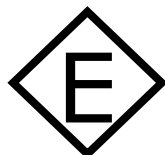


ICE CREAM SHOWCASE

BRIO



INSTRUCTION MANUAL

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1 GUIDE TO THE MANUAL

- ✓ This manual has been drawn up by the manufacturer and is an integral part of the machine supply. The information contained in this manual is for nonqualified (inexpert) and qualified personnel.
- ✓ This manual defines the purpose for which the machine was built and it contains all necessary information to ensure its proper installation and safe correct operation.
- ✓ Other technical information that is not included in this manual is an integral part of the technical file prepared and is available at its facilities.
- ✓ Constant observance of the regulations it contains will guarantee personnel and machine safety, low-cost operation and a longer operating life.
- ✓ The careful analysis done has made it possible to eliminate most risks. However, be sure to follow all the instructions given in this manual. Always refer to the manual before carrying out any operation. Safeguard this manual and make sure it is always available next to the machine or in the nearby vicinity.
- ✓ The diagrams and drawings are furnished by way of example. In pursuance to its policy of constant development and updating. The manufacturer may make any changes without giving advance notice.
- ✓ This manual must be kept for the entire life of the machine. If it is lost or destroyed, a copy can be requested from the manufacturer. Be sure to indicate the data listed on the nameplate (the price will be established by the manufacture).
- ✓ We welcomes any comments from clients concerning improvements to be made on the machine and will assess their implementation.
- ✓ This document is the exclusive property and cannot be divulged to third parties, either in whole or in part, without the written authorization
- ✓ We reserves all legal rights.
- ✓ All the measurements listed in this manual are expressed in mm.

IMPORTANT NOTICE



Correct Disposal of this product

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

SAFETY TIPS



IMPORTANT: For your safety read the manual carefully before installing or using this product. Save this manual for future reference.

Position on a flat, stable surface.

A service agent/qualified technician should carry out installation and any repairs if required. Do not remove any components or service panels on this product.

1. The appliance is intended for commercial use.
2. DO NOT use the appliance outside.
3. DO NOT attempt to service the item yourself.
4. DO NOT use damaged appliances. If you are in any doubt, consult service agent.
5. DO NOT use electrical appliances inside the appliance (e.g. heaters, ice-cream makers etc.), unless they are of the type recommended by the manufacturer.
6. Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
7. This unit can be used by children aged above 18 years and persons with reduced physical, sensory or mental capabilities or lacking of experience and knowledge who have been given supervision or using instruction of the device and understand the resulting risks (for European market).
8. Do not let children play with the appliance.
9. Cleaning and user maintenance must not be carried out by children without supervision.

SAFETY TIPS



IMPORTANT: For your safety read the manual carefully before installing or using this product. Save this manual for future reference.

10. DO NOT put combustible explosive volatile articles and corrosive acids, alkalis or liquids in the equipment.
11. DO NOT use this appliance to store medical supplies.
12. DO NOT use jet/pressure washers to clean the appliance.
13. DO NOT allow children to play with the packaging, and dispose plastic bags safely.
14. Always carry, store and handle the appliance in upright orientation and move by holding the base of the appliance.
15. Always switch off and disconnect the power supply to the unit before cleaning.
16. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
17. To guarantee safe operation, ensure that the appliance is set up and connected as described in the instruction manual.
18. Any repairs and work on the appliance should only be carried out by the customer service department.
19. The key to the electrical cabinet should be kept out of the reach of children and users.

SAFETY TIPS

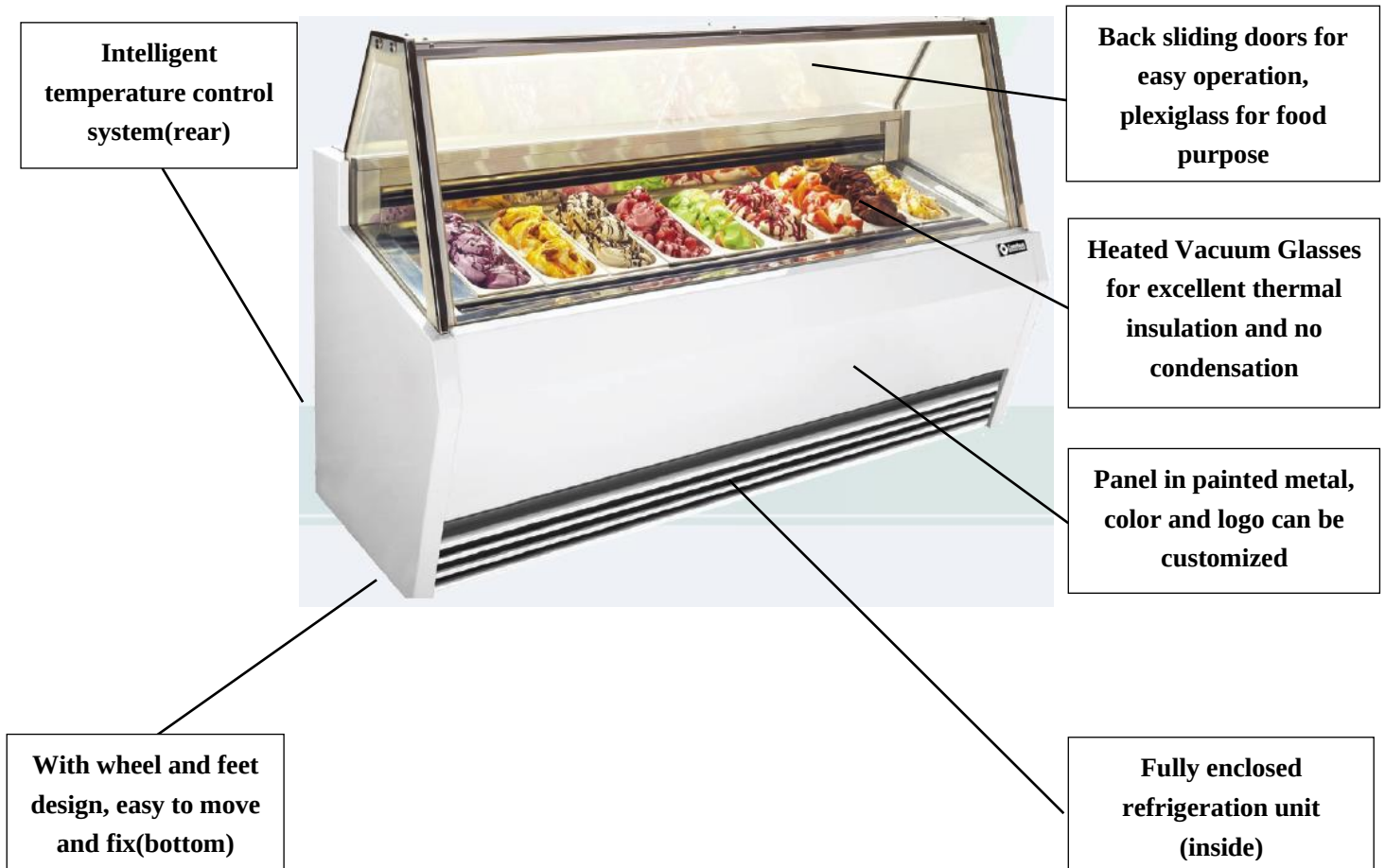


IMPORTANT: For your safety read the manual carefully before installing or using this product. Save this manual for future reference.

20. The A-weighted emission sound pressure level during normal operation is less than 70 dB(A).

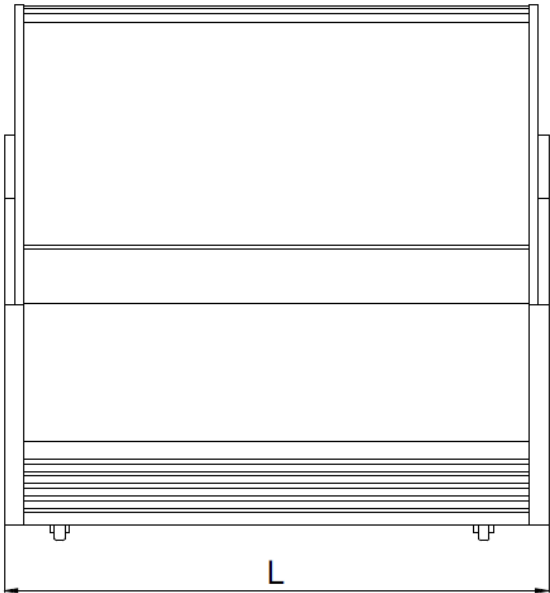
21. The refrigerant is covered by the Kyoto Protocol, which is fluorinated to harm the environment. It could cause global warming once leaked. (R404A GWP 3922; R448A GWP 1237; R290 GWP 5.)

2 FEATURES OF THE UNIT

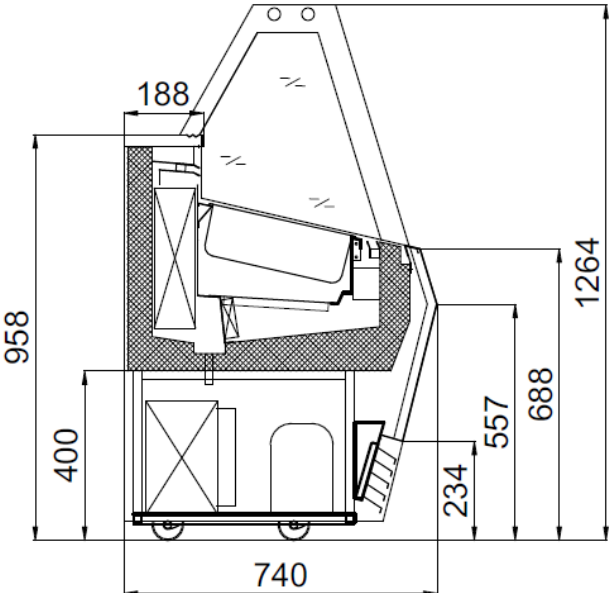


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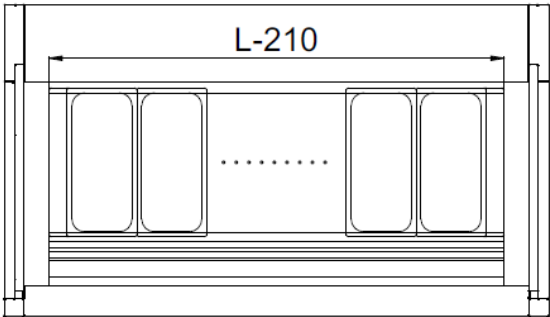
DRAWING



