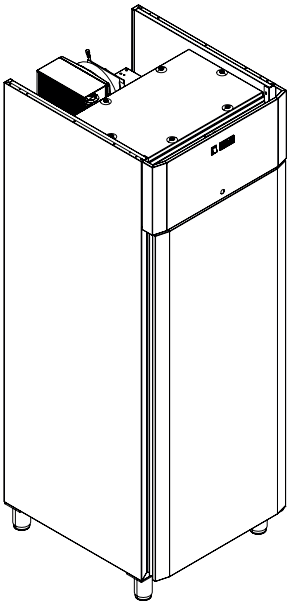
ARMADI REFRIGERATI
REFRIGERATED CABINETS

TRANSLATION OF THE ORIGINAL INSTRUCTIONS



PERFEKT | PERFEKT PLUS

Revision 01 - 09/2022

EN USE AND MAINTENANCE MANUAL

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TECHNICAL DATA SHEETS

series
ARMADI
refrigerati
refrigerated cabinets

EN

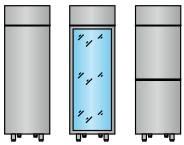
PERFEKT 700



SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES	
Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 2 doors ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = 0°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.71 x D.80 x H.203 min. H.210.5 max cm
Standard supplies	▪ 3 hook kits ▪ 3 plastic grids GN 2/1 ▪ fan stop ▪ door edge resistance



EN

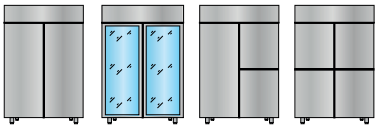
PERFEKT 1400



SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES	
Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 1 door, 2 hatches ▪ 4 hatches ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = 0°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.142 x D.80 x H.203 min. H.210.5 max cm
Standard supplies	▪ 6 hook kits ▪ 6 plastic grids GN 2/1 ▪ fan stop ▪ door edge resistance



EN

PERFEKT PLUS 700

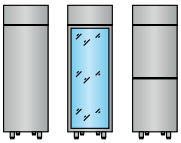


SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES

Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 2 doors ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = -2°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.71 x D.80 x H.203 min. H.210.5 max cm
Standard supplies	▪ 3 hook kits ▪ 3 plastic grids GN 2/1 ▪ fan stop ▪ door edge resistance ▪ 1 lock with key ▪ 1 dashboard LED light



PERFEKT PLUS 1400

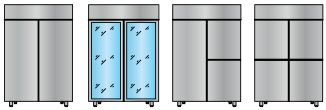


SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES

Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 1 door, 2 hatches ▪ 4 hatches ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = -2°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.142 x D.80 x H.203 min. H.210.5 max cm
Standard supplies	▪ 6 hook kits ▪ 6 plastic grids GN 2/1 ▪ fan stop ▪ door edge resistance ▪ 2 locks with key ▪ 2 dashboard LED lights



EN

PERFEKT 400



SUITABLE TO STORE

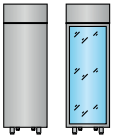
GASTRONOMY

CURED MEATS

MEAT

FRUITS AND VEGETABLES

TECHNICAL FEATURES	
Versions available	▪ Stainless Steel ▪ PV glass doors
Cooling type	▪ Ventilated (V)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = 0°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.60 x D.62 x H.190 min. H.208 max cm
Standard supplies	▪ 3 hook kits ▪ 3 plastic grids 500 x 440 mm ▪ fan stop ▪ door edge resistance



EN

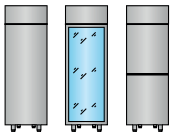
PERFEKT 600



SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES	
Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 2 doors ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = 0°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.71 x D.70 x H.203 min. H.210.5 max cm
Standard supplies	▪ 3 hook kits ▪ 3 plastic grids 530 x 550 mm ▪ fan stop ▪ door edge resistance



EN

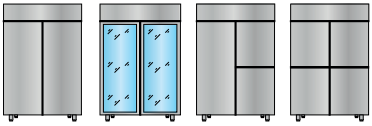
PERFEKT 1200



SUITABLE TO STORE

- GASTRONOMY
- FISH
- MEAT
- DAIRY PRODUCTS
- PASTRIES
- PRE-PACKAGED MEAT
- CURED MEATS
- PHARMACEUTICALS
- FRUITS AND VEGETABLES
- PRE-PACKAGED FISH

TECHNICAL FEATURES	
Versions available	▪ Stainless Steel ▪ PV glass doors ▪ 1 door, 2 hatches ▪ 4 hatches ▪ Combined ▪ With incorporated unit (CG) ▪ Without unit (SG)
Cooling type	▪ Ventilated (V) ▪ Static (S)
Operating temperature (°C)	▪ **TN** NORMAL TEMPERATURE = 0°C ÷ +10°C ▪ **BT** LOW TANK TEMPERATURE = -18°C ÷ -22°C ▪ Test data: temperature + 40°C / Humidity 60%
Available in size	W.142 x D.70 x H.203 min. H.210.5 max cm
Standard supplies	▪ 6 hook kits ▪ 6 plastic grids 500 x 440 mm ▪ fan stop ▪ door edge resistance



USE AND MAINTENANCE MANUAL

1. GENERAL PRELIMINARY INFORMATION

Thank you for purchasing one of our products.

Carefully read this manual before carrying out installation, maintenance and/or before using the equipment.

This manual is attached to the series **REFRIGERATED CABINETS** version **PERFEKT | PERFEKT PLUS**.

The Manufacturer is not liable for breakages, accidents or various problems due to non-compliance with and in any case the non-application of the provisions contained in this manual.

1.1. PURPOSE OF THE DOCUMENT

This **User and Maintenance Manual** represents the reference document, drawn up by the manufacturer of the equipment, aimed at operators and specialised personnel who will come into contact with it during its entire life cycle.

The purpose of the document is to provide information for the correct use of the equipment, from installation to disposal, bringing attention to the dangers that may arise from incorrect use and taking into account the reasonably foreseeable incorrect behaviour of the operator.

1.2. SUPPLY AND PRESERVATION

The manual is supplied in **paper and electronic format**.

This manual is an integral part of the equipment.

Keep this manual in a place that is accessible to all users for future consultation. In case of transfer or sale of the equipment, be sure to provide the new user with this manual, so that they may be properly informed about the installation procedure, the use and safety requirements.

