

# **User Manual Book**

## **Blast Chiller & Freezer**

BZ 1050 DASS  
BZ 1100 DASS  
BZ 1130 DASS

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This guide book explains everything you need to know about your new product. Please contact our Customer Care should you need further assistance through [www.modena.com](http://www.modena.com).

## PART 1: SAFETY INFORMATION

Read the user manual book carefully

- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.
- Do not damage the refrigerant circuit.
- When positioning the appliance, ensure the supply cord is not trapped or damaged.
- The refrigerant and insulation blowing agent inside the refrigerator need special disposal procedure. Consult the disposal method with related department
- Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance. Do not use plug adapter.
- To avoid hazard due to instability of the appliance, it must be fixed in accordance with the instructions.
- Clean the surfaces that come in contact with food and accessible drainage systems regularly
- If power outage occurs, unplug the power cord. Wait at least 10 minutes before starting the appliance to avoid damage to the compressor.
- While carrying and positioning the appliance, do not damage the cooler gas circuit.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- If the supply cord is damaged, it must be replaced by the manufacturer, an authorized service agent or similar qualified persons, in order to avoid a hazard.

## Environmental Notice



The packaging material used is recyclable. We recommend that you separate plastic, paper and cardboard and give them to recycling agents. To help preserve the environment, the refrigerant used in this product is iso-butane (R600a) or propane (R290), which does not affect the ozone layer and has little impact on the greenhouse effect. According to WEEE (Waste of Electrical and Electronic Equipment) guidelines, waste from electrical and electronic devices should be collected separately. If you need to remove of this appliance in the future, do not throw it away with the rest of your domestic garbage. Instead, please take the appliance to the nearest WEEE collecting agents, where available.

## PART 2: NAME OF PARTS



*\*Above picture is for reference only. Difference between the picture and actual product may occur*

*\*\*Feature and equipments differ by each product*

# PART 3: QUICK START GUIDE

## General Features

The chilling and freezing cycle is programmed according to International Food Safety Standards. There are 4 (four) types of cycle:

1. Cy1: For fast chilling and conservation of foods at positive temperature
2. Cy2: For chilling and fast freezing of foods with holding
3. Cy3: Direct fast freezing with holding
4. Cy4: Direct fast freezing without holding

See Appendix 1 about Cycle Parameters for more details

## Control Panel



## Display

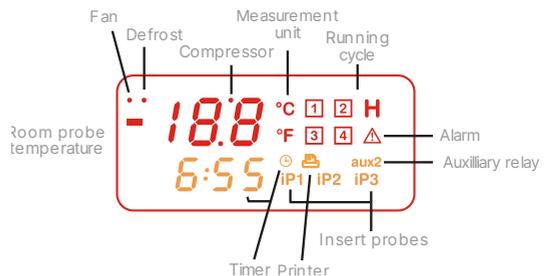
The upper display shows the temperature of the room probe.

The lower display shows the temperature of the inserts probe or the count down timer. To pass to the one insert probe to the another one use the DOWN key.

- Temperature
- Timer or insert probe
- Alarm and status icons

If an icon or LED is **on**, the correspondent function is enabled.

If an icon of LED is **flashing**, the correspondent function is delayed.



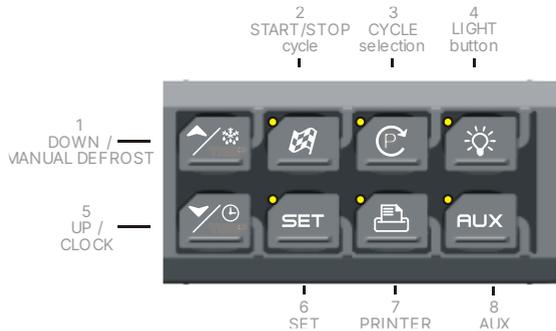
## Keyboard in Stand-by Mode

### How to Select a Cycle:

Push and release the  (3) button until the desired cycle is selected.

### How to Start a Cycle:

Push and release the  (2) button. The correspondent yellow LED is switched on,



### How to Temporarily Stop the Running Cycle:

1. Press and release the  (2) button.
2. The compressor and the fan will be stopped for the PAU time (see parameters list) and the flashing message "Stb" will be displayed.
3. To restart the cycle, press and release the  (2) button, the cycle will restart from the point at which it was interrupted.
4. In any case the cycle automatically restarts after the PAU time.