FRONT VIEW



SIDE VIEW



TOP VIEW

MODEL	L (mm)
BRIO 6	1287
BRIO 7	1463
BRIO 9	1815

4 TECHNICAL DATA

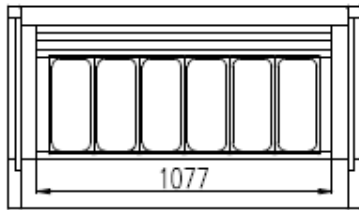
Model	BRIO 6		BRIO 7		BRIO 9	
Length（mm）	1287		1463		1815	
Depth（mm）	740		740		740	
Height（mm）	1264		1264		1264	
Temperature（℃）	-16～-18		-16～-18		-16～-18	
Optional Temperature（℃）	+2～-18		+2～-18		+2～-18	
Climatic class	4		4		4	
Compressor size HP	1		1		1	
Refrigerant	R404A/R448A		R404A/R448A		R404A/R448A	
Type of refrigeration	Ventilated		Ventilated		Ventilated	
Defrost	Automatic inversion cycle		Automatic inversion cycle		Automatic inversion cycle	
Defrost per day (24 hours)	4 per day		4 per day		4 per day	
Power (V/Ph/Hz)	220-240~/1/50	220-240~/1/60	220-240~/1/50	220-240~/1/60	220-240~/1/50	220-240~/1/60
Amperage（A）	6.5	7.0	6.5	7.1	6.5	7.3
Capacity at -30℃ Evap. Temp.（W）	850	1113	850	1113	850	1113
Lights Amperage（A）	1.13		1.38		1.63	
Energy consumption（kwh/24h）	17.6	23.5	18.5	24.4	20.2	25.2
Net capacity(L)	70		80		105	
Shipping info						
Length（mm）	1400		1560		1912	
Depth（mm）	825		825		825	
Height（mm）	1450		1450		1450	
Gross weight（kg）	152		180		225	
Volume（m3）	1.68		1.87		2.29	
40' Container	22PCS		15PCS		14PCS	
20' Container	11PCS		7PCS		7PCS	

4 TECHNICAL DATA

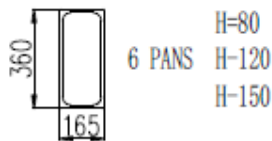
Model	BRIO 6		BRIO 7		BRIO 9	
Length（mm）	1287		1463		1815	
Depth（mm）	740		740		740	
Height（mm）	1264		1264		1264	
Temperature（℃）	-16～-18		-16～-18		-16～-18	
Optional Temperature （℃）	+2～-18		+2～-18		+2～-18	
Climatic class	4		4		4	
Compressor size HP	3/4		3/4		1	
Refrigerant	R290		R290		R290	
Type of refrigeration	Ventilated		Ventilated		Ventilated	
Defrost	Automatic inversion cycle		Automatic inversion cycle		Automatic inversion cycle	
Defrost per day（24 hours）	4 per day		4 per day		4 per day	
Power（V/Ph/Hz）	220-240~/1/50	220-240~/1/60	220-240~/1/50	220-240~/1/60	220-240~/1/50	220-240~/1/60
Amperage（A）	5.5	6.0	5.8	6.3	6.2	6.8
Capacity at -30℃ Evap. Temp.（W）	606	685	606	685	694	720
Lights Amperage（A）	1.13		1.38		1.63	
Energy consumption （kwh/24h）	14.5	16.5	15	17.2	16.8	19.2
Net capacity(L)	70		80		105	
Shipping info						
Length（mm）	1400		1560		1912	
Depth（mm）	825		825		825	
Height（mm）	1450		1450		1450	
Gross weight（kg）	152		180		225	
Volume（m3）	1.68		1.87		2.29	
40' Container	22PCS		15PCS		14PCS	
20' Container	11PCS		7PCS		7PCS	

5 PANS OR ROUND BUCKETS CONFIGURATION DRAWING

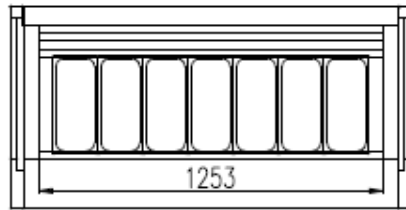
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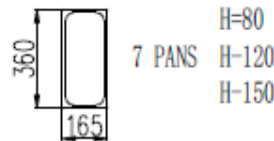
Operation side



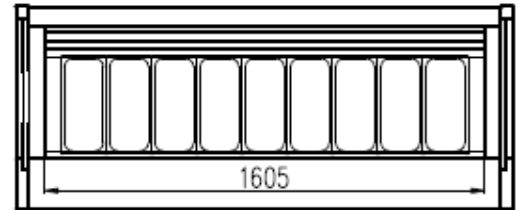
BRIO 7



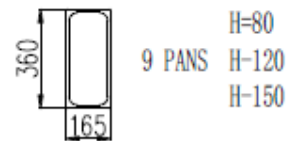
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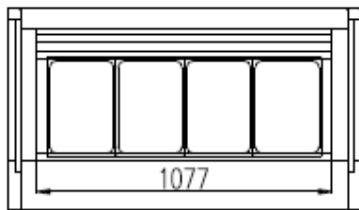
BRIO 9



Operation side



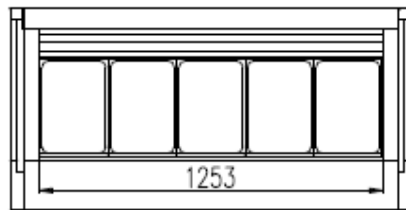
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Operation side



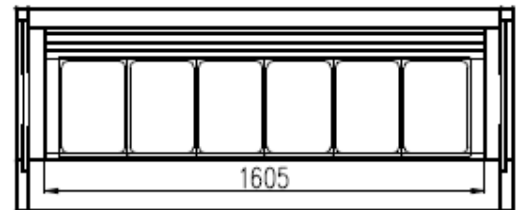
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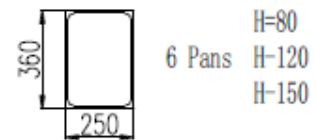
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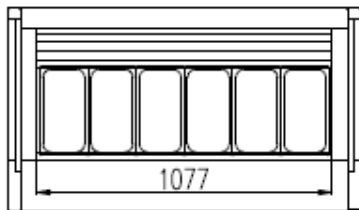
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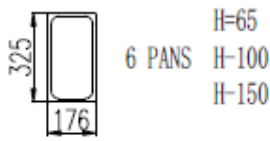
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BRIO 6

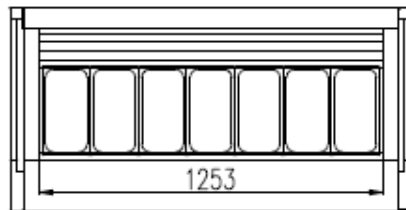


Operation side

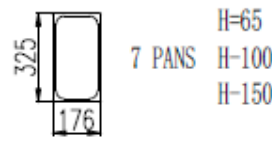


GN1/3 PANS

BRIO 7

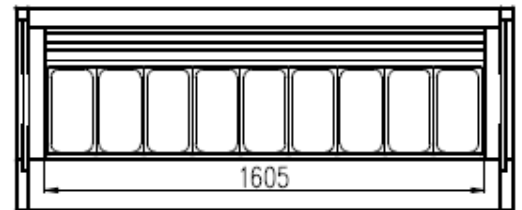


Operation side

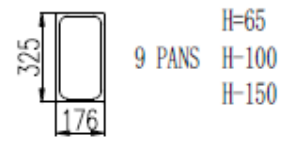


GN1/3 PANS

BRIO 9



Operation side

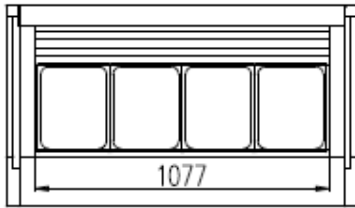


GN1/3 PANS

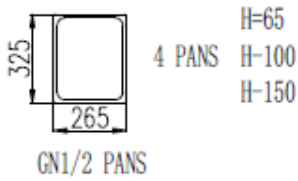
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PANS OR ROUND BUCKETS CONFIGURATION DRAWING

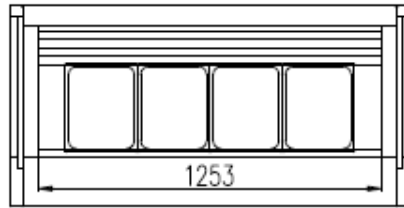
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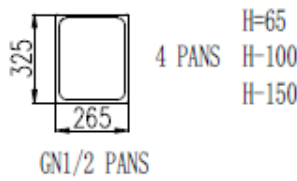
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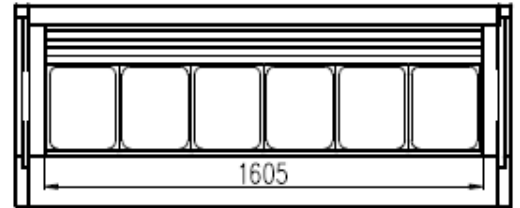
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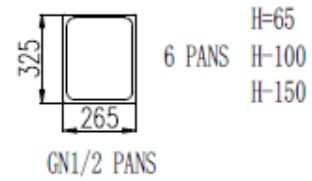
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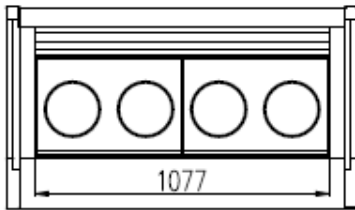
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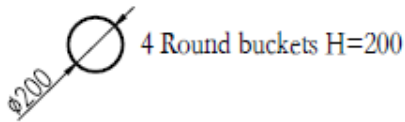
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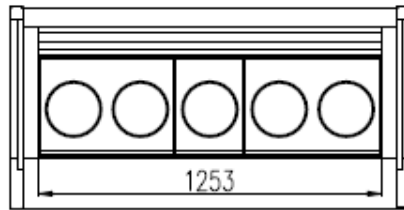
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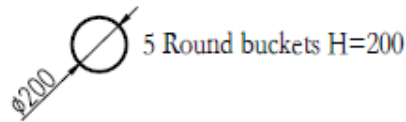
Operation side



