# VERTICAL FREEZERS AND COOLERS INSTRUCTIONS OF INSTALLATION, OPERATION & MAINTENANCE

Before use, please read and follow all safety rules and operating instructions. CRYSTAL has a policy of continuous improvement on its products and reserves the right to change materials and specifications without notice.

<u><b>1.</b></u> <b>SAFETY</b>
This safety symbol alerts you of potential hazards.
To reduce the risk of fire, electrical shock, burns, personal injury, follow carefully the instructions with this symbol in § "4.Electrical connection".
DANGER / Do not clean or store therein containers with flammable liquids or gases. Their vapors may create fire or explosion hazard.
DANGER / Before proceeding with cleaning and maintenance operations, ensure that the power line of the unit is disconnected. Failure to do so can result in electrical shock, fire.
DANGER / Do not connect or disconnect the electrical plug when your hands are wet.
DANGER / The maintenance operations must be executed by an authorized technician.
MARNING / The fuse or circuit breaker size should be 16 Amperes.
WARNING / Do not use solvent cleaning agents or abrasive on the interior. These cleaners may damage or discolor the interior.
WARNING / If on your appliance there is a sticker with the Symbol, means that the refrigerant containing appliance is R290 (propane) or R600a (isobutane), flammable hydrocarbon, environmentally friendly.
WARNING / Do not exceed the limitation of the horizontal or vertical red
\Lambda WARNING / 🕱 🖏
MARNING / Do not damage the refrigerant circuit.

- WARNING / Do not damage the refrigerant circuit.
- MARNING / Information regarding the maximum loading per shelf:

### Note: NC=No Canopy / F= Frameless Door

Appliance	Kg/Shelf	Appliance	Kg/Shelf	Appliance	Kg/Shelf
CRF300 F, Mira, CRF400, CRF400 NC, CRF400 F, CRF400 3D, CRFV500, CRFV500 NC, CRFV500 F	30	CRTF70, CRW200P, CR300	35	Amazon 400 Economy, CRS930, SNAP70	40
Gelobox, Gelobox INOX, CR400, CR500, CR500 S.Z., CR1000	45	CRW400P, CR600, CRS1200	50	CR1300, CR2000, SNAP100, CRFV1200, CRFV1200 F,	60
CR800	70			CRFV2000, CRF2000 F	

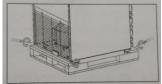
## 2. TRANSPORTATION

Always transport the appliance in vertical position, as shown in Fig 1a. Do not transport the appliance in horizontal position, as shown in Figure 1b.





Fig 1b



# 3. INSTALLATION INTRUCTIONS

- 3.1 Before using your appliance:
- 3.1.a Remove the exterior and interior packing. In order to remove it from the pallet, use a screwdriver and unscrew and four screws, as shown in Fig 2.
- 3.1.b The user manual with the instructions of installation, operation & maintenance is enclosed in every appliance. Some appliances contain additional parts. Consult the table below to ensure that all the required parts are included in your appliance:

	Pieces							
Appliance	Level shelves	Floor shelves	Fittings	Handle	M5 screws	Decompression valve	Door Rubber	Кеу
Figures	3	3	3	4	4	5	10.a,b,c	3
CR300, CR400, SNAP70, SNAP100	4	-	16	-	-	-	1	-
CR500, CR600, CRS930, CRS930 CR1000, CRS1200, CR1300, CR2000, Amazon 400 Economy	5	-	20	-	-	-	1	-
CR800	6	-	24	-	-	-	1	-
CR500 S.Z.,CRFV500, CRFV500 NC	5	1	20	-	-	-	1	-
CRFV500 F	5	1	20	1	2	-	1	-
CRF300 F, CRF400 F, CRF400 3D,CRTF70	-	1	-	1	2	-	1	-
Mira, CRF400, CRF400 NC	-	1	-	-	-	-	1	_
CRFV1200	10	2	40	-	-	1	1	-
CRFV1200 F	10	2	40	1	2	1	1	-
CRFV2000	15	3	60	-	-	1	1	-
CRFV2000 F	15	3	60	1	2	1	1	-
Gelobox, Gelobox INOX	5	-	20	-	_	1	1	1
CRW 200P, CRW 400P	2	-	8	-	-	-	1	-



Fig 3. Shelves, fittings



Fig 4. Handles, handle screws



Fig 5. Decompression valve

3.1.c To assembly the required parts, follow the steps, as described below:







Fig 6. Level shelf placement







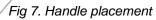




Fig 8. Door locking



Fig 9. Decompression valve placement

Fig 10.a. Pull out completely the entire seal from the door.

Fig 10.b. Insert the new seal in the seat of the door profile.

Fig 10.c. Use the rubber mallet to adjust the seal on the door profile gap.



