

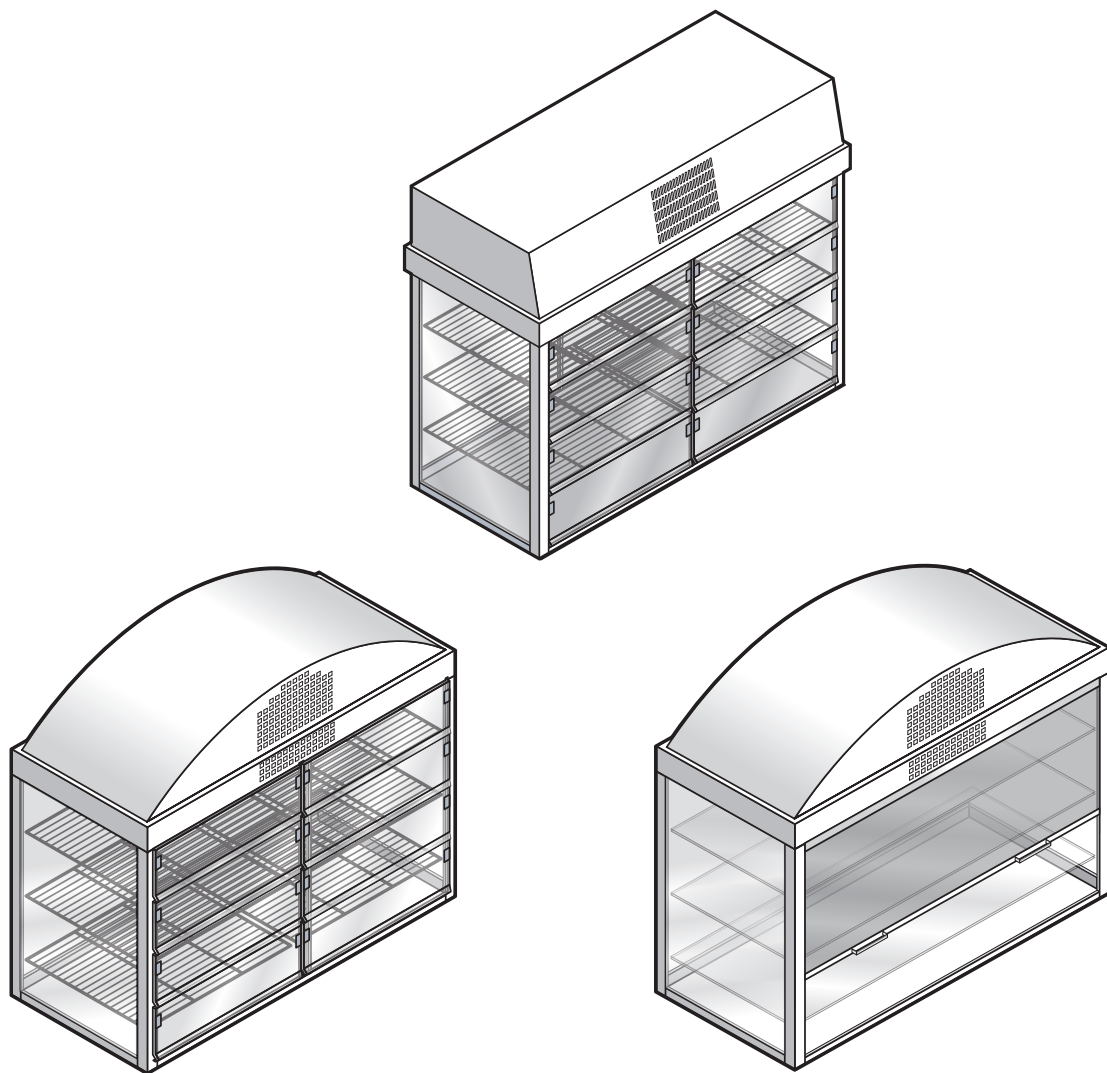


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INSTALLATION, OPERATING AND MAINTENANCE MANUAL FOR REFRIGERATED DISPLAY CASES



EN Installation, operating and maintenance manual 14

** Instructions d'origine*



R290

INFORMAZIONI PER LE APPARECCHIATURE CON REFRIGERANTE R290 (PROPANO)
INFORMATION FOR BUILT-IN REFRIGERATED UNITS WITH REFRIGERANT R290 (PROPANE)
INFORMATIONS POUR LES VITRINES REFRIGEREES AVEC REFRIGERANT R290 (PROPANE)
INFORMATIONEN FÜR DROP-IN GEKÜHLTE ELEMENTE MIT KÜHLMITTEL R290 (PROPAN)



EN

Read this manual and carefully follow its instructions before running any operation.
Any operation of technical assistance on machines that contain the gas R290 has to be made exclusively by qualified personnel trained in the handling procedures when using the gas R290.
Each activity has to be carried out by personnel suggested by the manufacturer of the goods or by the dealer that has sold them.
Only original spare parts, tested and approved for the specific use with R290, shall be used.