1.3. SYMBOLS USED IN THE MANUAL

Symbols are used throughout the manual to emphasise information of significant importance.
The ones used are provided below:

SYMBOL	TYPE	DESCRIPTION
	WARNING	Symbol used to identify important warnings for the safety of the operator and/or equipment.
	FORBIDDEN	Symbol used to identify operations that must not be performed or behaviours that must not be adopted as they could cause personal injury or damage to the machine.
	OBLIGATION	Symbol used to identify particularly important information inside the manual. The information also regards the safety of personnel involved in use of the equipment.

1.4. REGULATORY FRAMEWORK

The equipment has been designed according to the regulatory framework described in the declarations of conformity accompanying the product and the identification plate placed on the same, as well as requirements, which can be downloaded directly from the manufacturer's website.

1.5. WARRANTY

The warranty terms established by law apply. Should the product be faulty, contact the nearest Authorised Service Centre, or the reference Dealer.

The following documentation must be forwarded in order to repair the equipment;

- serial number;
- copy of the invoice with the date of purchase of the product;
- description of the fault.

2. SAFETY WARNINGS



The Manufacturer cannot be held liable for any damage, suffered by people or things, caused by non-compliance with the aforementioned requirements or deriving from tampering with even a single part of the equipment and from the use of non-original spare parts.



This professional equipment can only be used and cleaned by adults (> 18 years in Europe or other limits defined by the local regulatory framework) with normal physical and mental health and adequately trained and informed on the subject of health and safety in the workplace.



Wait until the desired temperature set on the control panel is reached before loading the products into the refrigerated cabinet. Avoid setting temperatures lower than those relating to the refrigerated cabinet category, as this would cause the evaporator to clog.



Use suitable food containers for food contact materials for the storage and display of unpackaged food and anything else to meet food safety in accordance with local regulations.



Strictly avoid placing hot pots, products or objects on or near the equipment.



Do not damage and bend the evaporator flaps and the refrigerated fluid pipes.



The power supply must be disconnected before carrying out maintenance, control, cleaning operations.



All routine and special maintenance operations, both of the refrigerated cabinet and of the refrigerating monoblock or of the built-in condensing unit, must be carried out with the unit stopped, disconnecting the power supply.

It is recommended to have specialised personnel carry out cleaning operations.

The electrical plug of the refrigerated cabinet must always be connected to a fixed socket. It is forbidden to connect the electric plug of the cabinet to an extension and/or reducer.



All operations regarding maintenance and replacement of parts must be carried out by qualified technical personnel.



Do not store explosive substances, such as pressurised containers with flammable propellants, in this appliance.



The installation of the appliance and of the refrigerating unit must only be carried out by the Manufacturer's technicians or by expert personnel.



Should the power supply cable be damaged, it must be replaced by the manufacturer or its technical assistance service or in any case by a person with similar qualifications, in order to prevent any risk.



It is strictly forbidden to make changes to the equipment.



When replacing parts and when removal of the plug is required, it must be clearly indicated that the plug must be removed in such a way that the operator can verify from any point they have access to that the plug remains unplugged.



Replace any broken or faulty components only with original spare parts.

2.1. OBLIGATIONS AND PROHIBITIONS

2.1.1. OBLIGATIONS

- To install the equipment, follow the instructions in the **"INSTALLATION" chapter**. Installation must be carried out exclusively by qualified technical personnel.
- Keep the entire area around the equipment free and clean.

2.1.2. PROHIBITIONS

- Do not install the equipment if it appears damaged upon receipt.
- Do not allow children to play with the equipment.
- Do not use the equipment as a work surface or as a support surface.
- Do not place or keep flammable liquids or materials, or easily ignitable objects inside the equipment or in the immediate vicinity.
- Do not move the refrigerated cabinet by grabbing it by the handle, but do so from the sides.
- Do not place the refrigerated cabinet under direct exposure to sunlight and all other forms of thermal radiation.
- Do not place the product inside a room with high relative humidity (potential formation of condensate).
- Do not place the product inside a closed recess or close to a wall.
- Do not obstruct the air vents.
- Do not modify or tamper with the equipment in any way.

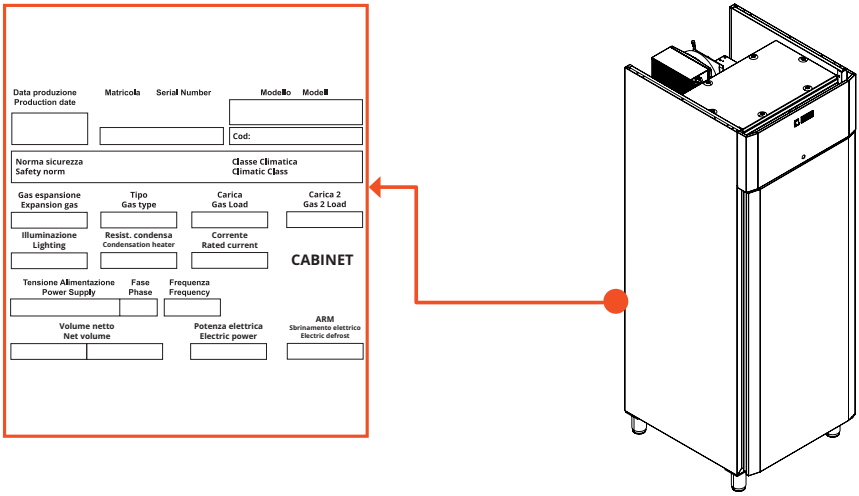
3. IDENTIFICATION AND DESCRIPTION

3.1. EQUIPMENT IDENTIFICATION

An identification plate is placed on the back of the equipment, which shows:

- the serial number,
- the type/functional features,
- the details of the certification and marking.

It is strictly prohibited to remove the identification plate and/or replace it with other plates. Should the plate be damaged, detached or removed for accidental reasons, the customer must inform the Manufacturer.



3.2. INTENDED USE

The equipment covered by this manual is a **REFRIGERATED CABINET** for professional use belonging to the **PERFEKT | PERFEKT PLUS**line. It has been designed and built for storing food and/or pharmaceutical products.

The Manufacturer cannot be held liable for uses other than those indicated.

Do not use this equipment to store products other than those intended. Do not store explosive substances, such as pressurised containers with flammable propellants, in this appliance.

The equipment cannot be used for the storage of medicine, blood and blood derived products.