- 3.1.d Before connecting the appliance to the power source, it is mandatory to let it stand upright for some time. By doing so, the possibility of a malfunction to the cooling system, by the transportation is reduced significantly.
- 3.1.e If needed, clean the interior surface and gasket with water using a soft cloth or sponge.
- 3.2 Installation of your appliance:
- 3.2.a Locate the appliance preferably in dry areas.

Only for appliances: CRFV500, CRFV500 NC, CRFV500 F, CRFV1200, CRFV1200 F, CRFV2000, CRFV200 F, CRF 300 F, Mira, CRF400, CRF400 NC, CRF 400 F, CRF400 3D, Gelobox, Gelobox INOX, CRTF70, Icebox24 GD, Icebox30:

Too much moisture in the air will cause frost to form quickly on the interior surface, requiring more frequent defrosting of the appliance.

- 3.2.b Locate the appliance away from direct sunlight and heat devices, such as: oven, radiator and other. This way the increase of electrical consumption will be avoided and the colors of plastic and metallic parts will be protected.
- 3.2.c Place the appliance on a horizontal floor that is strong enough to support the appliance. when it is fully loaded.
- 3.2.d Level the appliance from side to side and front to back by adjusting the 2 adjustable screw stands that are provided (except Icebox24 GD, Icebox30). Check the level of the appliance with a leveler, as shown in Fig 11.



Fig 11. Level of the appliance







Fig 12. Spacing of the appliance

- 3.2.e Allow at least **10 cm** of space in front of the engine compartment opening, to improve air circulation for compressor and condenser cooling, as shown in Fig 12.
- 3.2.f After plugging the appliance, allow the unit to cool down before placing products inside.

### 4. ELECTRICAL CONNECTION

MARNING / Fire-Electrical shock hazard.

Do not use extension cord. If you do, you can cause electrical shook, fire. If the power cord is too short, have a qualified electrician or service technician install an outlet near the appliance.

A WARNING / Fire-Electrical shock hazard.

Plug the appliance into a grounded wall outlet. Do not remove ground. If you do, you can cause electrical shock, fire.

MARNING / Fire-Electrical shock hazard.

If the power cord is damaged, call an authorized electrician or service technician to replace it.

### MARNING / Fire-Electrical shock hazard.

If the interior lighting is damaged, or not operating, have it replaced by an authorized electrician or service technician. Each different LED lighting connection is demonstrated:

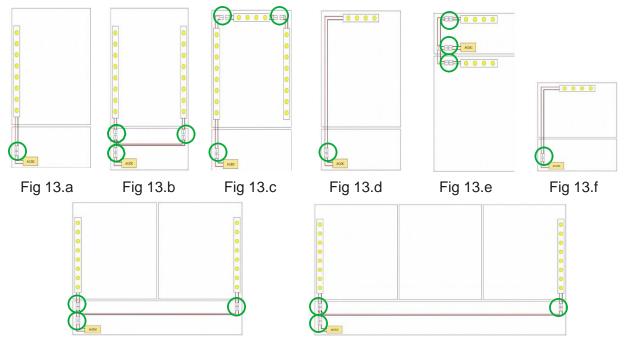


Fig 13.g

Fig 13.h

On the following table, each appliance is linked to its corresponding LED lighting connection.

Appliance	Fig
Amazon 400 Economy	13.a
CR300, CR400, CR500, CR500 S.Z., CR600, CR800, CRF300 F, Mira, CRF400 NC, CRF400 F, CRFV500 NC, CRFV500 F, CRF400 3D	13.b
CRFV500, CRF400,	13.c
SNAP70, SNAP100	13.d
Icebox24 GD	13.e
CRTF70	13.f
CRS930, CR1000, CRS1200, CR1300, CRFV1200, CRFV1200 F	13.g
CR2000, CRFV2000, CRFV2000 F	13.h

### 4.1 LED lighting replacement procedure



WARNING / Fire-Electrical shock hazard.

Before any actions, unplug the power supply (Fig 14.a)! The disconnection presented in Fig14.b referred to the connection point marked with circles on Fig13.a – Fig13.h. To install the new LED lighting, follow the presented steps with the reversed orded.

WARNING / Fire-Electrical shock hazard.

Plug the appliance into a grounded wall outlet. Do not remove ground. If you do, you can cause electrical shock. fire.

WARNING / Fire-Electrical shock hazard.

The position of the light switch and the thermostat is presented on the following table and corresponding figures, for each appliance:

Appliance	Light switch	Mechanical thermostat	Electronic thermostat	Fig 15.
SNAP70, SNAP100	$\checkmark$		$\checkmark$	а
Icebox24 GD, Icebox30	$\checkmark$	$\checkmark$		b
CRTF70		$\checkmark$		С
CRW 200P, CRW 400P		$\checkmark$		d
Other appliances			$\checkmark$	е



Fig 15.a



Fig 15.c

Fig 15.e

WARNING / Fire-Electrical shock hazard.

