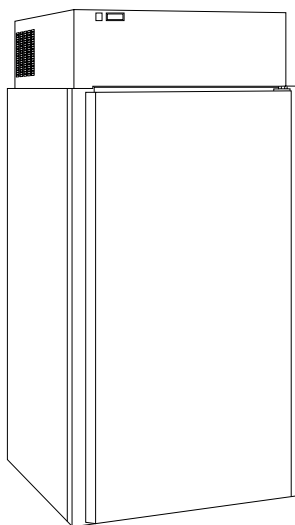


# MINI-COLD ROOM 100<sup>®</sup>

## COLD AND FREEZER ROOMS

TRANSLATION OF THE ORIGINAL INSTRUCTIONS



Revision 01 - 03/2024

**EN** USE AND MAINTENANCE MANUAL





# TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>3</b>	<b>7. CONTROL PANEL</b> .....	<b>25</b>
<b>TECHNICAL DATA SHEETS</b> .....	<b>5</b>	7.1. CONTROL PANEL (mod. EW961 - EW974)....	25
<b>USE AND MAINTENANCE MANUAL</b> .....	<b>7</b>	7.1.1. <i>Display</i> .....	26
<b>1. GENERAL PRELIMINARY INFORMATION</b> .....	<b>8</b>	7.2. Access and use of the menu .....	27
1.1. Purpose of the document .....	8	7.2.1. <i>Machine status menu</i> .....	27
1.2. Supply and preservation .....	8	7.2.2. <i>Programming menu</i> .....	27
1.3. Consultation notes .....	8	7.2.3. <i>Setpoint modification block</i> .....	28
1.4. Regulatory framework .....	9	7.2.4. <i>Password</i> .....	28
1.5. Warranty .....	9	<b>8. USE</b> .....	<b>29</b>
<b>2. SAFETY WARNINGS</b> .....	<b>10</b>	8.1. First use .....	29
2.1. Obligations and prohibitions .....	11	8.2. Switch-on .....	29
2.1.1. <i>Obligations</i> .....	11	8.3. Product loading .....	30
2.1.2. <i>Prohibitions</i> .....	11	8.4. Defrost .....	30
<b>3. IDENTIFICATION AND DESCRIPTION</b> .....	<b>12</b>	8.4.1. <i>Automatic defrost</i> .....	30
3.1. Equipment identification .....	12	8.4.2. <i>Manual defrost</i> .....	31
3.2. Intended use .....	13	8.5. Stand-by .....	31
3.3. Description .....	13	8.6. Switching off .....	31
3.4. Main components .....	14	<b>9. CLEANING</b> .....	<b>32</b>
<b>4. RECEIPT AND HANDLING</b> .....	<b>15</b>	9.1. Safety Warnings for Cleaning .....	32
4.1. Equipment receipt .....	15	9.2. Table of cleaning operations .....	33
4.1.1. <i>Handling with packaging</i> .....	15	9.3. Cleaning the floor panel .....	33
4.1.2. <i>Packaging removal and inspection</i> .....	16	9.4. Cleaning the condenser .....	33
4.1.3. <i>Packaging disposal</i> .....	17	<b>10. MAINTENANCE</b> .....	<b>34</b>
4.2. Handling .....	17	10.1. Routine maintenance .....	34
4.2.1. <i>Version and weight division for handling</i> .....	17	10.1.1. <i>Inspecting after delivery</i> .....	34
4.2.2. <i>Handling operations</i> .....	17	10.2. Extraordinary maintenance .....	35
<b>5. INSTALLATION</b> .....	<b>18</b>	10.2.1. <i>Replacement of motor fan</i> .....	35
5.1. Installation site .....	18	10.2.2. <i>Compressor / refrigerant replacement</i> .....	35
5.1.1. <i>Features of the installation site</i> .....	18	10.2.3. <i>Condenser replacement</i> .....	35
5.1.2. <i>Minimum safety distances</i> .....	19	<b>11. DIAGNOSTICS</b> .....	<b>36</b>
5.2. Cold room assembly .....	20	11.1. Alarms .....	36
5.2.1. <i>Assembly of shelves</i> .....	22	<b>12. DECOMMISSIONING AND DISPOSAL</b> .....	<b>37</b>
5.2.2. <i>Mounting the hooks</i> .....	23	12.1. Long periods of inactivity .....	37
5.3. Condensate water drain .....	23	12.2. Disposal .....	37
<b>6. CONNECTIONS</b> .....	<b>24</b>	<b>13. ATTACHMENTS</b> .....	<b>38</b>
6.1. Electrical connection .....	24	13.1. Wiring diagram .....	38
6.1.1. <i>Power supply connection</i> .....	24	13.2. Control panel parameter table .....	41

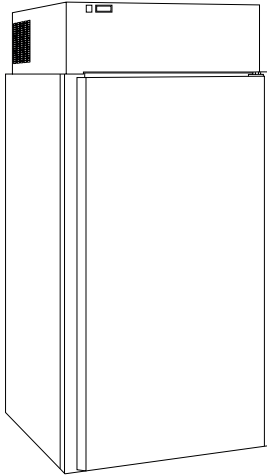


# TECHNICAL DATA SHEETS

---

# MINI-COLD ROOM 100

Cold and freezer room, insulation thickness **60 mm**



## SUITABLE TO STORE



**MEAT**



**FROZEN GOODS**



**PASTRIES**



**FRUITS AND  
VEGETABLES**



**CURED MEATS**



**DAIRY PRODUCTS\***



**FISH\***

\*Only with stainless steel interior fittings and without floor in the **TN** version.

## TECHNICAL FEATURES

Version	<ul style="list-style-type: none"> <li>▪ <b>TN</b>: Normal temperature</li> <li>▪ <b>BT</b>: Low temperature</li> <li>▪ With built-in unit</li> <li>▪ With remote group</li> </ul>	
External dimensions without monoblock	L.1000 x P.1000 x H.2120 mm	
External dimensions with monoblock	L.1000 x P.1000 x H.2120 mm	
Net weight	<ul style="list-style-type: none"> <li>▪ <b>TN</b>: 185 kg</li> <li>▪ <b>BT</b>: 185 kg</li> </ul>	
Gross weight	<ul style="list-style-type: none"> <li>▪ <b>TN</b>: 190 kg</li> <li>▪ <b>BT</b>: 190 kg</li> </ul>	
Operating temperature TN	0°C / + 8°C	
Operating temperature BT	- 20°C / -18°C	
Insulation	Material Type	Rigid polyurethane foam (PUR)
	Insulation thickness	60 mm
	K	0.26 kcal/h·m <sup>2</sup> ·°C
	Density	40/42 kg/m <sup>3</sup>

# USE AND MAINTENANCE MANUAL

---

# 1. GENERAL PRELIMINARY INFORMATION

**Thank you for purchasing our equipment.**

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

This manual is attached to the equipment **MINI-COLD ROOM 100**.

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

The **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 manual 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 in **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. CONSULTATION NOTES

SYMBOL	TYPE	DESCRIPTION
-	BOLD TEXT	Highlights some significant sentences and references in the text.
	GENERIC OR DEDICATED WARNING SIGN	It highlights risks to the health and safety of authorised personnel and/or risks of damage to or malfunction of the machine.
	GENERIC OR DEDICATED PROHIBITION SIGN	Emphasises the prohibition to perform an action.
	GENERIC OR DEDICATED OBLIGATION SIGNAL	Indicates a prescription (obligation to perform an action).
	INFORMATION	Reports relevant information.



