

TORNADO



EN Use and Maintenance Manual



Sistema di Qualità
ISO 9001
Cert. CISO/CSQ 9130,TAIF



Sistema di Qualità
ISO 14001
Cert. CISO ECO ISO 9191,ISA3



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MODELS	
50	RV TB



1. NOTES / IMPORTANT NOTES

The content of this manual is of a technical nature and is owned by **ISA S.r.l.** It is forbidden to reproduce, circulate or modify all or part of its content without written consent. Any infringement will be legally pursued.

The manual and the conformity certificate are an integral part of the refrigerated cabinet and should always accompany the product in the event of transferral to a new location or to a new owner.

The user is responsible for the integrity of these documents, for their consultation during the whole life cycle of the refrigerated cabinet itself.

Keep this manual in a safe place.

It should be made available near the refrigerated cabinet for consultation at any time.

If lost or destroyed, you can request a copy of the manual from **ISA S.r.l.** by specifying the exact model, serial number and year of manufacture.

The manual reflects the manufacturing technology at the time of supply.

The manufacturer reserves the right to modify its products in any way it deems necessary, with no obligation to update manuals and machines relating to previous manufacturing batches.

This refrigerated cabinet is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or by persons lacking the necessary experience and knowledge, unless they are supervised by a person responsible for their safety who has instructed them on how to use the cabinet.

Children should be supervised to ensure that they do not play with the refrigerated cabinet.

Always refer to this manual before going ahead with any operation.

Before doing any type of work, disconnect the refrigerated cabinet from the power supply.

Any work on electric and electronic parts or cooling system components should only be carried out by trained personnel in compliance with current laws.

The Manufacturer cannot be held liable for any injury to persons or animals, or damage to the product itself in the event of:

- improper use of the refrigerated cabinet or use of the appliance by unqualified or unauthorised personnel
- failure to comply with current legislation
- incorrect installation and/or power supply faults
- failure to observe the instructions contained in this Manual
- failure to follow the maintenance programme
- unauthorised modifications
- installation of non-original spare parts in the refrigerated cabinet
- installation and use of the refrigerated cabinet for purposes other than those for which the appliance was designed and sold
- tampering with or damage to the power supply cable

Liability for applying the safety instructions contained in this manual is held by the technical personnel responsible for the intended use of the refrigerated cabinet, who should ensure that authorised personnel:

- are qualified to carry out the requested activity
- are aware of, and carefully comply with, the instructions contained in this document
- are aware of, and apply, the general safety standards applicable to the refrigerated cabinet

Failure to comply with safety standards may result in injury to personnel and damage to the refrigerated cabinet components and control unit.

The user can contact the dealer to request additional information not contained in this document, or suggest improvements, at any time.

1.1 Introduction

ISA S.r.l. employs materials of the best quality and as they enter the company, we constantly monitor their storage and the use as part of the manufacturing process to prevent damage, deterioration and failure.

All manufacturing elements are designed and manufactured in order to guarantee reliability and high safety standards.

All refrigerated cabinets are subjected to a strict testing procedure before delivery, however, please bear in mind that product performance over time depends on correct use and adequate maintenance.

This manual contains the necessary instructions to maintain the refrigerated cabinet's initial appearance and functions over time.



NOTE

SO AS NOT TO COMPROMISE REFRIGERATED CABINET OPERATION AND SAFETY, PARTICULARLY COMPLEX INSTALLATION AND MAINTENANCE OPERATIONS ARE NOT DESCRIBED IN THIS MANUAL AND ARE CARRIED OUT BY THE MANUFACTURER'S SPECIALISED TECHNICAL PERSONNEL.

The Owner's Manual contains the information required for understanding the mode of operation of the refrigerated display case and correct use of the same, namely: the technical description of the various functional groups, equipment and security systems, operation, use of instrumentation and interpretation of any diagnostic messages, key information and procedures relating to routine maintenance.

For correct use of the refrigerated cabinet, the working environment should comply with current health and safety standards.



WARNING

INSTALLERS AND USERS ARE OBLIGED TO READ AND UNDERSTAND ALL THE INSTRUCTIONS CONTAINED IN THIS DOCUMENT BEFORE USING THE REFRIGERATED CABINET.

1.2 Manufacturer's contact details

ISA S.r.l.

Via del Lavoro, 5
06083 - Bastia Umbra - Perugia - Italy

Tel. +39 075 80171
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www.isaitaly.com

1.3 Safety standards

The safety requirements, indications, standards and notes illustrated in the various chapters of the manual are aimed at establishing a code of conduct and a series of obligations to be observed when performing the various activities, in order to create safe conditions for personnel, the equipment and the surrounding environment.

The safety standards reported in this document are intended for trained, authorised personnel responsible for:

- transport
- installation
- operation
- management
- maintenance
- cleaning, decommissioning and disposal which are the only intended uses of this refrigerated cabinet






WARNING

READING THIS MANUAL, ALBEIT IN FULL, IS NO SUBSTITUTE FOR ADEQUATE USER EXPERIENCE. THEREFORE IT SHOULD ONLY BE CONSIDERED A USEFUL REMINDER OF THE TECHNICAL FEATURES AND THE MAIN OPERATIONS TO PERFORM.

1.4 Key

The manual contains symbols to attract the reader's attention and highlight particularly important aspects.

The table below illustrates the meaning of the various symbols used

SYMBOL	MEANING	NOTES
	DANGER	Indicates danger with risk of an accident for the user. Pay full attention to portions of text marked with this symbol.
	ATTENTION	Represents a warning of potential wear or damage to the refrigerated cabinet, the equipment or to a personal item belonging to the user. Pay attention to portions of text marked with this symbol.
	WARNING / NOTE	Indicates a warning or a note on key functions or useful information. Pay attention to portions of text marked with this symbol.
	ADDITIONAL INFORMATION	Portions of text that contain additional information are preceded by this symbol. This information is not directly connected with the description of a function or with the progression of a procedure. These may be references to other additional documents, such as attached manuals, operation instructions, technical documents or other sections of this manual.
	VISUAL CHECK	Indicates that the reader should perform a visual check. The user is required to read a measurement value, check a signal, etc.