If the light switch, or thermostat gets wet, or is not operating, have it replaced by an authorized electrician. If not, you can cause electrical shock, fire.

# 5. TEMPERATURE CONTROL AND ADJUSTMENT

- 5.1 When the appliance is turned on for the first time, let it operate for a few minutes. This will ensure that the cabinet is thoroughly chilled, before products are placed inside. During this time, the compressor will operate constantly. This is normal.
- 5.2 The thermostat is located, according to figures15.a-15.e.
- 5.3 The thermostat is presetted by the manufacturer and typically can cover regular needs. However, if it is necessary, the manufacturer's settings can be modified.
- 5.3a Mechanical Thermostat(figures 15.b, 15.c, 15.d): The position of the mechanical thermostat can by adjusted by turning the knob clockwise, from position No.1, which is the warmest temperature set point, to position No.7, which is the coldest temperature set point. The recommended thermostat set position is between positions No.3 and No.4.
- 5.3b Electronic thermostat(figures 15.a, 15.e): The set point of the electronic thermostat, the activation of manual Defrost, the Standby and the Auxiliary function can be adjusted



UP BUTTON

Press and release: Scroll menu, increase values Press for at least 5 sec:

a) Activation of Manual Defrost function: Only for appliances: CRFV500, CRFV500 NC, CRFV500 F,



CRFV1200, CRFV1200 F, CRFV2000, CRFV2000 F, CR500 S.Z., SNAP70, SNAP100.

b) Activation of Energy Saving Mode: <u>Only for appliances</u>: CRFV500, CRFV500 NC, CRFV500 F, CRFV1200, CRFV1200 F, CRFV2000, CRFV2000 F, CRF300 F, Mira, CRF400, CRF400 NC, CRF400 F, CRF400 3D, Amazon 400 Economy, CR300, CR400, CR500, CR500 S.Z., CR600, CR800, CRS930, CR1000, CRS1200, CR1300, CR2000.

#### **DOWN BUTTON** Press and release:

 $\ge$ 

a) Scroll menu items, decrease values

b) ON/OFF lighting: <u>Only for appliances</u>: CRFV500, CRFV500 NC, CRFV500 F, CRFV1200, CRFV1200 F, CRFV2000, CRFV2000 F, CRF300 F, Mira, CRF400, CRF400 NC, CRF400 F, CRF400 3D, Amazon 400 Economy, CR300, CR400, CR500, CR500 S.Z., CR600, CR800, CRS930, CR1000, CRS1200, CR1300, CR2000, SNAP70, SNAP100.



### STAND-BY BUTTON

Press and release: Return to the previous menu Press for at least 5 sec: Activates the Standby function(ON/OFF)

### set SET (ENTER) BUTTON Press and release:

a) Setpoint display and confirm, or change, parameter value with UP and DOWN buttons

b) Displays alarms(if active),

Press for at least 5 sec: Open user's menu for adjusting parameters. We strongly recommend that this action should only be executed by an authorized technician.

- 5.4 To turn the appliance off:
- 5.4.a Mechanical thermostat: Turn the thermostat knob to 0
- 5.4.b Electronic thermostat: Activate the Standby function to OFF.

MARNING / By turning off the thermostat, the cooling cycle is interrupted, but the power supply to the appliance does **not** shuts down.

## 6. DEFROST AND CLEANING OF THE APPLIANCES

6.1 When frost has build up to about 10mm thickness, manual defrost should be activated and the appliance should be cleaned. If the area has exceeding moisture, the appliance may need defrosting and cleaning more frequently.

MARNING / Unplug the appliance before cleaning.

6.2 Use a soft sponge or cloth to clean the gasket and the interior.

MARNING / Do not apply electrical devices, such as fans, hair dryers, etc for faster defrosting. If you do, you can cause electrical shock, fire.

- 6.3 Remove all frozen products before defrosting. Place the frozen products in another appliance or a cool area.
- 6.4 Leave the door open.
- 6.5 Open the defrost water drain tap(located on the inner bottom) and use a large sponge to remover water faster.
- 6.6 Use a plastic scraper to remove frost more effectively.
- A DANGER / Do not use a knife, or any other sharp tool for defrosting, or cleaning. You can cause damage to either yourself, or the appliance.
- 6.7 When the interior of the freezer is dry, replace the water drain tap.
- 6.8 Close the door.
- 6.9 Plug in and turn on the freezer for at least 1 hour before placing the removed frozen products.

### 7. MAINTENANCE

- 7.1 If the appliance does not work, or if it does not work properly, before calling for service, see the troubleshooting guide on §12.TROUBLESHOOTING GUIDE
- 7.2 Depending on the type of the condenser, different actions shall be taken.
- 7.2.a Copper tube-aluminum sheet condenser(Fig 16.a):

If the condenser has dirt or dust on the aluminum sheet, a soft paint brush or vacuum cleaner can be used to remove it. It is recommended that the condenser should be cleaned every 6 months.