## 1.4. REGULATORY FRAMEWORK

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

## 1.5. WARRANTY

The warranty terms established by law apply. Should the equipment 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 equipment
- 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 must only be used and serviced 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.



### WARNING

Electrical hazard. Disconnect the power supply before carrying out maintenance work.



Only qualified technical personnel should carry out maintenance work.



Only use original spare parts.



It is strictly forbidden to make changes to the equipment.



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

## 2.1. OBLIGATIONS AND PROHIBITIONS

### 2.1.1. OBLIGATIONS

- Only qualified technical personnel should perform the installation work (see chapter '**INSTALLATION**')
- Keep the area around the equipment free and clean
- Keep the entire perimeter of the equipment free so that there is air circulation
- For food contact only use materials and articles: contamination-free, compliant with regulations and declared MOCA/FCM
- Wait until the set temperature is reached before loading the product into the equipment.

### 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 modify or tamper with the equipment in any way
- Do not place or store flammable liquids or materials, or easily ignitable objects inside the equipment or in the immediate vicinity
- Do not place any kind of material (boxes or other) on the equipment
- Do not handle the equipment by the handle. Grasp it at the sides
- Do not place the equipment under direct exposure to sunlight and all other forms of thermal radiation
- Do not place the equipment inside a room with high relative humidity (potential formation of condensate)
- Do not place the equipment inside a closed niche or against the wall
- Do not obstruct the air vents
- Do not set temperatures lower than permitted
- Do not damage and bend the evaporator flaps and the coolant pipes
- Do not store medicines, blood and blood products in the equipment
- Do not store explosive substances, such as pressurised containers with flammable propellants, in the equipment
- Do not store chemical and flammable products
- Do not place hot pans, hot products and objects on or near the equipment.

## 3. IDENTIFICATION AND DESCRIPTION

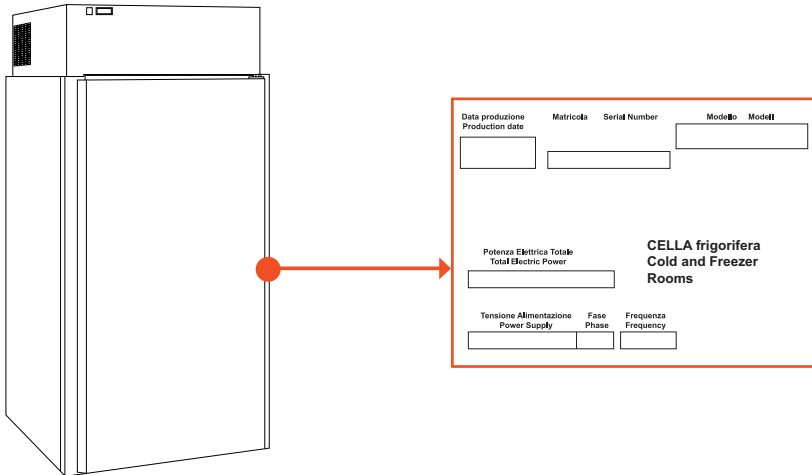
### 3.1. EQUIPMENT IDENTIFICATION

The nameplate is on the side of the equipment. Contains:

- Serial number
- The type/functional features
- The details of the certification and marking.



**Do not remove the identification plate and/or replace it with other plates.  
Contact the manufacturer if required.**



## 3.2. INTENDED USE

The equipment is a **COLD AND FREEZER ROOM** for professional use. Used to store packaged and/or unpackaged food. 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 introduce pressurised containers with flammable propellant into the equipment.**



**Do not introduce living animals, dangerous or contaminated materials, objects or substances into the equipment.**

## 3.3. DESCRIPTION

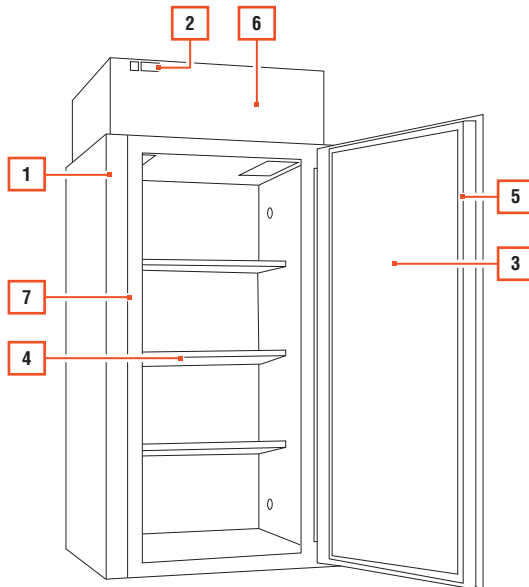
The structure of the equipment consists of modular panels. The construction materials are designed not to absorb odours, not to allow pests to lurk and not to encourage the development of fungi and/or mould.

The wall panel is constructed from two non-toxic, pre-painted galvanised steel sheets.

The ceiling panel is constructed from galvanised steel outer sheet and non-toxic pre-painted inner sheet.

The floor panel is constructed from galvanised steel outer sheet and stainless steel inner sheet.

### 3.4. MAIN COMPONENTS



POS.	ELEMENT	NOTES
1	PANEL STRUCTURE	
2	CONTROL PANEL	
3	BLIND PAD DOOR WITH MAGNETIC CLOSURE	
4	SHELF	
5	DOOR GASKET	
6	BUILT-IN MONOBLOCK REFRIGERATION UNIT	Including: <ul style="list-style-type: none"> <li>▪ Evaporator</li> <li>▪ Condenser</li> </ul>
7	ELECTRICAL RESISTANCE	Heating cable



**In the case of purchasing equipment without a built-in monoblock refrigeration unit, there is the set-up for connection to the remote unit. The evaporator is however installed inside the equipment.**

## 4. RECEIPT AND HANDLING

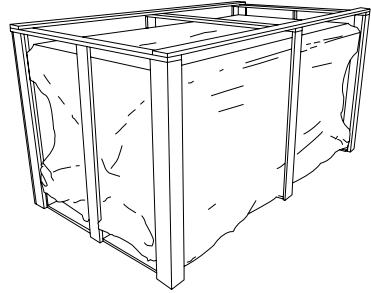
### 4.1. EQUIPMENT RECEIPT

The equipment can be delivered:

- Assembled / Disassembled with built-in monoblock refrigeration unit
- Without built-in monoblock refrigeration unit (with set up for connection to remote unit).

The equipment is delivered on a pallet packed with shrink-wrapped nylon and a wooden perimeter cage.