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INSTALLATION, OPERATING AND MAINTENANCE MANUAL FOR REFRIGERATED DISPLAY CASES

1. WARNINGS

Read this manual carefully before commencing installation.

The manual has been designed to provide the user with all the information required to use the appliance safely, from its transportation right through to its disposal. In order to properly understand the document, you must be familiar with the terms and symbols used; these are summarised below:

 **WARNING** – Health and safety hazard for the persons involved

 **WARNING** - Electrical hazard - Dangerous voltage

 **WARNING** - Flammable R290 gas hazard

 Read the instruction manual before using the appliance.

The manual must be stored carefully so that it can be used for future reference. If the appliance changes hands, the manual must also be handed over to the new user.

This documentation is also made available by the manufacturer in digital format.

In order to use the appliance correctly:

- Do not remove or tamper with the safety devices;
- It is prohibited to perform any checks, cleaning operations or maintenance works on moving parts;
- Only use the appliance for the purposes for which it was specifically designed;
- Keep unauthorised personnel away from the appliance;
- It is prohibited for people under the age of 18 or adults with limited physical or mental abilities to use the appliance;
- Have maintenance performed exclusively by qualified personnel;
- Switch off the appliance in the event of a fault or malfunction;
- Only use the spare parts supplied or indicated by the Manufacturer;
- The A-weighted emission sound pressure level is below 70 dB ("A").

 **Attention:** only qualified personnel are authorised to access the main control board and any other electrical parts, whether for installation or maintenance purposes.

The Manufacturer declines all responsibility for damage to property or bodily injury caused by the failure to follow the instructions and warnings contained in the manual.

If in any doubt, and whenever the need arises, contact the Dealer.

1.1 Appliance description

The refrigerated display cases are elements of glass and polycarbonate with an independent refrigeration unit located in the upper part of the display case and a control panel for the equipment functioning.

These refrigerated display cases have been designed to be installed above Self-service elements with a neutral top or with a refrigerated top / tank, since the models provided are with or without insulated stainless steel bottom.

The unit can use R452A or R290 refrigerant gas. The operating temperature is regulated by a digital thermostat and the defrost function (programmable) is by compressor stop (Drop-in and Self 700 lines) or with hot gas (Self 800 line). The evaporation of condensation water is automatic.



Warning:



R290 gas is a potentially flammable and explosive type of gas. Therefore, it is absolutely necessary to take every precaution to avoid any danger related to the nature of this gas during routine and unplanned operations.

Only specialised personnel are authorised to work on the appliance; these personnel must avoid using open flames and electric tools.

The display case's service side is accessed via sliding doors in tempered glass; whereas from the customer's side they are equipped with polycarbonate doors with flaps or a roller shutter to secure the display case after service.

The display case has tempered double-glazed glass sides and grills or removable tempered glass shelves; the maximum load for each shelf is 25 kg when evenly distributed. The unit is refrigerated by circulating cold air and the lighting is standard.

The appliance operates in compliance with the UNI EN ISO 23953-1:2006 and UNI EN ISO 23953-2:2006 standards, according to the climate classes indicated in the table in point 5.1 and indicated on the appliance's rating plate. If the room temperature is higher, this may also have an effect on the temperature of the appliance and may result in it malfunctioning or becoming damaged.

For safety, refer to IEC/EN 60335-2-89 standard.

1.2 Transportation and handling



If the appliance is transported on a pallet, it must be unloaded by trained personnel using a forklift or other suitable lifting equipment. During loading and unloading operations, it is prohibited to stand under suspended loads. Any manoeuvring errors could cause crushing injuries.

Any blows to the surfaces of the appliance could result in immediate damage.

During this phase, anyone not directly involved in the operation must not be allowed to remain in the area.

