrical Panel and machine parts.	Yearly
<b>Electrical connection cable and plug</b> Check connection cable (replace it if necessary) and plug.	Yearly
<b>Extraordinary machine maintenance</b> Check all components, electrical equipment, corrosion, pipes, .....	Every 10 years (*)

(\*)the machine is designed and built for a duration of about 10 years. After this period of time (from machine commissioning) the machine must undergo a general inspection and overhaul. Some examples of checks to be carried out are given below:

- check for any oxidised electrical components or parts; if necessary, replace them and restore the initial conditions;
- check the structure and welded joints in particular;
- check and replace bolts and/or screws, also checking for any loose components;
- check the electrical and electronic system;
- check the functionality of safety devices;
- check the general condition of protection devices and guards.

# Extraordinary maintenance (30-50-70-100-180KG)

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## Disassembly

If the appliance has to be disassembled and then reassembled, make sure the various parts are assembled in the correct order (if necessary mark them during disassembly).

Before disassembling the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break. Before starting disassembly:

- disconnect the power supply;
- place a sign on the Main Electrical Panel indicating that the machine is undergoing maintenance and not to carry out manoeuvres;
- enclose the work area;
- remove all the pieces (if present) in the machine;
- carry out the disassembly operations.

## Decommissioning

If the machine cannot be repaired, carry out the decommissioning operations, signalling the failure with a suitable sign.