BERG™

INSTRUCTION MANUAL

Ice Cream Dipping Cabinet

This manual contains important information regarding your unit. Please read this manual thoroughly prior to equipment set-up, operation and maintenance. Failure to comply with regular maintenance guidelines outlined in this manual may void the warranty.

WARNINGS

- Please inspect unit for any possible shipping damage before installation.
- **Hydro-Carbon R290, a flammable and explosive refrigerant, is used in this unit. The following safety precautions must be enforced due to the use of R290 refrigerant:**
    - The unit should be kept far away from any heat source or open flame
    - Do not use mechanical devices to defrost the unit
    - Do not puncture the refrigerant tubing
    - Only qualified technicians are authorized to repair the unit especially when refrigerant leakage occurs
    - Dispose of unit in accordance with federal or local regulations
- Unit must be installed and placed properly by qualified technicians.
- Keep unit far away from flammable vapors and liquids.
- During maintenance and cleaning, please unplug the unit.
- Do not plug or unplug the cord with wet hands.
- It is recommended that a separate circuit, serving only your unit, be used. Use receptacles that cannot be turned off by a switch or pull chain.
- To prevent skin from getting stuck to the cold surfaces, keep hands and other body parts dry when touching cold surfaces in the refrigerated compartment .
- Children are strictly banned from climbing, standing or hanging on the appliance to avoid hurting themselves or damaging the unit.
- Never clean refrigerator parts with flammable fluids. These fumes can create a fire hazard or explosion. Do not store or use gasoline or other flammable vapors and liquids near this or any other appliance as the fumes can create a fire hazard or explosion.
- Do not attempt to repair or replace any part of your freezer unless it is specifically recommended in this manual. All other servicing should be done by a qualified technician.
- This unit is specifically designed to merchandise ice cream or yogurt type products.
- **Do not use this freezer for other than its intended purpose.**

ELECTRICAL CONNECTION

- This unit must be properly grounded at all times for your safety.
- Never use an adapter plug or extension cord to power the unit.
- The wall outlet, circuit and supply voltage must be checked carefully by qualified electricians.
- Do not plug unit into outlet if the power cord is broken or frayed.
- Make sure that the unit is not resting on or against the electrical cord and plug.
- Make sure the power supply is switched off before servicing the unit.
- Wiring diagram can be referenced if needed.
- **WARNING: Failure to follow these instructions can lead to personal injury or damage to the unit**

TO INSTALL:

- Remove unit from box and make sure all plastic, tape and packaging materials are removed.
- Place the unit on a flat, secure surface with at least 4” of open space around all sides to ensure proper air circulation
- Place the unit in a dry area to prevent the compartment body from getting rusty
- Place the unit in an area that is not in direct sunlight or any other sources of heat

TO USE:

- Make sure the unit is plugged in properly
- The unit should be running 2 to 3 hours before loading products to detect any potential electrical failure and/or concealed shipping damage.
- Do not replace the temperature controller or change its parameters without the help of a qualified technician.
- Do not restart the unit immediately when it is disconnected or shut off. Wait several minutes before restarting.

CLEANING AND MAINTENANCE

Stainless Steel Cleaning

- Ammonia and soap can be used to polish the stainless steel surfaces and wipe off fingerprints and smears.
- Other specialized commercial detergents can be used to remove grease and oil.
- Soft cloths, towels and sponges are recommended to be used along with detergents.
- Do not use steel wool to clean stainless steel.
- Hydrochloric acid or chlorine-based products cannot be used for stainless steel cleaning
- Stainless steel surfaces should be wiped dry after cleaning.
- **WARNING: Failure to follow the above instructions may result in abrasion, pitting and rusting of stainless steel surfaces**

Transparent Lid Cleaning

- The lid can be removed from the unit by taking down the hinge bracket when cleaning.
- The lid can be washed with non-abrasive detergents and soapy water.
- Rough cloths should not be used for cleaning to prevent the lid surface from being scratched.
- Do not use acetone, alcohol or dry-cleaning fluid to clean the plastic lid.