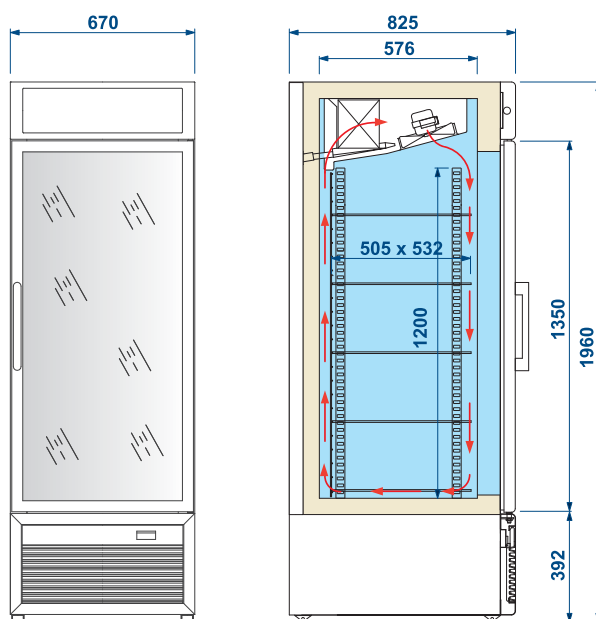
2. TECHNICAL SPECIFICATIONS AND DIMENSIONS

This refrigerated cabinet is exclusively intended to display and sell ice cream.
The manufacturer is not liable for injury to persons or damage to property or the cabinet itself caused by the displaying of products other than those described above.



UNAUTHORISED USE

- FOOD PRESERVATION.
- DISPLAYING AND/OR PRESERVING NON-FOOD PRODUCTS (CHEMICALS, PHARMACEUTICALS, ETC...).



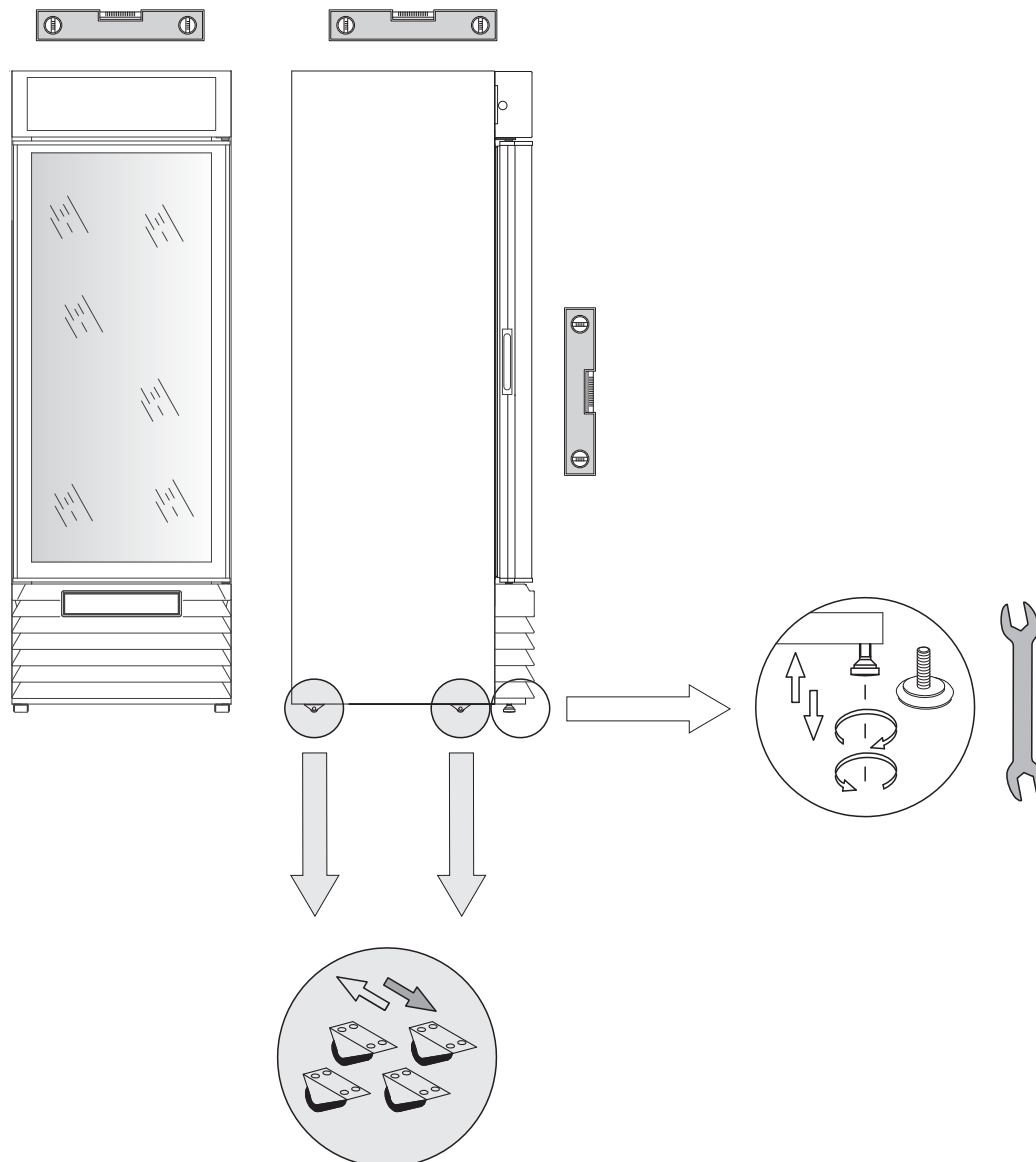
TECHNICAL FEATURES		50
		RV TB
External dimensions (l x p x h)	mm	670 x 825 x 1960
Refrigeration		Ventilated
Defrost		Hot gas
Climatic Class	N°	4
Operating environment	°C / % RH	30 / 55
Product Class		L1
Safety Class (CEI EN 60335-2-89)	N° / °C (ambient)	5 / 43
Refrigerant		R290
Power supply	V / ph / Hz	230 / 1 / 50
Electrical input (standard)	W / A	1020 / 6.3
Electrical input (defrost)	W / A	1680 / 7.6
Weight (net)	Kg	151

2.1 Positioning / Leveling

WARNING

THIS REFRIGERATED CABINET IS FITTED WITH (4) UNIDIRECTIONAL ROLLERS AND (2) ADJUSTABLE FEET.

IS **ABSOLUTELY NECESSARY** AFTER PLACEMENT TO STABILIZE THE CABINET ADJUSTING THE FEET LIKE SHOWED IN THE PICTURE.



2.2 Load limits

WARNING

IS ESSENTIAL NOT TO OVERLOAD THE APPLIANCE IN ORDER TO PREVENT ANY ALTERATION TO THE CORRECT AIR FLOW AND THUS AVOID HIGHER PRODUCTY TEMPERATURES.