### How to Stop a Cycle:

Push and hold the  (2) button until the yellow LED is switched off.

## Keyboard When Cycle is Running

<b>DISPLAY TEMPERATURES</b>		
<p>The upper display shows the temperature of the thermostat probe. The bottom display shows the temperature of an insert probe (if enabled) or the count-down timer. By pushing DOWN key, the probes iP1, iP2, iP3 and the count-down timer are displayed in sequence.</p>		
		

<p><b>PHASE DISPLAY:</b> pushing the UP key the running phase is displayed</p>		<p>PH1 = phase 1 PH2 = phase 2 PH3 = phase 3</p>
<p><b>HOW TO DISPLAY THE REGULATION SET POINTS:</b> By pushing the SET key the following information are displayed in sequence:</p> <ul style="list-style-type: none"> <li>• rSI = Room set point</li> <li>• iSI = Stop phase set point, referred to the insert probe</li> <li>• Back to the room temperature.</li> </ul>		
<p><b>HOW TO MODIFY THE ROOM SET POINT</b> While rSI or iSI are displayed hold pushed the SET key till the rSi or iSi label start flashing and LED near the SET key is turned on. Use the arrow key to modify the value and the SET key to confirm it.</p>		

**Keyboard When Holding Cycle is Running (H)**

<p><b>HOW TO DISPLAY THE HOLDING REGULATION SET POINTS:</b> While the holding cycle is running, (H icon is on), push the SET key and the holding set point is displayed on the UPPER display while the SETH label on the bottom display</p>		
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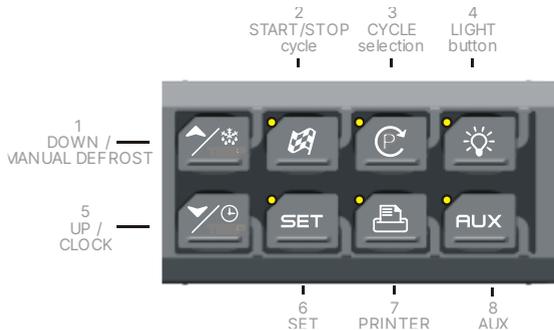
## HOW TO MODIFY THE ROOM SET POINT

While SETH is displayed hold pushed the SET key till the SETH label starts flashing and LED near the SET key is turned on. Use the arrow key to modify the value and the SET key to confirm it. TO CONFIRM AND EXIT: push the SET key again.

## Other Keys

**LIGHT (4)**: push the LIGHT (4) key to switch the light on and off. The status of the light is monitored by the yellow LED upper the key.

**AUX (8)**: push the AUX (8) key to switch the auxiliary on and off. The status of the auxiliary relay is monitored by the yellow LED upper the key.



**PRINTER / H (7)**: push the PRINTER key when the keyboard is connected to the controller, to enable or disable the printer.

## PRINTER CONFIGURATION MENU

Push the PRINTER (7) key for few seconds to enter the printer configuration menu. The itP, label is displayed, use the ARROW keys to browse the parameters:



- To modify: push the SET key and then the ARROW keys.
- UP key: browse the menu:
  - itP=time printing interval.
  - PbP=data to print.
  - PAR=enabled the printing of the parameter map.

- CyC=enabled the printing of cycle parameters.
- PtH=enabled the printing during the holding phase.
- PrS=level Pr1 o Pr2.
- Pnu=number of printing.
- DOWN key back to the previous label.
- To confirm: push the SET key.
- To exit the Printer menu: push both SET+UP keys or wait for 5 sec.

### How to Start Manual Defrost

Assure that none cycle is active or the hold mode is running. Keep UP key pressed a few seconds.

#### **NOTE**

the defrost will not be done if the temperature detected by the evaporator probe is higher than EdF (stop defrost temperature) parameter.

### Other Key Functions

 + 	To lock & unlock the keyboard Pon/PoF
 + 	To enter the programming mode when the controller is in standby Each parameter present in the Pr2 can be removed or put into "Pr1" (user level) by pressing SET+DOWN.
 + 	To return to the previous menu.

