SMART ELECTRONIC for BC&F

ELECTRONIC BOARD OPERATION PRESENTATION

Electrolux

LENGTHWISE VERSION

CROSSWISE VERSION

THE FOLLOWING PRESENTATION DESCRIBE THE “LENGTHWISE” VERSION BUT THE OPERATING MODE IS THE SAME FOR THE “CROSSWISE” LINE.

THE LAY OUT OF THE USER INTERFACE IS THE ONLY DIFFERENCE BETWEEN THE TWO LINES.

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- Soft Chilling (air temperature –2°C)
- Hard Chilling (air temperature –20°C, or -12°C)
- Shock freezing (air temperature -36 ºC)
- Holding at +3°C or -18ºC (also automatically activated at the end of each cycle)
- Program memory: two for each operating mode, setting time and air temperature
- It is possible to operate by time or by probe
- All settings are programmable: NF and UK regulations, personal profiles.
- Sterilizing cycle: UV lamps built-in (on request)
- Food-probe with 3 sensors, or 3 food-probes temperature (on request)
- Automatic defrosting and manual defrosting
- All information is recorded: date, time, cycle, food-probe temperature, holding temperature, HACCP accordance, Alarm service

MAIN FEATURES OF THE ELECTRONIC BOARD

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BLAST CHILLING

Positive blast chilling brings the food quickly to a temperature of +3°C.
Note that positive blast chilling is suitable for foods that are going to be eaten within a few days.
There are two types of blast chilling:

- **"SOFT" CHILLING**
- **"HARD" CHILLING**

- **"Soft" chilling** is recommended for foods such as vegetables, or pieces of food that are not very large or thick.
- **"Hard" chilling** is recommended for larger sized pieces of food.

NEGATIVE BLAST CHILLING OR FREEZING

(freezers only)
Freezing allows foods to be preserved for longer periods (weeks or months).
With blast freezing the water in the food microcrystallized, so that when the product thaws the tissues are not damaged and the food keeps intact both its original appearance and nutritional values.
With this cycle the temperature of the food goes down to between -20°C and -18°C when frozen.

MAINTENANCE OR PRESERVATION

The preservation cycle, i.e. the maintenance of the food at a chosen temperature, is started automatically at the end of the blast chilling or freezing cycle.
The preservation is continuous, until you switch off this function. Defrostings during preservations cycles are made by hot gas, the cycle is active until the evaporator probe will warm up or by time out (if the probe is out of order).

MAIN FEATURES OF THE ELECTRONIC BOARD

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SWITCHING ON

This button shows the appliance status: ON or OFF. To switch ON press button **1;** to switch OFF press **O**.

START/STOP CYCLE

This button starts or stops the selected cycle.
The selected cycle starts immediately when enabled.To stop the cycle push the button for at least 3 seconds.
If the door is closed when a cycle is started the button will light up. If the door is opened during a cycle it will start blinking.
In order to optimize the performance, at the beginning of a blast chilling cycle could be automatically executed a preparation cycle. On the temperature display will be shown the messsage "PREP".
Also, if the chiller has been inactive for a long time, the compressor will be started by impulses to guarantee maximum efficiency.

MAIN FEATURES OF THE ELECTRONIC BOARD

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SELECTING A CYCLE

The default setting on the appliance is the SOFT chilling cycle. Use these buttons **<< >>** to select one of the following options:

From left to right:

- Positive SOFT chilling Set point cycle SEA
- Positive HARD chilling Set point cycle SEH
- Positive maintenance (or preservation) Set point SrF
- Negative chilling or freezing Set point cycle SEC
- Negative maintenance (or preservation) Set point SFF

PROGRAMS

Press the button to set the appliance to programs mode. The appliance switches from standard cycle selection mode to program mode and vice versa.

From left to right:
- Program P1
- Program P2

There are 2 programs associated to each cycle. What is a program? For chilling, the user can change both the cell temperature and the chilling time and save the changes in the memory for subsequent retrieval, and for maintenance the user can set the cell set point.

MAIN FEATURES OF THE ELECTRONIC BOARD

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TEMPERATURE

The temperature display can show both the cell temperature and the core probe temperature. If **a cycle is running** (i.e. positive or negative maintenance, timed positive blast chilling or timed freezing), the temperature displayed is the cell temperature.

If a **food-probe cycle is running**, the food-probe temperature will be displayed by default.

Press the  button in chilling cycles to switch between cell temperature and food-probe temperature.

