Instruction and maintenance manual



ALL-IN-ONE



INDEX

Chapter 1 GENERAL RULES AND WARNINGS 1.1 Tests and warranty 1.2 Introduction 1.3 Product description 1.4 General safety regulations 1.5 Client's responsibilities 1.6 Service requests 1.7 Instructions for spare parts orders	Pag. 01 Pag. 01 Pag. 02 Pag. 02 Pag. 02 Pag. 02 Pag. 03
Chapter 2 SPECIFICATIONS 2.1 Product configurations 2.2 Noise level 2.3 Materials and refrigerants	Pag. 03 Pag. 03 Pag. 03 Pag. 03
Chapter 3 INSTALLATION 3.1 Transport and handling 3.2 Positioning 3.3 Wiring and electrical connection 3.4 Set-up operations 3.5 Reinstallation 3.6 Dismantling and disposal	Pag. 04 Pag. 04 Pag. 05 Pag. 05 Pag. 06 Pag. 07 Pag. 07
Chapter 4 OPERATION 4.1 Applications and intended use 4.2 Safety and accident prevention 4.3 Safety data plates and guards 4.4 Operating limits	Pag. 07 Pag. 07 Pag. 07 Pag. 08 Pag. 08
Chapter 5 ORDINARY AND PLANNED MAINTENANCE 5.1 Basic safety regulations 5.2 Cleaning operations 5.3 Periodic checks 5.4 Precautionary measures after long disuse 5.5 Preventive maintenance	Pag. 08 Pag. 08 Pag. 08 Pag. 09 Pag. 09 Pag. 09
Chapter 6 EXTRAORDINARY MAINTENANCE AND REPAIRS	Pag. 10
Chapter 7 DIAGNOSTICS	Pag. 10
Chapter 8 DESCRIPTION	Pag. 11
Chapter 9 OPERATION 9.1 Installation 9.2 First Start-up 9.3 Locked Home Screen 9.4 Unlocked home Screen	Pag. 13 Pag. 13 Pag. 13 Pag. 13 Pag. 16
Chapter 10 RECIPES 10.1 Recipe Screen 10.2 Start of Existing Recipe 10.3 Creation of New Recipe 10.4 Change and following Saving of Existing Recipe 10.5 Deleting of a Recipe 10.6 Running Recipe	Pag. 19 Pag. 20 Pag. 29 Pag. 30 Pag. 32 Pag. 34 Pag. 35
Chapter 11 SHORTCUTS 11.1 Start_stop 11.2 Defrost 11.3 Air exchange 11.4 Rotation (optional) 11.5 Alarms 11.6 Probes 11.7 Sterilization (optional)	Pag. 39 Pag. 39 Pag. 40 Pag. 41 Pag. 41 Pag. 42 Pag. 44 Pag. 46
Chapter 12 SETUP 12.1 Date and time 12.2 Language 12.3 Connections 12.3.1 Transfers 12.3.2 Info 12.3.3 Firmware Update 12.3.4 Reset 12.4 Parameters	Pag. 47 Pag. 48 Pag. 49 Pag. 49 Pag. 51 Pag. 51 Pag. 51
Chapter 13 SERVICE 13.1 Password access to the parameters menu 13.2 Seasoning Parameters 13.3 Alarm diagnostics 13.4 Replacement of U.V. Lamp	Pag. 52 Pag. 53 Pag. 53 Pag. 55 Pag. 56

Thank you for choosing this product.

Please read the warnings contained in this manual carefully, as they provide important information regarding safe operation and maintenance.

Make sure to keep this manual for any future reference by the various operators.

In some parts of the manual, the 4 be observed for safety purposes.

symbol appears, indicating an important warning that must

BOUNDARY CHARACTERISTICS OF OPERATION

The refrigerated cabinet has been designed and built to operate in optimal conditions at temperatures from +10°C to +32°C, with adequate air circulation. In places with characteristics that are different from the requirements, the stated performance cannot be guaranteed.

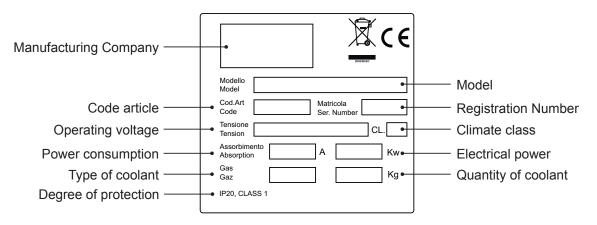
The supply voltage must be 230V +/- 10% 50Hz as standard, or as indicated on the EC label.

The refrigerated cabinet may only be used within the temperature limits specified by the manufacturer; to identify the correct operating range, read the letters after the last digit of the model shown on the EC label and compare it with the table below:

Serie	Temperature
ALL IN ONE	0° +30°C / 40÷95% U.R.

The refrigerated cabinet complies with the European directives as described in detail in the Annex "EC Declaration of Conformity"

The technical specifications of the refrigerated cabinet are listed on the CE label inside the motor compartment, on the body wall



ATTENTION: any request for intervention, technical support and spare part must refer to the **SERIAL NUMBER** on the CE label, on the manual cover or on the compressor motor. The producer declines any responsibility for any improper or not reasonably foreseen usage of the refrigerated cabinet and for any operation carried out by neglecting the indications listed on the manual.

Section 1: GENERAL INSTRUCTIONS

1.1 TESTING AND GUARANTEE

The appliance is tested in our works in compliance with established regulations and then shipped ready for use.

The guarantee is valid for a full 12 months from the date of delivery of the appliance and it covers the repair or replacement of any defective parts, with the exception of electrical and electronic components.

Manifest defects or differences with respect to the client's order must be communicated to the manufacturer within five days from the receipt of the goods or they will not be covered by the guarantee terms.

Any hidden or other defects must be communicated to the manufacturer within five days from the time that they are discovered and, in any event, within the maximum guarantee term of 12 months. The purchaser shall be entitled only to request repair or replacement of the goods. The purchaser is not entitled to claim compensation for direct or indirect damages of any whatsoever nature. In any case, the right of reparation or replacement of materials will have to be exercised within the warranty maximum time limit of 12 months from delivery date.

Repairs or replacement of defective materials will be carried out at the manufacturer's works; material returned to the manufacturer must be shipped carriage paid and will be returned to the purchaser carriage forward.

1.2 INTRODUCTION

This manual has been prepared with the scope of supplying all the instructions required for the correct use of the appliance and to maintain it in optimal condition. It also contains important user safety information.

The following professional roles are explained in order to define the responsibilities of each:

Installer: a qualified technician who positions the appliance and places it in service it in accordance with the instructions in this manual.

User: the person who, after reading this manual carefully, operates the appliance in accordance with the intended use specified in this manual.

Users' responsibilities:

- to ensure that food products are conserved at suitable temperatures and not exceeding the permitted period of time
- to be aware of the regulations governing the conservation of food and to observe any whatsoever hygiene indications that may be applicable.

The user is obliged to read the manual attentively and refer to the information in the manual at all times.

Particular attention must be paid to the contents of heading 1.4 **General Safety Warnings**.

Routine Maintenance Technician: qualified technician able to perform routine maintenance of the appliance by following the instructions in this manual (see section 5).

Special Maintenance Technician: qualified technician, authorized by the manufacturer to perform extraordinary maintenance of the appliance (see section 6).

The symbol \triangle appears at certain points in the manual to draw the reader's attention to important safety information.

The manufacturer declines any whatsoever responsibility in the case of improper use of the appliance deviating from the reasonably construed intended use, and for all operations carried out that are not in compliance with the instructions laid down in the manual.

This manual must be conserved in a place that is accessible and known to all operators (installer, user, routine maintenance technician, special maintenance technician).

This manual must not be reproduced or divulged, in whole or in part, using any whatsoever means or in any whatsoever form.