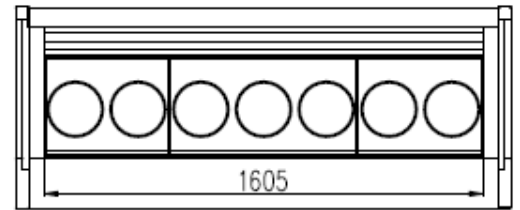
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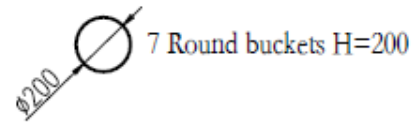
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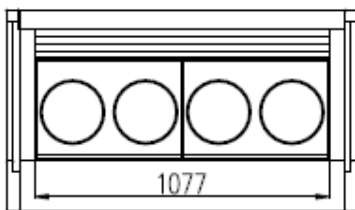
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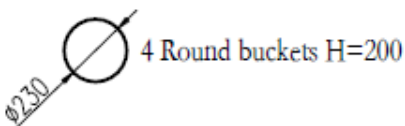
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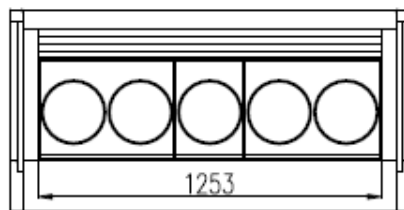
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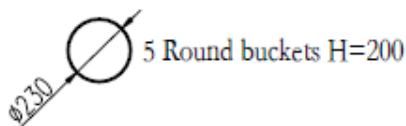
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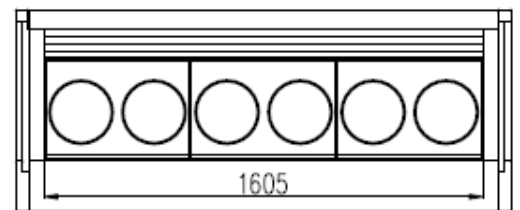
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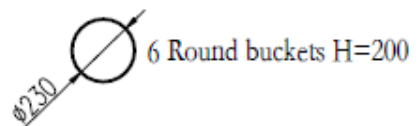
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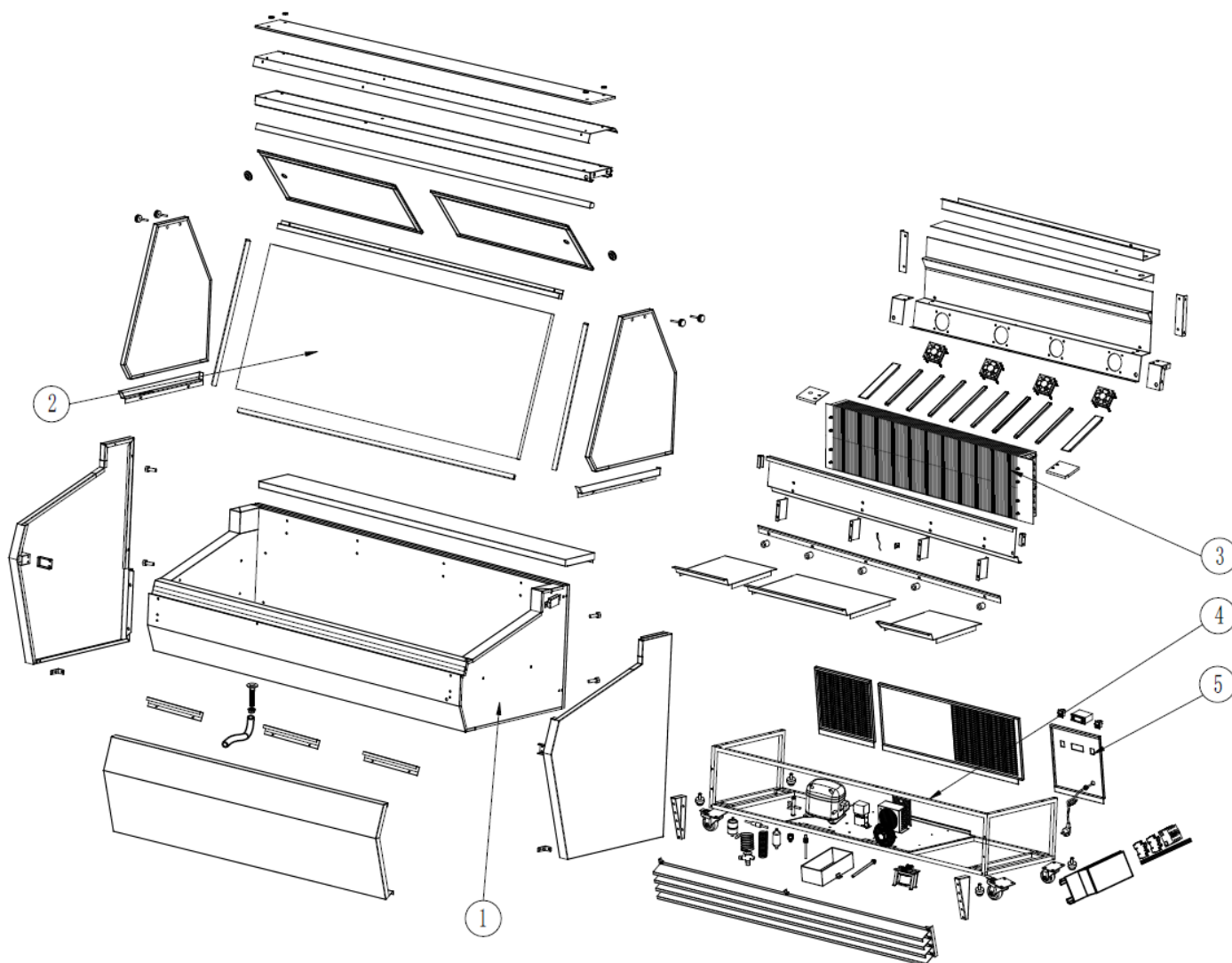
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Operation side



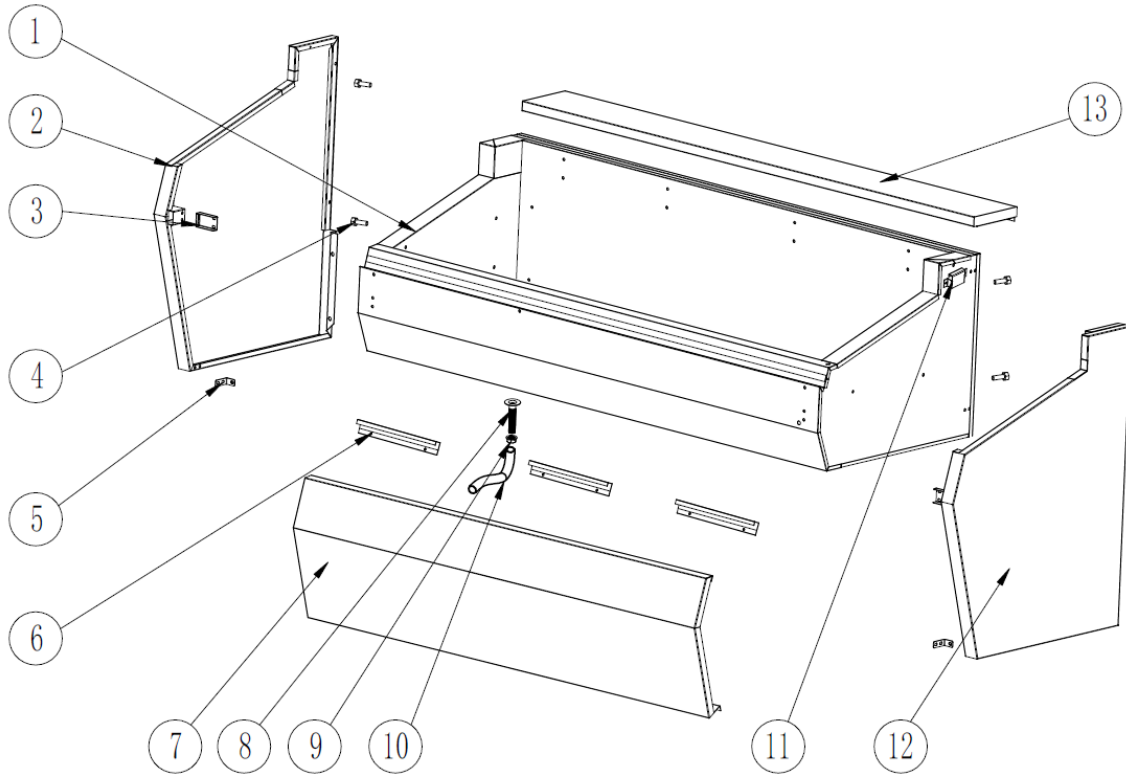
6 EXPLODED VIEW



NO	NAME	QTY.
1	Body and exterior trim panel components	Page 14
2	Glass and ceiling light components	Page 15
3	Inside cooling system and cold air circulation components	Page 16
4	Condensing unit assembly and its components	Page 17-18
5	Intelligent control system	Page 19

6 EXPLODED VIEW

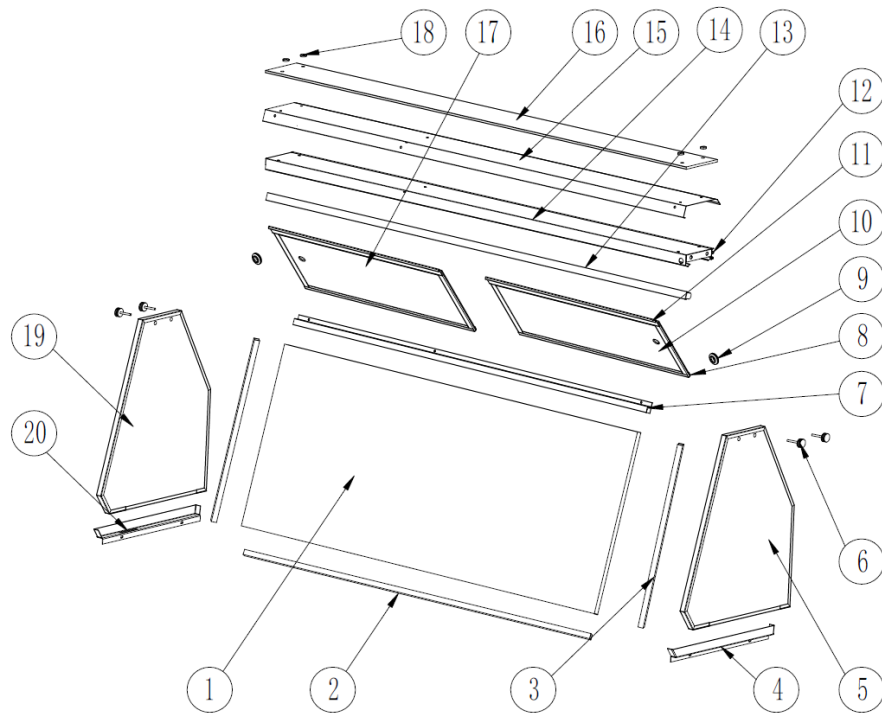
6.1 BODY AND EXTERIOR TRIM PANEL COMPONENTS



NO	NAME	QTY.
1	Frothing Framework	1
2	Side decorated board(Right)	1
3	Front piece 2 of side trim panel	2
4	Peg	4
5	Front fixing block of Side trim panel	2
6	Bayonet 1	3
7	Front decorated board	1
8	Draining pipe(long)	1
9	Draining pipe nut	1
10	Pipe	1
11	Upper retaining block of Side trim panel	2
12	Side decorated board(Left)	1
13	Worktable plate	1