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



#### 4.1.1. HANDLING WITH PACKAGING



**Only qualified technical personnel should perform handling operations on the equipment.**

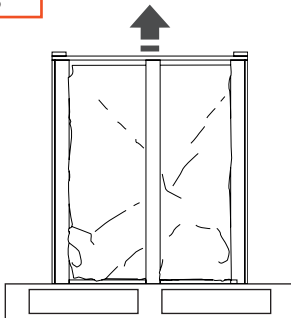


**The manufacturer accepts no liability in the event of non-compliance with current safety regulations.**

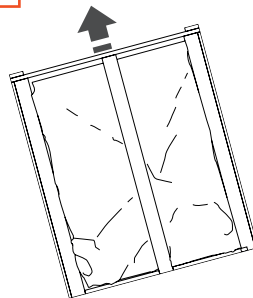
Always handle the packaging in an upright position (see the instructions on the packaging).

If the equipment with a built-in monoblock refrigeration unit is tilted, wait at least 8 hours before starting up. In this way, the oil in the condenser flows to all parts for lubrication.

**YES**



**NO**



### 4.1.2. PACKAGING REMOVAL AND INSPECTION

For the removal of the packaging:

STEP	ACTION
1	Remove the wooden perimeter cage.
2	Remove the shrink-wrapped nylon. Lift the equipment to remove it from the pallet.
3	Place the equipment in its designated place.

**Note:** Use a pallet truck or forklift truck appropriate for the weight to be handled.



**Keep the packaging pallet.**

After removing all packaging materials, check for faults.

**If any anomalies are found**, do not install the equipment. Contact your Dealer or Authorised Service Centre within 8 days from the date of purchase.

### 4.1.3. PACKAGING DISPOSAL

The materials used for packaging are recyclable and must be collected.



**Separate the various packaging materials and dispose of them in accordance with the regulations in force in the country of installation.**



## 4.2. HANDLING

### 4.2.1. VERSION AND WEIGHT DIVISION FOR HANDLING

	VERSION	PACKING SIZE	GROSS WEIGHT	NOTES
MINI-COLD ROOM 100	mounted TN	L.1120 x P.1190 x H.2300 mm	185 Kg	
	mounted BT	L.1120 x P.1190 x H.2300 mm	190 Kg	
	disassembled TN	L.1030 x P.1900 x H.1000 mm	185 Kg	
	disassembled BT	L.1030 x P.1900 x H.1000 mm	190 Kg	

### 4.2.2. HANDLING OPERATIONS

Carefully read the instructions before moving the equipment.



**Only qualified technical personnel should perform handling operations on the equipment.**



**The manufacturer accepts no liability in the event of non-compliance with current safety regulations.**



**Move the equipment while keeping it upright at all times. Do not tilt the equipment.**

A pallet truck or forklift truck suitable for the weight to be handled must be used to handle the equipment.

If the equipment with a built-in monoblock refrigeration unit is tilted, wait at least 8 hours before starting up. In this way, the oil in the condenser flows to all parts for lubrication.



**CAUTION**

**When handling, take care not to damage the equipment itself, persons, animals and/or things in the immediate vicinity.**



**CAUTION**

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

## 5. INSTALLATION



**Only qualified technical personnel should perform installation operations on the equipment.**



### CAUTION

**Do not install and use the equipment in ATEX classified environments, locations or areas.**



**The manufacturer accepts no liability in the event of non-compliance with current safety regulations.**

### 5.1. INSTALLATION SITE

#### 5.1.1. FEATURES OF THE INSTALLATION SITE



**Do not install the equipment outdoors, directly exposed to the weather.**



**Do not install in hazardous and/or ATEX classified areas.**

The installation room must be a room with adequate and controlled temperature and humidity in order to avoid malfunctions and condensation.

Ensure that there is a sufficient exchange of air in the installation room (even when the salesroom is closed), so as to guarantee the proper functioning of the equipment.

Follow the reported permissible environmental conditions:

#### PERMITTED ENVIRONMENTAL CONDITIONS

Ambient temperature	Max. 30°C
Air humidity	Max. 60%
Support tray	Flat and level

**Do not use the equipment outside the permitted conditions of use and operation.**

Higher installation room temperatures or insufficient recirculation air can reduce the performance of the equipment with deterioration of the contained products and increased energy consumption.



Do not obstruct the supply and return air ventilation openings in the equipment.



Place the equipment away from heat sources and open flames.

### 5.1.1.1. LOCAL FEATURES FOR REMOTE UNIT INSTALLATION



**In the case of purchasing equipment without a built-in monoblock refrigeration unit, there is the set-up for connection to the remote unit. Follow the instructions below to install the remote unit.**

The remote unit must be located away from the weather.

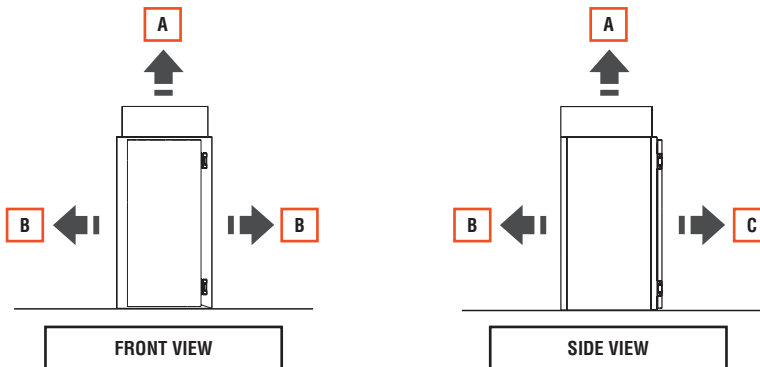
Depending on the model of the remote unit, observe distances from walls or other obstacles so that there is sufficient air exchange to ensure proper operation of the unit and easy maintenance.

### 5.1.2. MINIMUM SAFETY DISTANCES

In order to ensure proper functioning of the equipment and thus proper air circulation, observe the minimum safety distances from side walls, other equipment and/or heat sources.

#### MINIMUM SAFETY DISTANCES

<b>A</b>	Upper	40 cm
<b>B</b>	Side / Rear	5 cm
<b>C</b>	Door side	Distance to allow the door to open fully



## 5.2. COLD ROOM ASSEMBLY



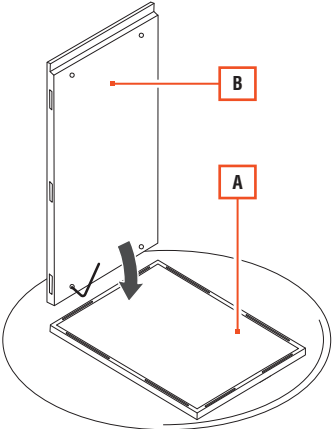
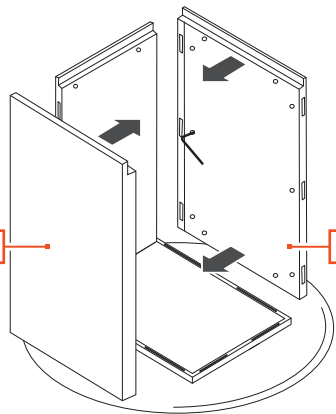
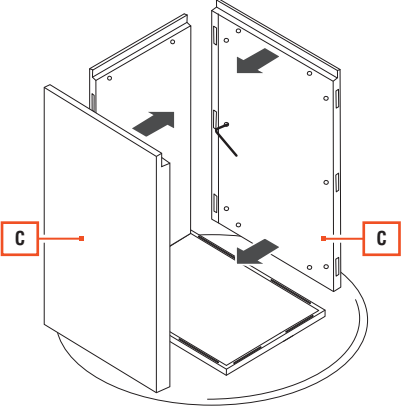
Use personal protective equipment PPE and provisional works during installation.