Can Holder Cleaning

- The plastic can holder can be removed from the unit for easy cleaning.
- The can holder can be washed with non-abrasive detergents and soapy water.
- A non-metallic brush is recommended for best results.

Condenser Cleaning

- The condenser should be cleaned at least once a month due to dirt, grease, lint and dust build up.

- The following instructions help to reduce compressor failure and minimize your maintenance expense:
    1. You will need a screwdriver, adjustable wrench and stiff bristle brush when cleaning the condenser
    2. Unscrew all screws with screwdriver to remove the grill covering the condenser
    3. Use a stiff bristle brush to get rid of the accumulated dirt, grease, lint and dust from the condenser.
    4. Clean the coils and fan blades of the condenser carefully and cautiously to avoid any damage.
    5. Ensure that the condenser and other accessories are assembled correctly before reinstalling the grill.
    6. Reinstall the grill and tighten all the screws.
    7. Connect the unit and check that it is functioning properly.

TROUBLESHOOTING

Before requesting any service on your unit, please check the following chart. Please note that this guide serves only as a reference for solutions to common problems

Problem	Possible Cause	Corrective Action
Compressor not running	• Fuse blown, or circuit breaker tripped • Power cord unplugged • Thermostat set too high • Unit in defrost cycle	• Replace fuse or reset circuit breaker • Plug in power cord • Set thermostat to lower temperature • Wait for defrost cycle to finish
Condensing unit runs for long period of time	• Excessive amount of warm product placed in unit • Prolonged door opening or door ajar • Door gasket(s) not sealing properly • Dirty condenser coil • Evaporator coil iced over	• Allow adequate time for product to cool down • Ensure doors are closed when not in use. Avoid opening doors for long periods of time • Ensure gaskets are snapped in completely. Remove gasket and wash with soap and water. Check condition of gasket and replace if necessary • Clean the condenser coil • Unplug unit and allow coil to defrost. Make sure thermostat is not set too cold. Ensure the door gasket(s) are sealing properly
Unit is too warm	• Thermostat set too warm • Bad air circulation • Excessive amount of warm product placed in cabinet • Fuse blown, or circuit breaker tripped • Dirty condenser coil • Prolonged door opening or door ajar • Evaporator coil iced over	• Set thermostat to lower temperature • Re-arrange product to allow for proper air flow. Make sure there is at least four inches of clearance from evaporator • Allow adequate time for product to cool down • Replace fuse or reset circuit breaker • Clean the condenser coil • Ensure doors are closed when not in use. Avoid opening doors for long periods of time • Unplug unit and allow coil to defrost. Make sure thermostat is not set too cold. Ensure that door gasket(s) are sealing properly
Unit is noisy	• Loose part(s) • Tubing vibration	• Locate and tighten loose part(s) • Ensure tubing is free from contact with other tubing or components

WARRANTY

ONE YEAR WARRANTY

Warrants to the original purchaser of this unit, the cabinet and all parts thereof, to be free from defects in material or workmanship, under normal use and service, for a period of one (1) year from the date of original installation or 1 year after shipment date, whichever occurs first.

Any parts covered by this warranty that are examined and determined to have been defective within one (1) year of original installation or 1 year after shipment date from manufacturer, whichever occurs first, shall be repaired or replaced as stated below. Shall be deemed to have fully complied with its obligation under the foregoing warranties by electing either one of the following procedures

1.Furnishing a replacement part, freight collect, in even exchange for the returned part, freight collect.
2.Receiving the defective part, freight collect; repairing it; and returning it, freight collect.

ADDITIONAL FOUR YEAR COMPRESSOR PART WARRANTY

In addition to the (1) one year warranty stated above, warrants its hermetically and semi-hermetically sealed compressor to be free from defects in both material and workmanship under normal use and service for a period of four (4) additional years from the date of original installation but not to exceed five (5) years and three (3) months after shipment from manufacturer.