The personnel handling, positioning, assembling or disassembling the appliance, must be qualified and wearing suitable personal protective equipment (e.g. work gloves, safety shoes).

1.3 Operating conditions and technical specifications

The appliance has been designed for the distribution and display of food and beverages that must be kept at a low temperature. The food must only be displayed during the distribution phase as the appliance has not been designed to permanently preserve food. Any other use shall be considered improper.



Warning: the appliances are not suitable for outdoor installations and/or environments subjected to the weather (rain, direct sunlight, etc.).



Warning: do not store explosive substances such as pressurised containers or items containing a flammable propellant inside these appliances.



Warning: before installing the appliance, make sure that the electrical connection preparations comply with the information indicated on the rating plate. It is prohibited to remove or modify the rating plate or any other warning label.

1.4 Installation

Before unpacking the appliance, check that the outer protective casing is fully intact. Any damage must be promptly reported to the courier. In any case, no damaged appliance can be returned to the manufacturer without prior notice and without prior written authorisation.

 The described operations must be carried out by qualified personnel. Before performing any installation procedure, disconnect the appliance from the power mains. Place the appliance in a ventilated room away from heat sources, in order to ensure that there is a sufficient air supply in the area housing the compressor. For better use, provide a free space of at least 300 mm between the ceiling of the room and the upper part of the display case.

The refrigerated unit has been designed for use in a room with a maximum temperature of 22/25°C (see climate class on the rating plate). If the room temperature is higher, this may also have an effect on the temperature of the appliance and may result in it malfunctioning or becoming damaged.

Set down the appliance where desired using a pallet truck. If the unit is moved after it has been unpacked, protect the surfaces from knocks. Once the installation has been carried out, the protective film can be removed. This operation should be performed very slowly to prevent the glue from remaining on the surfaces. When cleaning the polycarbonate clapet doors, avoid the use of solvents, abrasives or other chemical products. Use only denatured alcohol and a soft cloth when needed.

WARNING: Do not obstruct the holes made in the units to ventilate the technical compartment; any obstruction could cause the appliance to malfunction.

WARNING: Do not store or use flammable materials and liquids near the appliance, and do not use electrical devices inside the compartments.

Use an earthed socket with an adequate capacity for the absorption indicated on the rating plate. Before installing the appliance, check that the surface it will be built in to is flat. Incorrect levelling can cause the appliance to malfunction.

1.5 Electrical connections

 They must be carried out in accordance with the local regulations in force. Before performing the electrical connection, make sure that the voltage and frequency correspond to the information indicated on the appliance's rating plate.

The terminal board for the electrical connection is located inside the technical compartment in the upper part of the display case. The connection or plug must be visible and accessible even after the installation. If the supply point is in the lower part of the display case, pass the cable inside the upright and exit at the bottom (D - Fig. 6-7).

The cable must have the minimum properties of a type H05 RNF cable and an efficient, appropriately-sized earthing conductor based on the total power of the appliance and any other appliances or accessories connected on the same terminal board (see the rating plate).

If the power cable is damaged, it must be replaced by the customer service or qualified personnel.

The appliance's electrical supply system must be equipped upstream with an appropriately-sized automatic omnipolar circuit breaker that ensures a gap of at least 3 mm between the contacts. There must not be any breaks in the earth cable.

 The electrical safety of this appliance is only guaranteed when the above-mentioned conditions are met and if the system's equipotential situation is also compliant (use the connection screw located near the power cable input and the symbol sticker). 

 Any operations carried out on electrical systems must be performed by qualified personnel. The manufacturer declines all responsibility in the event that these safety standards are not complied with.

Do not cover the top of the equipment to leave a good air circulation.

1.6 Reasonably foreseeable misuse

Any use other than what is specified in this manual is considered improper. When using the machine, work or activities that may pose risks to the safety of the workers or cause damage to the appliance are not permitted. Improper use includes:

- Placing the appliance in a weather-exposed outdoor area.
- Incorrectly installing the machine.
- Changing or tampering with the safety devices.
- Making changes or tampering with the appliance's electronic elements.
- Not complying with the deadlines for periodic checks, maintenance and cleaning.
- Placing or storing flammable or explosive materials in the immediate vicinity of the machine.