MARNING / Unplug the appliance from the power outlet before performing maintenance.

7.2.b Wire-On-Tube(WOT) condenser(Fig16.b): Free on maintenance condenser.

M WARNING / Other maintenance actions can be proceeded only by authorized technicians.

### 7.3 Maintenance services:

According to Regulation (EU) 2019/2024.

Service line (telephone)	Contact your seller or visit your seller's website
Technical support	Contact your seller or visit your seller's website
Ordering of spare parts.	https://crystal.gr/our-products/service-instructions- spare-parts/
CRYSTAL online spare parts catalogue	https://crystal.gr/wp-content/uploads/2023/05/SPARE- PARTS-LIST-1.pdf
Availability of legally required spare parts	The spare parts are available for eight years after placing the last unit of the model on the market.
Minimum duration of warranty	According to Commission Regulation (EU) 2019/2024. *Duration of warranty varies depending on contract agreement.
Online contact	https://crystal.gr/contact-us/
Professional repair	Contact your seller or visit seller's website





### 8. WATER CONDENSATION ON THE DOORS

- 8.1 If the relative humidity of the place where the appliance is placed is below 55% relative humidity, water condensation does not form on the glass surface, or the frame of the doors.
- 8.2 If the relative humidity exceeds 55%, a moderate water condensation on the glass surface, or the frame of the doors, is considered acceptable.

### 9. TIPS ON SAVING ENERGY

- 9.1 Install the application properly: Away from heat sources, direct sunlight, in a well-aired place and keeping at least 100mm of free space between the engine compartment and the nearest wall, or neighboring object.
- 9.2 Do not open the doors of the appliance for no reason. Also, make sure that the doors is closed properly.
- 9.3 Clean the interior tank, if needed. Defrost the appliances referred at §5.3.b, if needed.
- 9.4 Maintain the aluminum sheets of the copper tube-aluminum sheet condenser(Fig 15.a) clean.
- 9.5.a <u>Only for appliances:</u> CRFV500, CRFV500 NC, CRFV500 F, CRFV1200, CRFV1200 F, CRFV2000, CRFV2000 F, GELOBOX, GELOBOX INOX, CRW200P, CRW400P, Amazon 400 Economy, CR300, CR400, CR500, CR500 S.Z., CR600, CR800, CRS930, CR1000, CRS1200, CR1300, CR2000.

Do not place products close to the evaporator fan blade cover. If you do, you can block the correct air circulation.

9.5.b <u>Only for appliances:</u> CRFV500, CRFV500 NC, CRFV500 F, CRFV1200, CRFV1200 F, CRFV2000, CRFV2000 F, GELOBOX, GELOBOX INOX, CRW 200P, CRW 400P, Amazon 400 Economy, CR300, CR400, CR500, CR500 S.Z., CR600, CR800, CRS930, CR1000, CRS1200, CR1300, CR2000.

Do not attach products to the back sheet, the grid, or the air duct of the interior of the appliance. If you do, you can block the correct air circulation.

## 10. DISPOSAL RECYCLING PROCEDURE OF APPLIANCE

10.1 Under its normal operation, the appliance does not cause environmental pollution. At the end of its life expectancy, or in any other case of possible disposal, we suggest the following procedures:



This symbol on the product, or on the packaging indicates that the product should not be considered and disposed as household waste, but should be transported to the appropriate collection point for recycling of electrical and electronic equipment. By providing appropriate disposal of this product, you are helping to avoid potential negative consequences, which could result from its inadequate product disposal.

For more detailed information about recycling this product, contact your local waste disposalservice, or the store where the product was bought.

- 10.2 Recommended procedure of disposal:
- 10.2.a Turn off the equipment and disconnect the power plug.
- 10.2.b Remove the lighting(§4.1) and discard it separately.
- 10.2.c Remove the control units and the electronic boards and dispose them separately.
- 10.2.d Disassemble all independent or moving parts (doors, grids, wheels, profiles, etc.) and separate them to homogeneous material characteristics.
- 10.2.e Check the type of coolant on the rating plate(Fig17). Remove the refrigerant by disposing it through an authorized service facility. Be careful not to damage the cooling unit.
- 10.2.f Disassemble heat exchangers, fans, pipes, cables, etc. They consist of copper, aluminum, steel, which must be disposed separately.
- 10.2.g Once all the components have been removed from the body, separate the different types of materials (metal sheet, polyurethane, copper, aluminum, etc.)
- 10.2.h Each different plastic part of every appliance is demonstrated with numbered pictures. These pictures correspond to a table, in which the material type and the position of the part onto the appliance can be found for every model.