6 EXPLODED VIEW

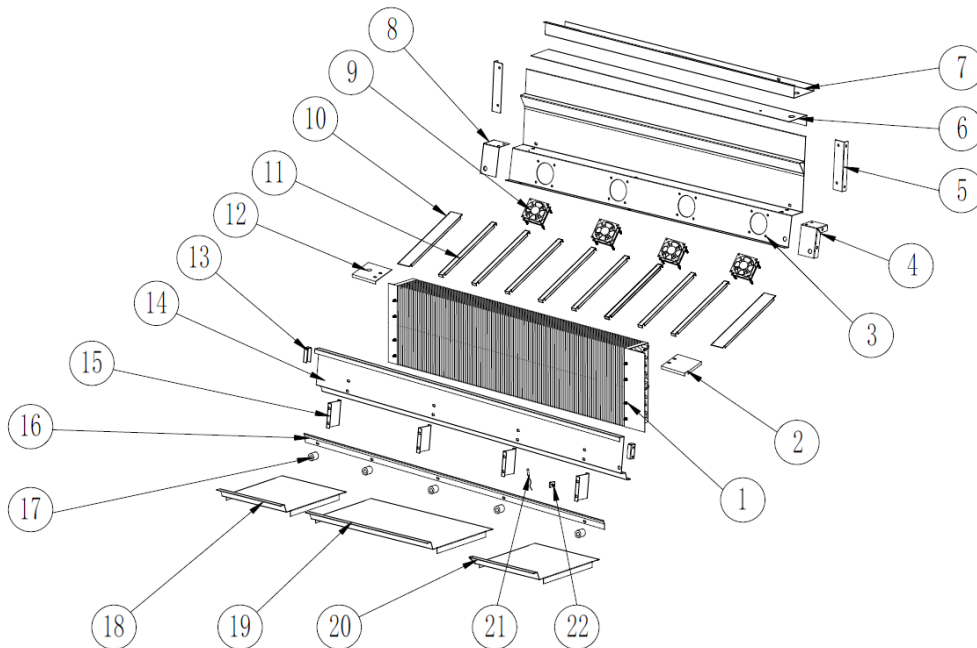
6.2 GLASS AND CEILING LIGHT COMPONENTS



NO	NAME	QTY.
1	Front glass	1
2	Front strip seal	1
3	Side strip seal	2
4	Side glass permanent seat(Left)	1
5	Left side glass	1
6	Butt bolt	4
7	Top clip of front glass	1
8	After the pull curtain anti-wear	2
9	Sliding door buckle cover	2
10	Back draw curtain 1	1
11	Rear curtain pothook	2
12	Rear pull curtain bracket	1
13	LED lamp	1
14	Top lamp holder 2	1
15	Top lamp holder 1	1
16	Top glass	1
17	Back draw curtain 2	1
18	Decorative screw	4
19	Right side glass	1
20	Side glass permanent seat(Right)	1

6 EXPLODED VIEW

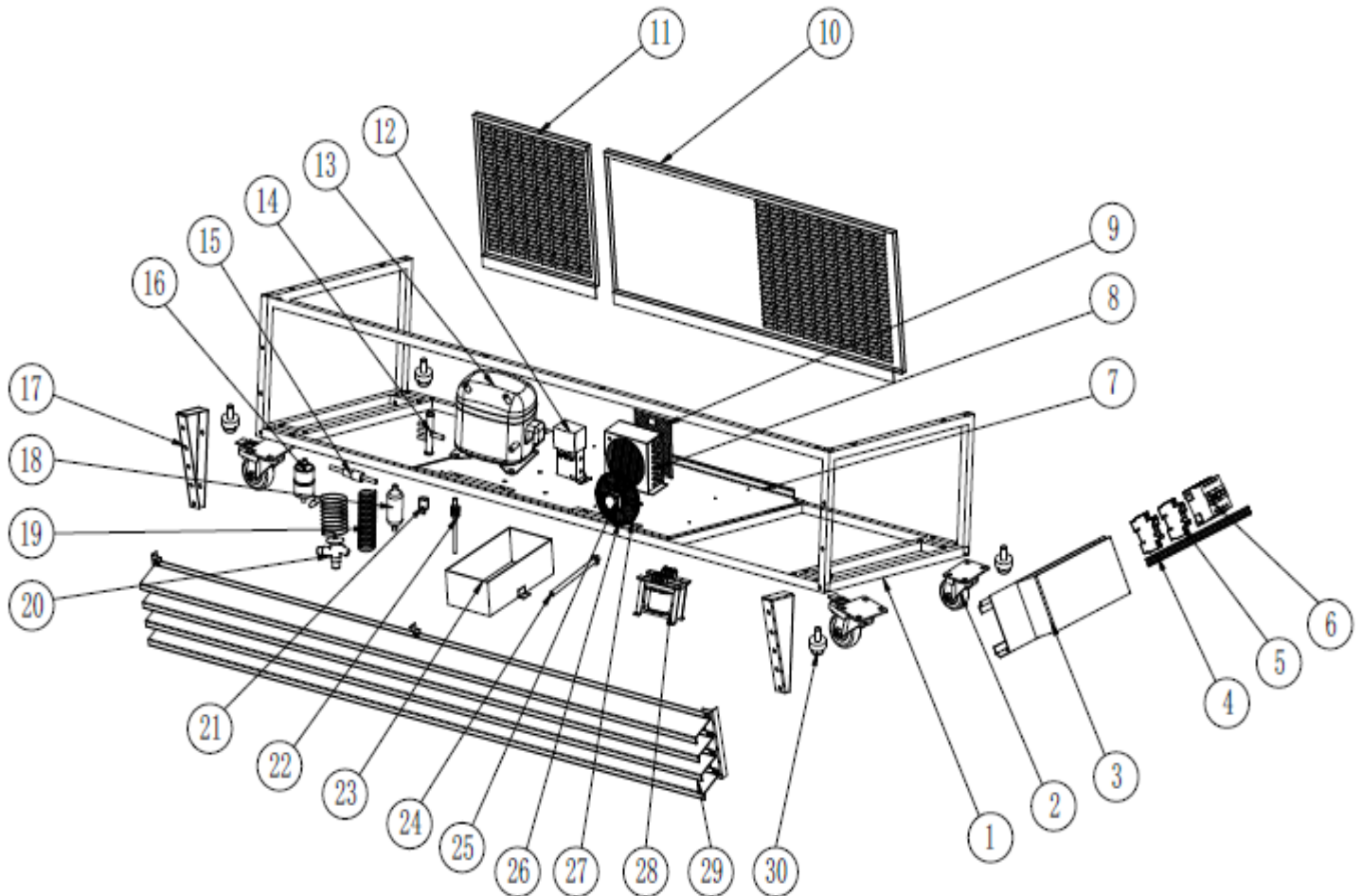
6.3 INSIDE COOLING SYSTEM AND COLD AIR CIRCULATION COMPONENTS



NO	NAME	QTY.
1	Evaporator	1
2	Evaporator left baffle	1
3	Air outlet baffle plate	1
4	Back holder (Left)	1
5	Air outlet baffle bracket	2
6	Air outlet guiding plate	1
7	Air outlet plate	1
8	Back holder (Right)	1
9	Evaporator fan	3/3/4
10	Basin side support	2
11	Basin support	5/6/8
12	Evaporator right baffle	1
13	Hanging bracket	2
14	Air recycle guide plate	1
15	Front holding bracket	3/3/4
16	Air recycle guide plate	1
17	Wind-guiding pillar	3/4/5
18	Cover plate (Right)	1
19	Cover plate (Middle)	1
20	Cover plate (Left)	1
21	Plastic probe	1
22	Detector fixed seat	1

6 EXPLODED VIEW

6.4 CONDENSING UNIT ASSEMBLY AND ITS COMPONENTS



6

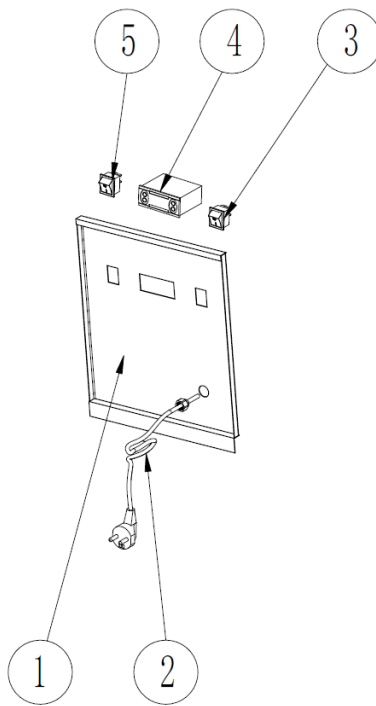
EXPLODED VIEW

6.4 CONDENSING UNIT ASSEMBLY AND ITS COMPONENTS

NO	NAME	QTY.
1	Bottom bracket	1
2	Direction wheel	4
3	Electric box assembly	1
4	Guide rail	1
5	Fuse	2
6	Relay	1
7	Combined plate	1
8	Condenser	1
9	Filter net	1
10	Back panel-L	1
11	Back panel-R	1
12	Starting box	1
13	Compressor	1
14	Four way valve	1
15	Holding valve	1
16	Air-liquid separator	1
17	Front panel bracket	2
18	Dry filter	1
19	Defrosting capillary	1
20	Expansion valve	1
21	Pressure switch	1
22	Pin valve	1
23	Water storage box	1
24	PTC heater	1
25	Condenser fan	1
26	Condenser fan grille	1
27	Condenser fan blades	1
28	Transformer	1
29	Front panel	1
30	Adjustable feet	4

6 EXPLODED VIEW

6.5 INTELLIGENT CONTROL SYSTEM



NO	NAME	QTY.
1	Control panel	1
2	Plug	1
3	Cooling switch(Red)	1
4	Thermostat	1
5	Lamp switch(Green)	1

7 DISPLAY CASE MARKING DATA

7.1 DISPLAY IDENTIFICATION

Before the display case is packaged, a nameplate is mounted on it, identifying each case that is manufactured by its model and series.

Check to be sure that the instructions manual corresponds to the display case to which it is referring.

If any information or technical assistance is required, in addition to the model and machine type, you must also indicate its serial number etc.

7.1.1 DISPLAY NAMEPLATE.

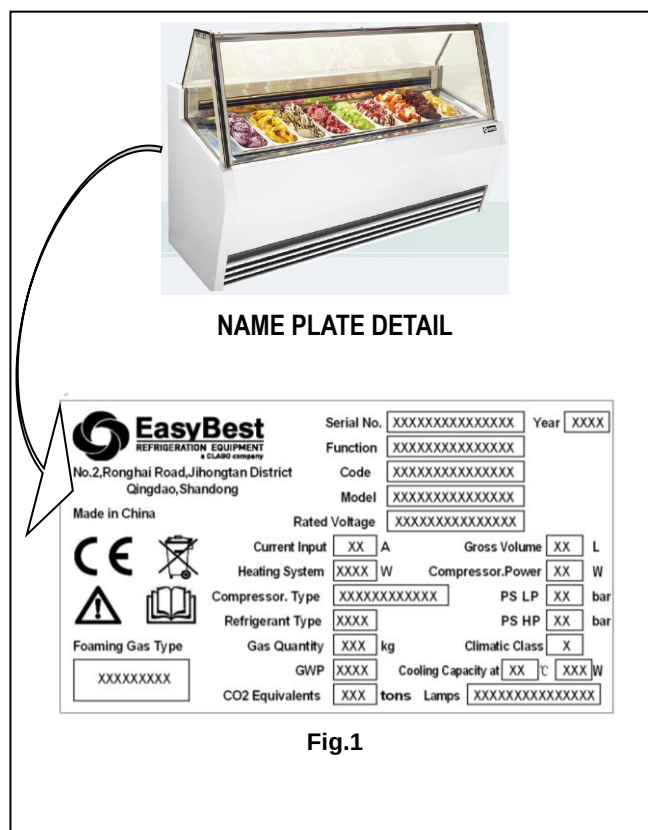
The display nameplate is located on the rear part (operator side)(Fig 1). The nameplate lists the information that identifies the machine, including its model and serial number.

