

07/2008

Mod:BCC/10

Production code: 727100





A.1 GENERAL INFORMATION

A.1.1 FOREWORD

The purpose of this manual is to provide the necessary information for the correct installation, use, and maintenance of the appliance.

Read the instructions in the manual carefully before carrying out any operation whatsoever on the appliance, as they give important information about the standards and rules governing its installation and safe use. Periodically inform the user of standards concerning safety. It is also important to train and update staff that is authorized to use the machine on its use and maintenance.

Failure to observe the instructions in this manual when carrying out any operations on the appliance will relieve the manufacturer of all liability. No part of this manual may be reproduced, wholly or in part.

A.1.2 INTENDED USE AND LIMITATIONS

This appliance was designed for rapid refrigeration and/or freezing and conservation of foods. It rapidly lowers the temperature of cooked foods, to preserve their original qualities over time and to ensure they keep for several days. Any other use is to be considered improper.

ATTENTION: the machine is not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, etc.).

The manufacturer declines any liability for improper use of the product.

A.1.3 TESTING

Our equipment has been designed and optimised with laboratory testing in order to offer high performance and efficiency. The product is delivered ready for use.

Passing of the tests (visual inspection - electrical test - functional test) is guaranteed and certified by means of the specific enclosures.

A.1.4 GENERAL SAFETY RULES

The appliance is manufactured in compliance with European low-voltage Directives 2006/95/EEC, electrical systems to standards EN 60-335-1, EN 60-335-2-89 and electromagnetic compatibility to standards EN 55014-1; EN 61000-3-2; EN 61000-3-3; (89/336+92/31/EEC); EN 55014-2.

Validity according to the latest current regulations.

IF THE UNIT CARRIES THE MARK NF ON THE FRONT PART, IT IS COVERED BY THE RIGHT TO USE THE MARK NF HYGIENE ALIMENTAIRE. Any modifications made to the machine will nullify this right of use.

Information concerning the mark **NF HYGIENE ALIMENTAIRE**:

- certifying organisation:

AFAQ AFNOR Certification

11 avenue Francis de Pressensé

93571 Saint-Denis La Plaine

Cedex - France

- conformity with instruction **NF031**

- the main certified characteristics are:

-suitability for cleaning

-suitability for operation: refrigerating performance

ATTENTION: compliance with the NF regulation is ensured by keeping the height of the feet at or above 150 mm.

A.1.5 CUSTOMER RESPONSIBILITIES

The customer must provide an earthed electricity socket of suitable capacity for the absorption specified on the data plate.

Provide a magneto-thermal differential switch realised in compliance with current standards, and a tri-polar plug (3P+N+T).

Check that the surface on which the appliance is to be placed is level.



A.1.6 DATA PLATE POSITION

The data plate, which contains all data concerning the machine, is located on the back, equipment compartment, on the left side. The plate giving the appliance PNC code and serial number is located below the logo. At the moment of installation of the unit, check that the electrical set-up matches the information on the plate.

B.1 DESCRIPTION OF CYCLES

B.1.1 POSITIVE CHILLING

Positive chilling allows foods to be brought quickly to a temperature of +3°C.

Keep in mind that positive chilling is to be used for foods which are going to be consumed within the next few days.

There are two types of chilling:

• “SOFT” CHILLING

• “HARD” CHILLING

- “Soft” chilling is indicated for foods such as vegetables or of a reduced thickness.

- “Hard” chilling is advised for foods in large pieces.

B.1.2 NEGATIVE CHILLING OR FREEZING (freezers only)

Freezing allows foods to be stored for even longer periods (weeks or months).

Rapid freezing consists of reaching a negative temperature (-18°C) at the core as quickly as possible. In this way, at the time of defrosting, the tissues are not damaged and the appearance and nutritional value of the food remains unchanged.

With this cycle the temperature of the foods is between -20°C and -18°C after freezing.

B.1.3 HOLDING OR CONSERVATION

The conservation cycle, which means holding the product at the specified temperature so that it is not altered over time, is activated automatically at the end of chilling or freezing cycles. Conservation is continuous. Interrupting it requires intervention on the programme.

B.1.4 STERILISATION CYCLE (Function for units with germicide lamp installed)

The UV lamps have a direct germicide action for the purpose of sterilising the surfaces and the air inside the cell of the machine. This function can be used to sterilise kitchen utensils such as knives, forks, etc. (do this in two steps, turning the utensils over) and can be activated at the end of each working day. Do not use this function if the cell contains foods.



ATTENTION:

The unit is equipped with a safety device which turns the lamps off whenever the door is opened. This safety is provided because **exposure to the UV radiation emitted by the lamps is harmful and may cause damage to eyesight.**

C.1. ANALYSIS OF USER INTERFACE

C.1.1 O•1 ON/OFF SWITCH



This key indicates whether the unit is on or off. To turn it on press 1, LED O•1 and the entire interface will light up.

C.1.2 START/STOP CYCLE



This key is used to start or stop the selected cycle.

When the selected cycle is launched, it starts running immediately. Stopping it requires the button to be held down for at least three seconds.

When a cycle is started with the door closed the key will light up. It will instead flash if a cycle is in progress and the door is open.

1- In order to improve machine performance and only if required, at the start of the chilling cycle, a preparatory cycle may start. This is indicated on the temperature display by the message "PREP".

2-Also, if the chiller is not used for an extended period of time, the compressor is started in impulses in order to assure maximum efficiency.

C.1.3 SELECTION OF CYCLES



The machine's default setting is the SOFT chilling cycle. The

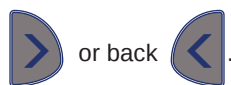
keys  can be used to select from the following:



From left to right:

- SOFT positive chilling
- HARD positive chilling
- Positive holding (or conservation)
- Negative chilling or freezing
- Negative holding (or conservation)

When selecting the desired cycle, each time the key  is pressed, the selection will move on to the next one. This is managed cyclically, so that it is possible to scroll either forward



C.1.3.1 Chilling with "cruise chilling" key



The "cruise chilling" cycle automatically controls the chilling process. It sets up the machine to complete the process within times required by standards while conserving the quality of the foods (without burning the surface of the foods).

When the cycle is launched, it starts running immediately. Stopping it requires the button to be held down for at least three seconds.

When the cycle is started with the door closed the key will light up. It will instead flash if a cycle is in progress and the door is open.

