CROSS WISE

USER INTERFACE

Blast chillers

Blast chillers/freezers

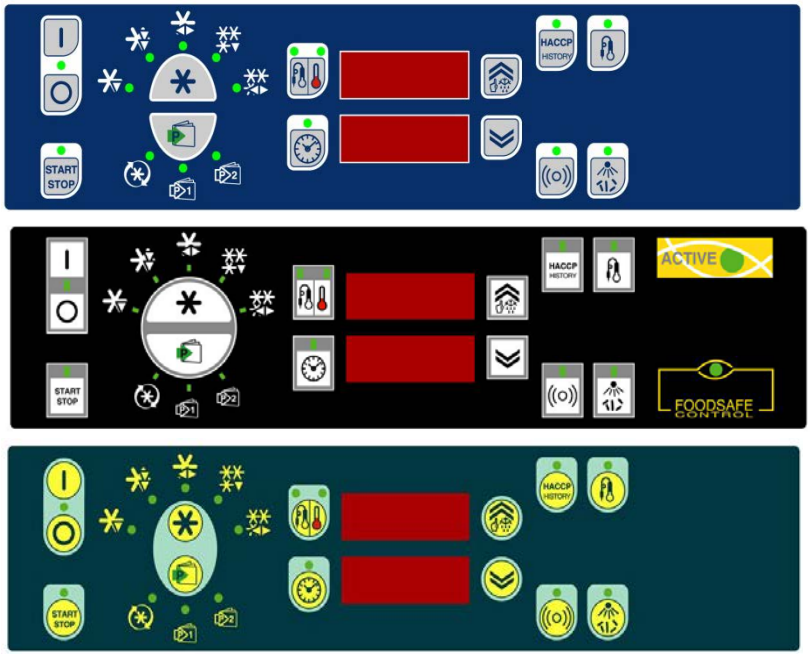
Electrolux

TDS Refrigeration

BCF Cross Basic

ELECTRONIC BOARD OPERATION PRESENTATION

All range BC and BCF



- Soft Chilling (air temperature –2°C)
- Hard Chilling (air temperature -12 / -20°C)
- Shock freezing (air temperature -35 ºC)
- Holding at +3°C or -18ºC (automatically activated at the end of each cycle)
- Programmes 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.
- Ssterilizing cycle: UV lamps built-in (on request)
- 3 core temperature probes (on request)
- Automatic defrosting and manual defrosting
- All information is recorded: date, time, cycle, core temperature, holding temperature, HACCP accordance, Alarm service
- ICE cycle
- Turbo cooling
- DEmo

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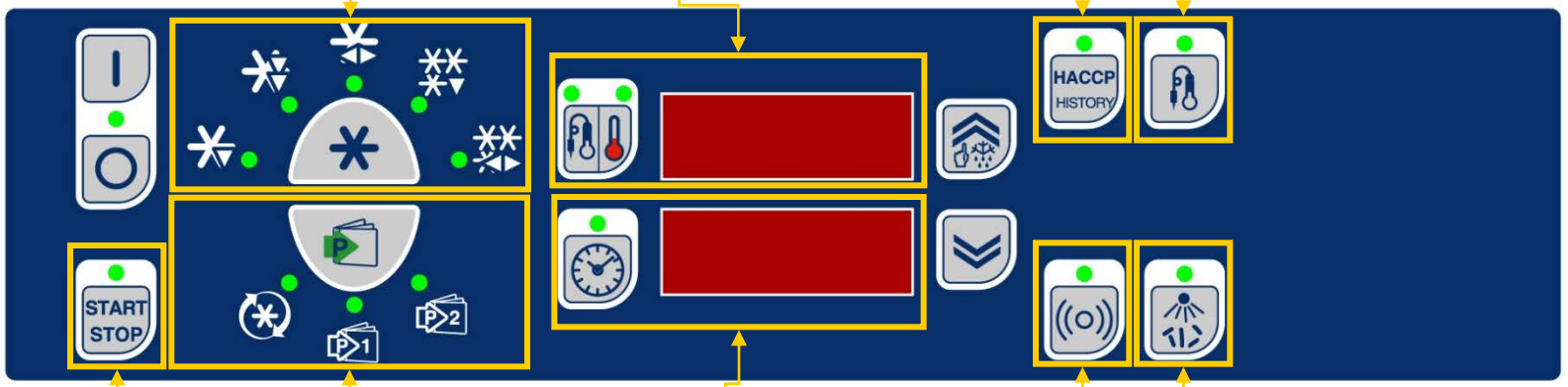