7.1.2 CE MARKING

The CE mark is applied directly to the nameplate on the display case.

7.1.3 NAMEPLATE OF THE MAIN COMPONENTS

The nameplates of all the components that were not manufactured directly (e.g. compressor, fans etc.) are mounted nameplate by the respective manufacturers.



8 HOW TO USE AND PRESERVE THE INSTRUCTION MANUAL

This chapter offers the indications that how to use and preserve the instruction manual

8.1 INTENDED USER OF THE INSTRUCTIONS MANUAL

This instructions manual is intended for the following personnel.

- Shipping, loading and unloading staff
- Operators
- Installers
- Maintenance personnel

8.2 OBJECTIVES OF THE INFORMATION IN THE MANUAL

The purpose of this manual is to indicate how the machine should be used based on its design. It will also indicate its technical features, offering instructions on how to move, install regulate and use it.

It will also guide you in maintenance work and facilitates spare parts orders.

8.3 LIMITATIONS ON USE OF THE MANUAL

It is important to remember that the instructions manual reflects the techniques current at the time the machine was purchased, thus, the manufacturer has the right to update the manual and the equipment without updating the manual or any prior production, with the exception of unusual case.

8.4 HOW TO PRESERVE THE MANUAL

We would like to remind the user that the manual must be preserved carefully to ensure it will last as long as the machine. Therefore, it should be supplied in a special case that can protect it from wear and tear over years. In addition, two copies of the section concerning "display case handling" are furnished so that the shipper and the personnel responsible for unloading the machine can consult this section without referring to the main text.

If the manual gets lost or destroyed, a copy can be requested through the firm's area representative or directly from the manufacturer. Be sure to specify the type, serial number and year the display case was manufactured.

9 HANDLING AND INSTALLING THE DISPLAY CASE

9.1 RECEIVING THE DISPLAY CASE

The display case has packaging around it to protect it during shipment and/or storage.

Figure 2 show the standard packing.

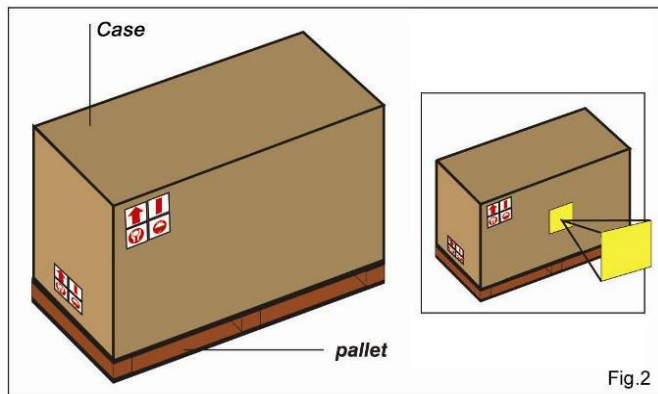


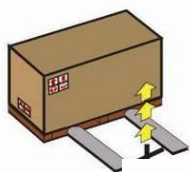
Fig.2

There is a table (Fig.2) on the packing and its purpose is to give detailed product information.

IMPORTANT: Remember that since multilayer board packing is used, it is subject to the action of atmospheric (rain, snow). Therefore, the display cases must be stored in a dry indoor area.

- Dimensions: length width height
- Lifting points

HOIST WITH FORK LIFT



STORAGE

Temporary or extended storage must be done in indoor areas protected from atmospheric agents. The display cases must be handled with care.

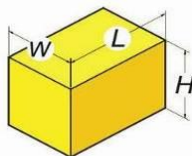


Fig.3



Damages caused by handling errors are not covered by the WARRANTY

9.2 UNLOADING OPERATIONS

The orientation of the packed display case must comply with the indications listed on the pictograms and the writing on the outside package.



Conduct the unloading operations using suitable hoisting equipment (the capacity must be adequate for the weight of the packed display case), hoisting it as shown in Fig.4.

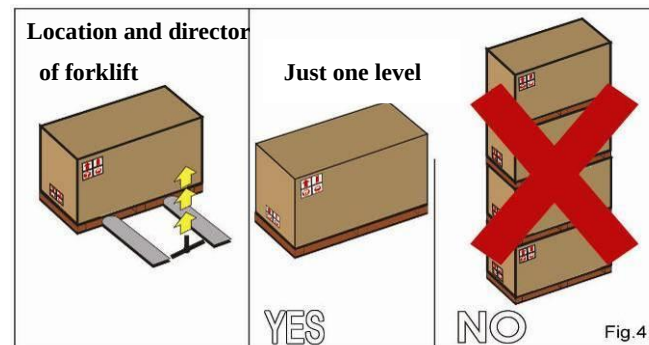


Fig.4

9.3 CHECKING PACKAGE



Before taking delivery from the shipper, check the conditions of the packing. If it shows obvious damage on the outside, the display case could be damaged. In this case, unpack the display case in the shipper's presence. Any damage caused by incorrect handling and storage is not the manufacturer's responsibility.

IN THIS CASE

- Contact your area representative.
- Draw up a written report
- Send a copy of the report to The manufacturer or area representative

9.4 UNPACKING



All the unpacked materials can be recycled in order to dispose of according local legislation. Be sure to destroy plastic components to prevent any hazards (suffocation) to children.

9.5 PERSONNEL REQUIREMENTS

We recommend that the operations to move the display case be handled by personnel accustomed to using hoisting equipment, in full compliance with the safety standards in force.

9.6 HANDING THE DISPLAY

The display case can be lifted with a fork-lift truck or with any other suitable means with a minimum capacity of twice the weight of the display case (see the specific nameplate). Operators running the hoisting equipment must remain at an adequate distance from the hoisted part and must ensure that no people or property is exposed to danger if the display case should drop. Movements must be slow and continuous to prevent the case from tipping over, etc.

The chapter offers various general information on the purposes of the display case, describing its main functions and use limitations.

10 ENVISIONED USE

10.1 OBJECTIVE OF THE ICE CREAM DISPLAY CASE

Ice cream display case has been designed to maintain the temperature of the ice cream. Therefore, the ice cream can be put in the case only if it is already cooled to reach its preservation temperature. The sunken area in showcase is to store ice cream. And cooling system is on the back of showcase. The cooling system works to make cold air and transfer to display area.

Please learn the safety system carefully to make sure the safety of operator and surrounding environment. Please don't use showcase of other function.

10.2 OPERATOR

No other special technical knowledge is required to use the display cases.

Attentive reading of this manual is sufficient. However, it is essential to remember that experience and knowledge of the product to be handled are a very important factor.

10.3 USE OF THE DISPLAY CASE

The room or area in which the display case is to be installed must have the following characteristics:

- Indoors
- Minimum temperature of 18
- Maximum temperature of 30
- Relative humidity (RH). 55%
- Illumination: 1001X (this value may change from one country to the next)
- No explosive gases

10.4 SAFETY REGULATIONS DURING USE

A prudent operator is the best one.

Most accidents can be avoided by observing a few precautions.

To ensure accident prevention, you must read and observe the following precautions before installing the display case and turning it on.

The latter operation must be carried out exclusively by authorized personnel trained on how to use the display case.

When this manual discusses switches and other components, it indicates if they are to the right or left of the display case.

In most situations, the terms "left" and "right" refer to the position of the operator standing in front of front door (Fig.5), unless otherwise specified. .



Fig.5

- Never allow anyone to use the display case without proper instruction. In many countries, it is legally mandatory for all operators to receive due instruction on the exact use and operating procedures of the display case and on safety methods prior to use.
- Carefully read the instructions manual before using the display case.
- Failure to observe use regulations can cause accidents.
- Make sure that each piece of equipment or accessory is installed correctly and that they are also approved for use on this display case.



WARNING: Refrigerating circuit can't be damaged

11 TECHNICAL DESCRIPTION OF THE DISPLAY CASE

11.1 GENERAL INFORMATION

This chapter offers a technical description of the display case and its operation. It supplies all the information deemed useful for the operator and maintenance personnel so they can gain a better understanding of correct operation to enable more rapid identification of any fault or malfunctions.

Display section

The display section is the area in the display case that holds the tubs of ice cream. Its dimensions will vary based on the model, while all the features are the same. The display section is mounted with all the elements required to house the tubs.

Glass instruction

The glasses are in special geometry design that can maximum assure the safe of operator and clients.

Cooling unite

The cooling unite is on the bottom of case, including all the spare parts for case's operation

The main spare parts include

- compressor
- condenser
- condenser fan
- condenser motor
- filter

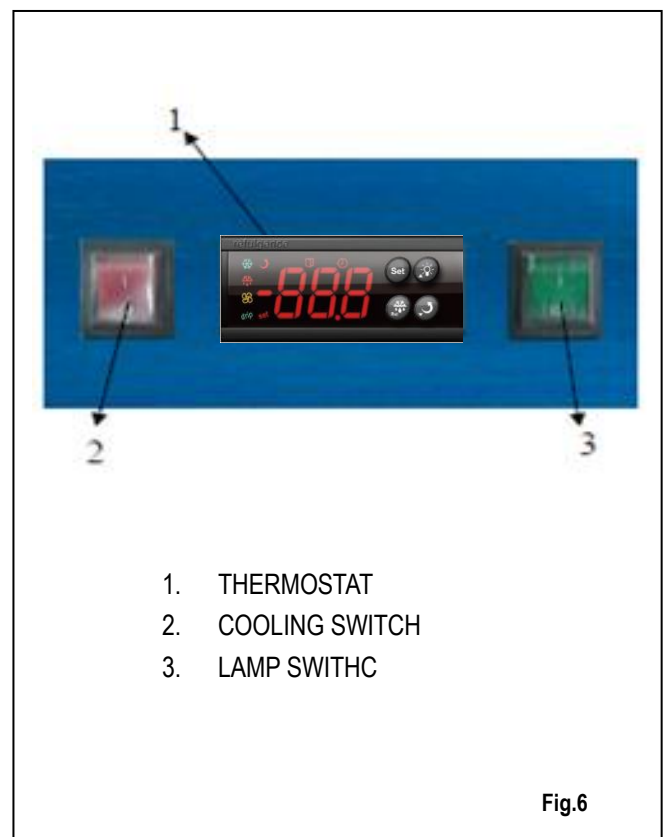
Chassis is composed by the metal frame, support plate and heating dissipating plate, to maximum ensure the safe of case when it is working. What need to be concerned is that only professional operator is allowed to check and adjust the case.

Control panel

The control panel is the element that manages the operation of the display case.

This management (temperature control and maintenance, defrosting) is entrusted to a command switchboard. In any event, the operator can utilize this component to change the temperature inside the display section.

Verify that when the display case is installed, the general switch is it.



12 INSTALLATION

12.1 GENERAL INFORMATION

This chapter offers all the technical information needed for installment operations, in accordance with the regulations in force. The installation and test of proper display case operation must be carried out by qualified personnel in full respect of the regulations in force and of the attached assembly instructions. In the event of installations that do not comply with the recommended installation, We declines any responsibility for personal injuries and/or property damage.