Compressors determined to have been defective within this extended time period will be either repaired or replaced with a compressor or compressor parts of similar design and capacity.

The four (4) year extended compressor warranty applies only to hermetically and semi-hermetically sealed parts of the compressor and does not apply to any other parts or components, including, but not limited to, cabinet, paint finish, temperature control, refrigerant, metering device, driers, motor starting equipment, fan assembly any other electrical component, etc.

134A (404A) AND R290 COMPRESSOR WARRANTY

The four year compressor warranty detailed above will be voided if the following procedure is not carefully adhered to:

1.This system contains R134A (R404A) and R290 refrigerant and polyol ester lubricant. The Polyester lubricant has rapid moisture absorbing qualities. If long exposure to the ambient conditions occur, the lubricant must be removed and replaced with new. Failure to comply with recommended lubricant specification will void the compressor warranty.
2.Dryer replacement is very important and must be changed when a system is opened for servicing. Dryer must be used with XH-9 desiccant.
3.Micron level vacuums must be achieved to insure low moisture levels in the system. 500 microns or lower must be obtained.

WHAT IS NOT COVERED BY THIS WARRANTY

Obligation under warranty is limited to either repair or replacement of parts, subject to the additional limitations below. This warranty neither assumes nor authorizes any person to assume obligations other than expressly covered by this warranty.

1.WARRANTY IS NOT TRANSFERABLE. This warranty is not assignable and applies in favor of the original purchaser/user to whom delivered. Any such assignment or transfer shall void the warranties herein made and shall void all warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.
2.NO CONSEQUENTIAL DAMAGES. Not responsible for economic loss: profit loss or special, indirect, or consequential damages, including without limitation, losses or damages arising from food or product spoilage claims whether or not on account of refrigeration failure.
3.ALTERATION, NEGLECT, ABUSE, MISUSE, ACCIDENT, DAMAGE DURING TRANSIT OR INSTALLATION, FIRE, FLOOD, ACTS OF GOD. Not responsible for the repair or replacement of any parts that have been subjected after the date of manufacture to alteration, neglect, abuse, misuse, accident, damage during transit or installation, fire, flood, or an Act of God.
4.NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. There are no other warranties, express, implied or statutory, except the one(1) year warranty and the additional four(4) year compressor warranty as described above. These warranties are exclusive and in lieu of all other warranties, including implied warranty and merchantability or fitness for a particular purpose. There are no warranties which extend beyond the description on the face hereof.
5.TRANSPORTATION COSTS. Will accept parts covered under this warranty freight collect, provided that shipment has received prior approval. Not responsible for any other transportation costs, but will ship freight collect parts either repaired or replaced under these warranties.
6.WARRANTY CLAIMS. All claims should include: model number of the cooler, the serial number of the cabinet, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect. Any action or breach of these warranty provisions must be commenced within one (1) year after that cause of action has occurred.
7. This equipment is intended for commercial use only and this warranty is void if equipment is used in other than a commercial application

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WARRANTY REGISTRATION CARD

MAIL CARD IMMEDIATELY

This card must be mailed immediately after installation date for warranty to be in effect.

National Service America • 230 Park Ave, 3rd Floor WEST • New York, NY • 10169

_____ _____
(Name of Business) (Dealer Purchased From)

_____
(Address) (City) (State) (Zip Code)

_____ _____
(Model Number) (Serial Number)

This is to inform that I, _____
(Please print name of individual who owns business)

have had the above installed in my place of business _____
(Date of Purchase)

_____ _____ _____
(Contact Phone Number) (Contact E-mail) (Signature of Individual Who Owns Business)

The above warranties are in effect from this installation date, or 90 days, which ever comes first.