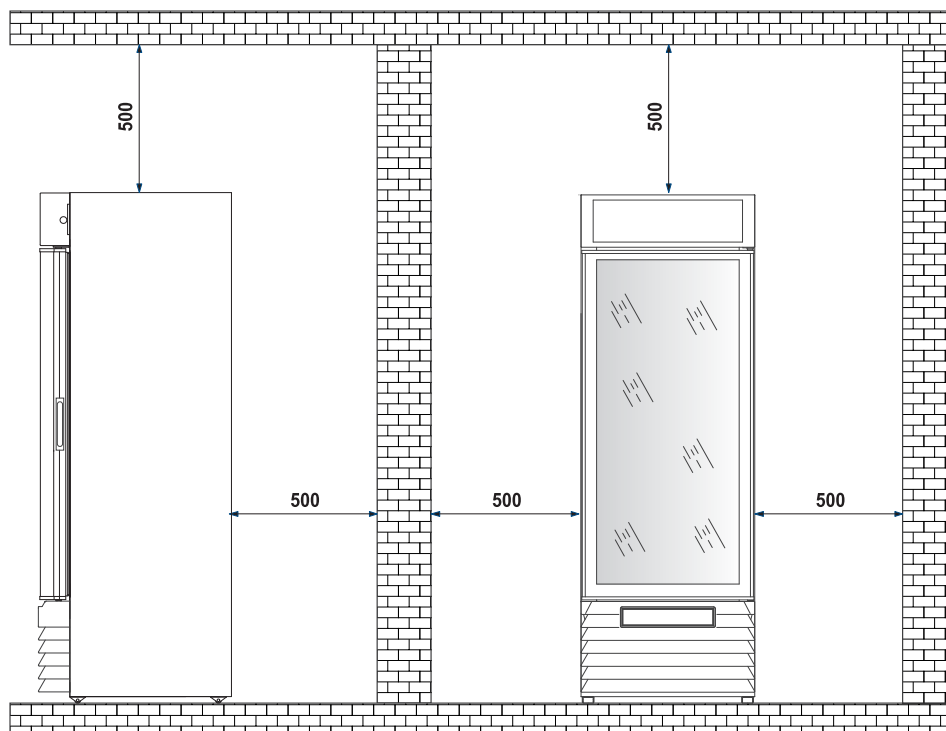


2.3 Installation (mm)



WARNING

IS CENTRAL TO THE DISTANCES GIVEN FOR THE PROPER INSTALLATION OF 'EQUIPMENT.

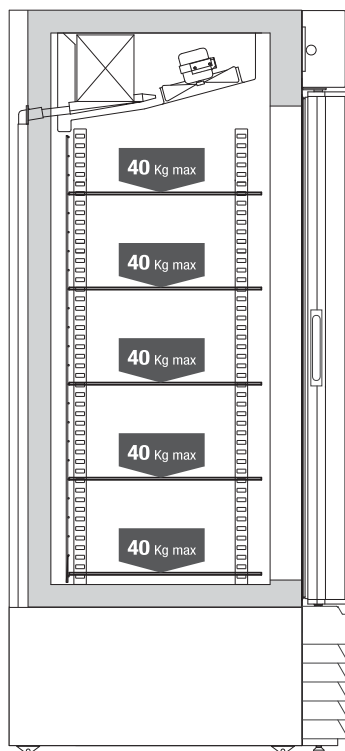


2.4 Shelves Load limits



WARNING

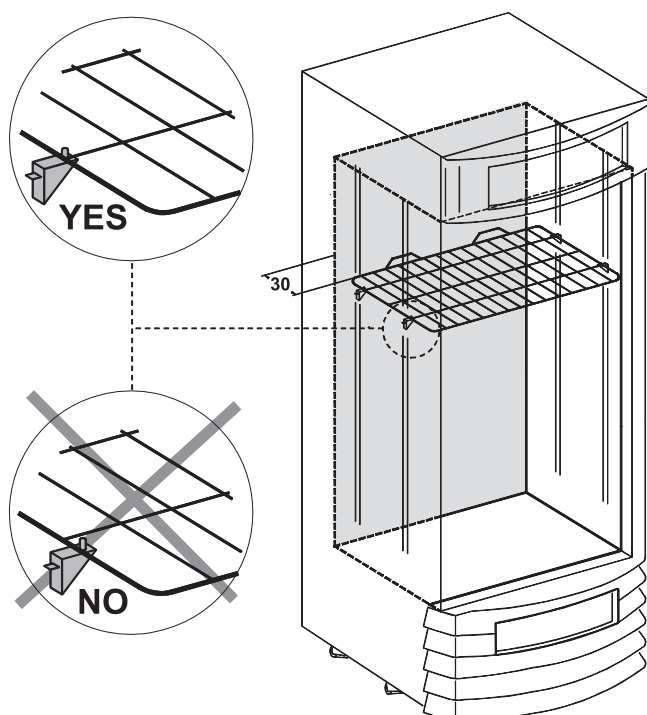
IS ABSOLUTELY NECESSARY TO MEET THE WEIGHT LIMITS SPECIFIED FOR EACH SHELF TO PREVENT THE DEFORMATION OR BREAKAGE.



2.5 Shelves installation (mm - mod. 50 RV TB)

**WARNING**

IS ESSENTIAL ASSEMBLED SHELVES AS INDICATED IN ORDER TO PREVENT ANY ALTERATION TO THE CORRECT AIR FLOW AND THUS AVOID HIGHER PRODUCT TEMPERATURES.



3. EQUIPMENT DESCRIPTION

3.1 General description and operating principles

To ensure the operator's safety, refrigerated equipment devices should be kept in constant working order. This manual is intended to illustrate the use and maintenance of the cabinet. The operator has a responsibility and duty to carefully observe the instructions contained within it.

3.2 Structure of the refrigerated equipment

The refrigerated equipment consist of a single piece of furniture which contains all the operational devices necessary to make them professional and efficient products for their intended use.

The refrigerated equipment consist of:

- One piece body with ecological polyurethane insulation
- LED lighting (internal - external)
- Refrigerated system (Static mod. RS - Ventilated mod. RV)
- Curved temperde glass door
- Electronic control board
- Condensing unit included
- Unidirectional rollers
- Adjustable feet

4. SAFETY

4.1 General information

The buyer is responsible for training personnel using the appliance on the risks, security devices and general health and safety rules required by the laws where the refrigerated cabinet is installed.

Users/operators should be aware of the position of all the controls and how they work, as well as of the features of the refrigerated cabinet.

They should also read this manual in its entirety.

Maintenance works should be conducted by qualified personnel after taking care of preparing the refrigerated cabinet adequately.

**WARNING**

TAMPERING OR UNAUTHORISED REPIACEMENT OF ONE OF MORE PARTS OF THE REFRIGERATED CABINET, USING ACCESSORIES THAT MODIFY ITS USE AND EMPLOYING SPARE PARTS OTHER THAN RECOMMENDED ONES MAY RESULT IN ACCIDENT RISKS.

**WARNING**

BEFORE DOING ANY TYPE OF WORK, THE REFRIGERATED CABINET SHOULD ALWAYS BE DISCONNECTED FROM THE POWER SUPPLY.