12.2 CORRECT SETTING

The location of caes is very important and it can affect the using life of case and case spare parts. What's more important, it also can affect the operation cost of case

Our technician will provide technical guidance

NOTE: unclear operation is prohibited.

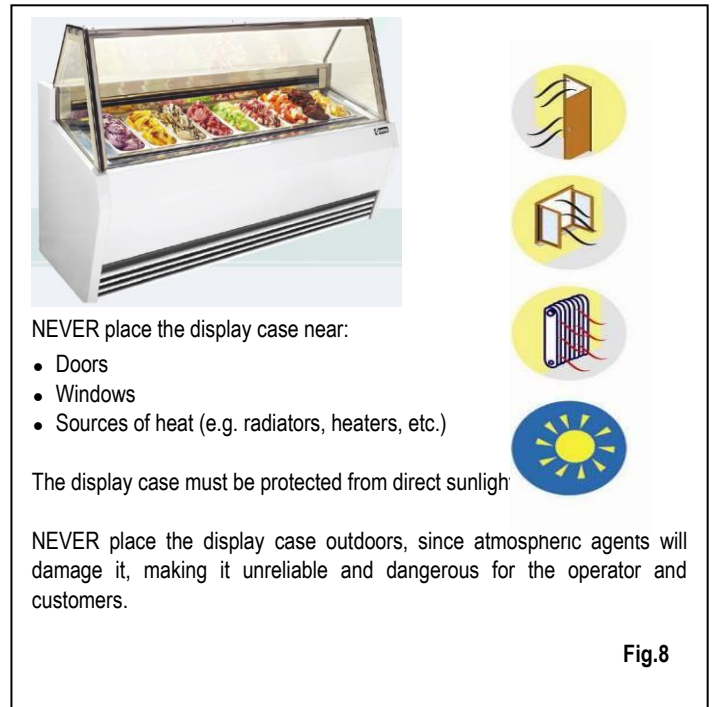
12.2.1 Using a water level, verify that the display case is perfectly flat. If necessary, use wooden shims to compensate for any defects in the flooring.

12.2.2 Ensure the normal heat radiation of the ice cream cart, nothing is to be placed in front of the heat dissipation panel. Like fig 7.8



Fig 7

the heat dissipation panel



- 1) Do not place the power cable in a transit area. We also recommend protecting the cable with trucking anchored to the floor.
- 2) NEVER touch the power plug if your hands are wet.
- 3) Verify that the power mains network is earthed in accordance with the regulations in force.
- 4) NEVER insert any adapters or multiple on the supply plug used to connect the display case.
- 5) NEVER use extensions to connect the display case to the mains.
- 6) Verify that the mains voltage complies with the data listed on the nameplate of the machine (maximum allowable variation $\pm 6\%$).



CLABO EASY BEST declines any responsibility for personal injuries or property damage caused by incorrect installation.



When the case is inserted in cabinet, please make sure heating dissipate fluent



WARNING: Refrigerating circuit can't be damaged



WARNING: For avoid any danger caused by unstable, please follow the manual strictly when install case

13 INSTRUCTIONS FOR USE

13.1 GENERAL INFORMATION

This chapter offers instructions for correct use ice cream display case.

13.1.1 INITIAL STARTUP OF THE DISPLAY CASE

Before switch on the display case, make sure there are no remaining pieces of the packaging inside the display section and then clean the display case thoroughly.

13.2 POSITIONING THE TUBS

Placement of the tubs inside the display section is an easy operation that is also very important for the operation of the display case and proper ice cream conservation. There is a sticker inside the display section indicating the loading limit of the display case. This reference allows you to get maximum performance from the display case and optimum product conservation.

Never superpose the ice cream tubs.

IMPORTANT: NEVER exceed the loading limits; this will damage both the product and the display case

13.3 USING THE SWITCH BOARD

The control panel contains all the instruments that make it possible to manage the display case, as indicated in (Fig 9.10).



Indicator light status description

Indicator light	Symbol	Status	Meaning
Setting	Set	ON	Parameter setting
		OFF	Status of temperature measuring and controlling
Refrigeration		ON	Refrigeration work
		OFF	Refrigeration stop
		FLASH	Refrigeration time delay
Defrost		ON	Defrost work
		OFF	Defrost stop
Fan		ON	Fan work
		OFF	Fan stop
Defrost dripping	drip	ON	Start defrost dripping
		OFF	Stop defrost dripping
Door switch		ON	Cabinet door open
		OFF	Cabinet door close

Keys description

Keys	Function	Button action
Set	Enter the status of parameter setting	pressing the keys for 3s
	Switch between menu and parameter	Press the response
	Adjust menu and parameters	Press the response
	Open/close light(only valid for the model with light control)	Press the response
	Upload the data to copy card	pressing the keys for 3s
	Adjust menu and parameters	Press the response
	Download the copy card	pressing the keys for 3s
	View evaporator sensor temperature	Press the response
	Exit from parameter setting	Press the response
	Press 3s to forced switch between refrigeration, defrost/defrost delay, defrost dripping	pressing the keys for 3s

Fig.10



1. THERMOSTAT
2. COOLING SWITCH
3. LAMP SWITCH

Fig.9



WARNING: There is refrigerant in high pressure state. DON'T damage the refrigerant circuit. And it must be professional operator to repair the case



WARNING: DON'T store explosive inside case, for example fuel spray



NOTE: Please don't use the electric instrument except that are suggested by us

14 MAINTENANCE

14.1 GENERAL INFORMATION

This chapter offers all the technical information required to conduct regular and extraordinary maintenance in compliance with the regulations in force

BEFORE STARTING ANY MAINTENANCE WORK OR OPERATOR CHECKS, YOU MUST:

- Verify that the display case is turned off and that it is disconnected from the power mains.
- Set up a sign indicating the work that is being done.
- If necessary, procure adequate lifting equipment.
- Verify that the operations to be done will not injure personnel or damage nearby machinery.

If the display case has not been used for a long time (winter season), we are commend the following procedures before turning it on again.

- Thoroughly clean the display section
- Thoroughly clean the condenser
- Thoroughly clean the glass structure
- Thoroughly clean the external structure
- Check the Ventilator fans to be sure they are not clogged.

IMPORTANT Incorrect or poor maintenance can make the display case hazardous to the operator and the personnel working near it.

14.2 CLASSIFICATION OF INTERVENTIONS

Maintenance work falls into two categories:

Normal maintenance: defined as work done to maintain normal operating conditions for the display case, i.e. without requiring the replacement of any parts.

This includes:

- Maintenance during the first ten hours of operation.
- Weekly maintenance work.
- Monthly maintenance work.
- Work done every six months.
- Work done annually.

Extraordinary maintenance; defined as work comprising:

- Work required due to malfunction;
- Work to be done at long intervals, i.e. work corresponding to the end of the work of a main part and requiring the interruption of display case operation.

ATTENTION

All the operations preceded by the symbol " " must be performed by a specialized technician.

14.3 REQUIREMENTS FOR MAINTENANCE PERSONNEL

Maintenance of these machines must be conducted SOLELY by qualified personnel specializing in working with refrigerating systems.

The must know and understand the written instructions, laws and regulations.

The instructions drawn up include the manual and the signs on the machine and control parts. The laws and regulations in force in the country where the machine is being used may entail greater safety provisions or identify further risks with respect to the ones listed in the manual.

They must have had actual training on the operations to be performed. Maintenance workers must have read the instructions in this manual and be familiar with all the commands so that they can work in full compliance of the safety regulations currently in force.

They must not be drug or alcohol abusers. The use of these substances impairs ready reflexes and coordination.

A technician who uses prescription drugs must obtain medical advice on his ability to conduct certain types of activities.

14.4 CLOTHING

Before starting any work operation, maintenance workers must wear suitable clothing that respects the indications envisioned by current regulations. All the instruments that are used must be in perfect condition and be type tested. The maintenance worker must ALWAYS check the supplied devices and replace them if they are damaged or are not compliant.

Listed below is a table with the devices recommends.

IMPORTANT TOOLS FOR MAINTENANCE PERSONNEL

	WEAR PROTECTIVE GLOVES
	WEAR GOGGLES (DURING WELDING WORK)
	WEAR SAFETY SHOES
	WEAR WORK OVERALLS WITHOUT ANY LOOSE ENDS

14.5 CLEANING THE GLASS STRUCTURE

Maintenance of the glass structure is very simple but it must also be done carefully due to the type of elements it comprises. It must be cleaned weekly using warm water and Marseilles soap.

NEVER use inflammable or abrasive products.

NEVER spray water to clean the display case.

To clean the display section, you need to remove all the ice cream tubs and place them in the refrigerator.

14 MAINTENANCE

14.6 CLEANING THE PLASTIC AND PAINTED PARTS

Learn these parts with warm water and neutral Marseilles soap. Dry well with a soft cloth (the display case must be turned off and disconnected from the power mains).

ATTENTION

NEVER use inflammable or abrasive products.

NEVER spray water to clean the display case

14.7 CLEANING THE DISPLAY SECTION

To clean the display section, you need to remove all the tubes and place them in the refrigerator. At this point, you can clean this section.

Use only warm water and neutral Marseilles soap. Dry well with a soft cloth (the display case must be turned off and disconnected from the power mains).

ATTENTION

NEVER use inflammable or abrasive products.

NEVER spray water to clean the display case

14.8 CLEANING THE CONDENSER

Maintenance work falls into two categories:

The condenser must be cleaned every 30 days maximum and this involves removing the dust that collects in the fins.

IMPORTANT: Disconnect the display case from the power mains and follow the instructions listed in the "General Information" section of this chapter.

Cleaning must be done gently without bending or breaking the fins, using a stiff brush.

IMPORTANT: Do not use fluids to clean the condenser.

To access the condenser, remove the front grate (Fig.11), removing the screws that fasten it to the structure.

Although the cabinet has a sophisticated defrost system, we recommend to defrost manually every week, and the steps are as follows

(For the machine without automatic defrost, it must be defrosted manually every day)

1. Move the food and switch off the case, let it defrost naturally.
2. On second day, to clean the inner of case by warm water. It is important from hygiene view to keep case clean, and the split of food on the case need to be cleaned in time.
3. Ensure that no ice remains on the evaporator. This operation is particularly important where the cabinet is positioned in humid conditions or in direct wind currents. On windy, humid, days ice will accumulate on the evaporator and the defrost may not be able to clear all of it. This will mean that ice will eventually build up and cause problems.

Automatic defrost does not mean that the cabinet never has to be switched off!

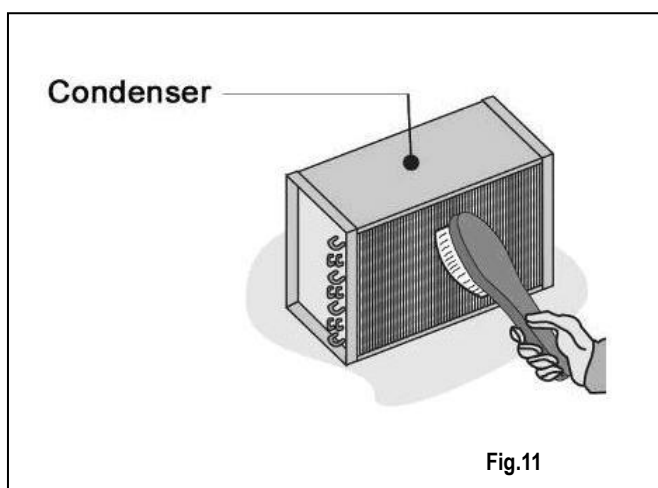


Fig.11

15 TROUBLE SHOOTING

Possibles causes and solutions.