1- In order to improve machine performance and only if required, at the start of the chilling cycle, a preparatory cycle may start. This is indicated on the temperature display by the message "PREP".

2- Also, if the chiller is not used for an extended period of time, the compressor is started in impulses in order to assure maximum efficiency.



ATTENTION:

The "cruise chilling" cycle works only if the shaft probe is inserted. If it is not, the cycle automatically changes over to timed soft positive chilling.

C.1.4 PROGRAMMES



Pressing the key places the unit in programme mode.

It will therefore go from standard cycle selection to programme selection and vice versa.



From left to right:

- Turbo cooling
- Programme P1
- Programme P2

Each standard cycle is assigned two default programmes (P1 and P2) which can be modified by the user.

What does programme mean? For chilling, the user can change the chamber temperature and the chilling time. These can be stored in memory and loaded later. For holding, the user can select the chamber set point.

C.1.4.1 Chilling with "turbo cooling"



The "turbo cooling" cycle allows the user to operate the unit at temperature between -36°C and +3°C. The unit runs a cycle continuously and defrosting is managed automatically.

To select this type of cycle, refer to paragraph C.1.4.

C.1.4.2 Cycles for ice cream

By enabling the parameter "EICE" (EICE = y), the machine is set up to run two ice cream cycles. Programmes "P1" and "P2" are disconnected from the normal logic and become two specific cycles for ice cream. They are no longer assigned to the selected standard cycle. When this cycle is selected, the LEDs for the standards cycles are off.

- cycle "P1": time-controlled or shaft probe-controlled chilling. After chilling, the machine switches over automatically to conservation at a temperature of -14°C.

- cycle "P2": "turbo cooling" chilling with a cell temperature of -16°C

N.B.: to modify the "EICE" parameter, refer to paragraph C.1.9.5.

C.1.5 TEMPERATURE



The temperature display makes it possible to view the temperature of the cell and of the shaft probe.

If a cycle is active (for positive or negative holding, timed positive chilling or timed freezing), the cell temperature is displayed.

If a shaft probe cycle is active, the default display is the shaft probe temperature.



In chilling cycles, pressing the key switches between

cell temperature and shaft probe temperature.

The LED indicates which of the two temperatures is being displayed at a given time:

- if the shaft probe temperature is currently displayed, the

SHAFT PROBE TEMPERATURE LED comes on



- if the cell temperature is currently displayed, the

CELL TEMPERATURE LED comes on.



Only one of the two is active at a time.

C.1.6 ALARM SIGNAL (refer to positions 32 and 33 in figs. 1 and 2)

These LEDs come on to indicate an alarm status.

HACCP

If an HACCP alarm occurs, the LED will:

- 1- flash if the alarm is in progress. To check the type of alarm, scroll through the utility section with the keys (§C.1.9).
- 2- stay on steady if the alarm has concluded but has not yet been viewed by the user.



If a service alarm occurs, the LED will:

- 1- flash if the alarm is in progress. To check the type of alarm, scroll through the utility section with the keys (§ C.1.9).
- 2- stay on steady if the alarm has concluded but has not yet been viewed by the user.

The type of alarm can be viewed using the “utility menu” functions (see paragraph C.1.9 to find out more about the utility menu, and paragraph C.4 for instructions on how to view types of alarms and their descriptions).

C.1.7 STANDARDS



The applicable standards LED is normally on.

In order from left to right there is: NF (French), UK (English), CUSTOM (defined by user).

C.1.8 TIME



- **During a chilling cycle:** the time display shows the total or remaining chilling time.
- **During holding cycle:** the display shows the hour.
- **During “turbo cooling” cycle:** the display shows:

“ ○○○○ ” = two hours left until start of defrosting

“ ○○○ ” = 1.5 hours left until start of defrosting

“ ○○ ” = 1 hour left until start of defrosting

“ ○ ” = 0.5 hours left until start of defrosting

The TIMED CYCLE LED  comes on only if a timed chilling cycle is in progress.

During the cycle selection phase it indicates the chilling time.

The “estimated remaining time” LED  comes on as soon as the electronic card calculates the time remaining until the end of cooking with shaft probe. Once it has been measured, the time is shown on the time display.

C.1.9 UTILITY



HACCP

((o))

When the key  is pressed, the key is back-lighted. The

keys  allow selection of the desired utility with

forward-backward scrolling. Press  to confirm.

Once you have entered the “Utility” menu, the card will go back to the main menu if no key is pressed for five seconds.

The DESCRIPTIONS OF THE UTILITY FUNCTIONS are listed below.

C.1.9.1 MANUAL DEFROSTING



If unit conditions allow it (LED  or  or with machine in standby status), manual defrosting is activated. The display will show the label “dEft” for the entire duration of the phase.

If the unit conditions do not allow activation of manual defrosting (during a chilling phase), the display will show the message “UTIL NONE”.

The selection is valid only in conservation/holding conditions and during operating cycle selection. Upon completion of defrosting, the card will return to the main configuration.

C.1.9.2 DISPLAY OF SHAFT PROBE TEMPERATURES



This function makes it possible to view shaft probe temperatures if there are more than one shaft probes inserted in the product. If only one shaft probe is used, to view the temperature follow the instructions in paragraph C.1.5.

C.1.9.3 STERILIZATION CYCLE



(Function for units with germicide lamp installed)

The UV lamps have a direct germicide action for the purpose of sterilising the surfaces and the air inside the cell of the machine (see paragraph B.1.4).

No cycle must be active. During this cycle, the “TEMPERATURE” display will show the chamber temperature. When the cycle is complete, it returns to the main menu.

If the unit conditions do not allow activation of the sterilization cycle, the display will show the message “UTIL NONE”.

C.1.9.4 APPLICABLE STANDARDS



The machine can be set up according to three different standards:

1. NF (French)
2. UK (English)
3. CUSTOM (defined by user)

Paragraph C.2.2.8 provides instructions on how to change the type of STANDARDS (for example to change over from NF standards to UK standards).

IT IS POSSIBLE TO CHANGE THE APPLICABLE STANDARD ONLY IF NO CHILLING CYCLE IS ACTIVE. If a chilling cycle is active, the utility is automatically exited.