1.3 PRODUCT DESCRIPTION

The appliance comprises a modular single body with panelling in various materials and insulation in expanded polyurethane foam, density 42 kg/cu.m. The appliance instruments are located on the front panel which closes the front of the motor unit, inside which the condenser unit and electrical wiring can be housed. The refrigerator interior is fitted with suitable supports for wire shelves (grids) and/or other accessories. The doors are fitted with an automatic return device and magnetic seal elements. During the design and construction stage all measures have been adopted to implement total safety including radiused interior corners, funnel-shaped base panel to convey condensate to exterior, no rough surfaces, fixed guards protecting moving or potentially dangerous parts.

1.4 GENERAL SAFETY REGULATIONS

Read this manual carefully and follow the prescriptions contained herein.

The user assumes full responsibility in the case of operations carried out without observing the instructions in the manual.

Primary general safety regulations:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- make sure that the appliance is not used by children or unsuitably qualified persons
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug
- in the case of faults or malfunctions, switch off the appliance and do not attempt to repair it yourself. All service and repair operations must be performed exclusively by suitably qualified authorized technicians.

1.5 CLIENT'S RESPONSIBILITIES

The customer is required to:

- execute the electrical and hydraulic connection of the appliance
- prepare the place of installation
- provide consumable materials for cleaning
- perform routine maintenance
- Provide adequate protection for pipes and cables external to the appliance.

In the case of power failures or malfunctions do not open the doors and drawers in order to maintain uniform temperature inside the unit. If the problem persists for more than a few hours, move the food contents to a more suitable place.

1.6 CLIENT SERVICE REQUESTS

For all technical problems and any requests for technical service, refer exclusively to your local dealer.

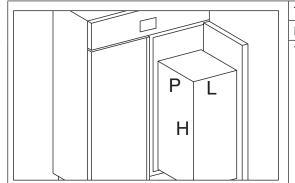
1.7 ORDERING SPARE PARTS

Spare parts orders must be made by consulting the relative spare parts catalogue which gives the correct description of the part, the part reference code and the serial number of your appliance. Consult your dealer.

Section 2: SPECIFICATIONS

2.1 PRODUCT CONFIGURATION

The appliance is designed solely for the preservation of food products (see heading 4.1). The products must be stored in observance of the load limits shown in the table and in figure 1 in order to ensure efficient air circulation inside the appliance (fig.1).



Туре	Load limits mm		
Model	L	Н	Р
700-1500	530	1500	650

fig.1

Model	Kg
700 S	100
700 F	100F
1500 S	200
1500 F	200F

2.2 NOISE LEVEL

The noise level of the appliance is below 70 dB (A).

2.3 MATERIALS AND REFRIGERANTS

The materials in contact or which may come into contact with foodstuffs comply with the relevant directives. The refrigerated cabinet has been designed and built in such a way that these materials can be cleaned before each use.

GAS R290: We hereby inform our clients that this product employs an HC (Hydrocarbon) refrigerating gas classified as A3, i.e. flammable. Devices with flammable refrigerating gases are identified with the following label on the device:



IMPORTANT SAFETY INSTRUCTIONS AND CAUTIONS: Although the gas quantity contained in the device complies with the norms on the subject, more precautions in the management of the device are requested, most of all when works on the refrigerating system have to be carried out:

 The refrigerating circuit must not be damaged to avoid leaks, because the contact between air and gas entails the risk of fires in case of presence of a suitable primer, such as open flame or sparks coming from electrical appliances. If any replacement of components is necessary, demand only original and homologated parts for specific use.

- In case of technical works due to malfunctions, please only contact qualified personnel who can carry them out according to the compulsory safety norms for this kind of gas. The tools used for working on the device must comply to the same rules concerning the refrigerating system components: no electrical appliances nor flames must be used in the presence of flammable gases.
- Specific works regarding vacuum and system charge will have to be carried our with the suitable tools for the type of gas, avoiding the presence of flammables and the contact with flames or sparks.

GAS R452A: The refrigerant fluids used R452A conform with the new EU regulation 517/2014 F-Gas R452A is a fluorinated gas, it has a GWP potential of 2141

The symbol indicates that this product must not be treated as household waste. To prevent potential negative consequences for the environment and human health, make sure that this product is properly disposed of and recycled. For more information regarding the disposal and recycling of this product, please contact your distributor, after sale Service, or waste treatment Service.

Section 3: INSTALLATION

3.1 TRANSPORT AND HANDLING

The appliance must be transported and handled exclusively in a vertical position, in observance of the instructions printed on the packing.

This precaution is necessary to avoid contamination of the refrigerant circuit with compressor lube oil with resulting valve and heat exchanger coil failure and problems starting the electric motor. The manufacturer accepts no responsibility for problems due to transport executed in conditions other than those specified above.

The accessories supplied with the appliance (runners, wire shelves, basins, trays) are supplied in separate packs shipped inside or separately from the unit.

The appliance is secured to a wooden base by means of plastic ties (fig.2) and wrapped in polyethylene or packed in a carton, cage or crate.

Refer to heading 3.6 for information on correct disposal of packing material.

The appliance must be handled using a fork lift truck or a pallet truck with suitable forks (fork length at least equal to 2/3 length of unit).

Maximum permissible stacking and the position of the centre of gravity are shown on the information label on the packing.

3.2 POSITIONING

Incorrect positioning can cause damage to the appliance and generate hazardous conditions for personnel. The installer must therefore observe the following general regulations:

- make sure you maintain a minimum of 3 cm from the walls
- the room must be well ventilated
- keep well away from sources of heat
- avoid direct sunlight

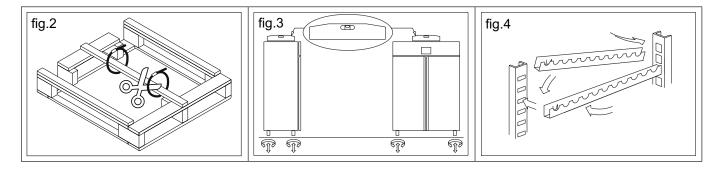
Specific positioning procedures

- remove packing material (polyethylene, cardboard box, crate, cage)

A Polyethylene is potentially dangerous to children

- remove accessories from inside the unit.

Removing the wooden base: tilt the unit sideways and cut the plastic ties (fig.2) lift and remove the base.



\(\Delta\) use gloves when handling wooden packing materials and the wooden base to protect the hands from splinters

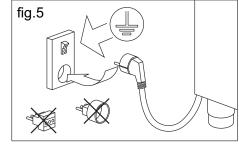
- position the appliance with the help of a spirit level. Adjust the leveling feet on the metal base of the unit if necessary (fig.3)
- remove the protective PVC film from the external surfaces of the unit
- position the shelf runners in the holes in the uprights (fig.4)
- insert the food shelves in the runners
- insert the condensate collection tray in the relevant runners located beneath the unit

3.3 WIRING AND ELECTRIC / WATER CONNECTION

The electrical plant and electrical hook-up operations must be performed by a qualified electrician

For safety reasons adhere to the following indications:

- check that the electrical plant is suitably sized for the absorbed power of the unit
- if the electrical socket and the plug on the appliance power cord are incompatible, change the plug with a suitable component, ensuring the replacement part is of the approved type
- do not use reductions or multi-way adapters (fig.5)



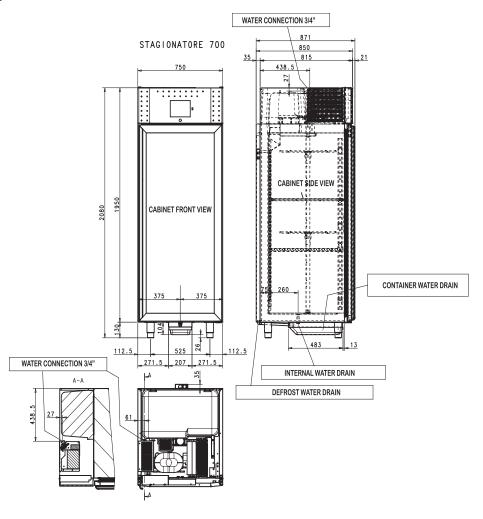
It is important to connect the appliance correctly to an efficient earth system executed in compliance with the relevant legislation.