5. CONTROLLER INSTRUCTION

5.1 Refrigerator controller

Digital controller model: PJEZ

Dimensioni (mm) / *Dimensions (mm)*

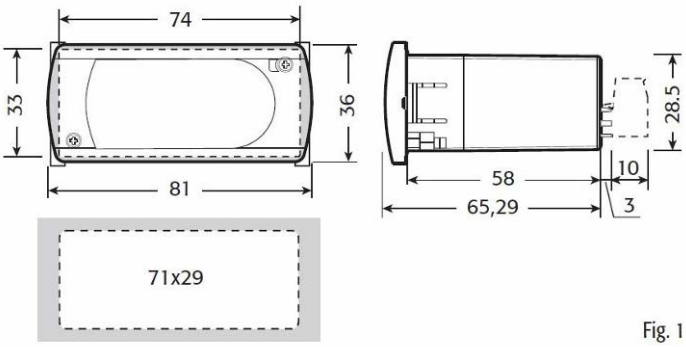


Fig. 1

Display and functions

During normal operation, the controller displays the value of the probe set using parameter/4(=1 ambient probe, default, = 2 second probe, = 3 third probe).In addition, the display has LEDs that indicate the activation of the control functions (see Table 1),while the 3 buttons can be used to activate/deactivate some of the functions(see Table 2).

LEDs and associated functions

icon	function	normal operation			start up
		ON	OFF	blink	
	compressor	on	off	request	ON
	fan	on	off	request	ON
	defrost	on	off	request	ON
AUX	aux	output on	output off	-	ON
	alarm	all	no alarm	-	ON
	clock	RTC fitted and enabled, at least 1 time band set	RTC not fitted or disabled, not even 1 time band set	-	ON if RTC fitted

Tab. 1

Table of functions activated by the buttons - models S, X, Y, C

button		normal operation		start up	
		pressing the button alone	pressed together		
	up ON/OFF	more than 3 s: toggle ON/OFF	Pressed together start/stop continuous cycle	-	
	down defrost	more than 3 s: start/stop defrost		Pressed together start parameter reset procedure	for 1 s display firmware vers. code
set mute	set mute	- 1 s.: display/set the set point - more than 3 s: access parameter setting menu (enter password '22') - mute audible alarm (buzzer)	-		for 1 s RESET current EZY set

Tab. 2

Setting the set point (desired temperature)

1 press **SET** for 1 s, the set value will start flashing after a few moments;

2 increase or decrease the value using **UP** or **DOWN**;

3 press **SET** to confirm the new value.

Switching the device ON/OFF

Press **UP** for more than 3 s. The control and defrost algorithms are now disable and the Instrument displays the message “OFF” alternating with the temperature read by the set probe.

Manual defrost

Press for **DOWN** more than 3 s (the defrost starts only the temperature conditions are valid).

Continuous cycle

Press **UP** and **DOWN** together for more than 3 s.

Access and setting type F (frequent) and type C (configuration) parameters

1. Press **SET** for 3 s (the display will show ”PS”);

2.To access the type F and C parameter menu, press **SET** ,enter the password “22” using **UP/DOWN**, press **SET** to confirm;

To access the F parameter menu only, press **SET** (without entering the password);