The time and temperature limits for correct cycle end established by NF or UK are FIXED and CANNOT BE MODIFIED by the user. CUSTOM applications can instead be configured. For example, when working with the NF setting, positive chilling with shaft probe concludes correctly if a temperature of 10°C is reached within 110 minutes. Chilling is thus concluded and the machine automatically switches over to positive holding.

Standard	BLAST CHILLERS		
	Chilling start temperature	Chilling end temperature	Chilling time
NF	+63°C	+10°C	110 minutes
UK	+70°C	+3°C	90 minutes
CUSTOM	CbSt °C	CCEt °C	CCTl minutes

Standard	BLAST FREEZERS		
	Chilling start temperature	Chilling end temperature	Chillingtime
NF	+63°C	-18°C	270 minutes
UK	+70°C	-18°C	240 minutes
CUSTOM	CbSt °C	CFEt °C	CFtl minutes

In sequence, the settings are shown that refer to: NF positive chilling, NF negative chilling, UK positive chilling, UK negative chilling, CUSTOM positive chilling, CUSTOM negative chilling.

The user can change all the parameters of the CUSTOM setting (**CbSt**, **CCEt**, **Cctl**, **CFEt**, **CFtl**) in USER PARAMETERS mode, paragraph C.1.9.5, or directly by selecting the utility (see paragraph C.2.2.9 for further indications on how to modify CUSTOM standards parameters. See paragraph D.6 for a list of parameters).

Exiting occurs automatically after twelve seconds of inactivity.

C.1.9.5 USER PARAMETERS **SET**

This selection makes it possible to view/modify operating parameters:

- the "TEMPERATURE" display shows the **parameter label**;
- the "TIME" display shows the **value assigned to the parameter**;



- allow scrolling through the parameters;

Exiting occurs automatically after twelve seconds of inactivity. To modify a parameter, see paragraph C.2.2.10.

C.1.9.6 HACCP **HACCP**

Makes it possible to display alarms for high cell temperature and for incorrect end of chilling cycle (see paragraph C.4. for all information concerning alarms).

C.1.9.7 SERVICE ALARMS **((o))**

Makes it possible to view all types of SERVICE ALARMS except those for high cell temperature and for incorrect end of chilling cycle (see paragraph C.4.1 for all information concerning alarms).

C.1.9.8 RESETTIME

To modify all time setting parameters (MIN, HOUR, DAY, MON, YEAR) refer to paragraph C.1.9.5.

C.2. USE - USER INSTRUCTIONS

Before using the machine, the cell must be cleaned with a detergent solution, because there may be residual condensation left over from final factory testing (for the type of product to use, see paragraph D.1.2).

C.2.1 START-UP

Turn on the protection switch installed upstream from the unit, press the **ON** key in order to turn the unit on. The **ON** LED will light up to indicate that the unit is powered.

C.2.2 OPERATION

C.2.2.1 How to select a "cruise chilling" cycle

To select a "cruise chilling" automatic chilling cycle (positive)

press the key .



ATTENTION: the "cruise chilling" cycle is not activated

when the unit is in "programme selection" status .

C.2.2.2 How to select a standard cycle

The machine's default setting is the SOFT chilling cycle. The

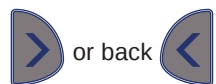
keys   can be used to select from the following:



From left to right:

- SOFT positive chilling
- HARD positive chilling
- Positive holding (or conservation)
- Negative chilling or freezing
- Negative holding (or conservation)

When selecting the desired cycle, each time the key  is pressed, the selection will move on to the next one. This is managed cyclically, so that it is possible to scroll either forward



If a different cycle is desired, press the key  until the LED of the desired cycle is orange, start the cycle by pressing the key



IMPORTANT: the machine automatically recognises whether the shaft probe is inserted in the product. If the shaft probe is not inserted, the timed cycle will start automatically. For automatic recognition, it is necessary to wait about two minutes from the end of the preparation cycle. Therefore, if a timed cycle starts, after about two minutes the TIME LED will come on, and CELL TEMPERATURE will be displayed as default.

C.2.2.3 How to select a "turbo cooling" cycle

To select the "turbo cooling" cycle, press the key ; the

LED  will turn orange.

To start the cycle press the key



C.2.2.4 How to select a programme:

First of all, the user needs to decide what type of cycle to launch (SOFT, HARD, etc.). The desired programme must then be selected. Proceed as follows:

- select the type of cycle desired;

- press the programme selection key



will turn orange;

- press the selection key



until the LED of the desired programme



- if the type of programme is satisfactory, launch it by pressing

the key



otherwise

- press the selection key



until the LED of the desired programme



- to launch the programme press the key



The user can modify some cycle parameters and save those modifications:

- for chilling cycle, the user can modify the chilling time/ cell set point and save it in memory so that it can be subsequently recalled (see paragraph C.2.2.5 and C.2.2.6);

- for positive holding, the user can set the cell set point.

C.2.2.5 Modification of chilling time

Chilling time is modifiable in the following cases:

- 1) during setting of a programme (P1 or P2)
- 2) during the selection phase of a chilling cycle
- 3) during actual chilling (can only be decreased).

For modification, proceed as follows:

- press the key



for two seconds;

- the display will flash to show that modification phase is active;

- set the desired value using the keys



- press the key



to confirm the value. Confirmation

will take place automatically after five seconds of inactivity.

C.2.2.6 Modification of cell temperature

- **Chilling cycles:** the set point can be modified only during selection of a custom cycle or during "turbo cooling".

- **Holding cycles (all).**

In all cases proceed as follows:

- press the key



for two seconds;

- the display will flash to show that modification phase is active;

- set the desired value using the keys



- press the key



to confirm the value. Confirmation will

take place automatically after five seconds of inactivity.

C.2.2.7 Viewing of temperature set point and chilling end time

When a cycle is running, the user can view the temperature set point and the chilling end time by simultaneously pressing the



C.2.2.8 Modification of selection of type of standards

To select the type of standards, for example UK standards,

press the key



, press the key



until the standards

utility is selected. Press the key to



enter, press the



to select the standard



. Press the key



again to confirm the selection. Confirmation will take place automatically after 12 seconds of inactivity.

C.2.2.9 Modification of parameters of custom standards

To modify the temperatures of the **CUSTOM standards**, first of all select the standards utility (see paragraph C.2.2.8).