Connection to the water supply network:

All the Seasonig cabinets need to be connected to the water supply network to absolve the humidity functions. The connection to the water supply network must be execute according to manufacturer's instructions and to professional qualified personal. The 34 inch connection to the water supply network is placed in the engine compartment, at 200 cm high from the ground. This cabinet need to be exclusively connected to cold water, not distilled and demineralized. The working pressure needs to be between 0,1 to 0,3 MPA.

It is advisable to install a tap to stop the water flow in case of maintenance.

If water is a little bit tough is recommended to install a water softener. Any possible solid particles, sands for example, can be removed installing a mechanic filter that it must be periodically checked and clean.



3.4 SET-UP OPERATIONS

To avoid errors and accidents, perform a series of checks for possible damage sustained during transport, installation and hook-up operations before starting up the unit.

Preliminary Checks

- -check the condition of the power cord (no cuts or chaffing)
- -check that the feet, door hinges and shelf supports are stable
- -check the condition of internal and external components (pipelines, heat exchanger elements, fans, electrical components, etc.); check also that all parts are firmly fixed into position
- -check that the door seals and drawers are not damaged (broken or scratched) and that the doors close and are sealed properly

The user must also observe the following instructions to obtain the best operation from the appliance:

1 Indications for Optimal Duty

- do not block the motor compartment air vents
- make sure doors are kept closed
- keep the defrost water drain outlet clear
- limit the frequency and duration of opening; each time the door is opened the internal temperature will alter
- perform routine maintenance regularly (see section 5).

3.5 RE-INSTALLATION

Observe the following procedure:

- switch off the appliance from the main switch
- disconnect the power cord from the electrical outlet
- handle the appliance in accordance with the instructions in heading 3.1
- follow the instructions in headings 3.2 and 3.3 for positioning and hook-ups in the new location

3.6 SCRAPPING AND DISPOSAL

Scrapping and disposal of the appliance must be carried out in full observance of established legislation in your country.

Section 4: OPERATION

4.1 APPLICATIONS AND INTENDED USE

4.1.1 Intended Use and Permitted Use

The appliance is designed and built for refrigerating, preserving and storing food products on commercial premises.

4.1.2 Improper and Unauthorized Use

- 1) treatment of products that require constant monitoring with indications in the case of temperature changes or interruption of refrigeration. For example:
- medicinal products
- blood and plasma
- thermo-sensitive chemical reactants
- 2) use in places subject to explosive atmosphere

All uses except authorized uses of the appliance shall be construed as "improper use" for which the manufacturer declines all responsibility.

4.2 SAFETY AND ACCIDENT PREVENTION

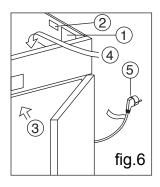
The appliance embodies various features designed to assure the safety and protect the health of the user. The following list describes the protections adopted against mechanical risks:

- stability: the appliance is designed and built so that even with the shelves fully extracted in the intended conditions of operation it will remain stable so that it can be used with no risk of tipping, falling or sudden movement
- surfaces, edges, corners: accessible parts of the appliance have no sharp corners, sharp edges or rough surfaces that could cause injury
- moving parts: moving parts of the unit are designed, built and configured to avoid risk. Moving parts are protected by fixed guards to prevent accidental contact that could result in injury Measures adopted for protection against additional risks:
- **electrical power:** the appliance is designed, built and fitted out with the aim of preventing the risk of electric shock in compliance with established safety legislation
- noise: the appliance is designed and built to reduce risks related to the emission of airborne noise to a minimum

4.3 SAFETY DATAPLATES AND GUARDS

It is strictly forbidden (fig.6):

- to tamper with or remove the evaporator cover that protects the user from the risk of cutting on the heat exchanger fins
- to remove the dataplate fixed to the inside edge of the motor housing showing technical specifications (1) and earth connection warning (2)
- to remove the dataplates on the evaporator unit cover near the electrical wiring inside the motor housing which warn the user to disconnect electrical power before working on appliance (3)
- to remove the dataplate fixed inside the motor compartment indicating earthing (4)
- to remove the data tag fixed to the power cord showing the type of power supply (5) The manufacturer declines all responsibility for safety of the appliance if the above recommendations are not observed.



4.4 OPERATING LIMITS

The appliance is designed and built to work in ambient temperatures Max. 38°C. If the ambient conditions are different it will not be possible to achieve the performance levels specified by the manufacturer.

The standard power supply must be 230V +/- 10% 50Hz.

Section 5: ROUTINE AND PROGRAMMED MAINTENANCE

The information in this section regards the user, or other non-specialized personnel, and the routine maintenance technician.

5.1 BASIC SAFETY REGULATIONS

We summarize the safety regulations already shown in heading 1.5 to ensure that the user or maintenance technician can perform the work in conditions of total safety:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug

5.1.1 Prohibited: Removal of Guards and Safety Devices

It is strictly forbidden to remove guards or safety devices when performing routine maintenance work. The manufacturer disclaims all liability that may arise if this regulation is not observed.

5.1.2 Indications on Emergency Measures in Case of Fire

- disconnect the appliance from the electrical power socket or switch off the master switch on the electrical mains line
- do not use water to douse fires
- use Co2 extinguishers

5.2 CLEANING THE REFRIGERATOR

The unit is designed to preserve food products so it is important to keep it clean for reasons of hygiene and health. The appliance is thoroughly cleaned in our factory before delivery. We recommend, however, that you clean the interior of the appliance before use. Before cleaning the appliance make sure the power cord is disconnected.

For daily cleaning, it is recommended to use the Everlasting **Natural Fridge Cleaner** (Code PA2930), a natural-based product for industrial cleaning, to be sprayed or misted directly onto the surface to be treated as per the instructions.



Spray and let it act for a few seconds.



Remove, preferably in one direction, with a dry cloth or multipurpose paper.

Natural Fridge Cleaner allows you to clean your equipment without emptying it: safe for you, your food, and leaves no harmful residues on surfaces or food.

The product is suitable for use on food contact surfaces, including aluminum, steel, and marble. It can also be used on worktops, kitchens, canteens, and food industries.

The product is available at authorized Everlasting S.r.l. and Meatico retailers.

5.2.1 Cleaning of the Cabinet Inside and Outside.

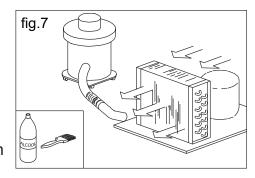
For this purpose, the following are indicated

- cleaning products: water and non-abrasive neutral detergent. DO NOT USE SOLVENT OR THINNERS
- cleaning method: use a cloth or sponge soaked in a suitable cleaning product to clean the interior and exterior parts of the cabinet
- sanitation: do not use substances that could alter the taste and smell of stored food
- rinsing: use a cloth or sponge soaked un clean water. DO NOT USE WATER JETS
- frequency: once a week or at different intervals in accordance with the type of food product conserved.

5.2.2 Cleaning the Condenser

The condenser will work less efficiently if it is obstructed with foreign material so it must be cleaned once a month. Before cleaning the condenser switch off the appliance, disconnect the power cord and proceed as follows:

Top-mounted unit: -for units with fixed upper front panel, use a safe step ladder for direct access to the condenser located at the top of the appliance. Use an air jet or a dry brush and, working with up and down movements (fig.7), remove any dust or fluff that has deposited on the heat exchanger fins. In case of greasy deposits, use a brush soaked in benzene or alcohol. For units with overturning upper front panel, unscrew the fixing screw and turn the upper panel on the top hinges. Proceed then with the cleaning as for the models with fixed upper panel. Start the appliance after cleaning.