## LED Light Meaning

LED	Mode	Description
	ON	Compressor is enabled
	Flashing	Programming Phase (flashing with LED  ) Anti-short cycle delay enabled
	ON	Fan is enabled
	Flashing	Programming Phase (flashing with LED  ) Anti-short cycle delay enabled
	ON	Defrost is enabled
	Flashing	Drip time in progress
	ON	An alarm is occurring
1, 2, 3, 4, H	ON	Freezing cycle 1, 2, 3, 4 or hold mode active
1, 2, 3, 4, H	Flashing	Instrument temporarily stop
AUX, AUX2	ON	Aux or Aux2 enabled

## How To Select A Cycle

Push the  to move among the cycles C1, C2, C3, C4 and the holding cycle. The related symbol on the display will be lighted and the cycle will be selected.

### NOTE

to pass from a cycle to another one simply push the  key when the controller is in stand-by mode.

**HOLD PHASE:** To select H symbol pushing the .

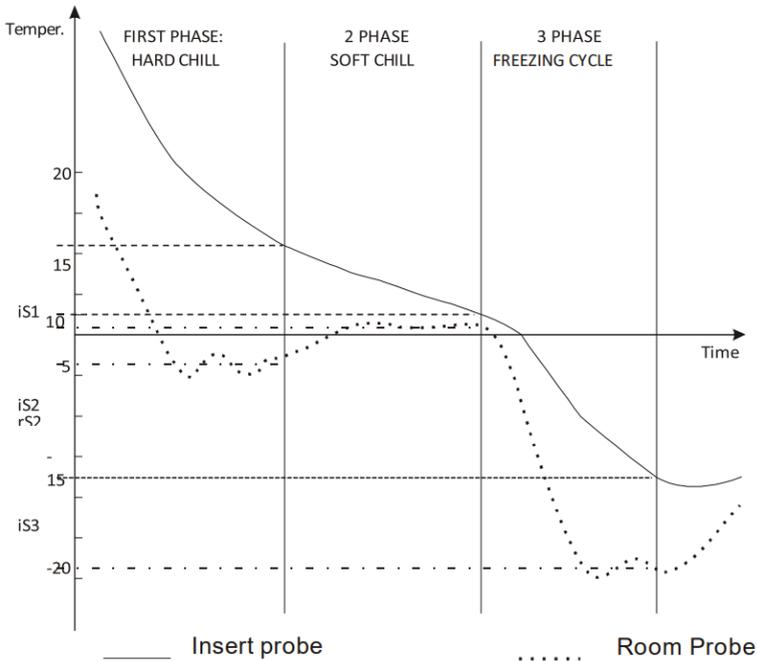
Cycles are pre-set with the following values:

- Cy1: for fast chilling and conservation of foods (hard +soft chill).
- Cy2: for chilling and fast freezing of foods (hard +soft + freezing cycle).
- Cy3: for direct fast freezing (only fast freezing cycle)
- Cy4: for fast freezing avoiding ice skin (hard chill + freezing cycle)
- HLd: hold mode function
- dEF: for starting a manual defrost

Now the cycle is memorised and can be activated Now the cycle is memorised and can be activated

### Example of Blast Chiller Cycle

The following drawing explains how a Blast Chiller cycle can be done.



1. **First phase: Hard Chill**

It is usually used to blast chill food just cooked.

It is normally used to fast chill hot foods. (e.g., from 80°C / 170°F to 20°C / 70°F). During “Hard Chill”, both compressor and fan are always on until the rS1 temperature is reached. At this point compressor is turned on end off to keep the temperature of the room at the rS1 value. “Hard Chill” ends when the temperature measured by the insert probes reach the iS1 value.

2. **Second phase: Soft Chill**

The Soft Chill starts when the Hard Chill ends. It is used to prevent thin layer of ice from forming on the product. The Soft Chill lasts until the temperature measured by the insert probes reach the set point iS2. During Soft Chill the temperature of the room is regulated by the ambient probe with the set point rS2.

3. **Third phase: Freezing Cycle**

Freezing Cycle: used to fast freeze foods. The Freezing Cycle starts when the Soft Chill ends. During the “Freezing Cycle” both compressor and fan are always on until the rS3 temperature is reached. At this point compressor and fans are turned on end off to keep the temperature of the room at the rS3 value (normally some degrees below iS3). Freezing Cycle ends when the temperature measured by the insert probes reach the iS3 value.