1.7 Operation/use

- Before using the appliance for the first time, clean the inside with warm water and mild soap. Avoid using abrasive detergents or scouring powders. Lastly, rinse and dry the appliance thoroughly. The manufacturer declines all responsibility if the products are not used as intended.
- The appliances have been designed for the distribution and display of food and beverages that must be kept at a low temperature. The food must only be displayed during the distribution phase as the appliance has not been designed to permanently preserve food.
- The machines have not been designed for use in unsupervised environments. Furthermore, the appliances are not suitable for outdoor installations and/or environments subjected to the weather (rain, direct sunlight, etc.).
- Avoid placing hot food or evaporating liquids inside the appliance, as its function is to preserve the product's temperature, and not to lower it; the product should therefore only be inserted if it has already cooled down.
- Cover or wrap foods to be preserved.
- Only keep the doors open for as long as it takes to insert or remove the food.
- The maximum load for each shelf is 25 kg when evenly distributed.
- Do not store explosive substances such as pressurised containers or items containing a flammable propellant.



Should any anomalies occur (short circuits, mechanical failures, electric cable deterioration, a smell of gas indicating a possible leak, etc.), the person in charge of normally using the machine must immediately switch off the appliance, unplug it from the power mains and secure the work area.



R290

1.8 Total shutdown

When the unit is to be decommissioned for a lengthy period, the following measures must be taken:

- Turn off the main switch.
- Disconnect the upstream power supply.
- Remove all the food from the display case and clean the inside as well as all the accessories.
- Leave the display case doors ajar so that fresh air can enter and prevent undesirable smells from forming.
- Protect the stainless steel surfaces with a thin layer of Vaseline oil. To do this, soak a cloth in the oil and rub vigorously.
- Periodically air out the premises.

1.9 Routine cleaning and maintenance

The appliance must only be cleaned after the power supply upstream from the appliance has been disconnected.

During the maintenance operations, the cable and the plug must be always visible and accessible for the operator who is performing the operations.

The routine and preventive maintenance essentially entails cleaning the stainless steel parts with warm water and mild soap on a weekly basis, and then rinsing and drying these thoroughly. Do not use direct jets of water. We recommend cleaning the fins of the refrigerating unit's condenser at least every three months. These operations must be performed by qualified personnel.

WARNING:

- Under no circumstances should you use abrasive or corrosive cleaning products.
- Do not accelerate the defrosting process using utensils such as scourers, brushes or sharp metal scrapers.
- Bleach, hydrochloric acid and other compounds containing chlorine will damage the stainless steel.
- The coloured parts must be cleaned with silicone wax.
- The floor under the appliance must not be washed with corrosive substances that could produce appliance-damaging vapours.
- When cleaning, do not wash the appliance with jets of water.
- **WARNING:** Do not damage the refrigerant circuit.
- It is forbidden to remove the safety guards.
- It is forbidden to use open flames to check for gas leaks.
- Smoking is prohibited.

1.10 Unplanned maintenance

Before carrying out any maintenance work, put the appliance in a safe condition. Unplanned maintenance is carried out in the event of a fault or malfunction. It must only be performed by qualified personnel and with the appliance disconnected from the power mains. In this case, repairs or replacements might be required. The faulty parts must only be replaced with materials and components that are identical to the originals or have been specified by the Supplier. The use of unsuitable materials can make the machine non-compliant with the safety standards. The manufacturer declines all responsibility for damage resulting from work carried out by unqualified or unauthorised technicians.



Should any anomalies occur (short circuits, mechanical failures, electric cable deterioration, a smell of gas indicating a possible leak, etc.), the person in charge of normally operating the machine must immediately switch off the appliance, unplug it from the power mains and secure the work area.



R290



Warning: the appliances contain flammable refrigerant gas (e.g. R290).

R290 gas is a potentially flammable and explosive type of gas. Therefore, it is absolutely necessary to take every precaution to avoid any danger related to the nature of this gas during routine and unplanned operations. Use suitable tools and avoid using open flames and electrical tools.

If the user replaces components or modifies the appliance without written permission from the Manufacturer, or uses unauthorised spare parts, the guarantee will immediately become null and void.

1.11 Disposal

At the end of its service life, the appliance must be disconnected from the power mains before the various components are disassembled. Special care must be taken to avoid the risk of injury related to the shape and weight of each component.



The symbol on the product indicates that it should not be considered as domestic waste. The appliance must be disposed of in accordance with the laws in force, most especially in regards to the disposal of the refrigerant. The various parts (electrical components, rubber hoses, cable sheaths, etc.) must be sorted for recycling in order to make the best possible contribution whilst protecting the environment and complying with the laws in force.