Chilling/freezing/holding cycles

HACCP alarms

Probe selector

Cavity/probe
temp. display

Cycle Start/Stop

Turbo Cooling and
Personalized/Ice Cream programs

Residual/Countdown
Time display

Service alarms

UV lamp
sterilisation cycle

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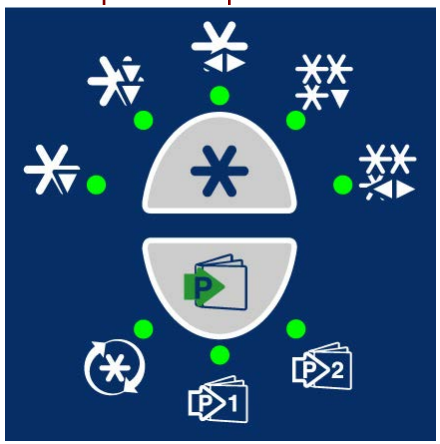

- Soft chilling
  - Working temp.: -2 ºC
  - For delicate vegetables
- Hard chilling
  - Working temp.: -20 ºC
  - For underground grown vegetables and meat
- Holding after chilling
  - Working temp.: +3 ºC
- Blast freezing
  - Working temp.: -36 ºC
  - To freeze
- Holding after freezing
  - Working temp.: -22 ºC
- Turbo Cooling function
  - Working temp.: +3 to -36°C
  - For continuous loading
- Personalized/Ice cream programs

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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 FREEZING

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

With blast freezing, the water in the food microcrystallines, so that when the product thaws the issues 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 -36°C and -18°C when frozen.

MAINTENANCE OR PRESERVATION

The preservation cycle, i.e. the maintenance of the food at a chosen temperature so that it does not alter over time, 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).

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SWITCHING ON

This button shows whether the appliance is 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, keep the button pressed down 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 performance, and only if the need arises, at the beginning of a blast chilling cycle you can start a preparation cycle, signaled on the temperature display with the message "PREP".
Also, if the chiller has been inactive for a long time, the compressor will be started by impulses to guarantee maximum efficiency.
Note: every cycle will be given, automatically by the system, a "batch number" these will start at 00.01am with progressive numbers 1,2,3…….

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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:

-2°C Positive **SOFT** chilling Set point cycle SEA

-12/-20°C Positive **HARD** chilling Set point cycle SHE

+3°C Positive maintenance (or preservation) Set point SrF

-36°C **Freezing** Set point cycle SEC

-22°C **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:

Turbo cooling -Program P1-Program P2

Turbo cooling: Continuous chilling at cell temperature -36 ºC

P1-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.

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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 **core probe cycle is running**, the core probe temperature will be displayed by default.

Press the  button in chilling cycles to switch between cell temperature and core 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 core 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**

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ALARM WARNING

The following indicator lights light up when an alarm occurs:

1. 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

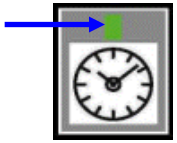
- blinks if the alarm is current

- stays lit if the alarm has ended and the user has not seen the alarm in the ALARM SERVICE utility

TIME

The time display shows the total and remaining chilling time if the cycle time is active and residual time if the food probe is active. **The display is enabled only during the mantinance or selection of a cycle.**

The **TIMED CYCLE INDICATOR LIGHT**



lights up is on only when a timed blast chilling cycle is running

MANUAL DEFROSTING 

If the appliance is in the right conditions, this function enables a manual defrosting cycle. The display shows the message “dEfr” throughout the entire cycle.

If a manual defrosting is not possible because of the status of the appliance, the message “UTIL NONE” will appear on the display.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  **(Function for appliances with germicidal light)**

The UV lamps have a direct germicidal action and are used to sterilize the surfaces and air in the cell of the appliance.

The UV lamps have a direct germicidal action and are used to sterilize the surfaces and air in the appliance cell. 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 doors are opened. This safety device has been installed because **exposure to U. V. rays emitted by the lamps is harmful.**

No cycles must be running. When the cycle is running the “TEMPERATURE” display shows the cell temperature. When the cycle is finished the system goes back to the main menu.

If a sterilization cycle is not possible because of the status of the appliance, the message “UTIL NONE” will appear on the display.

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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

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**	**CCtI 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**	**CFtI minutes**

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, CctI, CFEt, CftI**) either in USER PARAMETERS, or by selecting the utility directly.

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

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USER PARAMETER  **press togeter**

For displaing/editing the operating parameteres:

- The " TEMPERATURE" display show the parameter label;
- The "TIME" display shows the value associated to the parameter;

  Scroll parameters**;**

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

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FACTORY PARAMETERS 

For displaing/editingthe factory parameters:

- The “TEMPERATURE” display shows the parameter label,
- The “TIME” display shows the value associated to the parameter;
-  Keep press for 5 second ;and after together 

- In the display to appear the label FACT;

The time  will give me access to the value of the parameter and  will change the value, memorize by pressing the buttons for 5 seconds or by presing time again

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RESET OF FACTORY PARAMETERS

Using this procedure all parameters and alarm will be reset as default of original main board.