3. Scroll inside the parameter menu using **UP/DOWN**;

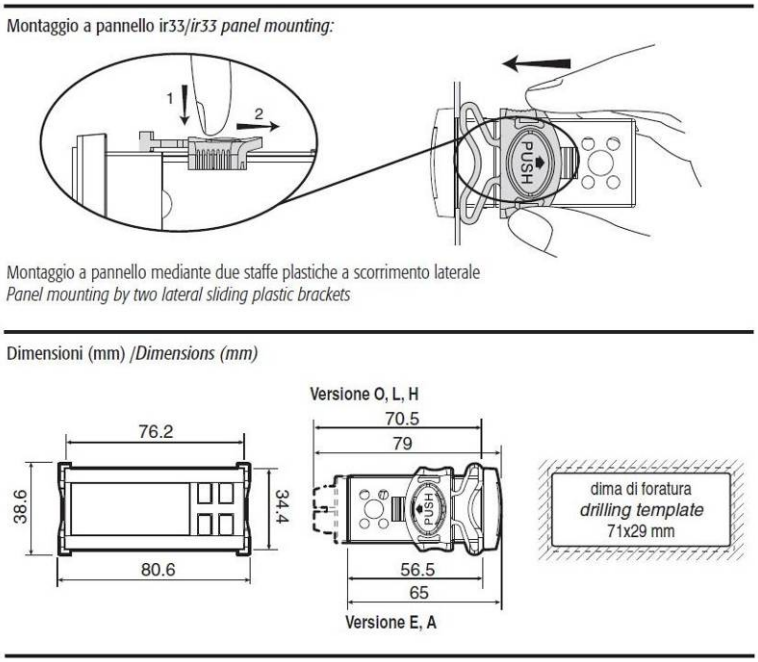
4. To display/set the values of the parameter displayed, press **SET**, then **UP/DOWN** and finally **SET** to confirm the changes (returning to the parameter menu).

To save all the new values and exit the parameter menu, press **SET** for 3 s;

To exit the menu without saving the changed values (exit by timeout) do not press any button for at least 60 s.

5.2 Freezer controller

Digital controller model: IR33



Signals on the display

The blinking status indicates a request for activation that cannot be implemented until the end of the Corresponding delay times.

Icon	Function	ON	OFF	blink	Startup
	COMPRESS.	compressor ON	comp. OFF	compressor request	
	FAN	fan ON	fan OFF	fan request	
	DEFROST	defrost in progress	defrost not required	defrost request	
AUX	AUX	auxiliary output AUX active	auxiliary output AUX not active	anti-sweat heater function active	
	ALARM	delayed external alarm (before the expiry of the time 'A7')	no alarm present	alarms in normal operation (eg. high/low temp.) or alarm from ext. digital input immediate or delayed	
	CLOCK	at least one timed defrost has been set	no timed defrost is present	clock alarm	ON if Real-Time Clock pre-
					sent
	LIGHT	auxiliary output LIGHT ACTIVE	auxiliary output LIGHT NOT ACTIVE	anti-sweat heater function active	
	SERVICE		no malfunction	malfunction (eg. EEPROM error or probe fault)	
HACCP	HACCP	HACCP function	HACCP function enabled	HACCP alarm (HA and/or HF) not enabled	
	CONTINUOUS CYCLE	enabled	not enabled	request	

Setting the set point (desired temperature value)

To display or set the set point, proceed as follow:

1.Press the "**Set**" button for more than 1 second to display the set point;

2.Increase or decrease the value of the set point, using the " ▲ aux " and " def ▼ " respectively, until reaching the desired value;

3.Press the "**Set**" button again to confirm the new value,

Alarms with manual reset

To alarms with manual reset can be reset by pressing the " Prg mute " and " ▲ aux " for more than 5 s.

Manual defrost

As well as the automatic defrost function, a manual defrost can be enabled, if the temperature conditions allow, by pressing the" def ▼ " button for more than 5 s.

Continuous cycle

Pressing the buttons " ▲ aux " and " def ▼ " simultaneously for more than 5 s enable the continuous cycle function.

During operation in continuous cycle, the compressor continues to operate for the time "cc" and it stops when reaches the "cc" time out or the minimum temperature envisaged (AL = minimum temperature alarm threshold).

Continuous cycle setting :"cc" parameter(continuous cycle duration):"cc"=0 never active;"c6" parameter(by passing the alarm after the continuous cycle):"cc" = 0 never active; it avoid or delays the low temperature alarm after the continuous cycle.

Accessing the configuration parameter (type C)

1) Pressing the " Prg mute " and "**Set"** buttons at the same time for more than 5 s, the display will show "00"(password prompt).

2) Press "**Set**"**,** use the " ▲ aux ' " or " def ▼ " buttons to display the number "22" (parameter access password).