2. INTRODUCTION

Read this manual carefully before commencing installation.

The manual has been designed to provide the user with all the information required to use the appliance safely, from its transportation right through to its disposal. In order to properly understand the document, you must be familiar with the terms and symbols used; these are summarised below:



WARNING – Health and safety hazard for the persons involved



WARNING - Electrical hazard - Dangerous voltage



WARNING - Flammable R290 gas hazard



Read the instruction manual before using the appliance.

The manual must be stored carefully so that it can be used for future reference. If the appliance changes hands, the manual must also be handed over to the new user.

In order to use the appliance correctly:

- Do not remove or tamper with the safety devices;
- It is prohibited to perform any checks, cleaning operations or maintenance works on moving parts;
- Only use the appliance for the purposes for which it was specifically designed;
- Keep unauthorised personnel away from the appliance;
- It is prohibited for people under the age of 18 or adults with limited physical or mental abilities to use the appliance;
- Have maintenance performed exclusively by qualified personnel;
- Switch off the appliance in the event of a fault or malfunction;
- Only use the spare parts supplied or indicated by the Manufacturer;
- The A-weighted emission sound pressure level is below 70 dB ("A").



Attention: only qualified personnel are authorised to access the main control board and any other electrical parts, whether for installation or maintenance purposes.

The Manufacturer declines all responsibility for damage to property or bodily injury caused by the failure to follow the instructions and warnings contained in the manual.

If in any doubt, and whenever the need arises, contact the Dealer.

The appliance complies with Directives 2014/30/EEC, 2014/35/EEC and 2006/42/EEC.

In addition, the following standards have also been applied: EN 55014-1:2017, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-11:2000, EN 60335-2-89:2010 with EN 60335-1:2012 + A11:2014 and EN 62233:2008.

3. APPLIANCE DESCRIPTION

The refrigerated display cases are elements of glass and polycarbonate with an independent refrigeration unit located in the upper part of the display case and a control panel for the equipment functioning.

These refrigerated display cases have been designed to be installed above Self-service elements with a neutral top or with a refrigerated top / tank, since the models provided are with or without insulated stainless steel bottom.

The unit can use R452A or R290 refrigerant gas. The operating temperature is regulated by a digital thermostat and the defrost function (programmable) is by compressor stop (Drop-in and Self 700 lines) or with hot gas (Self 800 line). The evaporation of condensation water is automatic.



Warning:



R290 gas is a potentially flammable and explosive type of gas. Therefore, it is absolutely necessary to take every precaution to avoid any danger related to the nature of this gas during routine and unplanned operations.

Only specialised personnel are authorised to work on the appliance; these personnel must avoid using open flames and electric tools.

The display case's service side is accessed via sliding doors in tempered glass; whereas from the customer's side they are equipped with polycarbonate doors with flaps or a roller shutter to secure the display case after service.

The display case has tempered double-glazed glass sides and grills or removable tempered glass shelves; the maximum load for each shelf is 25 kg when evenly distributed. The unit is refrigerated by circulating cold air and the lighting is standard.

The appliance operates in compliance with the UNI EN ISO 23953-1:2006 and UNI EN ISO 23953-2:2006 standards, according to the climate classes indicated in the table in point 5.1 and indicated on the appliance's rating plate. If the room temperature is higher, this may also have an effect on the temperature of the appliance and may result in it malfunctioning or becoming damaged.

For safety, refer to IEC/EN 60335-2-89 standard.

4. TRANSPORTATION AND HANDLING



If the appliance is transported on a pallet, it must be unloaded by trained personnel using a forklift or other suitable lifting equipment. During loading and unloading operations, it is prohibited to stand under suspended loads. Any manoeuvring errors could cause crushing injuries.

Any blows to the surfaces of the appliance could result in immediate damage.

During this phase, anyone not directly involved in the operation must not be allowed to remain in the area.

The personnel handling, positioning, assembling or disassembling the appliance, must be qualified and wearing suitable personal protective equipment (e.g. work gloves, safety shoes).

5. OPERATING CONDITIONS AND TECHNICAL SPECIFICATIONS

The appliance has been designed for the distribution and display of food and beverages that must be kept at a low temperature. The food must only be displayed during the distribution phase as the appliance has not been designed to permanently preserve food. Any other use shall be considered improper.

 Warning: the appliances are not suitable for outdoor installations and/or environments subjected to the weather (rain, direct sunlight, etc.).
Warning: do not store explosive substances such as pressurised containers or items containing a flammable propellant inside these appliances.