4. **End of Freezing Cycle & Start of Hold Phase (selectable)**

The end of the freezing cycle is indicated by the sound of the buzzer (Option). The alarm automatically stops after the “but” time or by pressing any keys.

Once the freezing cycle is complete, the instrument automatically starts the hold phase at the temperature set in parameter HdS. If Cap = No, the hold phase is not carried out.

**NOTE:**

1. with dbH = yES a defrost is done before the holding phase.
2. If the end cycle temperature iS3 is not reached in the maximum time Pd1+Pd2+Pd3(Option) the instrument keep on working, but the alarm message “OCF” is given.

## Alarms

Message	Cause	Output
EE	Data or memory failure	Alarm output ON. Other outputs unchanged
rPF	Thermostat Probe failure	Alarm output ON. Compressor output according to parameters Con and CoF
EPF	Evaporator Probe failure	Alarm output ON. Defrost termination is timed. No temperature control on fans.
i1P, i2P, i3P	Insert probe 1, 2, 3 failure	Alarm output ON. Other outputs unchanged. The cycle is made by time
rtC	Real Time Clock data lost	Alarm output ON. Other outputs unchanged.
rtF	Real Time Clock failure	Alarm output ON. Other outputs unchanged. The date and the duration of the cycle are not available
HA	Maximum temperature alarm	Alarm output ON. Other outputs unchanged
LA	Minimum temperature alarm	Alarm output ON. Other outputs unchanged
FF	Fast freezing interrupted by short power failure	Alarm output ON. The freezing cycle restart from the same point at which was interrupted
PFA	Fast freezing interrupted by long power failure	Alarm output ON. The freezing cycle restart from the current phase
OCF	Max duration of the cycle is expired	Alarm output ON. Other outputs unchanged. In any case the cycle ends when the final temperature is reached
EA	External alarm	Alarm output ON. Other outputs unchanged
CA	Serious external alarm	Alarm output ON. Other outputs OFF
dA	Door open alarm	Alarm output ON. Other outputs unchanged

## PART 4: MAINTENANCE

### Cleaning and Maintenance

To make sure that the freezer is in optimum condition, the interior and accessories must be cleaned regularly.

#### **IMPORTANT!**

Appliance must not be connected to the main electrical socket during cleaning! Risk of electric shock!

- Before performing cleaning activity, switch off the appliance and unplug the power cord.
- Do not use abrasive cleaners.
- Clean the interior and accessories using cloth and lukewarm water. After that, clean with clean water and dry completely.
- Dust can accumulate on the condenser and cause performance drop. Clean the freezer condenser at least once a year using soft brush or vacuum cleaner.
- After everything is dried completely, install the accessories and freezer to the initial position.
- Clean the condenser & evaporator periodically from debris and dust to ensure maximum performance

## PART 5: TROUBLESHOOTING

Check the following before contacting our Service Center in the event of malfunction

#### **WARNING!**

Before troubleshooting, unplug the unit from power source. Only a qualified technician is allowed to perform troubleshooting not stated in this manual.

## **IMPORTANT!**

There are some normal sounds during use (compressor sound, circulating refrigerant sounds)