Any work on electric parts or components of the cooling system should only be carried out by trained personnel in compliance with current laws.

4.1.1 Staff training

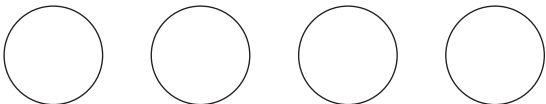






**WARNING**

THE REFRIGERATED CABINET IS INTENDED FOR PROFESSIONAL USE.

The buyer is responsible for instructing and training personnel who will use the refrigerated cabinet and maintenance technical staff adequately.

The manufacturer is available for advice, clarifications, etc. so that the operator and technical staff can use the refrigerated cabinet correctly.

4.1.2 Identification

1				
2	<hr/>			
Ord. Prod. Prod. Ord.	3	Tipologia Type	4	
Modello Model	5			
Articolo Article	6			
Matricola Nr. Serial Number	7	Data Prod. Prod. Date	8	psig min: psig max:
V	9 ~	10 Hz	11	Capacità lorda Gross volume
12 W		13 W		14 W
	15 W		16 A	Classe Class 17
	Nr 18	19	20 Kg	Classe Class 21
Ordine Cliente Customer order	22		23	
				Foaming gas: CO ₂  24

1	Symbols of compliance
2	Manufacturer's address
3	Production Order
4	Type
5	Model Name
6	Article
7	Serial Number
8	Production date
9 - 10	Power Supply Voltage and frequency
11	Gross capacity
12	Absorption at Rated capacity
13	Absorption during defrosting
14	Absorption of heating Elements
15	Lamp Power
16	Fuse Value
17	Climate class
18	Number of Motors
19	Type of coolant
20	Amount of coolant
21	Safety class
22 - 23	Customer order
24	RAEE mark

4.2 Waste disposal

During its normal operations, the refrigerated cabinet does not generate any environmental contamination.

At the end of its life cycle, or if it is necessary to proceed to definitive decommissioning, we recommend following the procedures below:



DISPOSAL OF THE REFRIGERATED CABINET (user)

The symbol, applied to either the product or its packaging, indicates that the product should not be considered as normal domestic waste, but should be taken to a waste collection point for the recycling of electrical and electronic appliances. The correct disposal of this product contributes to preventing potential negative consequences that might derive from an inadequate disposal of the product. For detailed information about recycling this product, contact your council, your local waste collection service or the store where you purchased the product.

END-OF-LIFE DISPOSAL AND RECYCLING PROCEDURES OF THE REFRIGERATED CABINET (Authorised Bodies)

1. Switch off the counter and unplug the power supply cable.
2. Remove the lamps. These should be disposed of separately.
3. Remove the power units and the electronic cards. These should be disposed of separately.
4. Remove all the independent parts (grids, casings, profiles, etc.) and group them according to shared features in order to access the heat exchanger, the pipes, the cables, etc. and be careful not to damage the cooling circuit.
5. Remove all mobile parts (doors, sliding doors, glass parts, etc.) and group the various materials according to their features.
6. Check the type of coolant on the label located inside the counter. Remove the coolant and take care of its disposal through authorised services.
7. Disconnect the evaporator, the condenser, the compressor, the pipes and fans. These are made of copper, aluminum, steel and plastic and should therefore be disposed of separately.
8. Once all the guardings and the various parts of the frame have been removed, separate the various types of materials they are made from (plastic, metal sheets, polyurethane, copper, etc.) and separate them according to shared features.

All recyclable materials and waste should be processed and recycled by professionals and in compliance with the laws of the country in question.

The company responsible for recycling the materials should be registered and certified as a waste disposal service in accordance with the specific directives of the country in question.



WARNING

ILLEGAL DISPOSAL OF THE PRODUCT BY THE OWNER WILL RESULT IN ADMINISTRATIVE CHARGES AS REQUIRED BY CURRENT LAWS.



WARNING

DISPOSAL OF THE PRODUCT SHOULD COMPLY WITH CURRENT LAWS ON THE DISPOSAL OF COOLANT LIQUIDS AND MINERAL OILS.



IMPORTANT

IF THERE IS NO SYMBOL REPRESENTING A BARRED DUSTBIN ON THE REFRIGERATED CABINET, THIS MEANS THAT THE MANUFACTURER IS NOT RESPONSIBLE FOR TAKING CARE OF THE DISPOSAL OF THE PRODUCT. IN THIS CASE, AGAIN, CURRENT WASTE DISPOSAL LAWS SHOULD BE COMPLIED WITH.



ADDITIONAL INFORMATION

FURTHER INFORMATION ON THE DISPOSAL OF COOLANT LIQUID, OILS AND OTHER SUBSTANCES ARE AVAILABLE ON THE SUBSTANCE'S SAFETY DATA SHEET.

4.3 Safety devices applied to the Refrigerated cabinet

The refrigerated cabinet is equipped with the safety devices below:

SAFETY DEVICES FITTED ON THE REFRIGERATED CABINET

FIXED PROTECTIVE DEVICES

SECTIONING THE ELECTRICAL POWER SUPPLY

4.3.1 Fixed protective devices

Fixed protections consist of fixed perimeter shields, which are used to prevent external parts from entering inside the refrigerated cabinet.



DANGER

IT IS STRICTLY FORBIDDEN TO START UP THE REFRIGERATED CABINET AFTER MAINTENANCE WORKS WITHOUT REFITTING THE PANELLING PROPERLY.



WARNING

YOU SHOULD CHECK THE INTEGRITY OF FIXED PANELS AND RELATED FIXINGS TO THE FRAME, WITH SPECIAL ATTENTION TO THE PROTECTIVE PANELS.

4.3.2 Sectioning the electrical power supply

Before conducting any maintenance works on the Refrigerated cabinet or part of it, it is necessary to section the power supply that powers it.



DANGER

PLEASE REMEMBER TO FULLY DISCONNECT THE REFRIGERATED CABINET FROM THE POWER SUPPLY IN THE EVENT OF MAINTENANCE WORKS DURING WHICH THE OPERATOR CANNOT PREVENT ANY ACCIDENTAL CLOSURE OF THE CIRCUIT BY OTHER PEOPLE.

4.3.3 Refrigerant R290



This device contains a small amount of R290 refrigerant gas is environmentally compatible, but **highly flammable**.

Pay close attention during transport, installation and that the destruction not to damage the refrigerant pipelines.

Maintenance must be carried out by technical staff trained and licensed by ISA to perform operations on flammable coolant gases.

IN CASE OF DAMAGE:

Keep away from the flame or ignition sources. Ventilate the room for several minutes. Turn the unit off, pull the plug. Informare il servizio assistenza clienti. The more refrigerant containing an appliance, the greater must be the environment in which there is the unit. In areas too small, in the event of leakage can form a flammable mixture of air and gas. The volume of the room where the equipment must be at least 19 cubic meters for each refrigerant system.