Then press the temperature key



for two seconds;

- the temperature value for **start chilling** will appear flashing;

- use the keys



to modify the value, if necessary;

- after 5 seconds of inactivity, the **end chilling** temperature will appear flashing;

- use the keys



to modify the value, if necessary;

- the new value is automatically saved after five seconds of

inactivity or by pressing the key



again.

To modify the time, use the same procedure as for the modification of chilling time (paragraph C.2.2.5)

Note: The information provided above is applicable to both positive and negative chilling.

C.2.2.10 Modification of USER parameters

To modify a parameter, select the utility:

- press the key



- the display will flash to show that modification phase is active;

- press the keys  to modify the value within the allowable range;
- the new value is automatically saved after five seconds

of inactivity or by pressing the key  again.

NOTE: it is possible to modify the parameters ONLY if no cycle is active. If a cycle is active, the utility will display the parameters in read-only status.

For the "List of USER Parameters" refer to paragraph D.6.

C.2.3 CHILLING/CONSERVATION CYCLE

Upon completion of the chilling or freezing cycle, the machine automatically switches over to the conservation phase. It is important for the chilled food to be properly conserved, maintaining a conservation temperature which is suitable for the type of food that is chilled.

C.2.4 DEFROSTING

If unit conditions allow it (LED  or  or with machine in standby status), manual defrosting is activated. The display will show the label "dEfr" for the entire duration of the phase. If the unit conditions do not allow activation of manual defrosting (during a chilling phase), the display will show the message "UTIL NONE".

The selection is valid only in conservation/holding conditions and during operating cycle selection.

Upon completion of defrosting, the card will return to the main configuration. The duration of the cycles and the intervals between defrosting cycles are pre-set at the factory.

- Manual defrost

To start manual defrosting:

- **PRESS THE KEY**  **; THE DEFROST LED WILL TURN ORANGE WHILE THE OTHERS REMAIN GREEN.**

- **PRESS**  **PER CONFERMARE L'ATTIVAZIONE.**

Before defrosting, remove the drain plug on the bottom of the cell. When finished, put the plug back in place.

To reduce defrosting time, it is possible to activate the function with the door open, that is, to run a manual defrost cycle with the door open. In this way the chiller runs the internal fans which draw in air from the exterior to the interior of the cell, making the reduction in defrost time possible.

C.2.5 GERMICIDE LAMPS (Function for units with germicide

lamp installed) 

To activate the lamps, the machine must be on but with no cycle running.

Press the key  Use the key  to select the cycle

"germicide". The corresponding LED will turn orange.

Press the key  again to confirm the selection. Launch

the cycle by pressing key .

It is advisable to run a germicide cycle at the start of the day before using the unit, and again at the end of the day after cleaning the cell.

For further information see paragraph B.1.4 and C.1.9.6.

ATTENTION: The cycle will not be activated if the cell temperature is less than 15°C and the door is open.

PROPER OPERATION OF THE MACHINE DURING CHILLING AND FREEZING CYCLES DEPENDS ON THE FOLLOWING:

C.2.6 PRODUCT LOADING AND UNLOADING

Use kitchen gloves when loading and unloading food products.

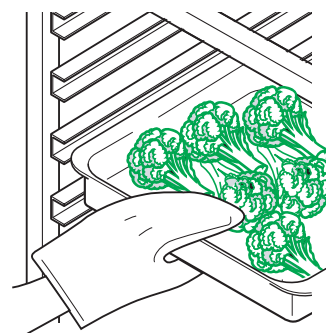
For the maximum loads for each shelf, adhere to the following table:

MAXIMUM LOAD PER PAN	
BC / BCF 20 GN 2/1	40 KG
BCF 2 x 20 GN 1/1	

It is advisable to keep the food covered during chilling to make chilling easier. Even distribution of the product in the cell is conducive to good air circulation resulting in improved product conservation.

Do not however leave the door open any longer than necessary when removing or placing food in the refrigerator.

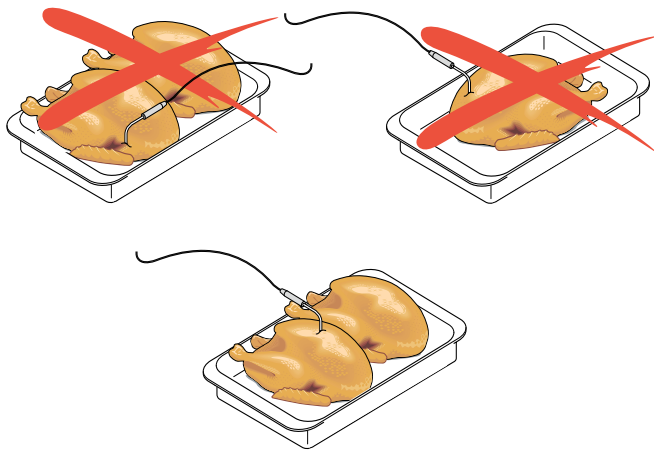
When the cycle is complete, open the door and extract the probe. Put it back in its original position (remember that the pans are now cold, use gloves).



- Types of containers to be used. It is advisable to use low containers (with sides not more than 65 mm high) to allow good circulation of air around the product. The greater the surface area of food exposed to the cold air, the less time is required for chilling. To avoid food contamination, it is advisable to clean the containers carefully as well as the surfaces where they rest. It is also advisable to place food into the chiller in the same container in which it was cooked.

C.2.7 INSERTION OF SHAFT PROBE IN THE PRODUCT

Make sure the probe is clean and sterile any time it is inserted into the product. Use caution in handling it as it is a sharp object. The use of the shaft probe during chilling cycles ensures they will be completed successfully. To ensure this, it is important for the probe to be placed correctly. This means in the centre of the largest piece of product. Make sure the tip does not protrude from the product, and it absolutely must not touch the pan.



C.3 EXAMPLES OF ACTIVATION OF OPERATING CYCLES

To make the use of the electronic card of this chiller even easier, we have elected to provide step-by-step instructions of all instructions to be followed in order to activate the different usage functions.

After being turned on, the unit's default setting is the SOFT chilling cycle.

At this point you can choose the desired cycle by pressing the

key  or you can press the key  for the automatic

cycle. Remember that if the shaft probe is not inserted into the food, the cycle automatically switches over to "soft" timed positive chilling.

- hard chilling -

PRESS THE "CYCLE SELECTION" KEY  UNTIL THE

"HARD CHILLING" LED  TURNS ORANGE;

PRESS THE "START/STOP CYCLE" KEY .