Fig 17



			Common parts	CRFV 500	CRFV 500 NC	CRFV 500 F	CRFV 1200	CRFV 1200 F	CRFV 2000	CRFV 2000 F	MIRA	CRF300 F	CRF400	CRF400 NC	CRF400 F	CRF400 3D	Gelobox, Gelobox INOX	CRTF 70	cebox24 GD	lcebox30	Amazon 400 Economy	CRS930, CRS1200	CR300, CR400,	CR800 CR800	CR1000, CR1300, CR2000	CR500 S.Z.	SNAP70, SNAP100	CRW 200P , CRW 400P
1 Evaporator cover	Position	Material	3	ۍ ۲	5	Ľ.	5	5	۲ ۲	_	Σ	5	5	Ū	Ū	5	ŏŏ	5	<u>0</u>	ŏ	ЪЗ	5	5	55	0	_	ŝ	55
2 Grid	Internal cabinet Engine room	PS PS		1	1	1	1	1	1	1												1	•		1	1	1	· ·
3 Door cover	Door	PS									1																•	
4 Castle evaporator shelf cover	Internal cabinet	ABS									1	1	1	1	1	1												
5 Front canopy part	Canopy	PC		1									1															
6 Side canopy part	Canopy	ABS		1									1															
7 Glass door frame part	Door	ABS		1	1	1	1	1	1	1	1	1	1	1	1	1		1	✓		1				1	1		
8 Metal sheet connection profile	Internal cabinet	ABS		1	1	1	1	1	1	1	1	1	1	1	1	1	1		1		1	1		·	1	1	1	1
9 Casing frame	Insulation wall	ABS																										
10 Door gasket	Door	EPDM		1	1	1	1	1	1	1	1	~	1	-	-	1	1	1	~	<		1			1	1		1
11 Cable/suction cover 12 Gasket holder	Internal cabinet Door	ABS ABS															1				1		•			-		· ·
13 Lateral glass frame	Insulation wall	ABS														1												
14 Sliding door frame	Door	ABS																				1						
15 Sliding casing frame	Internal cabinet	ABS																				1						
16 Price tag exhibitor	Internal cabinet	PC																									1	
17 Sensor cable	Internal cabinet	PVC		1	1	1	1	1	1	1	1	1	1	1	1	1	1				1	1		·	1	1	1	
18 Drainage tub	Engine room	PP																			1	1		1	1	1	1	1
19 Evaporator fan motor grid 20 Evaporator fan motor grid	External cabinet External cabinet	ABS		1	1	1	1	1													1	1		/	1	1		1
21 Handle	Door	ABS																1				1						
22 Light switch	External cabinet																		1	1							1	
23 Thermostat knob	Engine room	ABS																1	1	~								
23 Thermostat knob 24 Cable fitting	Internal cabinet Engine room	ABS PA	1																									1
25 Cable fitting	Engine room	PA	1																									
26 Cable passage fitting	Insulation wall	ABS	•	1	1	1	1	1	1	1	1	1	1	1	1	1					1	1		/	1	1		
27 Shelf hook	Internal cabinet	PA									1	1	1	1	7	1		1								·		
28 Lower hinge cable passage	Door	PP				1		1		1		1			1	1		1										1
29 Brand name logo	Engine room	Silicon	1																									
30 Grid	Engine room	PS																								1		
31 Shelf coating	Internal cabinet	PE		1	1	1	1	1	1	1							1	1			1	1		1	1	1		1
32 Lower hinge cable passage	Door	PP		1	1		1		1		✓		1	✓			1				1			1	1	1		
33 Drainage hose pipe	Engine room	PE		1	1	1	1	1	1	1	1	1	1	✓	1	1					1	1	•	( )	1	✓		1
34 Condensation drainage part 1	Internal cabinet	ABS		1	1	1	1	1	1	1																		
35 Tie-wrap	Engine room	PA	1																									
36 Condensation drainage part 2		ABS		~	1	1	1	1	1	1																		
37 Drainage part	Insulation wall Internal cabinet	ABS									1	1	1	~	1	1					1	1	•		1	-		1
38 Evaporator cover fitting 39 Thermometer	Internal cabinet	ABS																1					•		*			1
40 Height adjuster	External cabinet			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1		/	1	1	1	1
41 Compressor fitting	Engine room	PA	1								-															-		-
42 Insulation cap	Engine room	ABS	1																									
43 Drainage part cap	Internal cabinet	ABS									1	1	1	1	1	1					1	1		1	1	1		1
44 Handle	Door	ABS		1	1		1	1	1				1	1			1		1		1			( ) · · · ·	1	1		
45 Bag for manual and installation part	Internal cabinet	Nylon	1																									
46 Pipe insulator	Internal cabinet	NRB	1																									
47 Sheet insulator	Engine room	NRB		1	1	1	1	1	1	1												-						
48 Electronic thermostat	Engine room	ABS		1	1	1	1	1	1	1	1	1	1	1	< .	1	1				1	1	•	·	1	1	1	
49 Transmittor terminal box	Engine room	Bakelite ABS		1	1	1	1	1	1	1	1	1	1	1	1	1	1	~				1		,	/		1	1
50 Cables terminal box 51 Lighting transmittor cover	Engine room Engine room	ABS		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	•		1	1	1	· ·
52 Electrical cables	Engine room	PVC	1	·	·		•				•	•	·	·	•			•	•		•						•	
53 Electrical cable fitting	Engine room	PA	1																									
54 Lighting cover	Internal cabinet	ABS	•	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1		1	1		·	1	1	1	
55 Front frame	External cabinet	PS																1										
56 Wheels	External cabinet	PP		1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1		1	1	1	1	1
57 Mechanical thermostat part	Internal cabinet	ABS																										1
58 Pump selection switch set	External cabinet	ABS																										1
59 Wine flow seals	External cabinet	Rubber																										1
60 Wine sac valve	Internal cabinet	ABS																										1
61 Wine faucet	External cabinet	ABS																										1
62 Handle	External cabinet	PP																										1
63 Wine hose pipe	Internal cabinet	Silicon																										1
64 Packaging bag	External cabinet	Nylon	~																									
65 O-ring cable passage	Internal cabinet	Rubber									1											1			1			
66 Upper Hinge cover	External cabinet External cabinet	PS Nylon									1																1	
67 Courtain 68 Compressor terminal cover	External cabinet	Nylon ABS	1																								*	
69 Decompression valve	External cabinet			1	1	1	1	1	1	1							1											
70 Packaging part	External cabinet	EXP. PS		-			-	-	-	Ē								1										
71 Handle	Door	PS									1																	
	Internal cabinet																1											