During this operation use the following personal safety measures: safety glasses, respirator mask, chemical resistant gloves (benzine - alcohol).

5.2.3 Control panel cleaning

Turn the device off and unplug the power cord before carrying out this operation. Clean the screen with a smooth microfiber cloth, proceeding gently with circular movements in one direction only (in the case of stubborn dirt, slightly moisten the cloth with water).

N.B: Do not spray aerosol cleaners or liquids directly on the control panel, as they could irreparably damage its internal electronic components.

5.3 PERIODIC CHECKS

The following areas of the appliance or component assemblies require periodic checking:

- condition and efficiency of the door sealing elements
- condition of hinges and correct fixing of the doors
- condition of electrical cables and electrical parts

5.4 PRECAUTIONARY MEASURES FOR PROLONGED DISUSE

If the appliance is to remain unused for more than 15 days proceed as follows:

- switch off the appliance and disconnect it from the electrical supply
- clean the interior of the cabinet, shelves, trays, runners and supports, paying special attention to critical areas such as articulations and magnetic sealing strips in accordance with the indications in heading 5.2.
- leave doors slightly open to prevent accumulation of residual humidity

5.5 PREVENTIVE MAINTENANCE

5.5.1 Start-up after Prolonged Disuse

Before starting the appliance after prolonged disuse perform preventive maintenance. Clean the unit thoroughly as described in heading 5.2.

5.5.2 Checking Warning and Control Devices

Check the correct running of the controls according to what is reported in the "Instruction and Maintenance Manual" enclosed. We recommend you to take out a service or maintenance contract with your dealer covering:

- cleaning of the condenser
- keeping a check on the refrigerant charge
- checking complete cycle operation
- electrical safety

Section 6: SPECIAL MAINTENANCE AND REPAIRS

All maintenance work not described in the previous sections must be considered "Special Maintenance". Special maintenance interventions and repairs are to be performed exclusively by specialized technicians authorized by the manufacturer.

The manufacturer declines all liability in the case of work performed by the user or unauthorized persons, or if non-original spare parts are fitted to the appliance.

Section 7: DIAGNOSTIC

In case these problems arise, please follow the instructions stated in the following chart:

PROBLEM	POSSIBLE CAUSE	SOLUTION
Appliance does not switch on	power failure	check plug, socket, fuses, electrical line
	other	contact technical service
Refrigeration unit does not start	set temperature has been reached	set new temperature
	defrosting cycle is in progress	wait for cycle to end, then switch off and on again
	control panel breakdown	contact technical service
	other	contact technical service

Refrigeration unit runs constantly,	room is too hot	provide better ventilation
but does not reach set temperature	condenser is dirty	clean the condenser
	refrigerant needs to be recharged	contact technical service
	condensing fan is not running	contact technical service
	inefficient door seals	check seals / how goods are placed inside the cabinet
	evaporator is coated with ide	manual defrosting
	other	contact technical service
Refrigeration unit dos not stop at set temperature	control panel breakdown	contact technical service
	temperature probe breakdown	contact technical service
	improper use	see section 3.4
Ice block on the evaporator	defrost resistance breakdown	contact technical service
	defrost probe breakdown	contact technical service
	obstructed drain	clean the drain and the drain outlet
Water or ice deposits in the drip tray	refrigerated counter is not levelled	check levelling

Section 8: SEASONING CABINET

Seasoning cabinet has been designed to recreate the necessary and optimal temperature and humidity conditions to season salami or cheese, regardless of external weather conditions.

For instance, seasoning salami consists in giving a product a set time for resting in suitable climate conditions, so that it can reach the best outcome in terms of organoleptic qualities, aroma and taste in the shortest time possible.

Products must be hanged on special supports placed inside the Seasoning cabinet, so that air can flow freely and that salami are not touching one the other.

It is also advisable to season products having the same size and type, to ensure the best result.

The Seasoning cycle can be divided into 3 main steps:

1) STEWING/DRIPPING

It lasts just a few hours: the diffusion of the aroma inside the meat is facilitated, therefore activating the natural fermentation process and the loss of water due to gravity.

2) DRYING

It takes about six days. During this phase, the product loses a huge quantity of water. Such loss should be as uniform as possible, alternating work and rest phases, in order to keep the gut elastic and therefore let the water contained inside the meat reach the external part of the salami.

3) SEASONING

The duration of this phase depends on the type of product. The right regulation of humidity helps proliferating a natural enzymatic phenomena called "good mould", favouring the complete maturation of the product, and capable of guaranteeing its storage and healthiness.

The controller manages temperature and humidity in seasoning and storage environments.

It is equipped with a 7" TFT display with capacitive touch screen combined with a highly-advanced software and an extremely user-friendly interface.

As a whole, the system allows for controlling the following features: temperature (hot / cold) and humidity (humidification / dehumidification), defrosting (electric), recoveries, dripping, air exchange either programmed or automatic, activation of internal air recirculation for destratification and product oxygenation.

Main features:

- 7" TFT display with high resolution (800x480 WVGA), LED backlighting and capacitive touch screen.
- Devices: USB 2.0.
- Acoustic signals.
- High quality design and icons.
- Dedicated home page background according to the ongoing recipe (cold cuts, cheese).
- Touch screen interface with gestures, for an even more intuitive control.
- Clock and calendar (RTC).
- Multilingual.
- Software updating from USB.
- Alarm history combined with popup warning messages.
- Advanced HACCP function with detailed memory of temperature / humidity alarms triggered.
- 150 completely customizable programs can be stored on the device.
- Possibility of exporting and importing programs and parameters on USB.
- Automatic management of 20 phases for each program.
- Manual or automatic functioning with execution of the selected program.
- Diagram of the program in execution with possibility of displaying its progression (completed phases, phases in progress and phases yet to be executed) and of representing the set values and all remaining times.
- Temperature adjustment range: -2°C/+30°C; humidity adjustment range: 0-100 R.H.%.
- Possibility of excluding heat and humidity for managing cell-only storage with the activation of defrost cycles.
- CANBUS connection.



Chapter 9: INSTALLATION AND FIRST STARTUP

9.1 Installation

Before starting the refrigerating cabinet, it is necessary to check that all connections have been carried out as per chapter 3.3.

9.2 First start

Once the refrigerating cabinet is connected to the power supply, the machine will begin the startup. The display will show the uploading screen of the system software for some seconds, and then the splash screen (fig. 8) will be displayed.

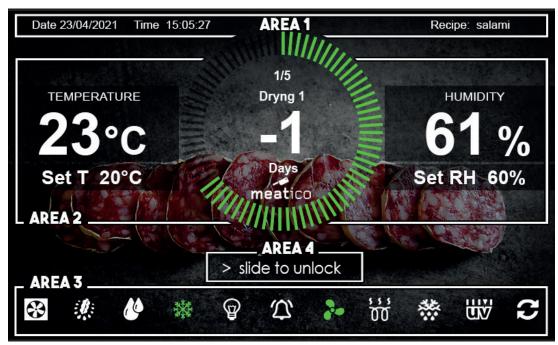


fig.8

When started, the refrigerator cabinet is in STOP condition with Refrigerator as loaded recipe.

9.3 Locked Home Screen

Locked Home Screen (fig.9) is a mere visualization screen that allows increasing the safety of the current process and avoiding accidental parameter/setting changes



fiq.9

ATTENTION: to change LANGUAGE or DATE and TIME, refer to paragraphs 12.1 - 12.2

It can be divided into 4 areas:

- -AREA 1: The current date and time are displayed; to change the visualization format see paragraph 12.4 The name of the currently running recipe is displayed on the right.
- AREA 2: The main information about the running recipe is displayed in this area:

<u>TEMPERATURE</u>: The internal temperature of the refrigerator cabinet is displayed in big type in the rectangle on the left. In the underlying rectangle, Set T indicates the set-up temperature in the current phase of the recipe.