If the shaft probe is not inserted into the product, a timed cycle is carried out.

- Hard chilling with modification of chilling end time -

PRESS THE "CYCLE SELECTION" KEY  UNTIL THE

"HARD CHILLING" LED  TURNS ORANGE;

IF YOU WANT TO MODIFY THE CHILLING END TIME PRESS

THE "TIME" KEY .

PRESS THE "CYCLE SELECTION" KEY  TO SET THE DESIRED VALUE; THE NEW VALUE IS AUTOMATICALLY SAVED AFTER FIVE SECONDS OF INACTIVITY OR WHEN THE

"TIME" KEY  IS PRESSED.

PRESS THE "START/STOP CYCLE" KEY .

- Hard chilling with programme selection -

PRESS THE "CYCLE SELECTION" KEY  UNTIL THE

"HARD CHILLING" LED  TURNS ORANGE;

PRESS THE "PROGRAMME SELECTION" KEY : THE PROGRAMME TYPE SELECTION LED COMES ON .

IF THE SELECTED PROGRAMME IS ACCEPTABLE, PRESS

THE "START/STOP CYCLE" KEY .

IF YOU WANT TO MODIFY THE TYPE OF PROGRAMME

PRESS THE "CYCLE SELECTION" KEY  UNTIL THE LED OF THE DESIRED PROGRAMME  TURNS ORANGE;

PRESS THE "START/STOP CYCLE" KEY .

- Hard chilling with programme selection and modification of chilling end time -

PRESS THE "CYCLE SELECTION" KEY  UNTIL THE

"HARD CHILLING" LED  TURNS ORANGE;

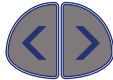
PRESS THE "PROGRAMME SELECTION" KEY : THE PROGRAMME TYPE SELECTION LED COMES ON .

IF THE SELECTED PROGRAMME IS ACCEPTABLE, PRESS

THE "START/STOP CYCLE" KEY .

IF YOU WANT TO MODIFY THE TYPE OF PROGRAMME:

PRESS THE "TIME" KEY  FOR TWO SECONDS;

PRESS THE "CYCLE SELECTION" KEY  TO SET THE DESIRED TIME VALUE.

PRESS THE "TIME" KEY  AGAIN TO SAVE THE NEWLY SET VALUE. CONFIRMATION WILL HOWEVER TAKE PLACE AUTOMATICALLY AFTER FIVE SECONDS OF INACTIVITY.

PRESS THE "START/STOP CYCLE" KEY  IF YOU WANT TO MODIFY CELL TEMPERATURE.

SET THE DESIRED TEMPERATURE VALUE  FOR TWO SECONDS;

SET THE DESIRED TEMPERATURE VALUE ; PRESS

THE "TEMPERATURE" KEY  AGAIN TO SAVE THE

NEWLY SET VALUE. CONFIRMATION WILL HOWEVER TAKE PLACE AUTOMATICALLY AFTER FIVE SECONDS OF INACTIVITY.

PRESS THE "START/STOP CYCLE" KEY .

-Chilling with "turbo cooling" -

PRESS THE "PROGRAMME SELECTION" KEY ; THE

"TURBO COOLING" LED COMES ON .

PRESS THE "START/STOP" KEY  TO START THE CYCLE.

C.4 ALARMS

C.4.1 ALARMS

The electronic card manages two types of alarm:

- **HACCP** whose function is to monitor and memorize high temperature alarms.

HACCP alarm status is indicated by activation of the buzzer, by the flashing of the HACCP red LED, and by the alarm label being shown on the display.

- **SERVICE ALARMS** whose function is to memorise and manage all alarms available in the electronic card (except for the high temperature alarm and incorrect end of chilling cycle alarm).

C.4.1.1 HACCP ALARMS

Makes it possible to manage alarms for high cell temperature and for incorrect end of chilling cycle.

If no alarm is present: the "TEMPERATURE" display shows the message 'none', while the "TIME" display stays off.

In case of alarm the "TEMPERATURE" shows the alarm number, "AL 1", "AL 2", etc., while the "TIME" display shows the description of the alarm (see paragraph C.4.1.1.1).

To view the alarm, enter Utilities, and press the keys  which allow scrolling. The labels "AL 1", "AL 2", and so on, will appear.

After showing the last alarm, the display will show the label '—'. If no action is taken for 12 seconds the unit automatically reverts to the main menu.

To cancel the alarms, simultaneously press  + 

for 5 seconds

ATTENTION: Reset is disabled if the operator has not seen the memorized alarms and the TEMPERATURE display will show the message "RES".

C.4.1.1.1 DESCRIPTION OF ALARMS

-HIGH TEMPERATURE ALARMS

The display will show:

- the label "**Batch** (number) **Ht** (maximum temperature reached) **C Start Date Time End ---**", **if the alarm is still active**

E.G. Batch 01 Ht 15C Start 25-10-01 15.48 End ----

- the label "**Batch** (number) **Ht** (maximum temperature reached) **C Start Date Time End Data Time**", **if the alarm has still terminated**

E.G. Batch 01 Ht 15C Start 25-10-01 15.48 End 25-10-01 17.48

where:

Start Date Time indicates the start of the alarm, **End Data Ora** indicates the end of the alarm (format "Date": DD-MM-YY, format "Time" HH.MM;).

-INCORRECT END OF CHILLING CYCLE ALARM

This type of control is carried out to verify whether a shaft probe chilling/freezing cycle terminates properly.

If it does not terminate properly, this generates a **"Chilling duration time overrun"**, and the display will show

• the label **"Batch (number) Ot (chilling time) MIN Start Date Time End date Time"**

E.G. BATCH1 Ot 120MIN Start 25-10-01 15.48 End 25-10-01 17.48.

where (number) indicates the batch number of the current day, Start Date Time indicates the start of the cycle, End Date Time indicates the end of the cycle.

WHAT IS A BATCH NUMBER: Each chilling cycle (SOFT/HARD chilling, freezing) which is carried out will be identified by a progressive number (1, 2, ...) called a "BATCH NUMBER". It will refer to the current day and will be reset to zero at the start of a new calendar day.

N.B. for timed and "turbo cooling" chilling, there are no end of cycle alarms.



ATTENTION:

if there is a power outage, the display will show the alarm "power outage" with the red indicator light . It is possible to view this alarm by scrolling with the keys in utility.