The indicator light shows which of the two temperatures is being displayed at that time:

-if the core probe temperature is displayed, the

-CORE PROBE TEMPERATURE INDICATOR LIGHT  switches on

- if the cell temperature is displayed the
CELL TEMPERATURE INDICATOR LIGHT  switches on

Only 1 of the 2 can be enabled.

IMPORTANT: The appliance recognizes automatically when the food-probe is inserted in the product. If the probe hasn't been inserted in the product, a timed cycle will start automatically.

It is necessary to wait 2 minutes after the end of the preparation cycle for the automatic recognition.

Consequently, if a timed cycle starts, after 2 minutes the TIME INDICATOR LIGHT  will switch on and the CELL TEMPERATURE will be displayed by default.

MAIN FEATURES OF THE ELECTRONIC BOARD

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ALARM WARNING

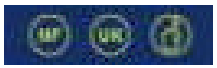
The following indicator lights light up when an alarm occurs:

When an HACCP alarm occurs, the indicator light
- blinks if the alarm is current
- stays lit if the alarm has ended and the user has not seen the alarm in the HACCP utility.

When a service alarm occurs, the indicator light
- blinks if the alarm is current
- stays lit if the alarm has ended and the user has not seen the alarm in the ALARM SERVICE utility.

The type of alarm can be displayed by using the “Utilities menu” functions.

STANDARDS



The Standard indicator light is normally off. It lights up only when the Reference Standard option is entered with the UTILITIES button.
From left to right, the lights are: NF (French), UK (British), CUSTOM (set by user).
To display the appliance Standard setting use the “Utilities menu” functions.

TIME

The time display shows the total and remaining chilling time. **The display is enabled only during the running or selection of a blast chilling cycle.**
The display is switched off during the setting/running of a maintenance cycle.

The **TIMED CYCLE INDICATOR LIGHT**  lights up only when a timed blast chilling cycle is running.

Set the blast chilling time in the selection stage.

MAIN FEATURES OF THE ELECTRONIC BOARD

UTILITIES

When the  button is pressed it lights up behind. Use the  buttons to scroll backwards and forwards and select the utility. Press  to confirm.

After entering the “Utilities” menu, the system will go back to the main menu if no button is pressed for 5 seconds.

See in the following chapters THE UTILITIES FUNCTIONS

THE UTILITIES FUNCTION

MANUAL DEFROSTING

If the appliance has an icy evaporator this function enables a manual defrosting cycle. The display shows the message “dEfr” throughout the entire cycle.
A manual defrost is not possible when the temperature felt by the evaporator probe is higher then 7°C.

The selection is enabled only in preservation/maintenance and when selecting the operating cycle.
When the defrosting is finished the system will go back to the main configuration.

PROBE TEMPERATURES DISPLAY

This function displays the probe temperatures (if more that one probe is present) , on the lower display you may read the food probe “FP” number, on the upper display, the relative temperature. If there is .

STERILISATION CYCLE **(enable for appliances with UV lamp, only)**

The UV lamps have a direct germicidal action and are used to sterilize the surfaces and air in the cell of the appliance.
This function can be used to sterilize kitchen utensils such as knives, carving forks, etc. (to be done in two cycles, turning the utensils round).
Do not use this function if there is food in the cell.
ATTENTION: The appliance has a safety device that switches off the lamps when the door is opened. This safety device has been installed because **exposure to U. V. rays emitted by the lamps is harmful.**

During a sterilisation cycle no others cycle can be swithed ON and only the cell temperature is shown.
When the cycle is finished the system goes back to the main menu.

THE UTILITIES FUNCTION

REFERENCE STANDARD

The machine can be set to 3 different Standards:
1. NF (French)
2. UK (British)
3. CUSTOM (set by user)

THE REFERENCE STANDARD SELECTION CAN BE CHANGED ONLY WHEN THERE IS NO CYCLE RUNNING. If a chilling cycle is running the system will automatically exit the utility. The Standard indicator light is normally off. It lights up only when the Reference Standard option is entered with the UTILITIES button.

The end of cycle temperature and time limits in the NF and UK Standards are FIXED and CANNOT BE EDITED by the user, whereas the CUSTOM Standard is user configurable.

For example, if the NF setting is used, a positive blast chilling cycle with core probe ends correctly if the 10ºC temperature is reached within 110'. The chilling then proceeds either until the maintenance temperature set by the manufacturer is reached or the user presses STOP.

The settings for the different Standards are displayed in sequence, as follows: NF positive blast chilling, NF negative blast chilling, UK positive blast chilling, UK negative blast chilling, CUSTOM positive blast chilling, CUSTOM negative blast chilling.