USE:

Never use electrical appliances inside the appliance. do not damage the refrigerant circuit do not use mechanical or other means to accelerate the defrosting process, other than recommended by the manufacturer. Keep clear of obstruction ventilation openings in the equipment or the structure to be built.

RISK OF EXPLOSION:

Do not store products contain flammable propellants and explosives.

INSTALLATION OF THE UNIT:

Is suitable for installation in a dry, well ventilated room. The installation site should not be exposed to direct sunlight and not near a heat source, such as stove, radiator, etc.. If it is unavoidable to install near a heat source, use a suitable insulating plate.

4.4 Residual risks

During design the manufacturer examined all the areas or parts at risk. Therefore, all necessary precautions have been taken to prevent risks to persons and damage to the refrigerated cabinet as mentioned earlier.

**WARNING**

PERIODICALLY CHECK THAT ALL SAFETY DEVICES ARE OPERATING CORRECTLY. DO NOT REMOVE THE FIXED PROTECTIVE DEVICES FROM THE REFRIGERATED CABINET. DO NOT INTRODUCE FOREIGN OBJECTS OR TOOLS INTO THE OPERATIONAL AND WORKING AREA OF THE REFRIGERATED CABINET.

Although the refrigerated cabinet is fitted with the aforementioned safety devices, there are still some risks that cannot be eliminated, but reduced via corrective actions by the final integrator and correct operational procedures.

Below is a summary of the remaining risks associated with the refrigerated cabinet during:

- Normal operation
- Adjustments and tweaking
- Maintenance
- cleaning

4.4.1 Risk of contact with live parts

Risk of breaking or damaging the electrical components of the refrigerated cabinet, with a possible reduction in safety levels, following a short circuit.
Before connecting the electricity supply, make sure there is no ongoing maintenance work.

**WARNING**

BEFORE YOU MAKE THE CONNECTION, MAKE SURE THE DC CURRENT BEFORE MAKING THE CONNECTION, CHECK THAT THE D/C ELECTRICITY AT THE POINT OF INSTALLATION IS NO HIGHER THAN THE VALUE INDICATED ON THE PROTECTIVE SWITCHES ON THE FUSE BOX. IF IT IS, THE USER IS RESPONSIBLE FOR FITTING THE RELEVANT LIMITING DEVICES.

**WARNING**

IT IS STRICTLY FORBIDDEN TO CONDUCT ANY ELECTRICAL MODIFICATION, IN ORDER TO PREVENT ADDITIONAL UNFORESEEN HAZARDS AND RISKS.

4.4.2 Fires

**DANGER**

IN THE EVENT OF A FIRE, IMMEDIATELY DISCONNECT THE MASTER SWITCH FROM THE MAIN POWER SUPPLY LINE.

4.4.3 Explosive atmospheres

Cabinets can't be placed in places classified as risk of explosion 1999/92/CE:

Zona 0

A place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods or frequently.

Zona 1

A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

Zona 20

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods or frequently.

Zona 21

A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.

4.4.4 Slipping



Any leaks in the areas surrounding the refrigerated cabinet may cause personnel to slip. Check that there are no leaks and keep these areas clean at all times.

4.4.5 Tripping



Generally untidy deposits of material may constitute a tripping hazard and a total or partial obstruction of emergency exit routes.

You should ensure that operating and transit areas and emergency exit routes are free from obstacles in compliance with current legislation.

4.4.6 Circuit faults

Owing to potential faults, safety circuits may become less effective, which results in lower safety levels.

You should check the operational condition of the cabinet safety devices regularly.

4.5 Warning signs (if any)

Owing to the presence of various residual risks identified for the refrigerated cabinet, **ISA S.r.l.** has fitted cabinets in the JAMAICA series with hazard, warning and obligation signs devised in compliance with regulations relating to graphical symbols for use on systems. The signs are located in clearly visible positions.



WARNING

IT IS STRICTLY FORBIDDEN TO REMOVE THE WARNING SIGNS ON THE REFRIGERATED CABINET.



WARNING

THE USER IS RESPONSIBLE FOR REPLACING WARNING SIGNS THAT, OWING TO WEAR, BECOME UN-READABLE.

5. INSTALLATION

5.1 General Information

This manual provides information on how to unpack and position as well as information on how to connect them to the power supply.

5.2 Storage and unpacking

The refrigerated cabinet, with or without the packaging, should be carefully stored inside warehouses or in areas away from the elements and direct sunlight at a temperature between **0** and **+40 °C**.

The refrigerated cabinet should only be moved by qualified personnel operating forklift trucks, the power of which should be suited to handling the weight of the product: during this operation the refrigerated cabin must be placed on the special pallet supplied.

Unpack the refrigerated cabin by removing the screws fixing it to the pallet.

All packaging materials are recyclable and should be disposed of in accordance with local regulations. Please destroy "plastic" bags to prevent them from becoming hazardous to children (suffocation).

5.3 Installation, positioning and ambient conditions

**WARNING**

THERE SHOULD BE A GOOD AIR FLOW AROUND THE COMPRESSOR AND CONDENSING UNIT. THEREFORE THE AREA AROUND THE UNIT SHOULD NOT BE OBSTRUCTED BY BOXES OR OTHER OBJECTS.

**WARNING**

POSITION THE APPLIANCE AWAY FROM SOURCES OF HEAT (RADIATORS, ALL TYPES OF OVENS, ETC.), AND AWAY FROM DRAUGHTS (GENERATED FOR EXAMPLE BY FANS, AIR CONDITIONING DUCTS, ETC.). ALSO AVOID DIRECT EXPOSURE TO SUNLIGHT, OR ANYTHING THAT CAUSES THE TEMPERATURE INSIDE THE CABINET TO RISE WITH DETRIMENTAL RESULTS TO UNIT OPERATION AND ENERGY CONSUMPTION. DO NOT USE THE EQUIPMENT OUTDOORS AND DO NOT LEAVE IT EXPOSED TO RAIN.

5.4 Electrical connection

**WARNING**

CHECK THAT THE VOLTAGE INDICATED ON THE APPLIANCE IS THE SAME AS THE VALUE ON THE APPLIANCE IDENTIFICATION LABEL AND IN THE TABLE PROVIDED IN PARAGRAPH 1 OF THIS MANUAL, AND CHECK THAT THE REQUIRED VOLTAGE IS SUITABLE. CHECK ON THE SOCKET THAT THE POWER SUPPLY VOLTAGE PROVIDES RATED VOLTAGE ($\pm 10\%$) WHEN THE COMPRESSOR IS STARTED.