3.3. DESCRIPTION

The equipment covered by this manual is a **REFRIGERATED CABINET** for professional use**, for internal use,** to be used **for the storage of food and/or pharmaceutical products.**

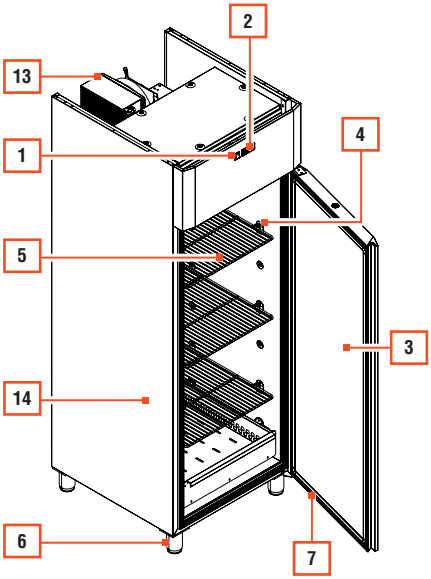
it is available in the following versions:

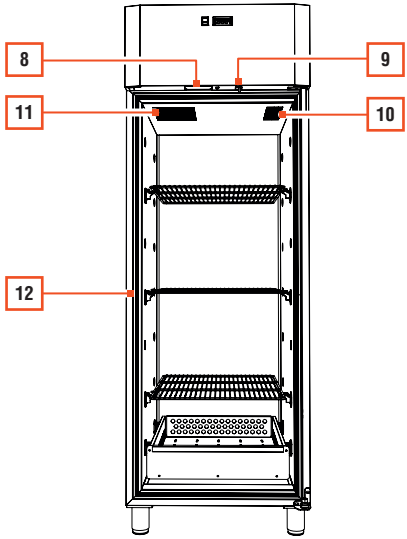
- **TN** normal temperature with temperature operation 0°C / +10°C
- **TN Plus** normal temperature with temperature operation -2°C / +8°C
- **BT** normal temperature with temperature operation -18°C / -22°C
- With blind doors or with glass doors with automatic magnetic closure
- With monoblock unit - With built-in condensing unit
- In monoblock version for connection to a remote unit
- Electronic control controller and main switch
- Standard supply voltage 230V - 1 - 50Hz

The external and internal structure is made of Stainless Steel while the external bottom is made of Galvanised steel. The tank insulation is made with expanded polyurethane resins with a density of 38-42 Kg/m^3. The power supply is provided via an electric cable already prepared by the manufacturer.

The tank insulation is made without the use of CFCs with a low environmental impact.

3.4. MAIN COMPONENTS





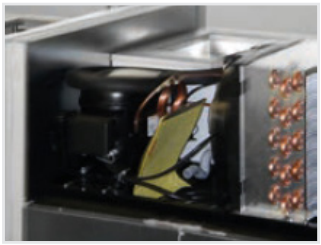
POS.	ELEMENT	NOTES
1	MAIN SWITCH	
2	CONTROL PANEL	
3	BLIND DOOR (or GLASS DOOR)	Available with blind door or with glass door.
4	STEEL SUPPORT HOOKS FOR GRID	
5	GRATING SURFACE	
6	STAINLESS STEEL ADJUSTABLE FEET	Optional: LOCKABLE WHEELS.
7	DOOR GASKET	
8	LED LAMP	For BLIND DOORS.
9	FAN STOP	
10	DELIVERY GRID	
11	SUCTION GRID	
12	DOOR EDGE RESISTANCE	Present in the BT version to prevent the door from freezing.
13	REFRIGERATING UNIT	
14	IDENTIFICATION PLATE	

The refrigerated cabinet door can be mounted on both sides. Should moving the door to the other side be required, the appropriate KIT provided by the Manufacturer must be purchased. For the operating procedure, refer to paragraph **"Door disassembly and assembly on the other side"**.

3.4.1. REFRIGERATING UNIT

The built-in refrigerating unit consists of:

- compressor
- air condenser
- evaporator
- condenser fan
- evaporator fan
- defrosting resistance on BT version evaporator
- condensate water automatic evaporation



3.4.2. OPTIONAL - REMOTE SET-UP MONOBLOCK UNIT

The monoblock unit with remote set-up is composed of:

- evaporator
- evaporator fan
- condensate water discharge siphon

In the BT and PLUS version, the evaporator is equipped with a defrosting resistance.



The remote unit must be placed away from atmospheric agents, avoiding using the site where it is installed as a deposit for materials that would prevent correct air circulation.

Depending on the characteristics of the remote condenser unit model, the spaces from the wall or other obstacles must be respected so that there is a sufficiently adequate air exchange that ensures correct operation of the refrigerator cabinet and easy maintenance.

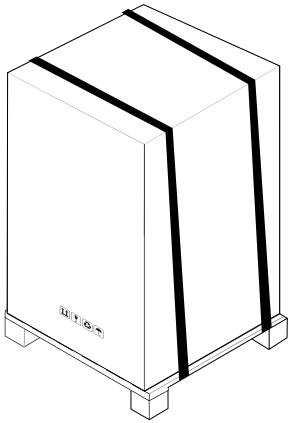


4. RECEPIT AND HANDLING

4.1. EQUIPMENT RECEIPT

The equipment is delivered on 4 easily removable plastic caps.

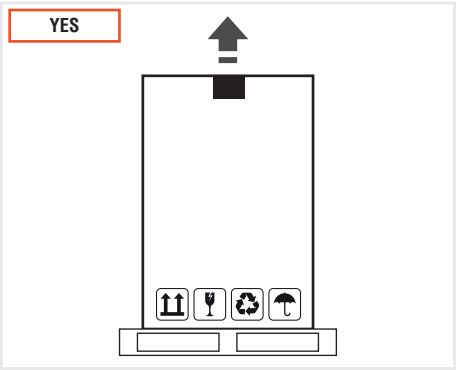
Upon delivery, check that the packaging is intact and that it has not been damaged during transport.

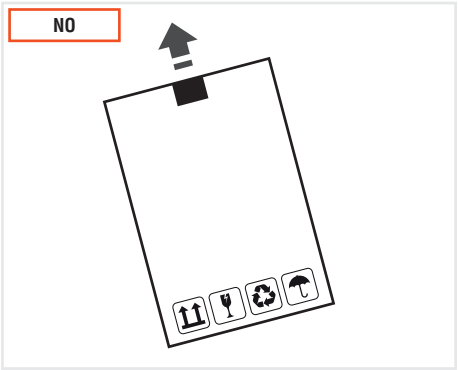


4.1.1. HANDLING WITH PACKAGING

The product unloading/loading operations must be carried out by authorised and qualified personnel. The company shall not be liable for failure to comply with the safety regulations in force on the subject.

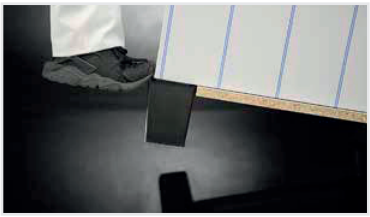
The packaging containing the refrigerated cabinet **must always be handled in a vertical position** (Top-Bottom indications on the packaging).