PROBLEM	POSSIBLE CAUSE	SOLUTION
COMPRESSOR WILL NOT START	NO VOLTAGE IN THE ELECTRICAL SOCKET	USE A VOLTMETER TO CHECK THE VOLTAGE
	THE ELECTRICAL CONDUCTOR OR WIRES MAY BE CUT	USE AN OHMMETER, TO CHECK FOR CONTINUITY
	DEFECTIVE ELECTRICAL COMPONENTS SUCH AS: THERMOSTAT, RELAY, THERMAL PROTECTOR, ECT.	REPLACE DEFECTIVE COMPONENTS
	COMPRESSOR MOTOR HAS A WINDING OPEN OR SHORTED	MEASURE THE OHMIC RESISTANCE OF THE MAIN AND AUXILIARY WINDINGS USING AN OHMMETER. COMPARE THEM WITH THE CORRECT VALUES
	DIRTY CONDENSER, LACK OF AIR FLOW	CLEAN CONDENSER AND ALLOW FOR AIR CIRCULATION
	LOW VOLTAGE	USE A VOLTAGE REGULATOR IF THE VOLTAGE IS LOWER THAN 198 VOLTS
	COMPRESSOR IS STUCK	CHANGE THE COMPRESSOR
THE TEMPERATURE IS TOO COLD	THERMOSTAT DOES NOT DISCONNECT THE CONDENSING UNIT	CHECK THE INSTALLATION OF THE THERMOSTAT, CHECK THE TEMPERATURE SENSOR. IF THE PROBLEM PERSISTS, CHANGE THE THERMOSTAT
	THERMOSTAT'S AMBIENT SENSOR IS LOOSE OR INSTALLED IMPROPERLY	CORRECTLY FASTEN THE THERMOSTAT'S AMBIENT SENSOR
THE TEMPERATURE IS NOT COLD ENOUGH	CONDENSER IS DIRTY; LACK OF AIR FLOW	CLEAN THE CONDENSER AND ALLOW FOR AIR CIRCULATION
	THE SHOWCASE HAS BEEN PLACED AT AN INADEQUATE LOCATION	THE UNIT MUST NOT BE NEAR STOVES, WALLS THAT ARE EXPOSED TO THE SUN, OR PLACES THAT LACK SUFFICIENT AIR FLOW
	THE SHOWCASE HAS BEEN USED IMPROPERLY	THE AIR INLET AND OUTLET IN THE DISPLAY CABINET MUST NOT BE SHIELDED BY ANY OBJECTS, WHICH WILL AFFECT THE CIRCULATION OF AIR CONDITIONING IN THE DISPLAY CABINET
	THE REFRIGERATOR HAS BEEN OVERCHARGED WITH THE REFRIGERANT GAS	CHECK TO SEE IF CONDENSATION OR ICE CRYSTALS HAVE FORMED ON THE SUCTION LINE. IF SO, CHARGE WITH THE CORRECT AMOUNE OF GAS
	THE REFRIGERANT GAS IS LEAKING	FIND THE LOCATION WHERE THE GAS IS LEAKING IN ORDER TO SEAL IT OR REPLACE THE DEFECTIVE COMPONENT. CHANGE THE DRIER. PERFORM A GOOD VACUUM AND RECHARGE THE UNIT
	THE EVAPORATOR AND/OR CONDENSER FANS AREN'T WORKING	CHECK THE ELECTRICAL CONNECTIONS AND MAKE SURE THAT THE FAN BLADE ISN'T STUCK. REPLACE THE FAN MOTOR IF IT DOESN'T WORK

15 TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
THE TEMPERATURE IS NOT COLD ENOUGH	LOW VOLTAGE	USE A VOLTAGE REGULATOR IF THE VOLTAGE IS LOWER THAN 198 VOLTS
ELECTRICAL SHOCKS	WIRES OR ELECTRICAL COMPONENTS ARE IN DIRECT CONTACT WITH METALLIC PARTS	CHECK FOR APPROPRIATE INSULATION ON THE CONNECTIONS OF EACH ELECTRICAL COMPONENT
NOISE	THE SHOWCASE IS NOT PROPERLY LEVELED	CHECK IF THE NOISE GOES AWAY AFTER YOU LEVEL THE SHOWCASE
	THE CONDENSER IS NOT FASTENED CORRECTLY. COPPER TUBINGS ARE IN CONTACT WITH METAL	WHILE THE COMPRESSOR IS WORKING, CHECK TO SEE IF METAL PARTS ARE IN CONTACT WITH ONE ANOTHER AND/OR IF THE SCREWS THAT FASTEN THE CONDENSER ARE TIGHTENED
	THE EVAPORATOR AND/OR CONDENSER FANS ARE LOOSE	CHECK IF THE FANS ARE SECURELY FASTENED. ALSO, CHECK IF THE FAN BLADES ARE LOOSE, BROKEN OR CROOKED. IF SO, CHANGE THE FAULTY BLADE
	COMPRESSOR HAS AN INTERNAL NOISE	IF THE NOISE PERSISTS AFTER ALL OTHER MEASURES HAVE BEEN TAKEN, IT MAY BE ORIGINATING FROM THE COMPRESSOR
	CONTACT WITH EXTERNAL OBJECTS	REMOVE ANY EXTERNAL OBJECTS IN CONTACT WITH THE DISPLAY CASE
	SCREWS LOOSE	CHECK SCREW TIGHTNESS
NO ILLUMINATION	THE LIGHT SWITCH IS IN “O” POSITION	PRESS THE LIGHT SWITCH TO THE “I” POSITION
	THE LAMP SWITCH, LED POWER SUPPLY, OR LED CONTACT ARE NOT CONNECTED	INSPECT ALL CONNECTIONS
	THE LAMP SWITCH, LED POWER SUPPLY, OR LED ARE DAMAGED	REPLACE THE DAMAGED COMPONENT

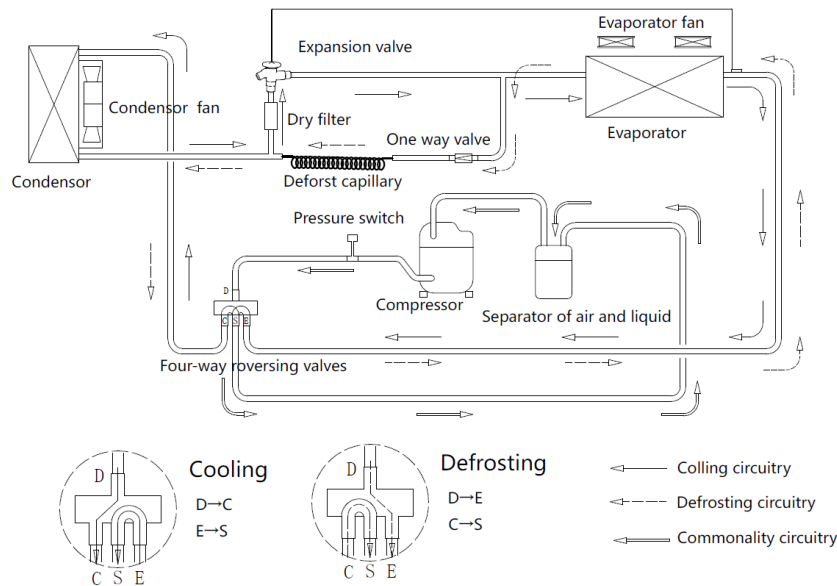
Important

If these solutions are not successful, please contact our Technical Servicing Department.

The operator must never intervene if intervention by qualified personnel is specified (*)

16 REFRIGERATION SYSTEM

Description of its components



COMPRESSOR:

The compressor is a factory sealed unit located at the bottom of the cooling cabinet. This pump is activated by a motor which draws low pressure vapor(refrigerant) from the evaporator. It then compresses the gas and forces it into the condenser at a high pressure.

PRESSURE SWITCH:

This is a device that gives an output in response to a set level of pressure. When the pressure exceeds the set value of the pressure switch, the pressure switch will disconnect the compressor power supply.

FOUR-WAY ROVERSING VALVES:

Four-Way Reversing Valve switch between cooling and heating mode by changing the flow of the refrigerant.

CONDENSOR:

The condenser is located in front of compressor. Its receives hot, high pressure refrigerant gas from the compressor, and cools it down until it returns to liquid state.

CONDENSOR FAN:

The condenser fan is a ventilation device which forces the ambient air to flow over the condenser in order to cool down the refrigerant flowing inside it.

DRY FILTER:

The drier is located in between the condenser and the evaporator. It traps and removes moisture in the refrigeration system while allowing oil and refrigerant to flow freely.

EVAPORATOR:

The evaporator is located inside the cooling cabinet. As the gas flows at a low pressure through the evaporator, it absorbs serpentine and removes the heat from inside the cabinet.

EVAPORATOR FAN:

This device produces the required circulation of air through the cooling cabinet as well as over the surface of the evaporator's serpentine thermal exchange area.

SEPARATOR OF AIR AND LIQUID:

The role of the gas-liquid separator is to protect the compressor by separating and preserving the refrigerant liquid in the return pipe when the refrigerant liquid is returned after starting, running or defrosting.

16 REFRIGERATION SYSTEM

ONE WAY VALVE:

The check valve is in parallel with the capillary to control the positive and negative flow of the refrigerant, so that the refrigerant can only flow in a specified direction to achieve the forward flow of the refrigerant when cooling and the reverse flow of the refrigerant when defrosting.

EXPANSION VALVE (DEFROST CAPILLARY):

It is a device used to control the amount of refrigerant that flows into the evaporator.

THERMOSTAT:

The thermostat is responsible for detecting temperature change inside the cabinet. It starts the compressor whenever the cabinet temperature rises above the desired temperature. The compressor recirculates the refrigerant throughout the system, lowering the temperature inside the cooling compartment. When the temperature drops to the set point programmed in the thermostat, it turns off the compressor and a new cycle starts again. And the defrosting operation will be controlled according to the set time.

COOLING CABINET:

This is the area where the foods are stored. It has been designed to allow for constant cold air circulation to flow through the foods.

THE REFRIGERATION CYCLE

1. When the temperature of the cooling chamber is higher than the set temperature, the electronic temperature controller controls the contact closure of the compressor start-stop.
2. At this time, the AC contactor in series on the compressor is powered on and closed, and the compressor are powered on and run.
3. The compressor recirculates the refrigerant throughout the system by drawing the refrigerant gas at a low vapor pressure from the evaporator. Then it compresses the refrigerant and forces it into the condenser.
4. The condenser, with the help of its fan motor, removes the refrigerant's heat as its flows through the condenser. The heat is then released to the outside environment. Consequently, the decrease in temperature will change the refrigerant from a gaseous to a liquid state.
5. The expansion valve regulates the amount of refrigerant that is discharged into the evaporator.
6. The refrigerant in the evaporator absorbs and removes heat from the cooling chamber with the help of a circulating fan.
7. The drop in temperature inside the cooling compartment is caused by the refrigerant's continuous circulation through the system. This gas continuously absorbs the heat that exists inside the cooling compartment and expels it to the outside environment. When the temperature drops to the set temperature, the electronic temperature controller controls the compressor start-stop contact to disconnect, thus shutting down the compressor.