**WARNING**

THE PLUG SHOULD BE DIRECTLY CONNECTED TO THE ELECTRICAL SOCKET. IT IS FORBIDDEN TO CONNECT THE PLUG TO THE SOCKET BY MEANS OF MULTIPLE SOCKET EXTENSIONS OR ADAPTORS.

**WARNING**

EARTHING IS NECESSARY AND MANDATORY BY LAW.

**WARNING**

WE RECOMMEND YOU FIT THE SOCKET OF YOUR ELECTRICAL SYSTEM WITH AN OMNIPOLAR SWITCH WITH MINIMUM 3 MM BETWEEN CONTACTS. IT SHOULD ENSURE PROTECTION OF THE CIRCUITS FROM EARTH FAULTS, OVERLOADS AND SHORT CIRCUITS AND SHOULD BE RATED FOR THE LOAD AND MADE IN ACCORDANCE WITH CURRENT STANDARDS. WE THEREFORE RECOMMEND USING A HIGH-SENSITIVITY DIFFERENTIAL SWITCH AS YOUR SECTIONING DEVICE, IN ORDER TO PREVENT THE WHOLE SYSTEM FROM BEING CUT OFF IN THE EVENT OF A FAULT.

**ATTENZIONE**

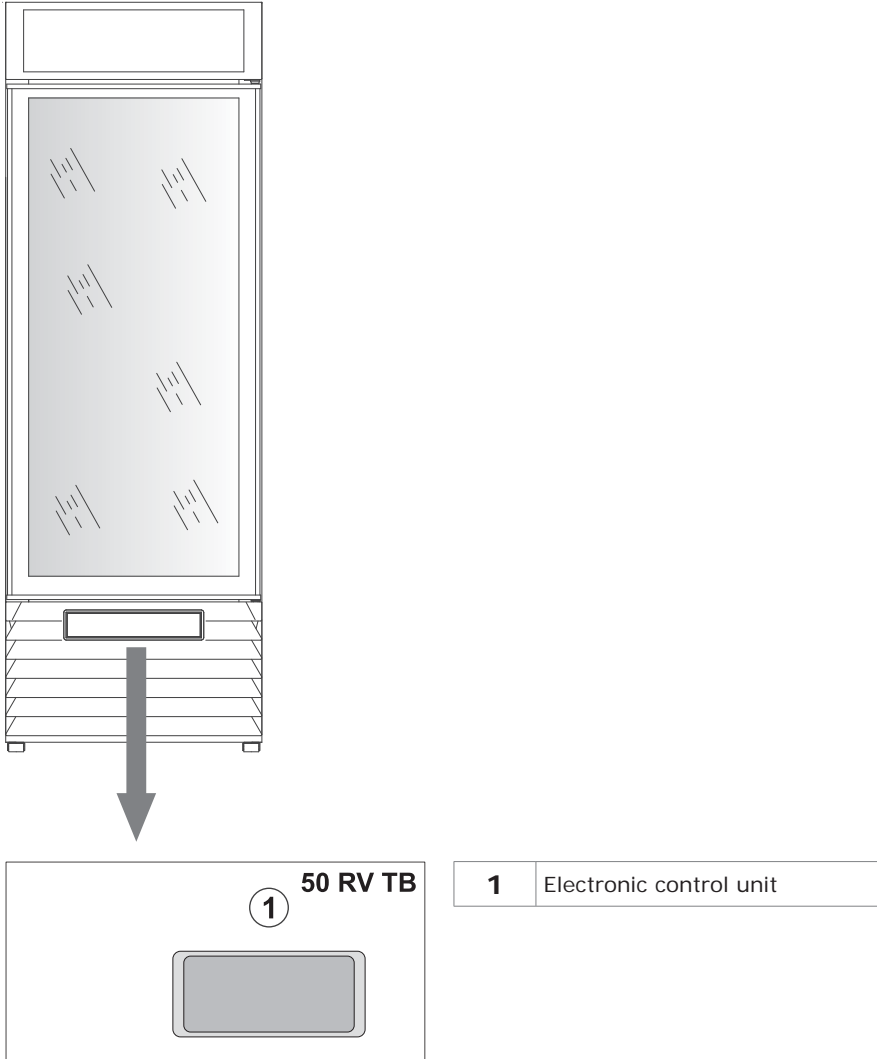
DO NOT ROUTE THE ELECTRICITY CABLE IN PASSAGEWAYS.

6. OPERATION

Before the product is delivered to the customer, it is essential that a trained technical member of staff checks that the refrigerated cabinet is operating correctly in order to achieve maximum performance.

6.1 Control panel

The control panel consist of the following compnents:



6.1.1 Start-up

Activate the mains system master switch.

Plug the refrigerated cabinet in at the socket supplied by the customer, ensuring that the plug is fitted with an earth contact and that there are no multiple sockets connected to it; the cabinet is activated automatically.

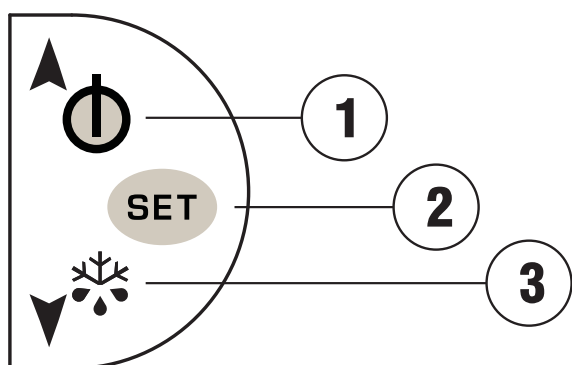


WARNING

THE ELECTRONIC CONTROL BOARD SHOULD BE INSTALLED USING THE DEFAULT SETTINGS. ANY CHANGES TO THE CONTROL BOARD SETTINGS MAY BE CARRIED OUT EXCLUSIVELY BY QUALIFIED PERSONNEL.

THE ELECTRONIC CONTROL BOARD MUST ONLY BE REPLACED WITH AN ORIGINAL REPLACEMENT FROM ISA, SPECIFICALLY MADE FOR R290 REFRIGERANT.

6.2 User interface (electronic control **PJEASY**)



WARNING

THE ELECTRONIC CONTROL BOARD SHOULD BE INSTALLED USING THE DEFAULT SETTINGS. ANY CHANGES TO THE CONTROL BOARD SETTINGS MAY BE CARRIED OUT EXCLUSIVELY BY QUALIFIED PERSONNEL.

THE ELECTRONIC CONTROL BOARD MUST ONLY BE REPLACED WITH AN ORIGINAL REPLACEMENT FROM ISA, SPECIFICALLY MADE FOR R290 REFRIGERANT.

6.2.1 Button

SINGLE BUTTON PRESSURE

1

- Pushing the button for more than 3 seconds , switch from ON/OFF.