3) Confirm by pressing "**Set**".

4) The display will show the first modifiable "C" parameter.

Accessing the configuration parameter (type F)

1) Hold the " Prg mute " button for more than 5 s (if there are active alarms, first mute the buzzer),the display will show the first modifiable "F" parameter.

Modifying the parameters

After having displayed the parameter, either type "C" or type "F", proceed as follows:

1. Use the " ▲ aux " or " def ▼ " buttons to scroll the parameters, until reaching the parameter to be modified; when scrolling the parameters, an icon is shown on the display that represents the category of the parameter.

2. Alternatively, press the“ Prg mute “button to display a menu that can be used to quickly access the family of parameters to be modified

3. Scrolling the menu using the “ ▲ aux “and “ def ▼ “buttons displays the codes of the various categories of parameter, accompanied by the corresponding icon on the display (if present).

4. Once having reached the desired category, press “**Set”** to go directly to the first parameter in the chosen category (if no parameter is visible, pressing the “**Set”** button will have no effect)

5. At this stage, modify the parameters or return to the “Category” menu, using the “Prg mute “button.

6. Press ”**Set**” to display the value associated with the parameter.

7. Increase or decrease the value using the “ ▲ aux “ or “ def ▼ “ buttons respectively.

8. Press “**Set**” to temporarily save the new value and return to the display of the parameter.

9. Repeat the operation from point 1 or point 2.

10. If the parameter has sub-parameters, press “**Set**” to display the first sub-parameter.

11. Press the “ ▲ aux “or ‘ def ▼ “ button to display all the sub-parameters.

12. Press “**Set** “to display the associated value.

13. Increase or decrease the value using the “ ▲ aux “ or “ def ▼ “button respectively.

14. Press “**Set**” to temporarily save the new value and return to the display of the sub-parameter code.

15. Press “Prg mute “ to return to the display of the parent parameter.

Saving the new values assigned to the parameter

To definitely save the new values of the modified parameters, press the “Prg mute “ button for more than 5 seconds, thus exiting the parameter setting procedure. All the modification made to the parameters temporarily saved in the RAM can be canceled and “normal operation” resumed by not pressing any bottom for 60 seconds. Allowing the parameter setting session to expire due to timeout if the instrument is switched off before press the “Prg mute “ button, all the modifications made to the parameters and temporarily saved will be lost.

Correct Settings for CAREL Controllers (115V)

MODE	PJEZ(REFRIG)	IR33(FREEZER)	DISPLAY
/5	1	1	TEMPERATURE UNIT F/C
/c1	0	0	CABINET OFFSET
/c2	0	0	EVAP OFFSET
St	33	-7	USER SET POINT
rd	7	7	DIFFERENTIAL
r1	33	-10	LOW LIMIT
r2	43	10	HIGH LIMIT
c0	2	2	COMPRESSOR DELAY
dI	3	3	DEFROST INTERVAL TIME
dt1	43	58	DEFROST TERMINATION TEMP
dP1	20	20	MAX DEFROST DURATION
F0	N/A	2	FAN OPERATING FUNCTION
F1	N/A	41	FAN STARTING TEMPERATURE
F2	N/A	1	FAN STOPS WHEN COMPRESSOR STOPS
F3	N/A	1	FAN MODE DURING DEFROSTING

Parameter settings for Dipping cabinet CAR-1(PJEZS0H100)

Display Codes	Parameter descriptions	Parameter setting Value	remarks
/5	TEMPERATURE UNIT F/C	1	
/c1	CABINET OFFSET	0	
/c2	EVAP OFFSET	0	
St	USER SET POINT	-15℉	
rd	DIFFERENTIAL	7℉	
r1	LOW LIMIT	-15℉	
r2	HIGH LIMIT	0℉	
c0	COMPRESSOR DELAY	2min	
dI	DEFROST INTERVAL TIME	6Hr	
dP1	MAX DEFROST DURATION	20min	