4.1.2. PACKAGING REMOVAL AND INSPECTION

Upon receipt of the equipment, proceed with its unpacking:

STEP	ACTION	PICTURE
1	Remove the bands.	
2	Remove the packaging cardboard.	
3	Remove the stops that secure the refrigerated cabinet to the base.	
4	Lift the refrigerated cabinet to move it from the base and place it in the dedicated location. **Note**: lift the refrigerated cabinet with suitable tools for the weight to be handled. **Note**: 2 people are required to handle the refrigerated cabinet.	
5	Remove the protective films used to protect the steel (both external and internal).	

Do not dispose of the base.

After removing all packaging materials, check for any anomalies.

In case of anomalies, do not carry out the installation operations and contact the authorised Dealer or Assistance centre

within 8 days from the date of purchase, reporting the data shown on the identification plate of the equipment and any problems encountered.

4.1.3. PACKAGING DISPOSAL

The materials used for the packaging are recyclable and must be collected according to the regulations concerning separate waste collection.



Separate the various packaging waste materials and dispose of them in compliance with the regulations in force in the country where the oven is installed.

4.2. HANDLING

4.2.1. TABLE OF VERSIONS AND WEIGHTS

Follow the table below for the weight and dimensions of the refrigerated cabinet depending on the version purchased.

VERSION	DIMENSION	WEIGHT
PERFECT 400	W.60 x D.62 x H.190 min. H.208 max cm	TN = 85 Kg / BT = 95 Kg
PERFECT 600	W.71 x D.70 x H.203 min. H.210.5 max cm	TN = 110 Kg / BT = 122 Kg
PERFECT 700	W.71 x D.80 x H.203 min. H.210.5 max cm	TN = 125 Kg / BT = 140 Kg
PERFECT 1200	W.142 x D.70 x H.203 min. H.210.5 max cm	TN = 143 Kg / BT = 153 Kg
PERFECT 1400	W.142 x D.80 x H.203 min. H.210.5 max cm	TN = 162 Kg / BT = 180 Kg
PERFECT PLUS 700	W.71 x D.80 x H.203 min. H.210.5 max cm	TN = 125 Kg / BT = 140 Kg
PERFECT PLUS 1400	W.142 x D.80 x H.203 min. H.210.5 max cm	TN = 162 Kg / BT = 180 Kg

4.2.2. HANDLING OPERATIONS

Carefully read the instructions before moving the equipment.



The product unloading/loading operations must be carried out by authorised and qualified personnel. The company shall not be liable for failure to comply with the safety regulations in force on the subject.



The equipment must always and only be transported in a vertical position.
Do not tilt the product!

2 operators are required for lifting/handling.

Handle the equipment with a pallet truck and/or forklift truck suitable for the weight to be handled.

Should the refrigerated cabinet with built-in condensing unit be tilted, it is recommended to wait at least eight hours before start-up. This way, the oil will flow into all the components so that they are lubricated again; start-up can be performed subsequently.



Pay attention during handling so as not to cause damage to the equipment itself, to people, animals and things in the immediate vicinity.



Do not pull the equipment by the door opening handle to move it.

5. INSTALLATION



The installation, and all the interventions on the equipment described in this instruction manual, must be performed by qualified technical personnel and in compliance with current regulations.



The equipment cannot be installed and commissioned in ATEX classified environments, places or areas.



The equipment cannot be installed and commissioned in medical environments, places or rooms.

5.1. INSTALLATION SITE

Install the refrigerated cabinet inside a room equipped with an air conditioning system. Malfunctions may occur if the room is not air conditioned (for example: condensate formation).



Check that there is sufficient air exchange in the installation environment, even during the closing periods of the sales area. This way the monoblock unit/built-in condensing unit will be able to function properly.

5.1.1. FEATURES OF INSTALLATION SITE



The equipment was not designed for outdoor operation. It is not allowed to install the equipment outdoors and in locations directly exposed to the weather.

The equipment must be placed indoors, in a room ventilated and suitable for the purpose.
It cannot be used outside the permitted usage and operating conditions.

PERMITTED ENVIRONMENTAL CONDITIONS	
Ambient temperature	max 40°C
Air humidity	max 60%

Pay attention to the following indications in order to allow the refrigerator cabinet to function properly:

- Do not place the refrigerated cabinet with direct exposure to sunlight and all other forms of radiation, such as high intensity incandescent lighting, cooking ovens, or radiant bodies such as heating radiators.

- Do not place the refrigerated cabinet near openings to the outside near drafts, such as doors and windows or in direct contact with the air flows from air conditioning fans, vents and fan coils.
- Do not obstruct the air vents of the monoblock unit or the condensing unit.
- Do not place any type of material, boxes or other, on the roof of the cabinet where the refrigerating unit is positioned so as not to compromise its operation.
- Do not place the refrigerated cabinet inside a room with high relative humidity (potential formation of condensate).
- Do not place the refrigerated cabinet inside a closed recess, as the lack of air recirculation may prevent the refrigerating unit from functioning.
- Do not place two or more cabinets back-to-back (potential malfunction of the refrigerating unit).
- It is also recommended not to use electrical appliances inside the compartments of the refrigerated cabinet.

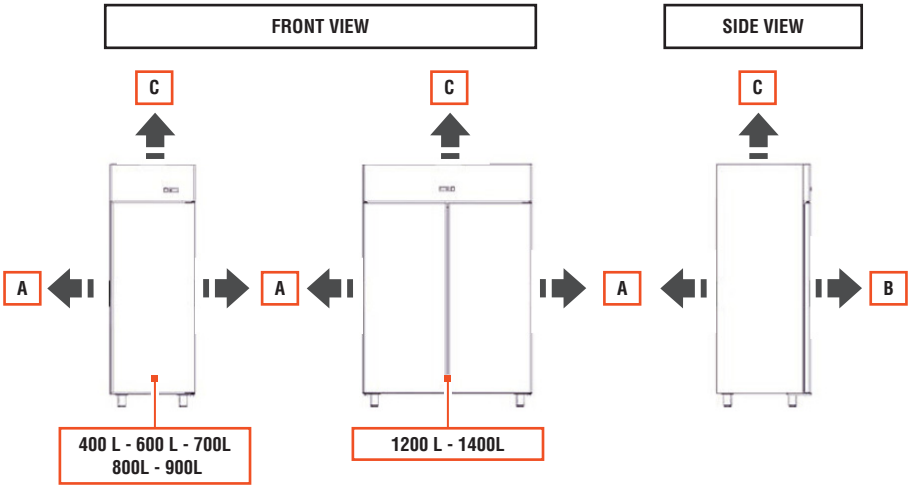
It is recommended to keep all the supply and return air ventilation openings inside the refrigerated cabinet free of obstructions.