All recyclable materials and waste must be treated and recycled professionally, in accordance with the instructions of the corresponding country. The company responsible for recycling must be registered and certified as a waste disposal service, in accordance with the specific instructions of the corresponding country.



Abusive disposal of the product by its owner imposes penalties and administrative measures as defined by the applicable regulations. Comply with the applicable laws regarding the disposal of refrigerants and oils.



For foam disposal, keep in mind that the polyurethane foams used are CFC, HFC and HCFC free.

## 10. WIRING DIAGRAM

The wiring diagram is printed on a sticker on the back side of the appliance, near the engine compartment.

## 11. CLIMATE CLASSES RATING

The climate class of the appliance is rated on the rating plate. The rating plate is located at the top of the right side of the interior of the appliance. To illustrate its approximate position, Fig 18 demonstrates the position of the rating place in CRF400.



Fig 18

# 12. TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SUGGESTED SOLUTION
The appliance does not operate.	<ol> <li>Not plugged in.</li> <li>The circuit breaker is tripped or fuse is blown.</li> <li>Compressor is out of order.</li> </ol>	<ol> <li>Plug in the power supply.</li> <li>Replace the circuit breaker, or the fuse.</li> <li>Contact an authorized technician.</li> </ol>
Temperature inside the appliance is too cold.	Thermostat is not set correctly or is out of order.	Advice §5.3 or contact an authorized technician for replacement.
Temperature inside the appliance is too warm / Compressor seems to run too long.	<ol> <li>A large amount of warm / unfrozen products might have been stored recently.</li> <li>The doors are not closed properly</li> <li>The condenser is covered with dust and dirt (only for condensers with aluminum sheets).</li> <li>The outside temperature is hotter than normal.</li> <li>There is no enough air circulation space in front of the engine</li> </ol>	<ol> <li>Wait until the freezer reach its targeted temperature.</li> <li>Make sure that the gasket is sealed properly to the interior. If that does not resolve the issue, contact an authorized technician to repair, or replace the gasket.</li> <li>Advice §7.</li> <li>Advice §3.2.b.</li> <li>Advice §3.2.e.</li> </ol>

	<ul> <li>compartment openings.</li> <li>6) The condenser, or evaporator fan motor is out of order.</li> <li>7) Products are placed too close to the evaporator fan cover, blocking the air circulation.</li> <li>8) Products are attached to the back sheet of interior of the appliance.</li> <li>9) Ice has build-up on the evaporator aluminum sheets.</li> <li>10) There is a refrigerant leakage in the refrigerant circuit.</li> </ul>	<ul> <li>6) Contact an authorized technician to replace the fan motor.</li> <li>7) Advice an authorized technician to replace the refrigerant gas and seal the refrigerant circuit.</li> <li>7) Advice §9.5.a.</li> <li>8) Advice §9.5.b.</li> <li>9) Advice §5.3. If that does not resolve the issue, contact an authorized technician.</li> <li>10) Contact an authorized technician.</li> </ul>
Popping or cracking sound when compressor comes on.	This is normal.	Sound will level off or disappear as the appliance continues to operate. If that does not resolve the issue, contact an authorized technician.
Bubbling or gurgling sound, like water boiling.	This is normal.	It is due to the refrigerant circulating.
Vibrations	<ol> <li>The appliance is touching the wall.</li> <li>The appliance is not on a level surface.</li> </ol>	<ol> <li>Move it from the wall.</li> <li>Advice §3.2.d.</li> </ol>
Moisture forms into frost on the interior surface of the appliance. <u>Only for appliances:</u> CRF300 F, Mira, CRF400, CRF400 NC, CRF400 SD, CRF400 3D, CRF70, Icebox 24GD, Icebox 30	<ol> <li>This is normal. It is caused by the air flow to the interior of the appliance, when the door opens.</li> <li>If the frost is significant, the doors might not have been closed properly.</li> </ol>	2) Make sure that the gasket is sealed properly to the interior. If that does not resolve the issue, contact an authorized technician to repair, or replace the gasket.