<u>HUMIDITY</u>: The internal relative humidity of the refrigerator cabinet is displayed in big type in the rectangle on the right. In the underlying rectangle, Set RH indicates the set-up humidity in the current phase of the recipe.

<u>TIME:</u> In the middle of AREA 2, a circular crown composed of various wedges highlights the time progress status of the running phase. With the passing of time, the wedges become green, and when all the wedges are highlighted, the recipe phase is completed and next phase starts. In numerical terms, the value displayed in the middle of the crown represents the remaining time to the end of the running phase and it can be stated in Day, Hours, Minutes.

The number of the running phase (each recipe can be composed of different phases), its name and the remaining time to phase change are displayed inside the crown.



fig.10

The example (fig.10) indicates that the first phase (Dry-Aging 1) of the two total phases composing the recipe is running, and that 1 day is left to the beginning of phase 2.

-AREA 3: The icons related to the statuses of the digital outputs of the refrigerator cabinet are displayed:



- 1- Air Exchange
- 2 Recovery
- 3 Humidification
- 4 Cooling
- 5 Lighting
- 6 Alarm
- 7 Ventilation
- 8 Warming
- 9 Defrost
- 10 Sterilization
- 11 Cold Cuts Rotation

The output status can either be ACTIVE if it is green-coloured or NOT ACTIVE if it is white-coloured. The last two icons on the right (sterilization and rotation) can be grey-coloured if the purchased the refrigerator cabinet model does not respectively include the germicide UV Lamp and the Cold Cuts Whirligig rotation system.

- AREA 4: > slide to unlock

Sliding on the writing allows the unlocking of the device to access the Unlocked Home Screen



9.4 Unlocked Home Screen

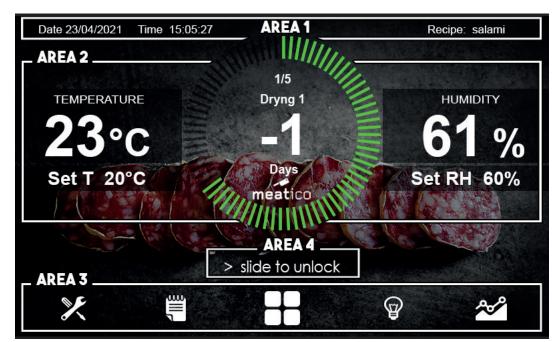


fig.12

The Unlocked Home Screen is an active screen, i.e. has clickable keys, unlike the Locked Home Screen.

It can be divided in 4 areas (fig.12):

- **-AREA 1:** It displays the current date and time; to change the visualization format see paragraph 12.1. The name of the currently running recipe is displayed on the right.
- AREA 2: The main information about the running recipe is displayed in this area:

<u>TEMPERATURE</u>: The internal temperature of the refrigerator cabinet is displayed in big type in the rectangle on the left. In the underlying rectangle, Set T indicates the set temperature in the current phase of the recipe.



<u>HUMIDITY:</u> The internal relative humidity of the refrigerator cabinet is displayed in big type in the rectangle on the right. In the underlying rectangle, Set RH indicates the set humidity in the current phase of the recipe.



Unlike the Locked Home Screen, the SET T and SET RH keys are clickable and allow for a quick change of temperature and relative humidity Set Points of the running phase. Click on the keys until fully green-coloured. (fig.13)



fig.13

The upper box will respectively display the TEMPERATURE and HUMIDITY Set Points of the running phase; to change the values, click on the + or - keys and confirm by clicking on the SET T or ST RH keys until fully green-coloured. (fig.14)



fig.14

The abovementioned change procedure only affects the running recipes, and it does not overwrite the corresponding recipe that is saved in the archive.

<u>TIME:</u> In the middle of AREA 2, a circular crown composed of various wedges highlights the time progress status of the running phase. With the passing of time, the wedges become green, and when all the wedges are highlighted, the recipe phase is completed and next phase starts.

A RUNNING RECIPE KEY can be found inside the circular crown (fig.15).

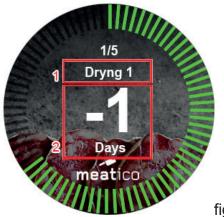


fig.15

The following data is graphically displayed on the Running Recipe Key:

- 1 The name of the running phase
- 2 The remaining time to the end of the running phase, stated in Day, Hours, Minutes, depending how far in time the end of the phase is.

Click on the Running Recipe Key to quickly access the complete screen of the running recipe.



From this screen it is possible to make quick changes on the parameters of the running recipe or carry out dedicated functions (see paragraph Running Recipe).

- AREA 3: In this area there are five keys to access different menus:



- 1 SETUP
- 2 RECIPES
- 3 SHORTCUTS
- 4 LIGHT: Click on the icon to turn on/off the light inside the refrigerator cabinet
- 5 DIAGRAM

- AREA 4: > slide to lock

Sliding on the writing allows the locking of the device to access the Locked Home Screen



CHAPTER 10: RECIPES

Click on the icon on the Unlocked Home Screen to access the Recipe Menu, where all recipes stored in the refrigerator cabinet are located. They are divided in three folders:

- CHEESE
- COLD CUTS.

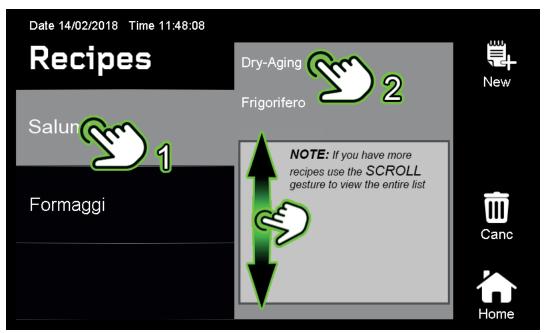


fig.16

Click on each folder

1 to open a drop-down list containing all the recipes belonging to the

category (fig.16). Select one of the recipes 2, to access the Recipe Screen, where all the information about the operation of the refrigerator cabinet in every phase of the recipe are displayed. (fig.17).

10.1 The Recipe Screen is divided in 3 areas (fig.17):

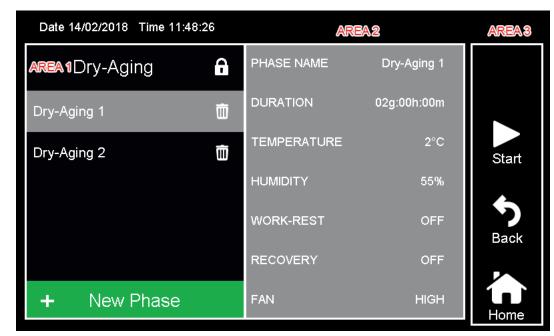
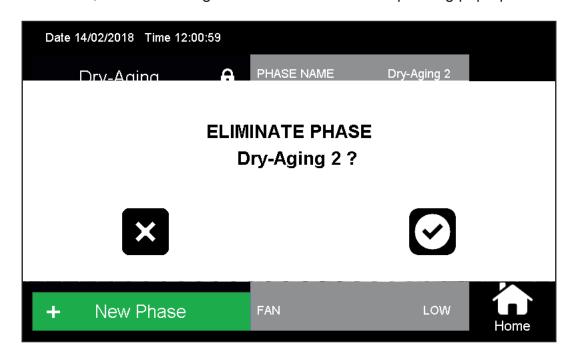


fig.17

- AREA 1:

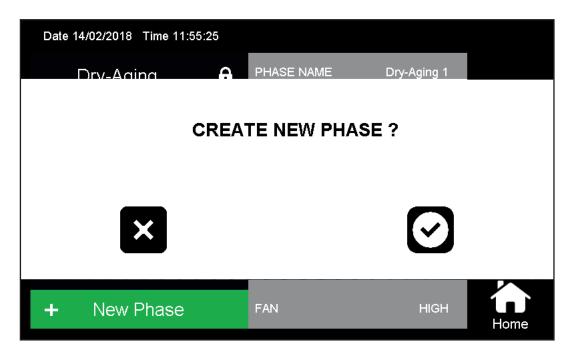
On top there is the name of the selected recipe with a padlock next to it, in case it is an Everlasting recipe already present by default in the refrigerator cabinet. The recipes belonging to this category cannot be modified; in case they are, they will have to be compulsorily saved with a different name than the one of the already existing recipe. Under the name of the recipe there is the sequence of all the phases composing the recipe. It is possible to remove a phase by clicking on the recycle bin icon next to the name, then confirming the removal on the corresponding pop-up.