Two operators are required to assemble the equipment.

Use the enclosed spanner to mount the equipment.

For the **assembly of the structure**:

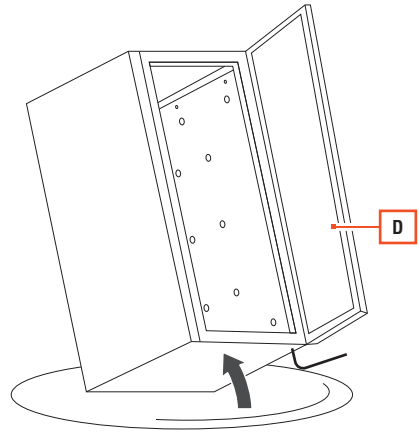
STEP	ACTION	PICTURE
1	Position the floor panel ( <b>A</b> ).	
2	Fasten the back panel ( <b>B</b> ) to the floor panel.	
3	Fasten the two side panels ( <b>C</b> ) to the back panel and floor panel.	

STEP ACTION

PICTURE

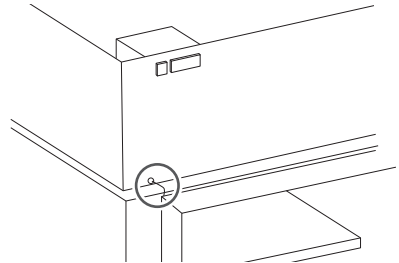
- 4 Fasten the door panel (**D**) to the hooks on the outside of the floor panel.

**Note:** tilt the equipment to perform this operation.



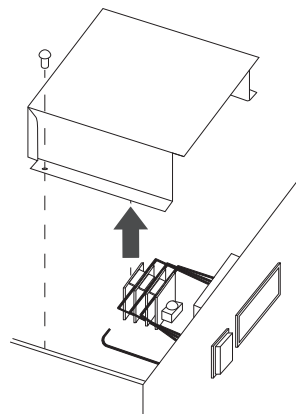
- 5 Fasten the ceiling panel by means of the hooks inside the cold room.

- 6 Connect the resistor.  
Pass one end through the plug hole in the front defence.



- 7 Lift the terminal block cover by means of the screws.

- 8 Connect the two ends of the resistor:
- One at the brown wires
  - The other at the blue wires.



## STEP ACTION

## PICTURE

- 9 Remove the protective films present to protect the steel (both external and internal).



- 10 Place the end caps at the holes.

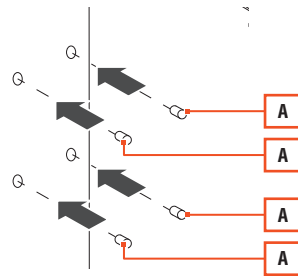
### 5.2.1. ASSEMBLY OF SHELVES

For **assembly of shelves:**

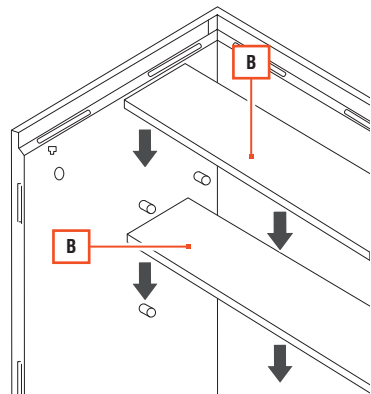
## STEP ACTION

## PICTURE

- 1 Insert the plastic supports **(A)** into the holes in the inner side walls.  
**Note:** Place the supports in the same positions in both the left and right side walls.



- 2 Place each shelf **(B)** on the plastic supports provided.



### 5.2.2. MOUNTING THE HOOKS

For the **mounting of the hooks**:

STEP	ACTION	PICTURE
1	Insert one end of the hooks <b>(A)</b> into a hole in the side panel.	
2	Insert the opposite end into the hole of the opposite side panel.	

### 5.3. CONDENSATE WATER DRAIN

The equipment:

- With built-in refrigeration monoblock unit, it is equipped with automatic defrosting and evaporation of condensate water
- With dry-up for a remote unit, it is equipped with a thermostatic valve.

## 6. CONNECTIONS

### 6.1. ELECTRICAL CONNECTION



**Only qualified technical personnel should perform connection operations on the equipment.**



**The electrical connection must be carried out in accordance with the legal compendium and regulations applicable in the country where the equipment is installed.**

#### 6.1.1. POWER SUPPLY CONNECTION

Refer to the attached wiring diagram of the equipment.

To make a correct electrical connection:

- Set up a residual current circuit breaker
- Check that the mains voltage and frequency correspond to those on the nameplate. A variation  $\pm 10\%$  of the rated voltage is allowed
- Connect the equipment to an efficient earthing system. Verify operation and declaration of conformity in accordance with the regulatory compendium of the country of installation
- Install a bipolar cut-off switch with opening of the contacts at least 3 mm, upstream of the plug. This switch is mandatory when the load exceeds 1000 watts or when the equipment is connected directly without the use of a plug. It must therefore be placed in the immediate vicinity of the equipment so that it can be clearly seen by personnel in the event of maintenance
- Check that the cross-section of the power cable is adequate for the power absorbed by the equipment.

**It is compulsory by law to connect the equipment to an efficient earthing system, declared and verified by the relevant authorities.**

**Do not connect the electrical plug of the equipment to an extension cord and/or reducer.**

Proceed as follows:

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



#### **WARNING**

**Electrical hazard. If the power cable is damaged, replace it.**

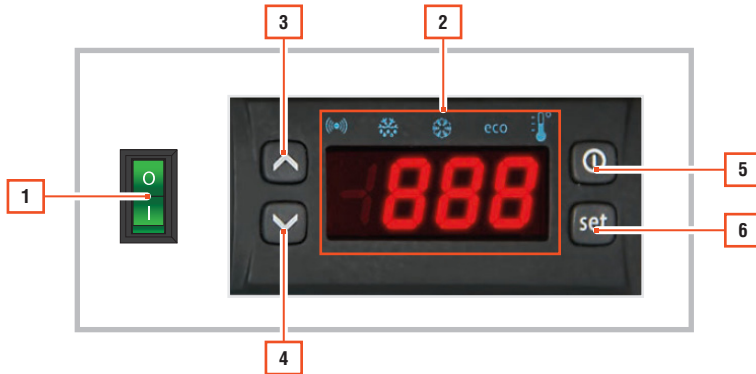






**The manufacturer disclaims all liability for incorrect connections, not carried out in a workmanlike manner or by unqualified and authorised technical personnel.**