2

- Pushing the button for 1 second allows the set point.
- Pushing the button for more than 3 seconds give access to menu , parameters setting (enter password 22).
- Switch off the acoustic alarm (buzzer).

3

- Pushing the button for more than 3 seconds switch on the lighting .

COMBINED PRESSURE

1-3

- Start / Stop compressor.

7. ROUTINE MAINTENANCE AND REGULAR CHECKS

7.1 Internal cleaning

- a)** Remove the products from inside the tank and place them in a freezer immediately to ensure the product is preserved correctly.
Remove shelves (mod. 50 RV TB).
- b)** Cutting off the power by pulling the plug from the coupling point voltage.
- c)** Wait at least 4 to 6 hours, until the ice on the evaporator has melted completely, before proceeding with cleaning operations.
We recommend waiting until the following day to make sure the product has been completely defrosted.
- d)** Remove the drain plug out of place in the front control panel (mod. 40 RS TB).
- e)** It is recommended to apply in the drain hole of a rubber tube or other suitable material so as to facilitate the 'output of the liquids.
- f)** Remove the plastic cap covering the hole outlet at the tank bottom.
- g)** Clean the tank bottom and side walls using a mild detergent, warm water and a soft non-abrasive sponge.
Rinse thoroughly and dry with cloth.

7.2 Access and cleaning the condensing unit

BACKSIDE

- a) Remove the 4 screws of the protective grid.
- b) Remove the protective grid.
- c) clean the condenser unit with a vacuum brush.

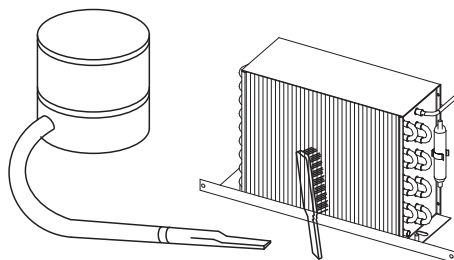
a)



b)



c)



FRONTSIDE

- a) Remove the 4 screws of the protective grid.
- b) Remove the protective grid.
- c) Clean the condenser unit with a vacuum brush.
Be careful not to bend the condenser fins.

a-b)



c)



7.3 External cleaning

The external surfaces may be cleaned as illustrated below, depending on manufacturing materials:

STAINLESS STEEL

Wash with warm water and mild detergents, rinse well and dry with a soft cloth.

ACRYLIC OR POLYCARBONATE SURFACES

Wash with lukewarm water, using a soft cloth or a chamois leather. Do not use detergents, alcohol, acetone or solvents. Do not use abrasive cloths or sponges.

GLASS SURFACES

Only use products specifically designed for cleaning glass. We do not recommend using tap water, which may leave calcium deposits on the surface of the glass.

7.4 Maintenance

Any work conducted on the on the refrigerated cabinet MUST involve disconnection from the power socket and in any case, none of the protective elements (grid, casing) should be removed by non-qualified staff. The refrigerated cabinet should not be operated when these protective elements have been removed.

OPERATION	DESCRIPTION	FREQUENCY
POWER SUPPLY CABLE	Periodically check the power supply cable in order to detect any damage. The power supply cable can be replaced only the manufacturer or by an authorised technical support centre. In the event of tampering or damage to the power supply cable, the Manufacturer cannot be held liable for any damage to people, animals or the product contained in the cabinet.	monthly
CONDENSER	A dirty condensing unit affects the system's efficiency levels, which results in lower performance and waste of electricity. We recommend clearing the condensing unit from deposits (dust and debris) that built up between the flaps and the front of the unit by blocking the airflow once every 30 days and anyway at least twice a year. cleaning operations should be carried out with bristle brushes, or better still, with a vacuum cleaner.	monthly
CONDENSATION WATER ABSORBING SPONGES	These should be cleared from deposits (dust and debris) at least once every 6 months.	once every 6 months

8. SPECIAL MAINTENANCE

ADDITIONAL DEFROSTING	Special temperature conditions and high levels of humidity may generate frost on the evaporator, which reduces the performance of the refrigerated cabinet. Should these conditions persist over time, qualified personnel should intervene to change the parameters of the electronic control board, if necessary. Whilst waiting for qualified personnel to carry out maintenance works, and only on this occasion, it is possible to defrost the product several times in the space of one day (which may affect the consistency of the product).	whilst waiting for qualified personnel to intervene
REPLACING THE LAMPS (if any)	In order to prevent and/or avoid any damage to the refrigerated cabinet, you should replace the lamps as soon as they are burned out (darkened ends, if they do not light up, etc.). The lamps should be replaced with identical lamps.	in attesa di intervento del personale qualificato

9. CUSTOMER SUPPORT CENTRE

9.1 Faults

If the appliance is not working properly or stops working, before contacting the customer support centre, check the following:

INCONVENIENCE	PROBABLE CAUSES	POSSIBLE SOLUTIONS
The appliance is not working	Interrupted protective fuse	Find what triggered the switch and subsequently place the fuse back.
	The master switch is open	Close the master switch
	The plug is not inserted	Insert the plug
	Power cut	Of the power cut persists, transfer the product in a freezer.
La temperatura interna non è sufficientemente bassa	Excessive ice accumulation on the evaporator(s)	Carry out an additional defrosting cycle
	The internal fans have stopped or their blades are damaged	Contact the technical support centre
	Internal ventilation is too high	Contact the technical support centre
	The wrong temperature has been set on the electronic control board	Set the right temperature
	Low efficiency levels of the electronic control board	Replace the electronic control board or the temperature probes only after checking with one of the two is not operating efficiently. Contact the technical support centre.
	The cabinet is affected by draughts or is exposed to direct or reflected sunlight	Remove any excessive draughts and prevent any direct or reflected sunlight.
	Air condensing unit blocked by dust or debris	Clean the condensing unit accurately
	Insufficient cooling air flow in the air condensing unit	Remove anything that may affect the air flow inside the condensing unit (paper sheets, cardboard, grids with an insufficient number of holes, etc.)
	Insufficient coolant in the cooling system	find the cause behind the lower amounts of coolant and eliminate it. Top up the coolant. If necessary, empty the system before topping up. Contact the technical support centre.
The compressor does not work or works only for a few moments	No power supply	Check if there is a power cut. Close the various switches on the power supply line.
	The power supply voltage is too low	Check that the network voltage of the power supply cable is 220V +/- 10%.
	The temperature set on the thermostat is too high	If the set temperature is higher compared to the air in the display area, the compressor does not activate itself. Set the suited temperature if the current one is not low enough.
	The pressure switch operated at maximum pressure (if any)	Check the reasons why the pressure switch is operating at maximum pressure levels, such as: air condensing unit is blocked, the fan of the condensing unit has stopped, the ambient temperature is too high, the pressure switch is broken. Eliminate the issue. Contact the technical support centre.