### 13. <u>RECOMMENDED TEMPERATURE SETTINGS</u>

#### Thermostat Temperature Settings

A) Freezers

A1) Frozen foods – packaged ice creams

The storage temperature of frozen food – packaged ice cream, to keep the food safe, is such that in any climate class, the warmest food has a temperature less than or equal to -18°C (when the lids or freezer doors are closed) and less than or equal to -16°C (when freezer lids or doors are opening and closing).

#### A2) Bulk ice cream

The serving temperature of bulk ice cream varies, depending on the fat content of each ice cream. This temperature is specified by each customer for the "pozzeti section" of the freezer and takes values from -10°C to -18°C, while in the "storage section" bulk ice cream freezer the temperature is less than or equal to -18°C.

#### A3) Ice Cubes

The storage temperature of ice cubes is from -12°C to -15°C.

B) Refrigerators

The preservation temperature of the preservation products is from  $-1^{\circ}$ C to  $+4.4^{\circ}$ C with the average temperature of the products being kept less than or equal to  $+2.5^{\circ}$ C. Even if food is exposed for a short time to a temperature above  $4.4^{\circ}$ C it could start to spoil. It is worth noting that not all food spoils at the same rate.

MODEL	CLASS	ENVIRONMENTAL TEMPERATURE AND HUMIDITY	THERMOSTAT POSITION
CRTF 70	7L1	350C - 75% RH	5,5
CRF 300 3D	4L1	30oC - 55% RH	-21,0 / -20,0
CRF 300 3D	4L1	30oC - 55% RH	5
CRF 300	7L1	350C - 75% RH	-20,0 / -19,0
CRF 400 3D	4L1	30oC - 55% RH	-21,0 / -20,0
CRF 400	7L1	350C - 75% RH	-21,0 / -20,0
GELOBOX	4L1	30oC - 55% RH	-19,5 / -22,5
CRFV 500	7L1	350C - 75% RH	-19,0 / -25,0
CRFV 1200	4L1	30oC - 55% RH	-25,0 / -20,0
CRFV 2000	4L1	30oC - 55% RH	-23,5 / -19,0
ICE BOX 24	4L1	30oC - 55% RH	4,5
ICE BOX 30	5L3	40oC - 40% RH	5,5
CRW 200 P	CC2/K4	32,20C - 65% RH	4
CRW 400 P	CC2/K4	32,20C - 65% RH	3,5
CR 300 EMD	CC2/K1	32,20C - 65% RH	1,5 - 4,5
			4,0 - 7,0