5.1.2. MINIMUM SAFETY DISTANCES

Follow the minimum safety distances from the side walls and/or other equipment in order to allow proper operation of the refrigerated cabinet and therefore correct air recirculation.

Maintain a minimum safety distance of 5 cm.

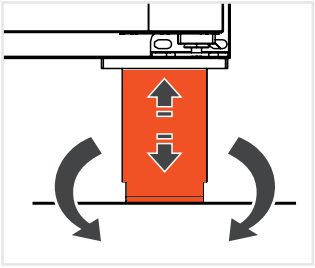
MINIMUM SAFETY DISTANCES		
A	Side / Rear	6 cm
B	Door side	60 cm
C	Upper	100 cm



5.2. FEET PLACEMENT AND ADJUSTMENT

The refrigerated cabinet must be positioned perfectly level in order to function properly and correctly drain the defrosting condensate water, furthermore noisy motor vibrations are avoided.

To **position the equipment**, proceed as described below:

STEP	ACTION	IMAGE
1	Place the refrigerated cabinet in a perfectly vertical position.	
2	Adjust the refrigerated cabinet screw feet (if required) to adjust its level.	
3	Check the flatness with a spirit level.	

Check the correct positioning of the condensate water drain tray and the relevant drain.

Note: refrigerated cabinets with glass door(s) are supplied with a door handle with relevant fixing screws. Install and secure the handle (at the customer's expense), arrange the bottom grids inside it (on all cabinets).

5.3. CONDENSATE WATER DRAIN - DRAIN CONNECTION

The refrigerated cabinet is available in the following versions:

- with built-in monoblock unit equipped with automatic defrosting and evaporation of condensate water
- with set-up for a remote condensing unit supplied with siphon and drain pipe for connection.

Both of these cabinet versions are equipped with automatic defrosting and evaporation of condensate water, and are also supplied with a drain pipe complete with siphon for connection to the water drainage mains.

Do not install the refrigerated cabinet without a siphon. Each drain must have its own siphon.

It will be the user's responsibility to connect to the water drainage mains.



6. CONNECTIONS

6.1. ELECTRICAL CONNECTION

6.1.1. ELECTRICAL POWER SUPPLY CONNECTION



The electrical connection must be carried out by a qualified technician. The installation and electrical connections must be carried out in compliance with the legal framework and regulations applicable in the countries where the equipment is to be installed.

Refer to the refrigerated cabinet wiring diagram.

Before electrically connecting the refrigerated cabinet, perform a thorough and complete cleaning of it using non-aggressive neutral detergents and water at approximately 30°C, then dry all the wet parts with a soft cloth.

The following is required to **perform a correct electrical connection**:

- check that the mains voltage and frequency correspond to those shown on the equipment plate. A variation ± 10% of the rated voltage is allowed. It is crucial to connect the equipment to an efficient earthing socket.
- have a device that allows you to separate the appliance from the mains with a contact width of at least 3 mm in all poles. Suitable separating devices refer to e.g. circuit breakers, fuses (screw fuses must be removed from the socket), residual current devices (RCDs) and contactors or remote switches.
- that the connection to the power line is made through a high sensitivity (30 mA) differential circuit breaker with manual reset, of adequate power, in order to safeguard the equipment from any overload or short circuits.
- consider the current absorption values indicated on the identification plate of the refrigerated cabinet for the sizing of the protection device.
- that the section of the power cable is suitable for the power absorbed by the unit.
- if the power cable is damaged, replace it in order to prevent any risk.
- if the compressor is damaged, replace it in order to prevent any risk. To avoid disconnecting the entire system in the event of a fault, it is recommended to use a high sensitivity differential circuit breaker as a cut-off switch.
- that the electrical plug of the refrigerated cabinet is connected to a fixed socket.

The earthing of the system is required by law, therefore it is required to connect it to an efficient earthing system.

It is forbidden to connect the electric plug of the cabinet to an extension and/or reducer.

Proceed as follows:

STEP	ACTION
1	Connect the power supply plug to the wall socket.



The Manufacturer declines any liability for incorrect connections, not performed in a workmanlike manner or performed by non-professionally qualified persons.

7. CONTROL PANEL (mod. EW961 - EW974)



POS.	ICON	ELEMENT	DESCRIPTION
1		**UP**	**Press and release** Scrolls the menu items Increases the values **Press for at least 5 sec** Activates the Manual Defrosting function
2		**DOWN**	**Press and release** Scrolls the menu items Decreases the values **Press for at least 5 sec** User configurable function
3		**STAND-BY (ESC)**	**Press and release** Returns up one level from the current menu Confirms parameter Value **Press for at least 5 sec** Activates the Stand-by function (when not inside the menus)
4	set	**SET (ENTER)**	**Press and release** Displays any alarms (if present) Accesses the Base Controls menu **Press for at least 5 sec** Accesses the Programming menu Confirms the controls
5	eco	**SET / SET Reduced**	▪ Flashing: reduced set active ▪ Quick flash.: access to level2 parameters ▪ Off: LED off in all other cases
6		**Compressor LED**	▪ Fixed on: compressor on ▪ Flashing: delay, protection or activation blocked ▪ Off: LED off in all other cases

POS.	ICON	ELEMENT	DESCRIPTION
7		**Defrost LED**	▪ Fixed on: defrost on ▪ Flashing: manual or digital input activation ▪ Off: LED off in all other cases
-		**Fan LED**	▪ Fixed on: fans on ▪ Off: LED off in all other cases
8		**Alarm LED**	▪ Fixed on: presence of an alarm ▪ Flashing: alarm silenced ▪ Off: LED off in all other cases

7.1. ACCESS AND USE OF THE MENU

The resources are organised into two menus which can be accessed as follows:

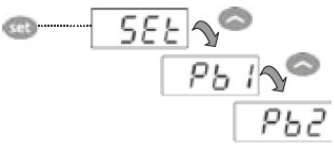
- **"Machine Status" menu:** press and release key set.
- **"Programming" menu:** press the key set for more than 5 seconds.

If you do not use the keyboard for more than 15 seconds (time-out) or press the ⏻ key once, the last value shown on the display is confirmed and you return to the previous display.

7.1.1. MACHINE STATUS MENU

Press and release the set key to access the **"Machine Status" menu**. If no alarms are in progress, the "SEt" label will be displayed.