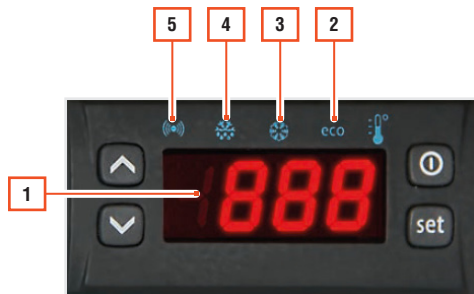
## 7. CONTROL PANEL

### 7.1. CONTROL PANEL (MOD. EW961 - EW974)



POS.	ICON	ELEMENT	DESCRIPTION
1	-	<b>MAIN SWITCH 0/1</b>	<ul style="list-style-type: none"> <li>Set to "0": machine switched off</li> <li>Set to "1": machine electrically powered.</li> </ul>
2	-	<b>DISPLAY</b>	Displays the equipment operating parameters.
3		<b>UP KEY</b>	<p><b>Press and release</b> Scrolls the items within the menu Increases the values</p> <p><b>Press for at least 5 sec</b> Activates the manual defrosting function</p>
4		<b>DOWN KEY</b>	<p><b>Press and release</b> Scrolls the items within the menu Decreases the values</p> <p><b>Press for at least 5 sec</b> User configurable function</p>
5		<b>STAND-BY KEY (ESC)</b>	<p><b>Press and release</b> Returns to an earlier level than the current menu Confirms parameter Value</p> <p><b>Press for at least 5 sec</b> Activates the Stand-by function (when not inside the menus)</p>
6		<b>SET KEY (ENTER)</b>	<p><b>Press and release</b> Displays any alarms (if present) Accesses the base controls menu</p> <p><b>Press for at least 5 sec</b> Accesses the programming menu Confirms the controls</p>

## 7.1.1. DISPLAY




POS.	ICON	ELEMENT	DESCRIPTION
1	-	<b>DISPLAY</b>	-
2	eco	<b>Reduced SET / SET LED</b>	<ul style="list-style-type: none"> <li>Flashing: reduced set active</li> <li>Quick flash.: access to level 2 parameters</li> <li>Off: LED off in all other cases</li> </ul>
3		<b>Compressor LED</b>	<ul style="list-style-type: none"> <li>Fixed on: compressor on</li> <li>Flashing: delay, protection or activation blocked</li> <li>Off: LED off in all other cases</li> </ul>
4		<b>Defrost LED</b>	<ul style="list-style-type: none"> <li>Fixed on: defrost on</li> <li>Flashing: manual or digital input activation</li> <li>Off: LED off in all other cases</li> </ul>
5		<b>Alarm LED</b>	<ul style="list-style-type: none"> <li>Fixed on: presence of an alarm</li> <li>Flashing: alarm silenced</li> <li>Off: LED off in all other cases</li> </ul>
-		<b>Fan LED</b>	<ul style="list-style-type: none"> <li>Fixed on: fans on</li> <li>Off: LED off in all other cases</li> </ul>

## 7.2. ACCESS AND USE OF THE MENU

The resources are organised in two menus:

- **Machine Status Menu**
- **Programming Menu**

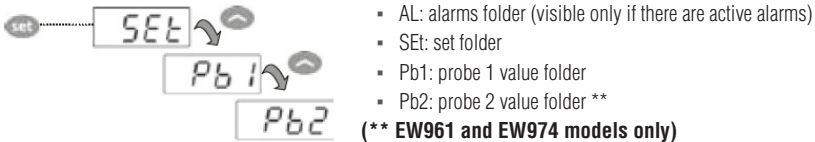
Press the  button once to confirm the last value shown on the display and return to the previous display. Inactivity of the keyboard for more than 15 seconds (time-out) also confirms the last displayed value and a return to the previous display.

### 7.2.1. MACHINE STATUS MENU

To access the **Machine Status menu**, press and release the  button.




If no alarms are in progress, the "SEt" label is displayed.

Press keys  and  to scroll the folders of the Machine Status menu.



#### Setpoint setting:

to view the Setpoint value, press the  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  to confirm the change.





#### Probe visualisation:

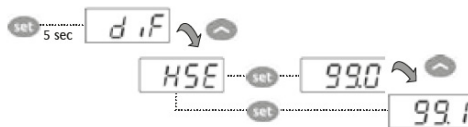
when the Pb1 or Pb2\* labels are present, press the key to display the value measured by the associated probe (\* Pb2 is only present in **models EW961 and EW974**).




### 7.2.2. PROGRAMMING MENU

Press the  key for more than 5 seconds to access the **Programming menu**. If applicable, an access PASSWORD "PA1" is 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  key to display the current parameter value. Use the  and  keys to change their value and press the  key to store the value.

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

### 7.2.3. SETPOINT MODIFICATION BLOCK

The equipment 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.

### 7.2.4. PASSWORD

- Password "PA1": allows access to level 1 parameters (User)
- Password "PA2": allows 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 using the equipment, check that it is in perfect condition. In the presence of faults, the equipment must be decommissioned and the Technical Assistance Service must be contacted.



### CAUTION

Keep all the supply and return air ventilation openings inside the equipment free of obstructions.

### 8.1. FIRST USE



Only specialised technical personnel should carry out the initial start-up of the equipment.

Before switching on, check that:

- The equipment and surrounding surfaces are dry
- The equipment is in a perfectly flat and level position
- The operating parameters have been adjusted (see chapter “CONTROL PANEL”)
- The main switch is in the “0-OFF” position
- There is no direct or indirect contact with live electrical parts



Do not perform operations with wet or damp hands.

Clean the equipment and its components thoroughly before loading the product (see chapter “CLEANING”).

### 8.2. SWITCH-ON



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

For switching on the equipment:

STEP	ACTION	PICTURE
1	Press the O/I main switch. <b>Note:</b> when switched on, the button lights up green.	

## 8.3. PRODUCT LOADING



Load a maximum of 25 kg on each shelf. The load must be evenly distributed on the shelf.



For proper storage, do not introduce hot products. Wait for the product to cool down before placing it inside the equipment.



Only open the door for the time necessary for loading and unloading products inside the equipment.

Before loading product, wait until the desired temperature inside the equipment has been reached.

Arrange the product so as not to obstruct the circulation of refrigerated air.



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

## 8.4. DEFROST

### 8.4.1. AUTOMATIC DEFROST

The equipment is equipped with an **automatic system for daily defrosting** set by the Manufacturer.

Act on the control panel to change the automatic defrosting (number, duration, interval).



#### **WARNING**

**Burn hazard. In appliances equipped with automatic electric defrosting, take care not to burn yourself on the electric heating element, which may still be hot. Then wait for it to cool down and then begin maintenance and cleaning operations.**

## 8.4.2. MANUAL DEFROST

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

Perform defrosting with door open or door closed. In the case of defrosting with the door closed, the time required will be longer.

To perform **manual defrosting**:

STEP	ACTION
1	Press and hold the  button for 5 seconds. <b>Note:</b> the equipment must be switched off/in stand-by.


If the defrost conditions are not satisfied:

- The parameter 'OdO' ≠ **0 (models EW961 and EW974)**
- The temperature of the evaporator probe Pb2 is higher than the defrost end temperature (**models EW961 and EW974**).

The display will flash 3 times, indicating that the operation will not be carried out.

## 8.5. STAND-BY

To perform **equipment stand-by**:

STEP	ACTION
1	Hold down the  button. <b>Note:</b> the equipment goes into stand-by mode.

## 8.6. SWITCHING OFF

To **shut down the equipment**:

STEP	ACTION	PICTURE
1	Press the O/I main switch. <b>Note:</b> the button is no longer illuminated in green.	