9.2 List of alarms on the electronic controller (if any)

TYPE ALARM	DESCRIPTION	HOW THE ALARM STOPS
P1 E0	Broken thermostat probe. compressor exit with "cON" e "cOf" parameters	The alarm starts a few seconds after the probe breaks down; it stops a few seconds after the probe starts working again properly. We recommend checking the probe's connections before replacing it.
P2 E1	Broken evaporator probe. Set time for de-frosting	The alarm starts a few seconds after the probe breaks down; it stops a few seconds after the probe starts working again properly. We recommend checking the probe's connections before replacing it.
HA HI	High temperature alarm	The alarm stops automatically after the temperature goes back to normal levels and when a defrosting cycle is launched. Check the settings.
LA LO	Low temperature alarm	The alarm stops automatically after the temperature goes back to normal levels and when a defrosting cycle is launched. Check the settings.
EA IA CB	External alarm	The EA external alarm stops after the digital infeed is de-activated. It should be restarted manually. The alarm is activated when the pressure switch is activated. Switch off and on. If the alarm persists, replace the tool.
ETc RTF	Real time clock is broken	Reset the clock. If the alarm does not stop, replace the clock.
EE	E.PROM Error	The instrument is damaged. It should be replaced. (contact the technical support centre).
EF	Operating parameters error	The instrument is damaged. It should be replaced. (contact the technical support centre).

10. WARRANTY TERMS AND CONDITIONS

The seller's warranty on the equipment is valid for twelve months from the date of delivery. The warranty includes repairs or replacements of any faulty parts due to manufacturing processes or installation after written communication with the number of the model and date of installation. All defects such as incorrect use of the refrigerator cabinet, inappropriate electrical connection, normal wear (for instance compressor failure and fluorescent lamp malfunctioning that does not depend on manufacturing defects), as well as calls for installations, technical instructions, adjustments and cleaning are not included in the warranty.

If the seller's technical staff detect any tampering, unauthorised repairs or inappropriate use of equipment the warranty will not take effect.

Shipment of components covered by the warranty is freight collect only.

Any damage to the refrigerated cabinet detected at the time of delivery due to transport must be reported on the same shipping note to claim compensation from the carrier.

The seller cannot be held liable in the event of damage to the product preserved in the cabinet due to failures of the refrigerated cabinet


















11. Annexes

Annex 1 - Electrical diagram - mod. 50 RV TB cod. 412100242000	26-27
Annex 2 - Declaration of conformity	28

Annex 1

Electrical diagram

mod. **50 RV TB** - cod. **412100242000** - electronic control unit **PJEASY**

	S1	TEMPERATURE PROBE
	S2	DEFROSTING PROBE
	CE	ELECTRONIC CONTROL UNIT
	U2	CONDENSER FAN
	U3	EVAPORATOR FAN
	U4	CLEANING FAN
	GD1	LED FEEDING
	HL1	VERTICAL LED
	HL2	UP ORIZZONTAL LED
	U1	COMPRESSOR
	I1	LIGHT SWITCH
	I6	DOOR MICRO SWITCH
	T5	TRASFORMER
	XS1	FEEDING CABLE
	B2	DEFROSTING VALVE
	R6	DOOR FRAME HEATING ELEMENT
	R7	GLASS DOOR HEATING ELEMENT

Annex 2

DECLARATION OF CONFORMITY

We: **ISA**

Via del Lavoro, 5 - 06083 - Bastia Umbra (PG)

certify on our own sole responsibility that the product:

Model: **MISTRAL 50 RV TB**

Serial Number:

To which this declaration relates is in conformity with the following standards and other normatives documents:

SAFETY OF MACHINERY

General Electrical Safety Standards EN60335-1/Ed.2002+Amendments A11:2004,A12:2006,A2:2006,A13:2008 Special Safety standards for Commercial Refrigerating Appliances EN 60335-2-89/Ed.2010. Standard for the Measurement of Electromagnetic Fields of Electrical Appliances EN 62233:2008 Directive 2006/95/EC of the European Parliament and the Council of 12 December 2006 on the approximation of laws relating to electrical equipment intended for use within certain limits of tension EN 62471/Ed. 2009 Photobiological safety of lamps and lamps system.

ELECTROMAGNETIC COMPATIBILITY (EMC)

Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated elettrici and thermal appliances for households and similar purposes, electric tools and similar electric EN 55014-1 (VALID TO 2009:Ed.2000+ Amendments A1:2001,A2:2002-or: Ed.2006) Immunity requirements for electric household appliances, electric tools and similar appliance. EN55014-2 (Ed.1997+Amendment A1:2001) Part 3: Limits – Section 2: Limits for harmonic current emissions (equipment input current

= 16A per phase) EN61000-3-2 (valid to 2009:Ed.2000+Amendment A2:2005-orEd.2006 Part 3: Limits – Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current = 16A EN61000-3-3 (Ed.1995+ Amendment A1:2001,A2:2005) Part 4: Testing and measurement techniques Section 2: Electrostatic discharge immunity test EN 61000-4-2 (Ed.1995)

Part 4: Testing and measurement techniques Section 4: Electrical fast transient/burst immunity test EN 61000-4-4 (Ed.1995)

THE PRESSURE EQUIPMENT DIRECTIVE (PED) 97/23/CE

As the equipment comes back in the class no superior than I it is excluded from the PED's application form (art.1 par. 3.6)

FOOD COMPATIBILITY

Regulations (CE)N.1935/2004 of the european parliament and council of 27th October 2004 Regulation (CE) N.2023/2006 of the and council of the 22th of December Directive 2008/39/CE della commission of March 2008 Directive 2007/19/CE della commission of 30 March 2007 Directive 2005/79/CE della commission of 18 November 2005 Directive 2004/19/CE della commission of 1 March 2004 Directive 2004/1/CE della commission of 6 January 2004

ROHS AND RAE

Directive 2002/95/CE of the European Parliament and of the Council of 27 January 2003
Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003
on waste electrical and electronic equipment (WEE)

REACH

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

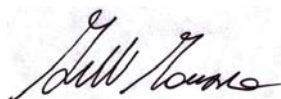
SUBSTANCES THAT REDUCE THE OZONE LAYER

REGULATION (EC) No 1005/2009 OF THE EUROPEAN PARLIAMENT (G.U.U.E 31/10/2009 L286)
Following the provisions of the Directives: 2006/95/CE, 2004/108/CE, 2006/42/CE, 97/23/CE

Person authorised to compile the Technical File is Mr. Minelli Maurizio Minelli Maurizio (Technical Department Manager)
Via del Lavoro 5 - 06083 Bastia Umbra (PG)

Bastia Umbra: **30 / 05 / 2012**
(place and date of issue)

Minelli Maurizio





Idee che lavorano con te

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