CR 450 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 450 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -3,0 - 0,0           CR 450 SUB ZERO EMD         CC2/K2         32,20C - 65% RH         -3,0 - 0,0           CR 500 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 500 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -4,52,0           CR 500 SUB ZERO EMD         CC2/K2         32,20C - 65% RH         -4,52,0           CR 600 EMD         CC2/K2         32,20C - 65% RH         -4,5 - 4,5           Quarter of the experiment of the expe				
CR 450 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -3,0 - 0,0         -3,0	CR 450 EMD	CC2/K2	32,20C - 65% RH	
CR 500 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 500 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -4,52,0           CR 500 SUB ZERO EMD         CC2/K2         32,20C - 65% RH         -4,52,0           CR 600 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 600 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 800 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K1         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD <t< td=""><td></td><td></td><td></td><td>4,0 - 7,0</td></t<>				4,0 - 7,0
CR 500 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 500 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -4,52,0           CR 600 EMD         CC2/K2         32,20C - 65% RH         -4,52,0           CR 600 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 600 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 800 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 930 EMD         CC2/K1         32,20C - 65% RH         0,5 - 3,5           SO - 6,1         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           SO - 6,0         CC2/K2         32,20C - 65% RH         0,5 - 3,5           SO - 6,0         CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           SO - 6,0         CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           SO - 6,0         CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           SO - 6,0         CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5	CR 450 SUB ZERO EMD	CC2/K3	32,20C - 65% RH	-3,0 - 0,0
CR 500 SUB ZERO EMD         CC2/K3         32,2oC - 65% RH         -4,52,0         -1,5 - +1,5         -1,5 - +1,5         -1,5 - +1,5         CR 600 EMD         CC2/K2         32,2oC - 65% RH         1,5 - 4,5         4,0 - 7,0         -1,5 - 4,5         4,0 - 7,0         -1,5 - 3,5         4,0 - 7,0         -1,5 - 3,5         4,0 - 7,0         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 4,5         4,0 - 7,0         -1,5 - 4,5         4,0 - 7,0         -1,5 - 4,5         4,0 - 7,0         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 3,5         -1,5 - 4,5				0,0 - 3,0
CR 500 SUB ZERO EMD         CC2/K3         32,20C - 65% RH         -4,52,0           CR 600 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 800 EMD         CC2/K2         32,20C - 65% RH         1,5 - 4,5           CR 800 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 800 EMD         CC2/K1         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K1         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1200 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4 </td <td>CR 500 EMD</td> <td>CC2/K2</td> <td>32,20C - 65% RH</td> <td>1,5 - 4,5</td>	CR 500 EMD	CC2/K2	32,20C - 65% RH	1,5 - 4,5
-1,5 - +1,5         CR 600 EMD       CC2/K2       32,20C - 65% RH       1,5 - 4,5         4,0 - 7,0       CR 800 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         4,0 - 7,0       CRS 930 EMD       CC2/K1       32,20C - 65% RH       0,5 - 3,5         0       CRS 930 EMD       CC2/K1       32,20C - 65% RH       0,5 - 3,5         0       CR 1000 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 1000 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 1000 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 1300 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 1300 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 2000 EMD       CC2/K2       32,20C - 65% RH       0,5 - 3,5         0       CR 2000 EMD       CC2/K4       32,20C - 65% RH       0,5 - 3,5         0       CR 2000 EMD       CC2/K4       32,20C - 65% RH       0,5 - 3,5         0       3,0 - 6,0       3,0 - 6,0       3,0 - 6,0				4,0 - 7,0
CR 600 EMD         CC2/K2         32,2oC - 65% RH         1,5 - 4,5         4,0 - 7,0           CR 800 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         4,0 - 7,0           CRS 930 EMD         CC2/K1         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,1           CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,1           CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CRS 1200 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CR 500 SUB ZERO EMD	CC2/K3	32,20C - 65% RH	-4,52,0
CR 800 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CRS 930 EMD         CC2/K1         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1000 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1200 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 1300 EMD         CC2/K2         32,20C - 65% RH         0,5 - 3,5           CR 2000 EMD         CC2/K4         32,20C - 65% RH         0,5 - 3,5           3,0 - 6,0         3,0 - 6,0         3,0 - 6,0         3,0 - 6,0				-1,5 - +1,5
CR 800 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         4,0 - 7,0           CRS 930 EMD         CC2/K1         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,1           CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,1           CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CRS 1200 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CR 600 EMD	CC2/K2	32,20C - 65% RH	1,5 - 4,5
-         -				4,0 - 7,0
CRS 930 EMD         CC2/K1         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,1         3,0 - 6,1           CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CRS 1200 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0           CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CR 800 EMD	CC2/K2	32,20C - 65% RH	0,5 - 3,5
CR 1000 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CRS 1200 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 1300 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 1300 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 1300 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 2000 EMD       CC2/K4       32,2oC - 65% RH       0,5 - 3,5         3,0 - 6,0       3,0 - 6,0       3,0 - 6,0				4,0 - 7,0
CR 1000 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CRS 930 EMD	CC2/K1	32,20C - 65% RH	0,5 - 3,5
CRS 1200 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 1300 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 1300 EMD       CC2/K2       32,2oC - 65% RH       0,5 - 3,5         CR 2000 EMD       CC2/K4       32,2oC - 65% RH       0,5 - 3,5         3,0 - 6,0       3,0 - 6,0       3,0 - 6,0				3,0 - 6,1
CRS 1200 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CR 1000 EMD	CC2/K2	32,20C - 65% RH	0,5 - 3,5
CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0				3,0 - 6,0
CR 1300 EMD         CC2/K2         32,2oC - 65% RH         0,5 - 3,5         3,0 - 6,0	CRS 1200 EMD	CC2/K2	32,20C - 65% RH	0,5 - 3,5
CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5           3,0 - 6,0         3,0 - 6,0         3,0 - 6,0         3,0 - 6,0				3,0 - 6,0
CR 2000 EMD         CC2/K4         32,2oC - 65% RH         0,5 - 3,5           3,0 - 6,0         3,0 - 6,0	CR 1300 EMD	CC2/K2	32,20C - 65% RH	0,5 - 3,5
3,0 - 6,0				3,0 - 6,0
	CR 2000 EMD	CC2/K4	32,20C - 65% RH	0,5 - 3,5
				3,0 - 6,0
	AMAZON 400 ECONOMY	CC2/K4	32,20C - 65% RH	4