1. Enter in the FACT parameters.
2. Keep the buttons pressed together  + 
3. The Password will be requested
4. Set “11” with buttons  
5. And confirm with button 

Attention: the parameter of the unit will be changed! reset all parameters following the parameters list.
If you have one single point of food probe the alarm will appear. Reset the parameters NFP from 3 to 1.

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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**

E.i. 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**

E.i. 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" E.i. 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 cycle end alarms in timed chilling/freezer

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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 allarm.

type B *user* which do not require service centre assistance and do not shut down the appliances.

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

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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 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	
E13	Internal clock malfunction	

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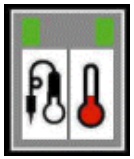
CHECKING THE TEMPERATURE OF THE PROBES

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 value associated label

FOODSAFE CONTROL

Food safe control (only Zanussi Brand)

Green led: (the cycle has finished correctly)

Red led: (the cycle has not finished /or the cycle has not finished correctly)

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OTHER FUNCTION:

DEMO

- **During exposition all the appliance functionality can be presented, the only difference is that loads are disabled.**
  To enable this function it is necessary select Factory parameter mode(page12) and set parameter MOdE from *STD* (standard) to DEMO

The display will scroll the label “DEMO MODE”

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OTHER FUNCTION:

TEST

- **The service engineer can perform a quick automatic check-up, To be able it enter in Factory parameter (page 12) and set parameter MODE from *STD* (standard) to *TEST*.**
  The phases will be: Press the button 

  and start the test

Display show :

- "TEST DISPLAY" (all led on)
- "TEST COMPRESSOR + CONDENSER FAN" (start comp. and fan)
- "TEST EVAPORATOR FAN" **(start evapoarator fan)**
- "TEST PROBES" (Chek all probes)
- "TESTING CYCLE" (ten minutes start)
- "TESTING DEFROST" (Defrosting start)

The test result can be:
GOOD or BAD .

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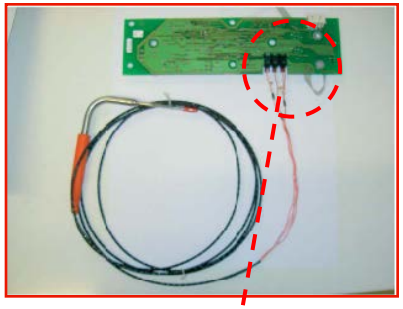
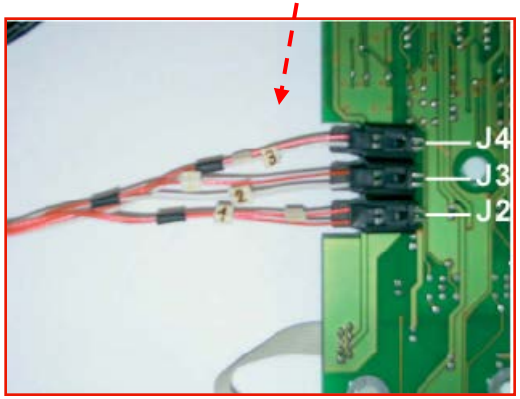
Food probe

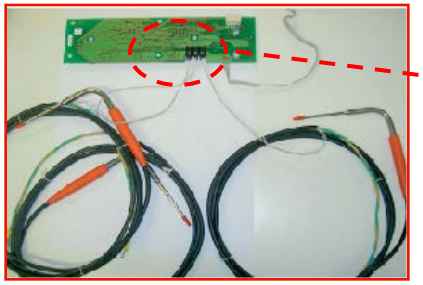
- In the standard configuration the BC/BCF has one food probe (parameter nFP=1), but the eletronic boad allows other configuration of the parameter nFP:
- nFP=0 only cycle by time
- nFP=1 only cycle with one food probe (*defaul configuration*)
- nFP=2 only cycle with two food probes (code Kit 880089 one probe)
- nFP=3 only cycle with three food probes (code Kit 880096 two probe)
- nFP=3 only cycle with one food probe with three sensor (code Kit 880088)

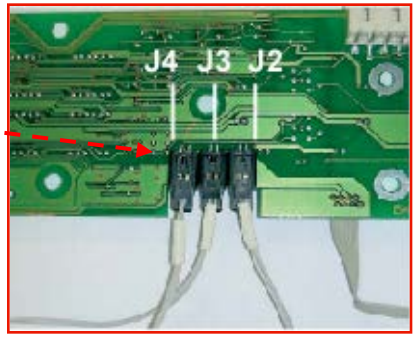
(kit pnc# 880088)





3 food probes





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Remote alarm

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 –imput 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)

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Remote signaling management

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