5.1 Climate class and temperature class

The climate class indicated on the rating plate refers to the following values:

CLIMATE CLASS: 2	CLIMATE CLASS: 3
• 22°C room temperature with 65% relative humidity	• 25°C room temperature with 60% relative humidity
• (IEC/EN ISO 23953)	• (IEC/EN ISO 23953)

Safety standard: IEC/EN 60335-2-89 (32°C ± 2°C)

PRODUCT TEMPERATURE CLASS: M1/M2

The rating plate contains the product's identification and technical data. The information it contains is listed below:

Emainox s.r.l. – Via Pontebbana 9 – 33098 Valvasone PN (Italy)		1								
MOD.	2	ART.	3							
MATR.	4									
EL	5	V	5	~	5	Hz	5	A	5	kW
CLIMATIC CLASS KLIMA KLASS	6	ILLUMINAZIONE LIGHTING	7	W						
REFRIGERANTE REFRIGERANT TYPE	8	9	Gr	IP	10					
RESISTENZA SCARICO DISCHARGE RESISTANCE	11	W	RESISTENZA SBRINAMENTO DEFROSTING RESISTANCE	12	W					
GAS ISOLAMENTO INSULATION GAS	13									
		MADE in ITALY								

- Manufacturer
- 1. Appliance's year of manufacture
- 2. Item Model
- 3. Production code
- 4. Serial number
- 5. Electrical data: supply voltage (V), number of phases (~), supply frequency (Hz), absorbed current (A) and maximum absorbed power (kW)
- 6. Climate class
- 7. Lighting power (W)
- 8. Type of refrigerant gas
- 9. Quantity of refrigerant gas (Gr)
- 10. Degree of protection against dust and water (IP)
- 11. Drainage heating element power (W)
- 12. Defrost heating element power (W)
- 13. Gas insulation

 Warning: before installing the appliance, make sure that the electrical connection preparations comply with the information indicated on the rating plate. It is prohibited to remove or modify the rating plate or any other warning label.

5.2 Commands and controls

The appliance is controlled by the control board connected via a 2.5 metre-long cable which can be positioned by the user according to the assembly needs, or inside the display case itself.

6. INSTALLATION

6.1 Controlling the appliance upon receipt

Before unpacking the appliance, check that the outer protective casing is fully intact.

Any damage must be promptly reported to the courier. In any case, no damaged appliance can be returned to the manufacturer without prior notice and without prior written authorisation.

6.2 Positioning

 The described operations must be carried out by qualified personnel. Before performing any installation procedure, disconnect the appliance from the power mains. Place the appliance in a ventilated room away from heat sources, in order to ensure that there is a sufficient air supply in the area housing the compressor. The refrigerated unit has been designed for use in a room with a maximum temperature of 22/25°C (see climate class on the rating plate). If the room temperature is higher, this may also have an effect on the temperature of the appliance and may result in it malfunctioning or becoming damaged. For better use, provide a free space of at least 300 mm between the ceiling of the room and the upper part of the display case. Set down the appliance where desired using a pallet truck. If the unit is moved after it has been unpacked, protect the surfaces from knocks. Once the installation has been carried out, the protective film can be removed. This operation should be performed very slowly to prevent the glue from remaining on the surfaces.

WARNING: Do not obstruct the holes made in the units to ventilate the technical compartment; any obstruction could cause the appliance to malfunction.

WARNING: Do not store or use flammable materials and liquids near the appliance, and do not use electrical devices inside the compartments.

6.3 Preparations to be made by the client

Use an earthed socket with an adequate capacity for the absorption indicated on the rating plate.

Before installing the appliance, check that the surface it will be built in to is flat. Incorrect levelling can cause the appliance to malfunction.

6.4 Electrical connections

 They must be carried out in accordance with the local regulations in force. Before performing the electrical connection, make sure that the voltage and frequency correspond to the information indicated on the appliance's rating plate. The terminal board for the electrical connection is located inside the technical compartment in the upper part of the display case. The connection or plug must be visible and accessible even after the installation. If the supply point is in the lower part of the display case, pass the cable inside the upright and exit at the bottom (D - Fig. 6-7).

The cable must have the minimum properties of a type H05 RNF cable and an efficient, appropriately-sized earthing conductor based on the total power of the appliance and any other appliances or accessories connected on the same terminal board (see the rating plate).