Press keys ∧ and ∨ to scroll the folders of the "Machine Status" menu:



- AL: alarms folder (visible only if there are active alarms);
- SEt: set folder
- Pb1: probe 1 value folder;
- Pb2: probe 2 value folder;

(only models EW971 and EW974)**

Set the Setpoint: to view the Setpoint value, press the set key when the "SEt" label is displayed.

The Setpoint value appears on the display. To change the Setpoint value, use keys ∧ and ∨ within 15 seconds. Press set to confirm the change.



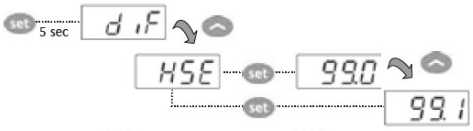
Display the probes: when the Pb1 or Pb2 * labels are present, by pressing the key the value measured by the associated probe appears (* Pb2 is only present in **models EW971 and EW974**).

7.1.2. PROGRAMMING MENU

Press the set key for more than 5 seconds to access the **"Programming" menu**. A "PA1" access PASSWORD will be requested if required.

When accessed, the display will show the first parameter ("diF").

Use keys ∧ and ∨ to scroll through all the parameters of the Programming menu:



Select the desired parameter using the ∧ and ∨ keys. Press the set key to display the current parameter value. Use the ∧ and ∨ keys to change their value and press the set key to store the value.

Note: It is recommended to switch the instrument off and on again each time the parameter configuration is changed to prevent malfunctions on the configuration and/or timings in progress.

7.1.3. SETPOINT MODIFICATION BLOCK

The instrument provides the option to disable keyboard operation.

The keyboard can be locked by programming the "LOC" parameter.
If the keyboard is locked, it is always possible to access the "Machine Status" menu by pressing the set key and display the Setpoint, however its value cannot be changed.

To unlock the keyboard repeat the procedure used to lock it.

7.1.4. PASSWORD

The password "PA1" grants access to level 1 parameters (User) while the password "PA2" grants access to level 2 parameters (Installer).
Level 2 parameters also contain all level 1 parameters.
In the standard configuration the password "PA1" is not enabled (value = 0) while password "PA2" is (value = 15). To enable the password "PA1" (value ≠ 0) and assign it the desired value, enter the "Programming" menu, select the "PS1" parameter with the ∧ and ∨ keys, press the set key, set the desired value and confirm it by pressing the key again.
If the password "PA1" is enabled, when entering the "Programming" menu, you will be asked to enter the password "PA1" or "PA2" based on the parameters you wish to change. To enter the password 'PA1' (or 'PA2'):



If the password entered is wrong, the instrument will display the 'PA1' (or 'PA2') label and the entry procedure must be repeated. Level 2 parameters can also be accessed from level 1 parameters, by selecting the 'PA2' parameter (present at level 1) with the keys ∧ and ∨ and then pressing the key set.

8. USE

Before use, it is required to check that the refrigerated cabinet is in perfect condition. In the presence of faults, the equipment must be decommissioned and the Technical Assistance Service must be contacted.

It is recommended to keep all the supply and return air ventilation openings inside the refrigerated cabinet free of obstructions.

8.1. CHECKS BEFORE USE

The first start-up must be performed by skilled personnel.

Before starting, make sure that:

- operations are not carried out with damp or wet hands.
- the appliance and surrounding surfaces are dry.
- there is no direct or indirect contact with live electrical parts.
- the refrigerated cabinet with built-in condensing unit is always exclusively vertical. If it has been tilted, wait at least 8 hours before start-up.
- the adjustment of the operating parameters is provided in chapter **"CONTROL PANEL"**.
- before inserting the plug into the electrical socket, the main switch on the equipment is in position "0 - OFF".

Before switch-on, it is recommended to carefully clean the equipment and its components as indicated in the chapter "CLEANING".

8.2. ACTIVATION

Do not start the equipment with wet hands or when there is contact with water.

To start the refrigerated cabinet, proceed as follows:

STEP	ACTION	IMAGE
1	Press the the main switch to set it to position 1 - ON". **Note:** the main switch lights up green.	

8.3. OPENING AND CLOSING THE DOOR

Door opening and closing must be carried out in the correct use and operating conditions such as providing an adequate grip of the door handle in order to avoid injuries such as cuts, shearing, bumps, blows and imbalances of the door.

When the door is opened, the cooling fan stops for energy saving, thanks to the intervention of the fan stop, and the lighting lamp on the door turns on. When closed, the light switches off and the fan reactivates.



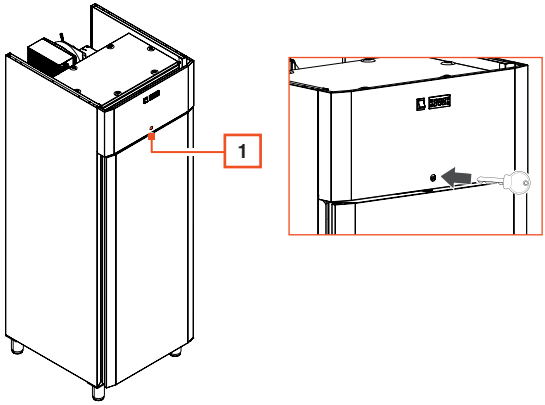


The door closing is servo-assisted with spring hinges, therefore no closing operation is required by the user.

It is forbidden to close the door with other parts of the body such as feet, knees, forearm, wrists, etc. as use and operating conditions that are not permitted may cause the aforementioned injuries.

8.3.1. DOOR LOCK (ONLY FOR PLUS VERSION)

In the PLUS version of the refrigerated cabinet there is a lock **(1)** with key that allows you to lock the door.



8.4. PRODUCT LOADING

Wait until the desired temperature set on the control panel is reached before loading the products into the refrigerated cabinet. Avoid setting temperatures lower than those relating to the cabinet category, as this would cause the evaporator to clog.

Maximum load line (LOAD LIMIT) = threshold beyond which the efficiency and correct operation of the equipment is not guaranteed.

The load limit is indicated inside the equipment.

The refrigerated cabinet is suitable for storing products which, at the time of loading it, must have a temperature close to the ideal one for storage.

Frozen products must not be loaded into the refrigerated cabinet with a temperature not exceeding -18°C.

Please note that by overfilling the refrigerated cabinet with the product to be cooled, all operating conditions worsen, risking damaging the products already contained in the cabinet. Therefore, it is required to avoid the storage of products in non-refrigerated places to avoid excessive loss of cold.