## 9. CLEANING

### 9.1. SAFETY WARNINGS FOR CLEANING



**WARNING**

**Electrical hazard. Disconnect the power supply before cleaning.**



**WARNING**

**Electrical hazard. Do not use water jets and/or high-pressure lances to wash the internal and external parts of the equipment.**



**WARNING**

**Do not damage the refrigerant fluid circuit.**



**Strict adherence to the correct hygiene practice manuals, which must be kept and maintained by the HACCP user.**

The first cleaning of the oven must be carried out by specialised personnel.

Observe the following indications:

- Clean the surfaces of the equipment regularly, to avoid deterioration of the equipment materials
- Use only lukewarm water with non-aggressive detergents, then dry damp parts with a soft cloth
- Carry out at least daily periodic cleaning of the loading area to prevent the development and accumulation of bacteria
- Carry out at least one monthly internal cleaning and defrosting if the equipment is used to store frozen or packaged products
- Do not use water jets to wash the internal parts of the equipment
- Do not direct water jets at electrical parts
- Do not use hard metal tools to remove any ice that may have formed.



**Use work gloves when carrying out cleaning operations.**



**Do not use cleaning agents containing chlorine, dilute solutions, caustic soda, abrasive detergents, muriatic acid, bleach or other products that can scratch or sand.**



**Do not use a steam cleaner to clean the equipment.**

Properly sanitise all equipment storage surfaces, any product processing rooms and all equipment. Plan the sanitisation operations so that there is a record of the hygiene and cleaning operations.



## 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	EVERY 6 MONTHS	YEARLY
Cleaning the loading area	■				
External cleaning		■			
Cleaning the inside of the door near the gaskets		■			
Cleaning the bottom of the tank		■			
Cleaning the floor panel		■			
Cleaning inside			■		



**Strict adherence to the correct hygiene practice manuals, which must be kept and maintained by the HACCP user.**

## 9.3. CLEANING THE FLOOR PANEL

To **clean the floor panel**:

- Use mild detergent in warm water
- Use a soft cloth
- Use the correct detergent solutions
- Check the joint between the floor panel and the walls
- Do not use abrasive products
- Do not clean the floor panel with pressure machinery.

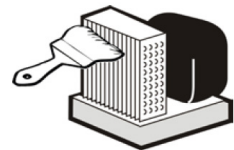
## 9.4. CLEANING THE CONDENSER

Clean the condenser periodically to ensure its proper functioning.

Use an air jet blowing from the inside to the outside of the unit. If this is not possible, use a long-bristled brush on the outside of the condenser.



**Do not use water jets.**



## 10. MAINTENANCE



### WARNING

Electrical hazard. Disconnect the power supply before carrying out maintenance work.



### CAUTION

The ceiling panel cannot be walked on except for maintenance. Only one person with a maximum weight of 80 kg is permitted.




Only authorised technical personnel should service the equipment.

### 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 checks and interventions that need to be carried out according to the recommended frequency.

OPERATION	FREQUENCY			
	MONTHLY	EVERY 2 MONTHS	EVERY 6 MONTHS	YEARLY
Check that there are no cooling fluid leaks and that the refrigerating system is working properly.				
 <b>Checking for refrigerant fluid leaks must be carried out by qualified and authorised personnel in accordance with local regulations.</b>				■
Check that the maintenance status of the electrical system is in complete safety.				■
Check that the door seal and the door itself close properly.		■		
Check the proper operation of the fans.		■		
Check the correct functioning of the condensate water drainage pipe.		■		
Check the correct functioning of the evaporator defrosting resistors		■		
Check the operating temperature setting, defrosting and defrost duration.		■		

## 10.2. EXTRAORDINARY MAINTENANCE

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

### 10.2.1. REPLACEMENT OF MOTOR FAN



For replacement, contact the **Authorised Dealer or Service Centre**.

### 10.2.2. COMPRESSOR / REFRIGERANT REPLACEMENT



For replacement, contact the **Authorised Dealer or Service Centre**.

Recover the refrigerant and oil and do not release them in the environment.

### 10.2.3. CONDENSER REPLACEMENT



For replacement, contact the **Authorised Dealer or Service Centre**.

# 11. DIAGNOSTICS

## 11.1. ALARMS

LABEL	FAULT	CAUSE	EFFECTS	TROUBLESHOOTING
<b>E1</b>	Probe1 faulty (cold room)	<ul style="list-style-type: none"> <li>Reading of values outside the operating range</li> <li>Faulty / shorted / open probe</li> </ul>	<ul style="list-style-type: none"> <li>Display of the E1 label</li> <li>Fixed Alarm Icon</li> <li>Disabling of the maximum and minimum alarm regulator</li> <li>Compressor operation based on the "Ont" and "OfT" parameters</li> </ul>	<ul style="list-style-type: none"> <li>Check the probe type (NTC)</li> <li>Check the probe wiring</li> <li>Replace the probe</li> </ul>
<b>E2</b>	Probe 2 faulty (defrost)	<ul style="list-style-type: none"> <li>Reading of values outside the operating range</li> <li>Faulty / shorted / open probe</li> </ul>	<ul style="list-style-type: none"> <li>Display of the E2 label</li> <li>Fixed Alarm Icon</li> <li>The Defrost cycle will end due to Time out (Parameter "dEt")</li> </ul>	<ul style="list-style-type: none"> <li>Check the probe type (NTC)</li> <li>Check the probe wiring</li> <li>Replace the probe</li> </ul>
<b>AH1</b>	HIGH Alarm Probe 1 temperature	<ul style="list-style-type: none"> <li>Value read by Pb1 &gt; HAL after time equal to 'tAO'.</li> </ul>	<ul style="list-style-type: none"> <li>Recording of label AH1 in folder AL</li> <li>No effect on the adjustment</li> </ul>	<ul style="list-style-type: none"> <li>Wait for the temperature value read by probe 1 to return below HAL.</li> </ul>
<b>AL1</b>	LOW Alarm Probe 1 temperature	<ul style="list-style-type: none"> <li>Value read by Pb1 &lt; LAL after time equal to 'tAO'.</li> </ul>	<ul style="list-style-type: none"> <li>Recording of label AL1 in folder AL</li> <li>No effect on the adjustment</li> </ul>	<ul style="list-style-type: none"> <li>Wait for the temperature value read by probe 1 to return above LAL.</li> </ul>
<b>EA</b>	External Alarm	<ul style="list-style-type: none"> <li>Activation of the digital input (H11 set as an external alarm)</li> </ul>	<ul style="list-style-type: none"> <li>Recording of label EA in folder AL</li> <li>Fixed Alarm icon</li> <li>Adjustment blocked if EAL = y</li> </ul>	<ul style="list-style-type: none"> <li>Check and remove the external cause that caused the alarm on D.I.</li> </ul>
<b>OPd</b>	Door Open Alarm	<ul style="list-style-type: none"> <li>Activation of the digital input (H11 set as door switch) (for a time greater than tdO)</li> </ul>	<ul style="list-style-type: none"> <li>Recording of label OPd in folder AL</li> <li>Fixed Alarm icon</li> <li>Regulator block</li> </ul>	<ul style="list-style-type: none"> <li>Close the door</li> <li>Delay function defined by OAO</li> </ul>
<b>Ad2</b>	Defrost for time-out	<ul style="list-style-type: none"> <li>End defrost by time instead of reaching the end defrost temperature detected by probe Pb2</li> </ul>	<ul style="list-style-type: none"> <li>Recording of label dAt in folder AL</li> <li>Fixed Alarm icon</li> </ul>	<ul style="list-style-type: none"> <li>Wait for the next defrost for automatic return</li> </ul>

## 12. DECOMMISSIONING AND DISPOSAL

### 12.1. LONG PERIODS OF INACTIVITY

If the equipment is not used for a long period of time (more than 2-3 weeks):

STEP	ACTION
1	Disconnect the power supply.
2	Carry out a thorough cleaning of the equipment (see chapter ' <b>CLEANING</b> ').
3	Cover the equipment with a cloth.