17

DISMANTLING

17.1 GENERAL INFORMATION

This chapter offers all the technical information required to dismantle the display case in compliance with the regulations currently in force.

17.1.1 DISMANTLING FOR DEMOLITION

If the display case is going to be scrapped, this creates two separate problems:

The first one is administrative: The competent public offices must be notified that the machine is being scrapped so that the documentation they have on file about the machine can be canceled.

The display case comes with a set of legal documents, such as the manual, the nameplate and the various authorizations that must be examined once the decision is made to demolish the machine.

The second one involves physically display of the display case; to do this, it is essential to contact specialized disposal companies or the manufacturer.

Proceeding with demolition of the display case is absolutely forbidden unless these indications have been observed.

17.1.2 DISMANTLING FOR TRANSFER

If the display case needs to be dismounted in order to move it to another area, proceed as follows:

Before starting to disassemble the machine, you are required to shut off the electrical supply.

All of this must be done by setting up special signs to indicate what you are doing.

Disassembly must be carried out by qualified personnel or directly by the manufacturer, being sure to separate and identify (mark) all the components.

Perfect organization during disassembly guarantees perfect and safe reassembly.

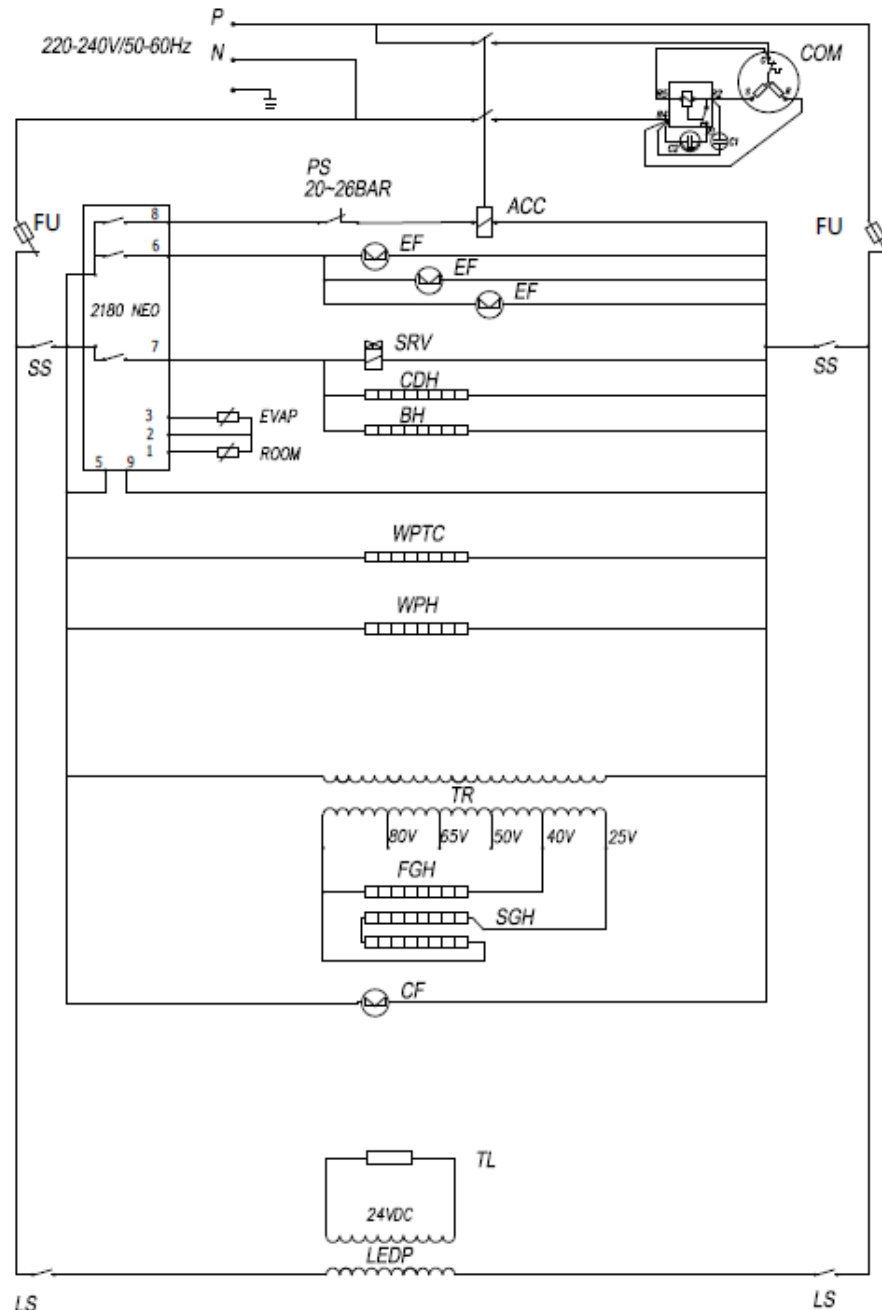
All the material must be kept in a dry area that is protected against weather.

Before remounting the machine, check the material thoroughly for any damage.

18 CIRCUIT DIAGRAM

ELECTRICAL DIAGRAM 220-240V/50-60Hz/1 PHASE

CIRCUIT FOR BRIO 6/7



ICE CREAM SHOW CASE with 2180 NEO thermostat

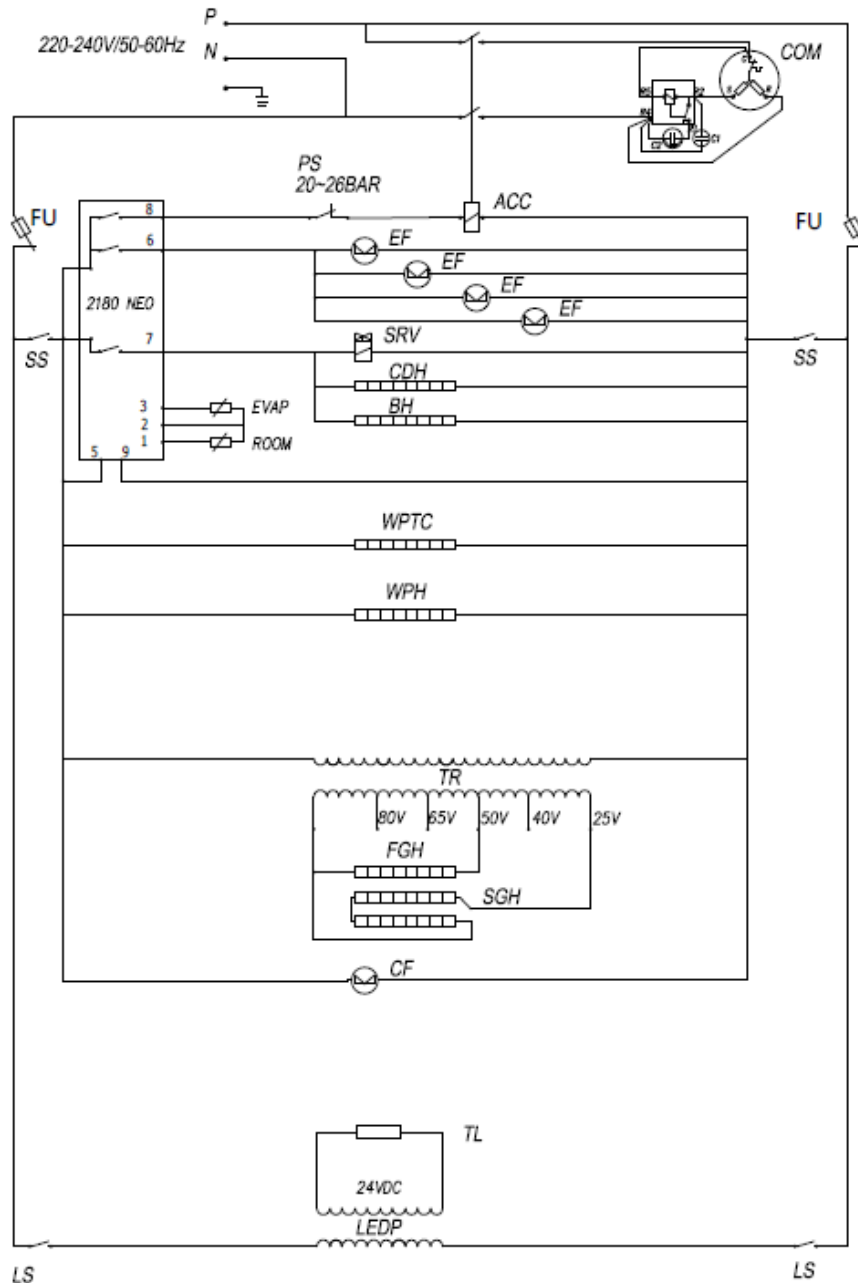
COM= compressor
ACC= AC contactor
EF= evaporator fan
SS= service switch
LS= light switch
SRV= four way valve
TL= top lamp
LEDP= led power
FGH= front glass heater
SGH= side glass heater

WPH= work plate heater
WPTC= ptc heater for water
PS= pressure switch
CF= condenser fan
CDH= central drip heater
BH= bottom heater
TR= transformer
ROOM= temperatur show case probe
EVAP= evaporator probe
FU= fuse

18 CIRCUIT DIAGRAM

ELECTRICAL DIAGRAM 220-240V/50-60Hz/1 PHASE

CIRCUIT FOR BRIO 9



ICE CREAM SHOW CASE with 2180 NEO thermostat

COM= compressor
ACC= AC contactor
EF= evaporator fan
SS= service switch
LS= light switch
SRV= four way valve
TL= top lamp
LEDP= led power
FGH= front glass heater
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WPH= work plate heater
WPTC= ptc heater for water
PS= pressure switch
CF= condenser fan
CDH= central drip heater
BH= bottom heater
TR= transformer
ROOM= temperatur show case probe
EVAP= evaporator probe
FU= fuse

19 ANNOTATIONS

Copy to be sent to the manufacturer – CLABO EASY BEST

CORRECT INSTALLATION FORM

CLIENT: _____

ADD: _____

CITY: _____

Retailer's stamps:

TEL: _____

ZIP CODE: _____

PROVINCE: _____

Installer's stamps::

First name: _____

Last name: _____

Add: _____ Zip code: _____

City _____ Tel: _____

Delivery date: _____

Display model: _____

Delivery document: _____

Serial No.: _____ Year: _____

Following installation of the display case, the client hereby declares that the work was carried out correctly and in compliance with the present instructions manual. He further declares that he has seen its perfect operation and is aware of the instructions for correct use and proper operation and maintenance of the display case.

CLIENT signature: _____

Signature of the RETAILER/ INSTALLER: _____

*This declaration is not valid unless filled out completely and signed.