It is possible to add a phase at the end of the previous ones by clicking on the + New Phase key,

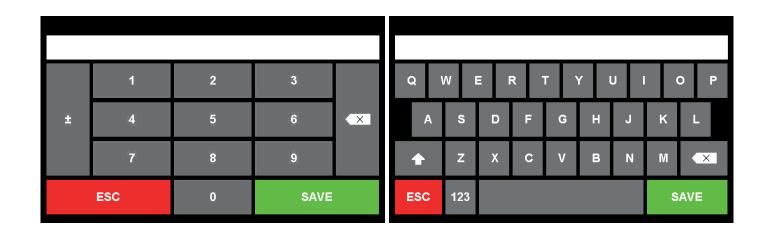


Then confirming the creation on the corresponding pop-up.



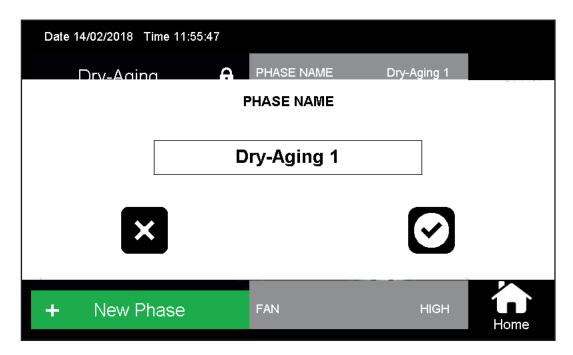
- AREA 2:

Click on each phase on AREA 1 to display the corresponding PHASE PARAMETERS on AREA 2. Each parameter is clickable and opens a pop-up from which it is possible to change its content. The entry of numeric values or names is carried out by two appearing keyboards, depending on the variable to be modified.



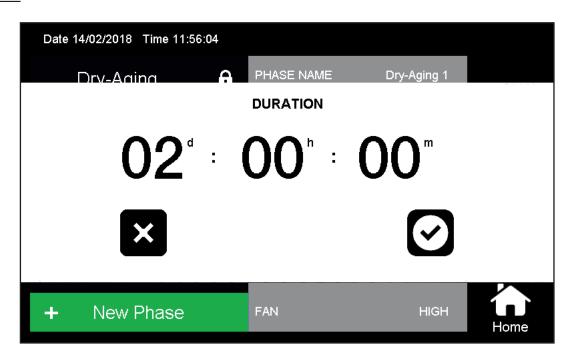
PHASE PARAMETERS:

PHASE NAME



Allows changing the name of the selected phase. Click on the name on the pop-up and type the name of the phase on the appearing keyboard. Push the key to confirm.

DURATION

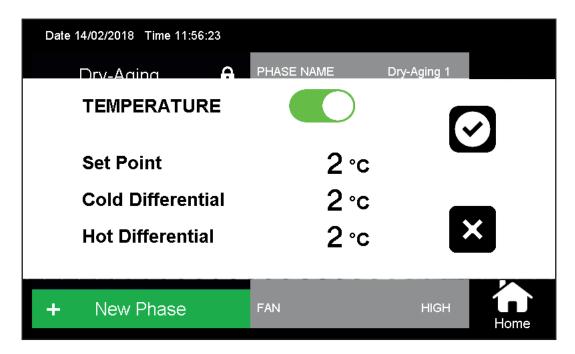


Allows setting the duration (expressed in days, hours, minutes) of the selected phase.

Click on each value of d h m to open the numeric keyboard and change its content.

Push to confirm, or to cancel and return to the previous values.

TEMPERATURE



Allows setting the temperature to be kept inside the refrigerator cabinet in this phase.

The first step is the activation or deactivation of temperature control:

In case in this phase of the recipe you wish to control the temperature inside the refrigerator cabinet, it is necessary to move the selector next to the TEMPERATURE name to the ACTIVE (green) status. Vice versa, if in this phase you do not need to actively control the temperature, move the selector to the NOT ACTIVE (black) status.

By clicking on the icon it is possible to go from active to not active status, and vice versa.

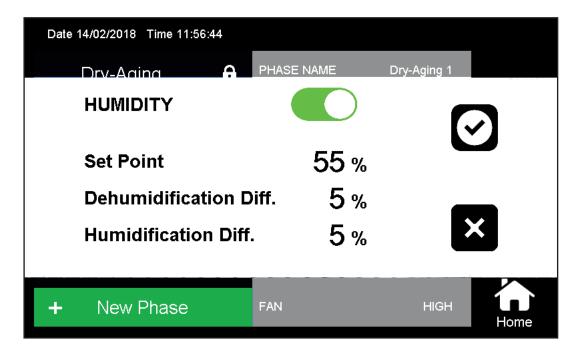
Then there are 3 parameters to be set:

- Set Point: it is the Temperature target to be kept inside the refrigerator cabinet.
- Cold Differential: it is the higher temperature delta compared to Set Point, defining when the compressor should intervene to restore the internal temperature of the refrigerator cabinet to the set-up Set Point. Default value: 2°C
- Hot Differential: it is the lower temperature delta compared to Set Point, defining when the electric heater cables should be activated to restore the internal temperature of the refrigerator cabinet to the set-up Set Point.

Default value: 2°C

To change one of the three parameters, click on the corresponding value and type a new content on the appearing numeric keyboard. Push to confirm or to cancel and return to the previous values.

HUMIDITY



Allows setting the Relative Humidity degree to be kept inside the refrigerator cabinet in this phase.

The first step is the activation or deactivation of humidity control:

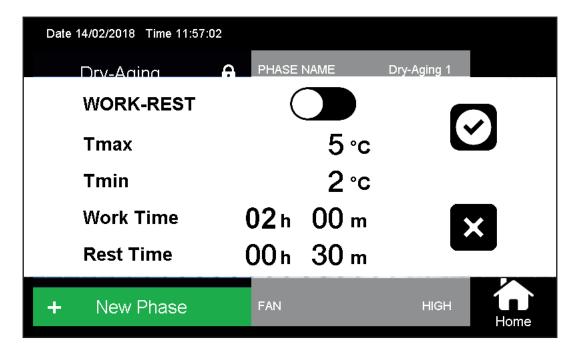
In case in this phase of the recipe you wish to control the relative humidity inside the refrigerator cabinet, it is necessary to move the selector next to the HUMIDITY name to the ACTIVE (green) status. Vice versa, if in this phase you do not wish to actively control humidity, move the selector to the NOT ACTIVE (black) status. By clicking on the icon it is possible to go from the active to the not active status, or vice versa.

Then there are 3 parameters to set:

- Set Point: it is the Relative Humidity target to be kept inside the refrigerator cabinet.
- Dehumidification Differential: it is the higher humidity delta compared to Set Point, defining when the compressor should intervene to restore humidity inside the refrigerator cabinet to the set-up Set Point. Default value: 5%
- Humidification Differential: it is the lower humidity delta compared to Set Point, defining when the humidifier should be activated to restore humidity inside the refrigerator cabinet to the set-up Set Point. Default value: 5%

To change one of the three parameters, click on the corresponding value and type a new content on the appearing numeric keyboard. Push to confirm, or to cancel and return to the previous values.