If the power cable is damaged, it must be replaced by the customer service or qualified personnel.

The appliance's electrical supply system must be equipped upstream with an appropriately-sized automatic omnipolar circuit breaker that ensures a gap of at least 3 mm between the contacts. There must not be any breaks in the earth cable.

 The electrical safety of this appliance is only guaranteed when the above-mentioned conditions are met and if the system's equipotential situation is also compliant (use the connection screw located near the power cable input and the symbol sticker). 

 Any operations carried out on electrical systems must be performed by qualified personnel.
The manufacturer declines all responsibility in the event that these safety standards are not complied with.
Do not cover the top of the equipment to leave a good air circulation.

7. OPERATION/USE

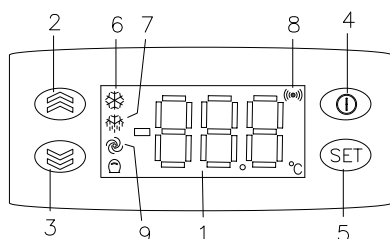
7.1 Intended use and restrictions

- Before using the appliance for the first time, clean the inside with warm water and mild soap. Avoid using abrasive detergents or scouring powders. Lastly, rinse and dry the appliance thoroughly. The manufacturer declines all responsibility if the products are not used as intended.
- The appliances have been designed for the distribution and display of food and beverages that must be kept at a low temperature. The food must only be displayed during the distribution phase as the appliance has not been designed to permanently preserve food.
- The machines have not been designed for use in unsupervised environments. Furthermore, the appliances are not suitable for outdoor installations and/or environments subjected to the weather (rain, direct sunlight, etc.).
- Avoid placing hot food or evaporating liquids inside the appliance, as its function is to preserve the product's temperature, and not to lower it; the product should therefore only be inserted if it has already cooled down.
- Cover or wrap foods to be preserved.
- Only keep the doors open for as long as it takes to insert or remove the food.
- The maximum load for each shelf is 25 kg when evenly distributed.
- Do not store explosive substances such as pressurised containers or items containing a flammable propellant.

7.2 Commissioning the appliance

- Insert the circuit breaker located upstream from the appliance.
- Press switch **C** to activate the lights.
- Turn on the digital thermoregulator, shown in Fig. 1, by holding down button **4** for at least 5 seconds (see the figure of the digital thermostat).
- If the temperature in the refrigerated unit is higher than the thermostat-set value, the compressor starts and the digital thermostat's indicator light (**6**) comes on.

7.3 Digital thermostat



Key

- 1 – Display
- 2 – “Increase value” push button. When pressed for at least 5 seconds it activates the manual defrost
- 3 – “Decrease value” push button
- 4 – It activates the standby function when pressed for at least 5 seconds and is also the “exit function” push button
- 5 – Push button for “accessing the setpoint”, accessing the menu, confirming commands and viewing alarms
- 6 – When the red LED is lit, the compressor is on
- 7 – When the red LED is lit, the defrost function is in progress
- 8 – When the red LED is lit, the alarm is active. When it flashes, the alarm has been silenced
- 9 – When the red LED is lit, the fan is running

USE

During normal operation, the instrument displays the temperature measured by the probe placed in the refrigerated area (display case).

To view the current setpoint (selected temperature), press and release the set button; when the “set” message appears, press the set button again.

To change the working setpoint, press and release the set button. When the “set” message appears, press the set button again. The set value will appear and to modify this, use the ▲(2) or ▼(3) push buttons within 15 seconds to increase or decrease the value; after this has been changed, press the set button again to save the value.

The setpoint can be set within the established minimum and maximum temperature limits.

The defrost function can be activated at any time by pressing the ▲ (2) button for at least 5 seconds; the next automatic defrost will start when the defrost interval time set by the manufacturer has elapsed.

WARNINGS AND ALARMS

“E1” on the display indicates that the **thermostat probe is faulty** which could be caused by one of the following malfunctions: incorrect type of tank probe, faulty tank probe or faulty connections; check the condition of the probe and that the connection between the instrument and probe is correct.

“E2” on the display indicates that the **evaporator probe is faulty** which could be caused by one of the following malfunctions: incorrect type of display case evaporator probe, faulty probe or faulty connections; check the condition of the probe and that the connection between the instrument and probe is correct.

“AH1” on the display indicates the **high temperature alarm** meaning that the value read is greater than the set max. value after the pre-set time; it does not affect the regulation in any way and the alarm will cease when the temperature falls below the max. value.