<b>Problem</b>	<b>Possible Cause</b>	<b>Recommended Action</b>
Appliance does not work	<ul style="list-style-type: none"><li>• Power cord is unplugged or loose</li><li>• Blown fuse or damaged fuse</li><li>• Defective socket</li></ul>	<ul style="list-style-type: none"><li>• Insert power cord correctly</li><li>• Check the fuse, replace if needed</li><li>• Malfunction must be repaired by qualified electrician</li></ul>
Appliance is not cold	<ul style="list-style-type: none"><li>• Thermostat not properly adjusted</li><li>• Too much food</li><li>• Door is opened frequently</li><li>• Freezer is placed in hot area</li><li>• Bad ventilation</li><li>• Frost accumulated inside the freezer</li></ul>	<ul style="list-style-type: none"><li>• Adjust the thermostat until it's cold</li><li>• Rearrange or reduce the food</li><li>• Do not open the door too frequent</li><li>• Place freezer in a cool and dry place</li><li>• Ensure adequate ventilation</li><li>• Defrost and clean the freezer</li></ul>
Appliance is too cold	<ul style="list-style-type: none"><li>• Thermostat adjusted to maximum position</li></ul>	<ul style="list-style-type: none"><li>• Adjust the thermostat with lower setting</li></ul>
Dew outside of freezer	<ul style="list-style-type: none"><li>• Ambient temperature and humidity too high</li></ul>	<ul style="list-style-type: none"><li>• Place freezer in a cool and dry place</li></ul>
Loud noise	<ul style="list-style-type: none"><li>• Freezer is touching the wall or other object</li><li>• Freezer pipe is touching other parts</li></ul>	<ul style="list-style-type: none"><li>• Reposition the freezer and follow the minimum distance</li><li>• If needed, bend the pipe to avoid touching with other objects</li></ul>

## PART 6: SPECIFICATION

MODEL	BZ 1050 DASS	BZ 1100 DASS	BZ 1130 DASS
Capacity (Liter)	170	368	494
Power Input (Watt)	750	980	1200
Color	Stainless	Stainless	Stainless
Control panel	Digital	Digital	Digital
Refrigerant (Weight)	R290 (150g)	R290 (150g)	R290 (150g)
Rated Current (A)	4.5	5.6	6.2
Rated Voltage (V)	220-240	220-240	220-240
Rated Frequency (Hz)	50	50	50
Defrost Power Input (W)	800	2×800	2×800
Product dimension (WxDxH)(mm)	800×800×930	800×800×1515	800×800×1763

*Design and specification can change without prior notice to improve the quality of the product. The illustration in this manual is schematic and can be different with your actual product. The values on label or in other documents are according to laboratory test and relevant standards. Values can vary depending on the actual operational and environmental condition of the product.*

## APPENDIX 1: CYCLE PARAMETERS

Parameter	Parameter Description	Cy1	Cy2	Cy3	Cy4
CyS	Cycle setting; tEP = by temperature	tEP	tEP	tEP	tEP
dbC	Defrost before cycle	no	no	no	no
iS1	Insert probe set point: (-50 to 50, res. 1°C or 1°F) when the temperature measured by the three insert probes reaches this value the first phase is ended.	20°C (68°F)	10°C (50°F)	-18°C (0°F)	-18°C (0°F)
rS1	Room probe Set point for the first phase: (-50 to 50, res. 1°C or 1°F) it prevents temperature from reaching a too low value during the hard cycle	-10°C (14°F)	-10°C (14°F)	-30°C (-22°F)	-30°C (-22°F)
Pd1	Maximum time for first phase: OFF to 4h00min, res. 10 min	2.0 h	2.0 h	4.0 h	4.0 h
iS2	Insert probe set point: (-50 to 50, res. 1°C or 1°F) when the temperature measured by the three insert probes reaches this value the first phase is ended.	5°C (41°F)	5°C (41°F)	-18°C (0°F)	-18°C (0°F)
rS2	Room probe Set point for the first phase: (-50 to 50, res. 1°C or 1°F) it prevents temperature from reaching a too low value during the hard cycle	-2°C (28°F)	-2°C (28°F)	-30°C (-22°F)	-30°C (-22°F)
Pd2	Maximum time for first phase: OFF to 4h00min, res. 10 min	2.0 h	2.0 h	off	off
iS3	Insert probe set point: (-50 to 50, res. 1°C or 1°F) when the temperature measured by the three insert probes reaches this value the first phase is ended.	3°C (37°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)
rS3	Room probe Set point for the first phase: (-50 to 50, res. 1°C or 1°F) it prevents temperature from reaching a too low value during the hard cycle	-2°C (28°F)	-30°C (-22°F)	-30°C (-22°F)	-30°C (-22°F)
Pd3	Maximum time for first phase: OFF to 4h00min, res. 10 min	off	2.0 h	off	off
dbH	Defrost before the hold phase	yes	yes	yes	no
HdS	Set point of the holding phase: (-50 to 50, res. 1°C or 1°F) with "OFF" the hold phase is disabled.	3°C (37°F)	-18°C (0°F)	-18°C (0°F)	off

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