The user can edit the parameter settings in the CUSTOM option (**CbSt , CCEt, Cctl, CFEt, Cftl**) either in USER PARAMETERS, or by selecting the utility directly.

The system exits the function automatically after 12 seconds if nothing else is pressed

Standard	BLAST CHILLER		
	Chilling start temperature	**Chilling end temperature**	**Chilling time**
NF	+63ºC	+10ºC	110 minutes
UK	+70ºC	+3ºC	90 minutes
CUSTOM	**CbSt ºC**	**CCEt ºC**	**CCtl minutes**

Standard	BLAST FREEZERS		
	Chilling start temperature	**Chilling end temperature**	**Chilling time**
NF	+63ºC	-18ºC	270 minutes
UK	+70ºC	-18ºC	240 minutes
CUSTOM	**CbSt ºC**	**CFEt ºC**	**CFtl minutes**

THE UTILITIES FUNCTION

USER PARAMETERS

For displaying/editing the operating parameters just move on "SET" and push the Utilities button:
- the “TEMPERATURE” display shows the parameter label;
- the “TIME” display shows the value associated to the parameter;
-  scroll the parameters;

The time  will give me access to the value of the parameter and  will change the value, memorize by not pressing the buttons for 5 seconds or by pressint time again.

FACTORY PARAMETERS

For displaying/editing the factory parameters move on "SET" and push together the arrows (don't push the Utilities button!):
- the “TEMPERATURE” display shows the parameter label;
- the “TIME” display shows the value associated to the parameter;
-  Keep pressed for 5 seconds;  scroll the parameters;

The time  will give the access to the value of the parameter and  will change the value, memorize by not pressing the buttons for 5 seconds or by pressing time again.

THE UTILITIES FUNCTION

HACCP

For displaying the cell high temperature alarm, the blast chilling cycle end and error alarm.

HIGH TEMPERATURE ALARM

The display shows:
• the "**Batch** (number) **Ht** (maximum temperature reached) **C' Start** Date Time **End** ----", **if the alarm is still active**
I.E. Batch 01 Ht 15C Start 25-10-01 15.48 End ----
• the "**Batch** (number) **Ht** (maximum temperature reached) **C' Start** Date Time **End** Date Time", **if the alarm has ended**
I.E. Batch 01 Ht 15C Start 25-10-01 15.48 End 25-10-01 17.48
Start Date Time indicates the start of the alarm, **End Date Time** indicates the end of the alarm ("Date" format: DD-MM-YY, "Time" format: HH.MM;).

CHILLING CYCLE END ERROR ALARM

This check ensures that a core probe blast chilling/freezing cycle ends correctly.
If a cycle does not end correctly, a **"Chilling time out of limits" alarm is generated** and the display reads:
"**Batch (number) Ot** (chilling time) **MIN Start** Date Time **End** Date Time"
I.E. BATCH1 Ot 120MIN Start 25-10-01 15.48 End 25-10-01 17.48.

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

WHAT IS A BATCH 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.

N.B. There are no HACCP alarms in timed chilling/freezing cycles.

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SERVICE ALARMS

For displaying all the different types of SERVICE ALARM except for the cell high temperature alarm and the blast chilling cycle end error alarm.

There are two types of service alarm:
-type **"b"** (user) which do not require service centre assistance and do not shut down the appliance;

List of service alarms not requiring service centre assistance

SYMBOL	DESCRIPTION	ACTION
B1	Condenser temperature high	Clean condenser; check air circulation around condenser
B2	Door open	Close door
B3	Memory full	Reset HACCP alarms
B4	Power failure	Check plug properly inserted in power supply socket; Check electrical system

THE UTILITIES FUNCTION

Electrolux

SERVICE ALARMS

- type **"E"** (non-user) for which you are advised to call the service centre for assistance but which do not shut down the appliance. When the alarms listed below occur, call the service centre for assistance.

SYMBOL	DESCRIPTION	ACTION
E1	minimum cell temperature	CALL SERVICE
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	food-probe 1 malfunctioning or disconnected	
E8	food-probe 2 malfunctioning or disconnected	
E9	food-probe 3 malfunctioning or disconnected	
E10	high pressure circuit warning	
E11	compressor overload	
E12	evaporator fan failure	
E13	internal clock failure	

OTHER FUNCTIONS

CHECKING THE TEMPERATURE OF THE PROBES

For displaying the temperature of the probes

Press  +  for a second,

- the “TEMPERATURE” display shows the label of the probe:
  - **“CELL”** **“EVAP”** **“COnd”** “**rOOM”** (ambient temperature) “**FP_1”** “**FP_2”** “**FP_3”**
- the “TIME” display shows the temperature value.