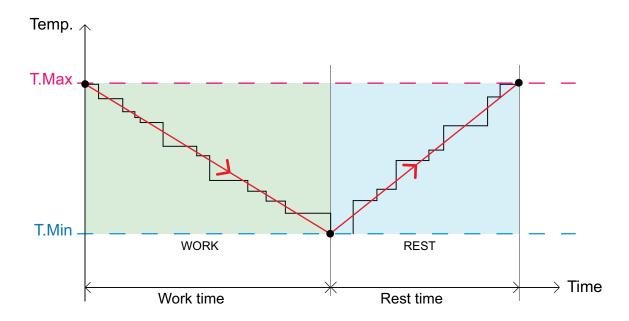
WORK-REST



Work-Rest is a particular temperature control alternating two conditions: Work period and Rest Period.

During Work, the refrigerator cabinet can linearly vary the internal temperature from initial Tmax to final Tmin within the set-up Work time, thanks to an algorithm activating the compressor and the heater cables. Then the Rest period starts and the refrigerator cabinet restores the temperature from Tmin to Tmax within the set-up rest time.

This alternation of periods of Work and Rest continues for the whole time of the selected phase.



The first step is the activation or deactivation of Work-Rest control:

In case in this phase of the recipe you wish to control the temperature inside the refrigerator cabinet according to the Work-Rest algorithm, it is necessary to move the selector next to the WORK-REST name to the ACTIVE (green) status, vice versa move the selector to the NOT ACTIVE (black) status.

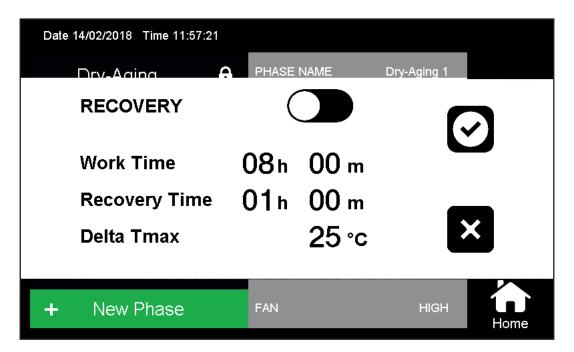
By clicking on the icon it is possible to go from the active to the not active status and vice versa. The Work-Rest control activation implies the deactivation of phase parameter control for Temperature, Humidity and Recovery.

Then there are 4 parameters to set:

- Tmax: is the start temperature of the Work period and of the end of the Rest period.
- Tmin: is the end temperature of Work period and of the start of Rest period.
- Work: is the duration of Work period.
- Rest: is the duration of Rest period.

To change one of the four parameters, click on the corresponding value and type a new content on the appearing numeric keyboard. Push to confirm, or to cancel and return to the previous values.

RECOVERY



The Recovery phase parameter allows dividing the selected phase in two periods: Work and Rest. During the Work period, the refrigerator cabinet controls the Temperature, Humidity and Ventilation parameters as previously set. After Work ends, the Recovery period starts: the refrigerator cabinet does not control any phase parameter and allows the product to naturally re-establish its conditions of thermodynamic balance. The alternation between Work and Recovery periods continues for the whole duration of the phase time.

The usage of Recovery is particularly indicated in the Drying phases of Cold Cuts, when during the Recovery period it is necessary to ensure that the water contained in the product gets to the external surface (cold-cut casing) by capillarity, so that it can be removed by evaporation during the following Work period.

The first step is the activation or deactivation of Recovery control:

In case in this phase you wish to activate the alternation of Work and Recovery period, it is necessary to move the selector next to the RECOVERY name to the ACTIVE (green) status, vice versa move the selector to the NOT ACTIVE (black) status.

By clicking on the icon, it is possible to go from the active to the not active condition and vice versa.

Then there are 3 parameters to set:

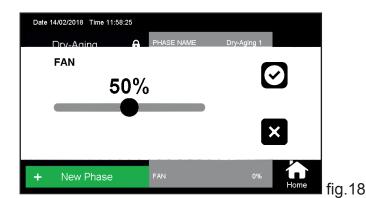
- Work: it is the duration of the Work period
- Recovery: it is the duration of the Recovery period
- Tmax Delta: it is a security threshold to preserve the integrity of products during the Recovery process. It refers in particularly to the maximum temperature not to be exceeded inside the refrigerator cabinet during the Recovery period. This maximum temperature is calculated from the set-up Set Point temperature of this phase, to which the Tmax Delta is added.

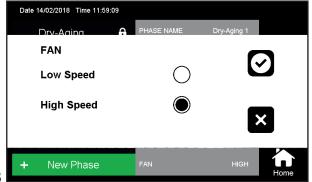
T max Recovery = T SetPoint + Tmax Delta

If this value is exceeded, the compressor is activated to restore the temperature under this threshold.

To change one of the three parameters, click on the corresponding value and type a new content on the appearing numeric keyboard. Push to confirm, or to cancel and return to the previous values.

VENTILATION





fia.19

Ventilation control can be of two types depending on if the electronics is installed on a the refrigerator cabinet or cold room.

In both cases, the speed of the fan blades that move the air inside the appliance is affected.

Low Speed: is particularly indicated in the phases in which it is advisable to avoid the product to be exposed to a too intense and direct airflow (for example, in the Cold-cut drying phase to avoid encrustment).

High Speed: is indicated in phases where a high reactivity in the control of temperature and humidity is required.

On a cabinet, (fig.19) it is possible to select low or high speed by clicking on the corresponding adjacent key. On a cold room (fig.18) it is possible to select the % of ventilation speed by moving the cursor along the selection bar.

100% corresponds to maximum speed, while 20% corresponds to the minimum settable speed.

Once the phase speed is set, push to confirm or to cancel and return to the previous setting.

- AREA 3:

AREA 3 (fig.17) contains function keys to carry out the following actions:



SAVE: allows saving a new recipe or saving an existing recipe that has been modified



START: allows starting the selected recipe



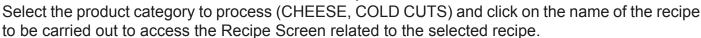
BACK: allows returning to the Recipe Menu



HOME: allows returning directly to the Unlocked Home Screen

10.2 Start of Existing Recipe

To start an existing recipe, thus already included in the archive folders, push the Recipes key on the Unlocked Home Screen to access the Recipe Menu screen.



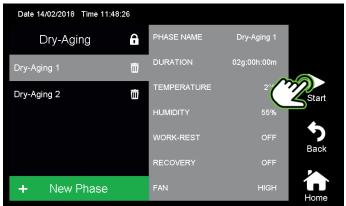


fig.20

In case no changes are to be made to the program, just click on the START icon (fig.20) an confirm the start of the recipe on the corresponding pop-up (fig.21)



l fig.21

The Unlocked Home Screen with the running recipe will automatically be displayed.

10.3 Creation of New Recipe

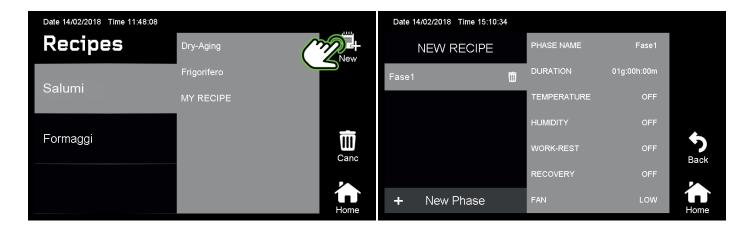
To create a new recipe, push the key



on the Unlocked Home Screen.

Select the category folder in which to add the new recipe from the Recipe Menu screen.