For the correct functioning of the refrigerated cabinet, it is required for the products contained to be arranged in such a way as not to hinder the free circulation of refrigerated air inside the cabinet.

Do not overload the refrigerated cabinet, especially in the upper part under the evaporator.

Therefore, limit door openings only for the time required to load and unload the products inside.

The storage of non-frozen products worsens the operating conditions of the unit, also risking damaging the products that are already stored inside the refrigerated cabinet. Therefore, avoid putting non-refrigerated products to prevent excessive loss of cold.

Make sure that the cold chain has been respected during transport and/or storage in cold rooms.

8.4.1. PRODUCT LOADING

Place the product on the grids inside the refrigerated cabinet.

The load of the product must be evenly distributed for each grid shelf.
Max 30 kg per shelf.

8.5. SETTING THE TEMPERATURE

To **set the temperature** of the refrigerated cabinet:

STEP	ACTION
1	Hold the key set on the control panel. **Note:** if no alarms are in progress, the "SEt" label will be displayed.
2	Set the required temperature by using keys ^ and v.
3	Press set to confirm.

8.6. DEFROST

8.6.1. AUTOMATIC DEFROST

The refrigerated cabinet is equipped with **automatic system for periodic daily defrosting** already set by the manufacturer and modifiable in number, duration and interval, using the control panel.

8.6.2. MANUAL DEFROST

A manual **defrost** can be performed if required.

The manual defrost operation must be performed by a specialised technician.

Proceed as follows to perform the **manual defrost**:

STEP	ACTION
1	Act on the appropriate command located on the control panel, or more simply by turning off the cooling system for the time required to melt all the ice present in the coil. **Note:** the operation depends on the climatic conditions and the amount of ice present.

A complete monthly cleaning including defrosting is recommended for cabinets intended for frozen or packaged products.

8.7. SWITCHING OFF

To **turn the refrigerated cabinet off**, proceed as follows:

STEP	ACTION	IMAGE
1	Press the the main switch to set it to position "0 - OFF". **Note:** the main switch switches off.	

9. CLEANING

9.1. CLEANING SAFETY WARNINGS



Disconnect the power supply before any cleaning operation.

It is essential to keep the refrigerated cabinet clean.

- Do not use water with a jet to wash the internal parts of the refrigerated cabinet as the electrical parts may be damaged. Do not use hard metal tools to remove the ice.
- Only use lukewarm water with non-aggressive detergents for cleaning, then dry the damp parts with a soft cloth.
- A weekly cleaning is recommended for the bottom of the tank especially for cabinets prone to spills of liquids or other food residue. Cleaning with detergent must also be carried out in the external areas surrounding the display area: it serves to keep the cabinet presentable and prevents the formation of dirt.
- The maintenance of a cabinet used for storing products such as meat, cured meats and dairy products, must include at least a weekly periodic cleaning of the loading area to prevent the development and buildup of bacteria.
- It is recommended to perform at least one monthly internal cleaning, if the refrigerated cabinet is used for storing frozen products.



The tray located under the cabinets used for the storage and display of fish must be washed daily.



Do not damage and bend the evaporator flaps and the refrigerated fluid pipes.



Carry out the cleaning operations using work gloves.



Do not use products that contain chlorine, its diluted solutions, caustic soda, abrasive cleaners, muriatic acid, bleach or other products that may scratch or sand.



Do not use a steam cleaner to clean the equipment.

9.2. TABLE OF CLEANING OPERATIONS

The following table lists a series of cleaning operations to be carried out according to the recommended frequency.

OPERATION	FREQUENCY				
	DAILY	WEEKLY	MONTHLY	AT 6-MONTHLY INTERVALS	YEARLY
Cleaning the evaporator.		■			
External leaning of the cabinet.		■			
Cleaning the inside of the door near the gaskets.		■			
Cleaning the bottom of the tank.		■			

9.3. GENERAL CLEANING

Carry out general cleaning of the refrigerated cabinet using a soft cloth and non-aggressive products.

Remove the grids inside the refrigerated cabinet for better cleaning. Clean the grids with a soft cloth.

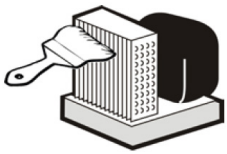
9.4. CLEANING THE CONDENSER



Disconnect the power supply before any cleaning operation.

The monoblock or the built-in condensing unit are placed externally in the upper part of the refrigerated cabinet.

It is required to periodically clean the evaporator in order to ensure proper functioning of the condensing unit. This cleaning depends mainly on the environment where the unit is installed.



Use a jet of air blowing from the inside to the outside of the unit; if this is not possible, use a long bristle brush on the outside of the evaporator.



Do not damage the refrigerant fluid circuit.

9.5. CLEANING THE GLASS (IF PRESENT)



Do not use abrasive material such as scotch bryte scourer, metal sponges or other materials that may compromise the transparency of the glass and/or cause it to break.

To clean the glass (internal and external) use a suitable degreasing product, respecting its indications, instructions for use and warnings. Rinse with a sponge soaked in water.

10. MAINTENANCE



Disconnect the power supply before any maintenance operation, both of the refrigerated cabinet and of the condensing unit.



Maintenance work must be carried out by a qualified technician.

10.1. ROUTINE MAINTENANCE

Ensure smooth operation over time of the equipment by performing periodic/preventive checks and maintenance.

10.1.1. INSPECTING AFTER DELIVERY

The following table lists a series of controls and activities that need to be carried out according to the recommended frequency.

OPERATION	FREQUENCY			
	WEEKLY	MONTHLY	AT 6-MONTHLY INTERVALS	YEARLY
Check that the condensation water drain system works correctly.		■		
Check that there are no refrigerant gas leaks and that the refrigerant system is working properly.				■
Check that the maintenance status of the electrical system is in complete safety.				■
Check that the door seals and the door itself close properly.		■		
Check the correct electronic control setting.				■
Check the condition of the sponge of the refrigeration unit for mould.	■			
Check that the refrigerating unit tray is not full.	■			

10.2. EXTRAORDINARY MAINTENANCE

Special maintenance includes service, repair, and restoration of nominal operating conditions or replacement of a faulty, defective or worn component.

10.2.1. REPLACEMENT OF LIGHTING LAMPS



Disconnect the power supply before any maintenance operation.

If the cabinet is equipped with lighting lamps, they must be replaced with others of the same power. Check the data shown on the plate located on the side of the lamp.

The neon lamp is positioned:

- laterally for the cabinet with a door,
- at the centre for the cabinet with two doors.