“AL1” on the display indicates the **low temperature alarm** meaning that the value read is lower than the set min. value after the pre-set time; it does not

affect the regulation in any way and the alarm will cease when the temperature rises above the min. value.

The thermostat's factory-set configuration parameters must only be modified by qualified personnel using the instrument's instructions.



Should any anomalies occur (short circuits, mechanical failures, electric cable deterioration, a smell of gas indicating a possible leak, etc.), the person in charge of normally operating the machine must immediately switch off the appliance, unplug it from the power mains and secure the work area.

7.4 Total shutdown

When the unit is to be decommissioned for a lengthy period, the following measures must be taken:

- Turn off the main switch.
- Disconnect the upstream power supply.
- Remove all the food from the tank/top or display case and clean the inside as well as all the accessories.
- Leave the display case doors ajar so that fresh air can enter and prevent undesirable smells from forming.
- Protect the stainless steel surfaces with a thin layer of Vaseline oil. To do this, soak a cloth in the oil and rub vigorously.
- Periodically air out the premises.

8. CLEANING AND MAINTENANCE

8.1 Routine maintenance

The appliance must only be cleaned after the power supply upstream from the appliance has been disconnected.

During the maintenance operations, the cable and the plug must be always visible and accessible for the operator who is performing the operations.

The routine and preventive maintenance essentially entails cleaning the stainless steel parts with warm water and mild soap on a weekly basis, and then rinsing and drying these thoroughly. Do not use direct jets of water. We recommend cleaning the fins of the refrigerating unit's condenser at least every three months. These operations must be performed by qualified personnel.

WARNING:

- Under no circumstances should you use abrasive or corrosive cleaning products.
- Do not accelerate the defrosting process using utensils such as scourers, brushes or sharp metal scrapers.
- Bleach, hydrochloric acid and other compounds containing chlorine will damage the stainless steel.
- The coloured parts must be cleaned with silicone wax.
- The floor under the appliance must not be washed with corrosive substances that could produce appliance-damaging vapours.
- When cleaning, do not wash the appliance with jets of water.
- **WARNING:** Do not damage the refrigerant circuit.
- It is forbidden to remove the safety guards.
- It is forbidden to use open flames to check for gas leaks.
- Smoking is prohibited.

8.2 Unplanned maintenance

Before carrying out any maintenance work, put the appliance in a safe condition. Unplanned maintenance is carried out in the event of a fault or malfunction. It must only be performed by qualified personnel and with the appliance disconnected from the power mains. In this case, repairs or replacements might be required. The faulty parts must only be replaced with materials and components that are identical to the originals or have been specified by the Supplier. The use of unsuitable materials can make the machine non-compliant with the safety standards. The manufacturer declines all responsibility for damage resulting from work carried out by unqualified or unauthorised technicians.



Should any anomalies occur (short circuits, mechanical failures, electric cable deterioration, a smell of gas indicating a possible leak, etc.), the person in charge of normally operating the machine must immediately switch off the appliance, unplug it from the power mains and secure the work area.

Warning: the appliances contain flammable refrigerant gas (e.g. R290).

R290 gas is a potentially flammable and explosive type of gas. Therefore, it is absolutely necessary to take every precaution to avoid any danger related to the nature of this gas during routine and unplanned operations. Use suitable tools and avoid using open flames and electrical tools.

If the user replaces components or modifies the appliance without written permission from the Manufacturer, or uses unauthorised spare parts, the guarantee will immediately become null and void.

8.3 Possible malfunctions

See the "digital thermostat warnings and alarms" in the attached instruction booklet for the possible malfunctions.

If after performing the indicated checks, the appliance is still not working correctly, switch off the appliance and immediately contact the supplier.

9. DISPOSAL

At the end of its service life, the appliance must be disconnected from the power mains before the various components are disassembled. Special care must be taken to avoid the risk of injury related to the shape and weight of each component.



The symbol on the product indicates that it should not be considered as domestic waste. The appliance must be disposed of in accordance with the laws in force, most especially in regards to the disposal of the refrigerant. The various parts (electrical components, rubber hoses, cable sheaths, etc.) must be sorted for recycling in order to make the best possible contribution whilst protecting the environment and complying with the laws in force.

10. ATTACHED DOCUMENTATION

- Test sheet
- Wiring diagram
- Thermostat instruction booklet