### 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.

**Do not disperse materials in the environment.**

In addition, all materials constituting the product, such as sheet metal, plastic, rubber, glass, etc., must be recycled and/or disposed of in accordance with the procedures of the relevant regulations.

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

**Do not disperse the coolant and oil in the environment.**

Make the equipment, destined for dismantling, unusable by removing the power supply cables.

## 13. ATTACHMENTS

### 13.1. WIRING DIAGRAM

EQUIPMENT	WIRING DIAGRAM CODE
MINI-COLD ROOM 100 TN	EL_MB_MIC_TN_001
MINI-COLD ROOM 100 BT	EL_MB_MIC_BT_003

**WIRING DIAGRAM**

**KEY**

**S1:** DOUBLE-POLE SWITCH

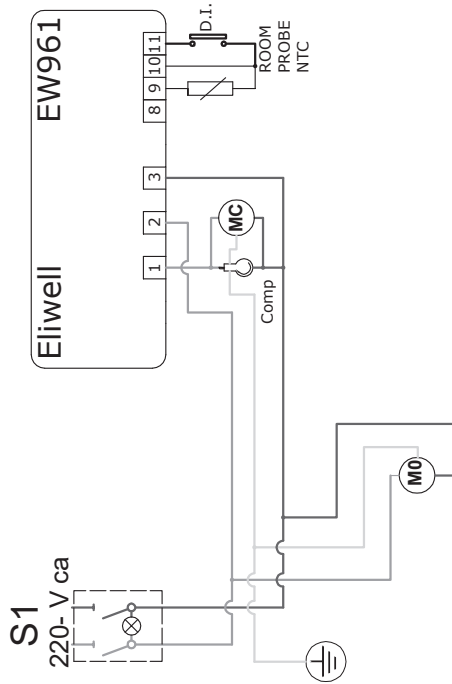
**COMP:** COMPRESSOR

**MO:** EVAPORATOR FAN MOTOR

**MC:** CONDENSER FAN MOTOR

**ROOM NTC PROBE:** NTC COOLED CHAMBER PROBE

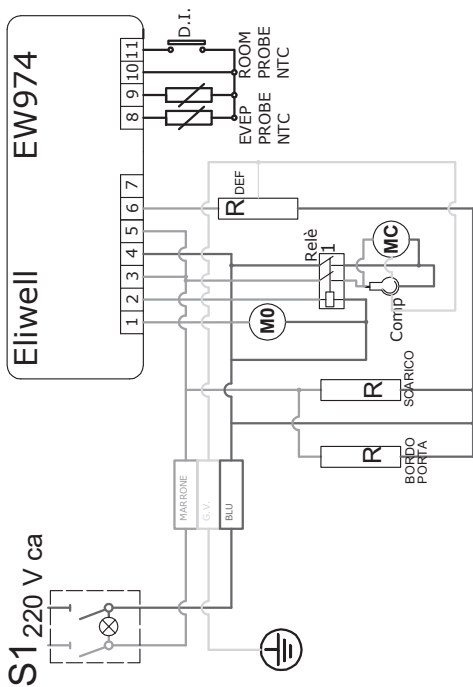
**D.I.:** DIGITAL INPUT



CODICE

**EL\_MB\_MIC\_TN\_001**

**WIRING DIAGRAM**



**KEY**

- S1: DOUBLE-POLE SWITCH
- RELAY 1: COMPRESSOR
- COMP: COMPRESSOR POWER RELAY
- R DEF: EVAPORATOR HEATER
- R DOOR EDGE: INTERNAL PLASTIC RESISTANCE
- R DISCHARGE: RESISTANCE IN THE EXHAUST PIPE
- MO: EVAPORATOR FAN MOTOR
- MC: CONDENSER FAN MOTOR
- EVAP PROBE NTC: EVAPORATOR PROBE mod. NTC
- ROOM NTC PROBE: NTC COOLED CHAMBER PROBE
- D.I.: DIGITAL INPUT

	CODICE
	EL_MB_MIC_BT_003



## 13.2. CONTROL PANEL PARAMETER TABLE

PARAMETER	MACHINE OPERATOR	DESCRIPTION
<b>SEt</b>		SEtpoint for temperature control.
<b>COMPRESSOR</b>		
<b>diF</b>	1&2	diFferential. Compressor relay tripping differential: the compressor stops on reaching the Setpoint value set (as indicated by the adjustment probe), and restarts at temperature value equal to the Setpoint plus the value of the differential. Note: it cannot be 0.
<b>HSE</b>	1&2	Higher SEt. Maximum value attributable to the Setpoint.
<b>LSE</b>	1&2	Lower SEt. Minimum value attributable to the Setpoint.
<b>OSP</b>	2	Offset Set Point. Temperature value to be added algebraically to the SetPoint when reduced set is enabled (Economy function).
<b>dOd</b>	2	digital (input) Open door. Digital input for switching off utilities. Valid if H11 = ±4 (door switch). n = does not switch off utilities; y = switches off utilities.
<b>dAd</b>	2	digital (input) Activation delay. Delay time in the activation of the digital input.
<b>Ont</b>	2	ON time (compressor). Compressor activation time if probe is faulty. If OFt=1 and Ont=0, the compressor always remains off, if OFt=1 and Ont>0 it operates in duty cycle mode.
<b>OFt</b>	2	OFF time (compressor). Compressor deactivation time if probe is faulty. If Ont=1 and OFt=0, the compressor always remains switched on, if Ont=1 and OFt>0 it operates in duty cycle mode.
<b>dOn</b>	2	delay (at) On compressor. Compressor relay activation delay time from call.
<b>dOF</b>	2	delay (after power) OFF. Delay time after switch-off; the indicated time must elapse between switching off the compressor relay and the next switch-on.
<b>dbi</b>	2	delay between power-on. Delay time between switch-on; the specified time must elapse between two successive switch-on of the compressor.