Proceed as follows **to replace the neon lamp**:

STEP	ACTION
1	Remove the transparent plastic protection, taking the lamp at both ends and turning it 90° until you hear a slight click.
2	Pull out the lamp being careful not to hit it. Handle it with care, avoiding breaking and cutting yourself.
3	Fit the new lamp by inserting it and rotating it 90°.
4	Reposition the transparent protection.

Proceed as follows **to replace the turtle lamp**:

STEP	ACTION
1	Remove the external protective casing of the lamp.
2	Replace the lamp.
3	Fasten the transparent casing again.

10.2.2. REFRIGERANT UNIT REPLACEMENT

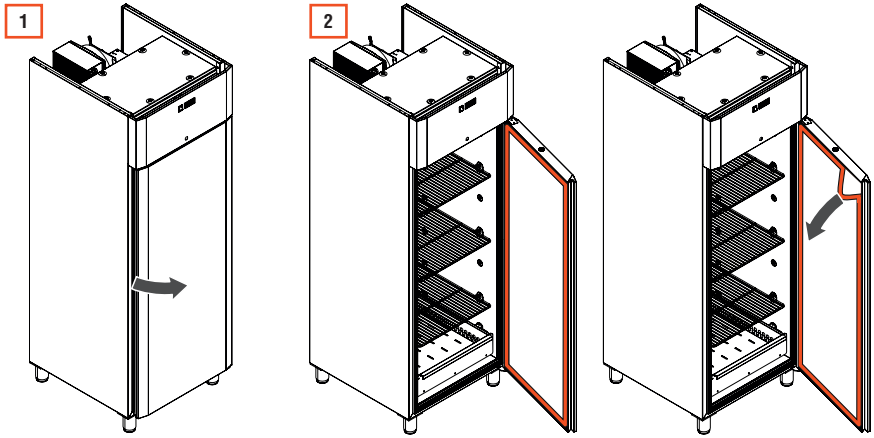


To replace the refrigerating unit, contact the Authorised Dealer or Service Centre.

10.2.3. DOOR GASKET REPLACEMENT

To **replace the gasket** on the door, proceed as follows:

STEP	ACTION
1	Open the door of the refrigerated cabinet.
2	Gently pull out one corner of the gasket and remove it from the housing.
3	Replace the gasket with one that has the same characteristics.
4	Close the door of the refrigerated cabinet.



10.2.4. DOOR DISASSEMBLY AND ASSEMBLY ON OTHER SIDE

Before carrying out the operations, make sure you have purchased the appropriate KIT from the Manufacturer.

To perform door **disassembly and its reassembly on the other** side of the cabinet**,** proceed as follows:

STEP	ACTION
1	Mount the bracket provided in the KIT in the lower corner of the cabinet.
2	Remove the door from the side where it is installed and turn it over.
3	Mount the door on the new side.

11. DIAGNOSTICS

11.1. ALARMS

LABEL	FAULT	CAUSE	EFFECTS	TROUBLESHOOTING
E1	Probe1 faulty (cell)	▪ reading of values outside the operating range ▪ faulty / shorted / open probe	▪ Display of the E1 label ▪ Fixed Alarm Icon ▪ Disabling of the maximum and minimum alarm regulator ▪ Compressor operation based on the “Ont” and “OFt” parameters	▪ check the probe type (NTC) ▪ check the probe wiring ▪ replace the probe
E2	Probe 2 faulty (defrost)	▪ reading of values outside the operating range ▪ faulty / shorted / open probe	▪ Display of the E2 label ▪ Fixed Alarm Icon ▪ The Defrost cycle will end due to Time out (Parameter “dEt”)	▪ check the probe type (NTC) ▪ check the probe wiring ▪ replace the probe
AH1	HIGH Alarm Probe 1 temperature	▪ value read by Pb1 > HAL after time equal to “tAO” (see “MIN AND MAX TEMP. ALARMS”)	▪ Recording of label AH1 in folder AL ▪ No effect on the adjustment	▪ Wait for the temperature value read by probe 1 to return below HAL.
AL1	LOW Alarm Probe 1 temperature	▪ value read by Pb1 < HAL after time equal to “tAO” (see “MIN AND MAX TEMP. ALARMS”)	▪ Recording of label AL1 in folder AL ▪ No effect on the adjustment	▪ Wait for the temperature value read by probe 1 to return above LAL.
EA	External Alarm	▪ activation of the digital input (H11 set as an external alarm)	▪ Recording of EA label in ▪ AL folder ▪ Fixed Alarm icon ▪ Adjustment blocked if EAL = y	▪ check and remove the external cause that caused the alarm on D.I.

LABEL	FAULT	CAUSE	EFFECTS	TROUBLESHOOTING
OPd	Door Open Alarm	▪ activation of the digital input (H11 set as door switch) (for a time greater than tdO)	▪ Recording of label Opd in folder AL ▪ Fixed Alarm icon ▪ Regulator block	▪ close the door ▪ delay function defined by OAO
Ad2	Defrost for time-out	▪ end defrost by time instead of reaching the end defrost temperature detected by probe Pb2.	▪ Recording of label dAt in folder AL ▪ Fixed Alarm icon	▪ wait for the next defrost for automatic return

11.2. DIAGNOSTICS

The alarm condition is always signalled by the buzzer (if present) and by the alarm icon ((•)).
To turn off the buzzer, press and release any key, the relevant icon will continue to flash.

Note: if alarm exclusion times are in progress, the alarm is not signalled.



The alarm warning from faulty probe 1 (Pb1) appears directly on the instrument display with the indication E1.



Models EW971 and EW974: The alarm warning from faulty probe 2 (Pb2) appears directly on the instrument display with the indication E2.

12. DECOMMISSIONING AND DISPOSAL

12.1. LONG PERIODS OF INACTIVITY

If the appliance is not to be used for a long period of time (more than 2-3 weeks) proceed as follows:

STEP	ACTION
1	Disconnect the power supply.
2	Clean the equipment thoroughly.

12.2. DISPOSAL



The electrical and electronic equipment that make up the appliance, such as lamps, electronic controls, electrical switches, electric motors and other electrical material in general, must be disposed of and/or recycled separately from urban waste according to the procedures of the regulations in force on the subject in each country. Avoid dispersing the materials in the environment. Furthermore, all materials that make up the product such as sheet metal, plastic, rubber, glass and more, must be recycled and/or disposed of in accordance with the procedures of the relevant regulations in force.

Illegal or incorrect disposal of the equipment entails application of the sanctions required by the current legislation.

Comply with the regulations in force in the Country of installation. Make the equipment, destined for dismantling, unusable by removing the power supply cables.