The machine will start operating again exactly where it left off.

C.4.1.2 SERVICE ALARMS

There are two types of service alarms:

- type **"b"** (user) which do not require technical service (see paragraph C.4.1.2.1) and do not shut down the machine;

SYMBOL	DESCRIPTION	ACTION
b1	Condenser high temperature	Clean the condenser; check that air circulates near the condenser
b2	Door open	Close the door
b3	Memory full	Reset the HACCP alarms
b4	Power failure	Make sure the plug is properly inserted in the power socket, check the electrical system

SYMBOL	DESCRIPTION	ACTION
E1	Minimum cell temperature	CALL SERVICE CENTRE
E2	Minimum evaporator temperature	
E3	Cell probe malfunctioning or disconnected	
E4	Evaporator probe malfunctioning or disconnected	
E5	Ambient probe malfunctioning or disconnected	
E6	Condenser probe malfunctioning or disconnected	
E7	Core probe 1 malfunctioning or disconnected	
E8	Core probe 2 malfunctioning or disconnected	
E9	Core probe 3 malfunctioning or disconnected	
E10	Pressure switch tripped	
E11	Compressor overload	
E12	Evaporator fan fault	
E13	Internal clock malfunction	

In the event of alarm "B2", the time display will show the message "door". When the alarm ceases (because the door is closed), the message disappears.

- eand type **"E"** (non-user) for which it is advisable to contact technical service (see paragraph C.4.1.2.2), but do not shut down the machine;

When alarms "E2" occurs, the machine will stop the cycle in progress and return to stand-by. It will be possible to restart the cycle again when the temperature of the evaporator returns to the proper level resulting in cessation of the alarm.

C.4.1.2.1 Types of service alarms which do not require technical service

C.4.1.2.2 Types of service alarms which require technical service

When the alarms listed below occur, call technical service.

All alarms shall be memorised as follows: the "TEMPERATURE" display shows the alarm number, for example "AL 1", "AL 2", etc., while the "TIME" display shows the ALARM CODE, for example "E1", "b1", etc.

If no alarm is active: the first alarm, is the most recent one to occur, is shown.

The keys let you scroll through the memorized alarms.

After displaying the latest alarm, the display will show the label "----", and after 12 seconds the unit will automatically return to the main menu.

When the next alarm occurs, those present will be cancelled (automatic reset).

If an alarm is active, entering the utility shuts off the buzzer while at the same time showing the alarm label.

The keys let you scroll through the memorized alarms.

After displaying the latest alarm, the display will show the label "----" and after 5 seconds the unit will automatically return to the main menu.

As long as the alarms are active, they will not be deleted from the memory.

To cancel the alarms, simultaneously press



for 5 seconds.

ATTENTION: Reset is disabled if the operator has not seen the memorized alarms and the TEMPERATURE display will show the message "RES".

C.5. HACCP CONNECTIONS (ACCESSORIES)

Refer to the handbook enclosed with the kit for instructions on installing the accessories.

The board has a serial communication line for interacting with other units, printers or a HACCP control station in a network.

This can be connected in the following ways:

- directly to a device that communicates in TTL (e.g. the FT190ELX printer), by setting the parameter E485="Prn"
- to an RS485 communications network, by setting the parameters E485="PC" and PRTY="1" (refer to the handbook supplied with the kit) inserting the conversion card RS485-LK-P and Adr="Network address".

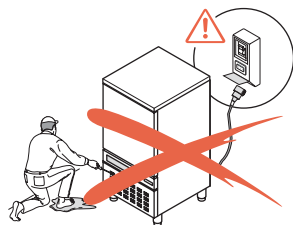
D.1. ORDINARY MAINTENANCE

D.1.1 PRECAUTIONS FOR MAINTENANCE

Routine maintenance tasks can be performed by non-specialized personnel provided the instructions given below are carefully followed. **The manufacturer shall not be held responsible for any operations carried out on the machine if these instructions are not complied with.**



ATTENTION:



Do not touch the equipment with wet hands or feet or when barefoot. Before carrying out any cleaning or maintenance, disconnect the appliance from the electrical mains and carefully pull the plug to disconnect the machine. Do not remove the safety devices for carrying out routine maintenance. Use protective gear (protective gloves) when cleaning the condenser. It is prohibited to use scissors, screwdrivers and pointed objects near the refrigerant circuit.

D.1.2 CLEANING THE CABINET AND ACCESSORIES

It is advisable to clean the cell weekly. Increase cleaning frequency based on use of the unit.

Before using the unit, clean all the internal parts and accessories with warm water and either neutral soap or products that are over 90% biodegradable (in order to reduce the emission of pollutants into the environment), then rinse and dry thoroughly. Do not use solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders for cleaning. Protect sheet metal with silicon wax.



Let the water run out of the drain tube, placed in the centre of the bottom of the cell. From here, the liquid will reach the container located under the cabinet. It is to be emptied periodically (for units 6 GN 1/1, 10 GN 1/1 and 10 GN 2/1).

Refit the drain plug immediately after the cleaning.

Note: before removing the plug for the drainage of cell washing liquids, make sure the collection container has been emptied.

ATTENTION: model 20 GN 1/1 does not have a liquid collection container. Make sure the drain pipe is connected to a water drainage system.

D.1.3 CLEANING OF THE SHAFT PROBE

Handle the probe with care, especially during cleaning, as it is a sharp object.

To ensure best performance of the shaft probe, it is advisable to clean it periodically.

The probe must be cleaned by hand, using lukewarm water and neutral soap, or with products which are more than 90% biodegradable (in order to reduce the emission into the environment of pollutants). Rinse with clean water and a disinfectant solution. Do not use solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders for cleaning.

ATTENTION: the probe must not be cleaned with boiling water.

D.1.4 PRECAUTIONS IN CASE OF PROLONGED DISUSE

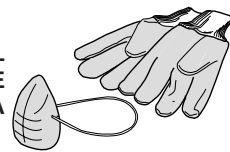
If the appliance is not going to be used for a long period, take the following precautions:

- Pull the plug;
- Remove all food from the compartment and clean the inside and the accessories;
- rub all the stainless steel surfaces vigorously with a cloth slightly dampened with Vaseline oil, so as to cover them with a protective film;
- Leave the door ajar to improve air circulation and prevent unpleasant odours;
- Periodically air out rooms.