PARAMETER	MACHINE OPERATOR	DESCRIPTION
<b>Odo (!)</b>	2	delay Output (from power) On. Output activation delay time from instrument switch-on or after a power failure.
<b>DEFROSTING</b>		
<b>dt</b>	1&2	"defrost type. Type of defrosting. 0 = electrical defrosting - compressor off (OFF) during defrosting; 1 = reverse cycle defrost (hot gas); compressor on (ON) during defrost; 2 = defrosting with Free mode; compressor-independent defrosting.
<b>dit</b>	1&2	defrost interval time. Time between the start of two successive defrosts.
<b>dCt</b>	2	defrost Counting type. Selection of count mode for the defrosting interval. 0 = compressor running hours (DIGIFROST® method); Defrost active ONLY with compressor on; 1 = Real Time - hours of appliance operation; defrost count is always active when the machine is switched on and starts at each power-on; 2 = compressor stop. Each time the compressor stops, a defrost cycle is carried out according to the dt parameter.
<b>dOH</b>	2	defrost Offset Hour. Delay time for the start of the first defrost from the call.
<b>dEt</b>	1&2	defrost Endurance time. Defrost time-out; determines the maximum duration of defrosting.
<b>dSt</b>	1&2	defrost Stop temperature. Defrost stop temperature (defined by the evaporator probe).
<b>dPO</b>	2	defrost (at) Power On. Determines if at the start-up the instrument must enter defrosting (provided the measured temperature allows this) y = yes; n = no.
<b>EVAPORATOR FANS</b>		
<b>Fpt</b>	2	Fan Parameter type. Characterises the parameter 'FSt' which can be expressed either as an absolute temperature value or as a value relative to the Setpoint. 0 = absolute 1 = relative.
<b>FSt</b>	1&2	Fan Stop temperature. Fan lock temperature; if the value, read by the evaporator probe, is higher than the set value, the fans stop.
<b>FAd</b>	2	FAn differential. Fan activation differential (see par. "FSt").
<b>Fdt</b>	1&2	Fan delay time. Fan activation delay time after a defrost.
<b>dt</b>	1&2	drainage time. Dripping time.
<b>dFd</b>	1&2	defrost Fan disable. Allows you to select whether or not to exclude the evaporator fans during defrosting. y = yes (fan excluded i.e. switched off); n = no.
<b>FCO</b>	2	Fan Compressor OFF. Allows you to select whether or not the fans are blocked when the compressor is OFF (switched off). y = fans on (thermostat-controlled; depending on the value read by the defrost probe, see parameter "FSt"); n = fans off; dc = not used;
<b>Fod</b>	2	Fan open door. Fans on when the door is open. Allows you to select whether or not the fans are blocked when the door is open and restarted when the door is closed (if they were active). n = fans blocked; y = fans unaffected.

PARAMETER	MACHINE OPERATOR	DESCRIPTION
<b>ALARMS</b>		
<b>Att</b>	2	Allows you to select whether the HAL and LAL parameters will have absolute (Att=0) or relative (Att=1) values.
<b>AFd</b>	2	Alarm Fan differential. Alarms differential.
<b>HAL</b>	1&2	Higher ALarm. Maximum temperature alarm. Temperature value (in relative value), the exceeding of which upwards will trigger the alarm signal.
<b>LAL</b>	1&2	Lower ALarm. Minimum temperature alarm. Temperature value (in relative value), the exceeding of which downwards will trigger the alarm signal.
<b>PAO</b>	2	Power-on Alarm Override. Alarm exclusion time after instrument switch on, after a power failure.
<b>dAO</b>	2	defrost Alarm Override. Temperature alarm exclusion time after defrost.
<b>OA0</b>	2	Alarm signalling delay after deactivation of digital input (door closure). Alarm means high and low temperature alarm.
<b>tdO</b>	2	time out door Open. Open door alarm activation delay time.
<b>tAO</b>	1&2	temperature Alarm Override. Temperature alarm signal delay time.
<b>dAt</b>	2	defrost Alarm time. Alarm signal for finished defrosting due to time-out. n = does not activate alarm; y = activates alarm.
<b>EAL</b>	2	External Alarm Clock. An external alarm blocks the controllers (n = does not block; y = blocks).
<b>COMMUNICATION</b>		
<b>dEA</b>	2	Index of the device within the family (valid values from 0 to 14).
<b>FAA</b>	2	Device family (valid values from 0 to 14). The FAA and dEA value pair represents the network address of the device and is given in the following format 'FF.DD' (where FF=FAA and DD=dEA).
<b>DISPLAY</b>		
<b>LOC</b>	1&2	LOCK. Setpoint modification block. See relevant paragraph. However, there remains the possibility to go into parameter programming and change parameters, including the status of this parameter to allow the keypad to be unlocked.. n = no; y = yes.
<b>PS1</b>	1&2	PAssword 1. When enabled (value other than 0), it is the access key for level 1 parameters.
<b>PS2</b>	2	PAssword 2. When enabled (value other than 0), it is the access key for level 2 parameters.
<b>ndt</b>	2	number display type. Display with decimal point. y = yes; n = no.
<b>CA1</b>	1&2	CAlibration 1. Calibration 1. Positive or negative temperature value added to the value read by probe 1.
<b>CA2</b>	1&2	CAlibration 2. Calibration 2. Positive or negative temperature value added to the value read by probe 2.

PARAMETER	MACHINE OPERATOR	DESCRIPTION
<b>ddl</b>	1&2	Defrost display lock. Viewing mode during defrosting. 0 = shows the temperature read by the room probe; 1 = locks the reading on the temperature value read by room probe when defrosting starts, and until the next time the Setpoint value is reached; 2 = displays the label "deF" during defrosting, and until the next time the Setpoint value is reached.
<b>dro</b>	2	display read-out. Select °C or °F for displaying the temperature read by the probe. (0 = °C, 1 = °F). <b>PLEASE NOTE: when changing from °C to °F or vice versa, the setpoint, differential, etc. values are NOT changed (e.g. set=10°C becomes 10°F)</b>
<b>ddd</b>	2	Selection of type of value to be displayed. 0 = Setpoint; 1 = cold room probe (Pb1); 2 = evaporator probe (Pb2).
<b>CONFIGURATION</b>		
<b>H08</b>	2	Stand-by mode. 0 = switches off the display only; 1 = switches off the display, blocks controllers and alarms; 2 = writes OFF on the display and blocks controllers and alarms.
<b>H11</b>	2	Digital input/polarity configuration. 0 = disabled; ±1 = defrosting; ±2 = reduced set; ±3 = not used; ±4 = door switch; ±5 = external alarm; ±6 = stand-by (ON-OFF). <b>ATTENTION: '+' sign indicates that the input is active when the contact is closed.</b> <b>'-' sign indicates that the input is active for open contact.</b>
<b>H25 (!)</b>	2	Enables/disables the buzzer. 0 = Disabled; 4 = Enabled; 1-2-3-5-6 = not used.
<b>H32</b>	2	DOWN button configurability. 0 = disabled; 1 = defrosting; 2 = not used; 3 = reduced set; 4 = stand-by.
<b>H42</b>	1&2	Evaporator probe presence. n = not present; y = present.
<b>reL</b>	1&2	reLease firmware. Device version: read only parameter.
<b>tAb</b>	1&2	tAble of parameters. Reserved: read only parameter.
<b>CONFIGURATION</b>		
<b>UL</b>	2	Up Load. Programming parameter transfer from instrument to Copy Card.
<b>Fr</b>	2	Format. Deletion of all data entered on the key.

**(!) CAUTION!**

- If one or more of these parameters highlighted with (!) are modified, the controller must be switched off and switched on again to ensure correct operation
- Parameter H25 is only present in models equipped with an on-board buzzer.