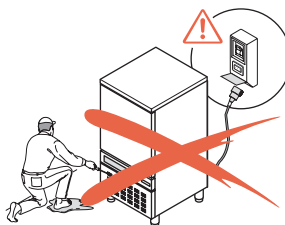
D.2. SPECIAL MAINTENANCE

Special maintenance must be carried out by specialized personnel, who may request the service manual from the manufacturer.

BEFORE CARRYING OUT ANY SPECIAL MAINTENANCE, MAKE SURE YOU ARE WEARING PROTECTIVE GLOVES AND A MASK.



ATTENTION:



Do not touch the equipment with wet hands or feet or when barefoot. Before carrying out any cleaning or maintenance, disconnect the appliance from the electrical mains and carefully pull the plug to disconnect the machine. Do not remove the safety guards. Use protective gear (protective gloves) when cleaning

the condenser. It is prohibited to use scissors, screwdrivers and pointed objects near the refrigerant circuit.

D.2.1 REPLACING THE POWER CABLE

To replace the power cable for units 10 GN 1/1 and 10 GN 2/1 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;
- re-connect the power supply.

To replace the power cable for units 6 GN 1/1 and 20 GN 1/1 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;
- move behind the chiller and extend the power cord;
- put the protection grid and the control panel back in place;
- switch the power on.

ATTENTION: the power cord used for permanent connection to the power mains is type H05VV-F (designation 227 IEC 53). If it is replaced, the new cord must have at least the same characteristics.

NOTE: if the power cord is replaced, the earth wire must be longer than the active wires.

D.2.2 REPLACING THE POWER SUPPLY CABLE ON MODELS ARRANGED FOR REMOTE UNIT

To replace the power supply cable on 20 GN 2/1 (180 Kg) appliances, 2x20 GN 1/1 disassembled (180/170 Kg) proceed as follows:

- disconnect the power supply;
- remove the electrical system box protection cover situated on the external top of the appliance;
- replace the power supply cable;
- refit the electrical system box protection cover in its original seat;
- reconnect the power supply.

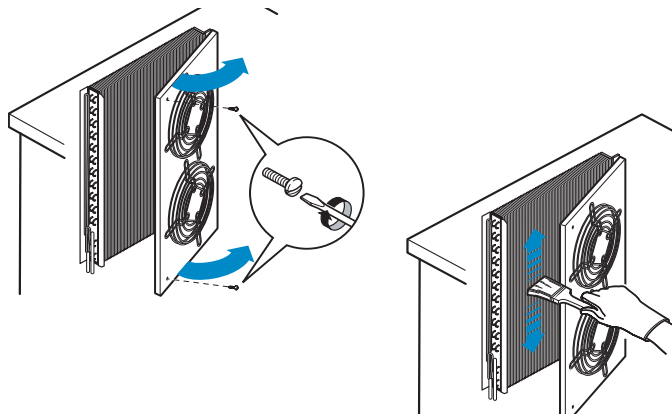
IMPORTANT: the power supply cable for permanent connection to the mains power supply is of the type H05VV-F (code 227 IEC 53); in the event of replacement, use a cable with at least these characteristics."

NOTE: if the power supply lead has to be replaced, the earth wire must be kept longer than the live and neutral wires.

D.2.3 U.V. LAMP REPLACEMENT (for 180/170 kg models only)

To replace the U.V. lamp, proceed as follows:

- disconnect the power supply;
- open the evaporator casing;
- remove the lamp protection plexiglas tube;
- replace the lamp with one of the same power (see dataplate on inside of evaporator casing);
- refit the lamp protection plexiglas tube;
- close the evaporator casing;
- reconnect the power supply.



D.2.4 REPLACING THE STARTER AND/OR REACTOR FOR U.V. LAMP

To replace the starter and/or reactor for U.V. lamp, proceed as follows:

- disconnect the power supply;
- remove the upper electrical system box protection cover;
- remove the starter and/or reactor and replace it with components having the same characteristics;
- refit the upper electrical system box protection cover;
- reconnect the power supply.

D.2.5 PERIODICAL CLEANING OF THE CONDENSER

The condenser can be cleaned with a brush as long as the brush does not have metal bristles or material which may compromise proper operation. Use extreme care not to bend the fins of the condenser so as to avoid a reduction in heat exchange.

To guarantee optimal appliance operation, the refrigerating unit condenser must be cleaned at least once every 3 months. If the appliance is installed in a dusty or poorly ventilated place the filter must be cleaned more frequently, about once a month.

The condenser is located behind the slotted front panel. To remove it, remove the two screws in the lower part, and pull it outwards to free it of the clips that hold it.



ATTENTION:

before removing the slotted panel that protects the condenser, make sure you have unplugged the unit.

Note: it is advisable to use a brush or vacuum cleaner to remove the dirt accumulated on the condenser. Do not use pointed objects which might damage the condenser.

ATTENTION: Do not clean the appliance with jets of water.

D.2.6 CLEANING THE EVAPORATOR COIL

Here it is also possible to clean with a brush as long as the brush does not have metal bristles or material which may compromise proper operation. Use extreme care not to bend the fins of the evaporator coil so as to avoid a reduction in heat exchange.

As an alternative, 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-inflammable degreasing product, environmentally-friendly and 90% biodegradable.

Regular cleaning of the evaporator coil is required to ensure the unit's proper operation and long-lasting performance.

To access the evaporator coil:

- disconnect the power supply;
- remove any pans which may be in the cell;
- remove the four screws, two front and two back, which hold the two deflectors to the evaporator guard;
- remove the two screws that hold the internal accessible guard and open it;
- clean the evaporator coil using a brush or vacuum cleaner;
- close the guard, put the deflectors back in place and restore electrical power.

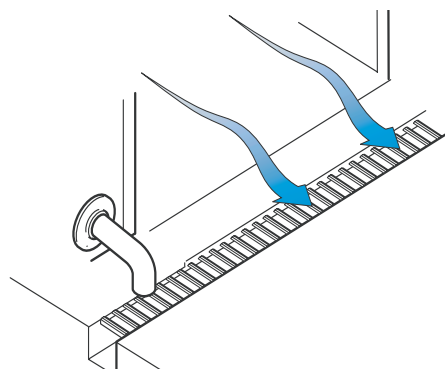


ATTENTION:

before opening the guard with a tool, make sure you have unplugged the unit.

D.2.7 EMPTYING CONDENSATION

periodic emptying of the liquid drain bowl can be avoided by connecting the cell drain "C", located on the evaporator bowl, to a drainage system with the special accessories supplied (bend, union, copper pipe), choosing the most suitable side for draining the condensation. It is advisable to use a floor grate.



The drain diameter is $\frac{3}{4}$ ", therefore it is advisable to use a $\frac{3}{4}$ " drain hose.

The drainage course to the open drain must be fitted with a trap, to prevent any backflow from the sewage network reaching the internal pipes in the appliance. Make sure there are no kinks in the hosing or elbows in the metal pipes in the drainage course. Avoid horizontal stretches, where water may collect and stagnate.

D.3. OPERATING PROBLEMS

D.3.1 QUICK TROUBLESHOOTING GUIDE

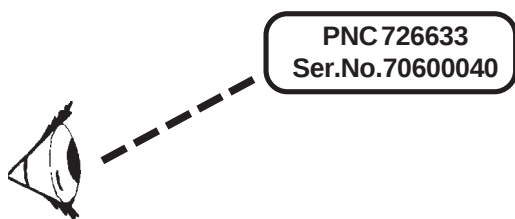
In some cases, faults can be remedied easily and quickly; the following is a list of some faults and relative remedies:

- A.** The appliance does not switch on:
 - check that the socket is powered.
- B.** The unit does not reach the required internal temperature:
 - check that the condenser is clean;
 - check that cycles have been set properly;
 - check that the product has been loaded into the cell properly;
 - check the condition of the probe.
- C.** The appliance is excessively noisy:
 - make sure the appliance is level.
An unbalanced position can set off vibrations.
 - make sure the cabinet is not touching other appliances or parts which could reverberate;

If the fault persists after having carried out the above checks, contact Technical Assistance, remembering to give the following details:

- the nature of the fault;
- the appliance PNC (production code);
- the Ser. No. (appliance serial number).

N.B.: the code and serial number (shown on the data plate, see paragraph A.1.6) are essential for identifying the type of appliance and date of manufacture.



E.g.: PNC 726633 00 - Ser.No. 70600040
726633 00: chiller R134a
70600040: production year 2007, week 06, 40th piece.

D.4.WASTE DISPOSAL AND DE-COMMISSIONING

D.4.1 WASTE STORAGE

At the end of the product's life-cycle, make sure it is not disposed of in the environment. The doors must be removed before disposal of the appliance.

Special waste materials can be stored temporarily awaiting disposal by means of treatment and/or permanent storage. The current environmental protection laws in the user's country must in all cases be observed.

D.4.2 PROCEDURE FOR PRELIMINARY DISMANTLING OF THE APPLIANCE

Different regulations are in force in the various countries, therefore the provisions set forth by the laws and the competent authorities in the countries where disposal takes place must be observed.

In general terms, the appliance must be taken to a specialized collection/demolition centre, after dismantling the components and grouping them together according to their chemical characteristics. Dismantle the unit and group the components together according to their chemical characteristics, remembering that the compressor contains lubricant oil and coolant, which can be recycled, and that the refrigerator components are classed as special waste which can be disposed of with urban waste.



ATTENTION:

make the appliance unusable by removing the power cable and any compartment locking mechanisms, in order to avoid the risk of someone becoming closed inside.

DISMANTLING OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.

D.5. ENCLOSED DOCUMENTATION

- Set of test and inspection documents
- Wiring diagram

D.6 LIST OF USER PARAMETERS

SYMBOL		RANGE	DEF.
MIN	Internal clock: Minutes	0..59	0
HOURL	Internal clock: Hours	0..23	0
DAY	Internal clock: Days	1..31	1
MON	Internal clock: Month	1..12	1
YEAR	Internal clock: Year	0..99	0
SrF	Indicates the cell temperature set point for the positive holding cycle and the conservation phase after positive chilling	- 25..10°C/F	3
SFF	Indicates the cell temperature set point for the negative holding cycle and the conservation phase after negative chilling	- 25..10°C/F	-25
LAC	Temperature difference from absolute temperature/conservation set point, below which a low temperature alarm is generated	-50..125°C/F	5
HAC	Temperature difference from absolute temperature/conservation set point, below which a high temperature alarm is generated	-50..125°C/F	5
CdiF	Indicates whether the LAC and HAC temperature limits are expressed as differential (d) or absolute (A).	A/d	D
SLd	Indicates duration of sanitation cycle	0..240	10
bCCy	Buzzer mode to indicate to indicate correct conclusion of a chilling cycle 'nob' = buzzer off 'bbl' = buzzer on for 30 seconds "lIb" = buzzer on until any key is pressed	Nob bbl lIb	bbl
bFCy	Buzzer mode to indicate HACCP alarms		bbl
bAlI	Buzzer mode to indicate a generic alarm		lIb
CCEt	"CUSTOM" standards: END OF POSITIVE CHILLING TEMPERATURE	0..CbSt°C/F	10
CCtI	"CUSTOM" standards: END OF POSITIVE CHILLING TIME	0..360 min	110
CFEt	"CUSTOM" standards: END OF NEGATIVE CHILLING TEMPERATURE	-35..CbSt°C/F	-18
CFtI	"CUSTOM" standards: END OF NEGATIVE CHILLING TIME	0..360°C/F	270
CbSt	"CUSTOM" standards: START OF CHILLING TIME	0..127°C/F	63
EICE	The utility enables the utility of cycles ICE P1 and P2 instead of the custom programmes	Y/N	N
tPrA	Indicates printing cycle during a chilling cycle. If set to 0, only the temperatures at the beginning and end of the cycle are printed.	1..255 min	5
tPrC	Indicates the printing interval in conservation /holding. If set to 0, no value is printed.	1..255 min	30
PrnL	Configuration of printout language: It = Italian, Gb = English, dE = German, fr = French, Es = Spanish, Se = Swedish	It/Gb/dE/fr/ Es/Se	Gb
Adr	Network address	01-FF	1
E485	Type of connection "Prn" = Printer; "PC" = Personal Computer;	Prn/PC	Prn
nOr	Indicates applicable standards, whether "NF", "UK" or "CUSTOM"	nF, Uk, CuS	Uk
REL	Software version	-	-

NOTES The default parameters (DEF) may undergo variations depending on the unit model.