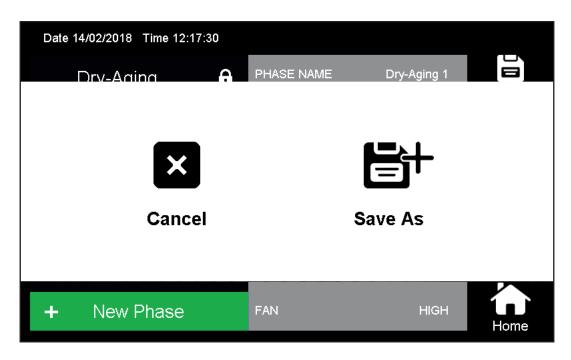
Push the New icon to access the New Recipe Screen.



The new default Recipe has only one phase and each phase parameter is deactivated.

Following any changes to the recipe, the SAVE icon will appear in the function keys

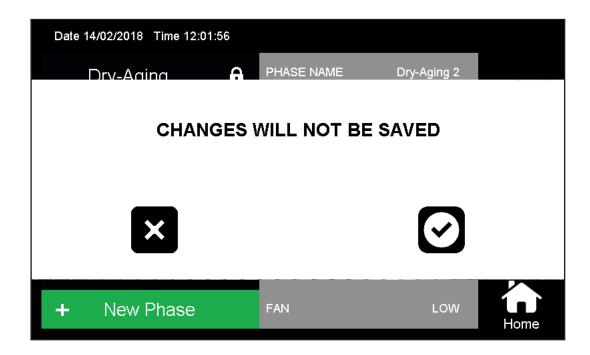
Once the desired phases are added and all phase parameters are set, push the SAVE key to save the recipe to the archive.



Click on the Save As icon on the appearing saving confirmation pop-up to open the keyboard on which to type the name to give to the recipe. Confirm the name on the keyboard by clicking on the green Save key.

The displayed recipe screen has the previously typed name on top left to confirm the correct saving process. The START key appears now on the function keys on the right, allowing carrying out the recipe.

By clicking on the BACK or HOME function keys before saving the recipe, a pop-up warning will appear to warn that the carried-out changes will not be saved and a new recipe will not be created.



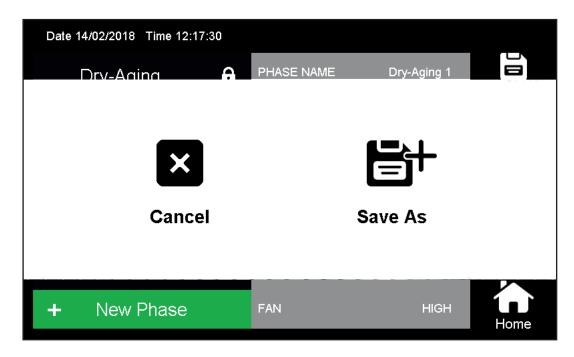
It is not possible to start a new recipe before saving it to the archive.

10.4 Change and following Saving of Existing Recipe:

To change a recipe that already exists in the archive, push the key screen.

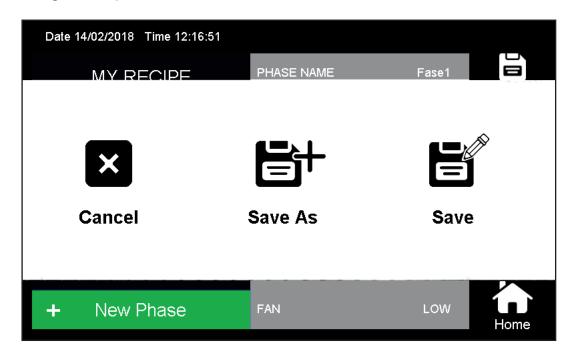
Select the category folder on the appearing Recipe Menu, and then select the recipe to be changed to access the recipe screen, where it is possible to carry out the necessary changes.

After any change of the recipe, the SAVE saving icon will appear among the function keys. By pushing on the icon, a different pop-up will appear, depending on if the modified recipe is a default Everlasting recipe or a user-created recipe.



In the first case, the only type of possible saving is SAVE AS, because it is not allowed to carry out changes and to overwrite an Everlasting recipe.

By clicking on save as, it is possible to type the name of the new recipe on the keyboard and to confirm with the save key. A new recipe based on an Everlasting recipe is thus created, and it is added to the original recipe folder.



In the second case, as the original recipe is a user-created program, the saving modes are two: SAVE or SAVE AS:

SAVE allows overwriting the new modified recipe to the previous one.

SAVE AS allows saving the modified recipe as a new recipe with a specific name. Therefore, both the original recipe and the modified recipe with their corresponding names will be present in the archive.

10.5 Deleting of Recipe

To delete one recipe from the archive, push



the Recipes key on the Unlocked Home Screen.

Select the category folder containing the recipe to be deleted on the appearing Recipe Menu.



Push the CANC function key on the right of the recipe Screen: it will turn green to indicate the access to the recipe delete mode.

In the delete mode, two types of symbols appear next to each recipe name:

PADLOCK to indicate that the corresponding recipe is an Everlasting recipe and cannot be deleted.

RECYCLE BIN to indicate that the corresponding recipe is a user-created recipe and can be deleted.

Push the recycle bin icon next to the recipe to be deleted. Confirm the deleting on the following pop-up.



The recipe has been deleted from the archive and cannot be recovered!

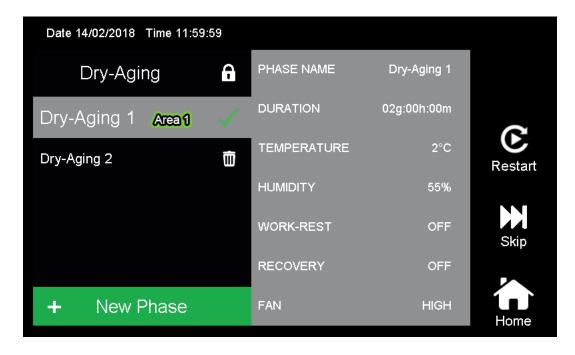
Push the CANC function key again to exit the recipe delete mode.

10.6 Running Recipe

To access the Running Recipe Screen, push on the RUNNING RECIPE KEY on the Unlocked Home Screen.



With this screen you can control the working status of the running recipe.



In **AREA 1** the currently running phase is highlighted with light grey colour and, next to the name, a flashing green check icon is present. The previously completed phases are identified with a green but steady check icon, whereas the still to be carried out phases have the recycle bin next to their name. All the changes on the phase parameters of the running phase or of the following phases immediately affect the running recipe, as well as the addition of phases or the deletion of still-to-becarried-out phases.

ATTENTION: Such changes, if not saved with the SAVE function key, will NOT be saved in the archive overwriting the corresponding recipe, but the will be carried out only for the running recipe.

A pop-up will warn the user in case of exit from the Running Recipe screen without saving the carriedout changes.

In **AREA 3** there are 4 function keys:

SAVE: allows saving the changes by overwriting the recipe already in the archive. After changing a running recipe, it is not possible to save it to the archive with a different name. The SAVE function is active only if the running recipe is not an Everlasting recipe (identified by the locked padlock next to the recipe name). A warning pop-up requires confirmation by the user.

RESTART: allows restarting the running recipe from the start. A warning pop-up requires confirmation by the user.

SKIP: allows skipping the current phase even if not ended and going directly to the next phase. A warning pop-up requires confirmation by the user.



HOME: allows returning to the Unlocked Home Screen.

FOLDER	RECIPE	PHASE	DURATION		TEMPER	ATURE			HUMII	DITY	
				ON/ OFF	SetPoint	Cold Diff	Hot Diff	ON/ OFF	SetPoint	Dehu Diff	Humi Diff
	Hard Cheese	Phase 1	20d 0h 0m	1	14	2	2	1	80	5	5
CHEESE	Soft Cheese	Phase 1	3d 0h 0m	1	16	2	2	1	65	5	5
	Soit Cheese	Phase 2	20d 0h 0m	1	12	2	2	1	80	5	5
	Cave	Cave	0d 0h 0m	1	12	2	1	1	80	10	10
		Cooling	0d 12h 0m	1	2	2	2	0	60	10	10
		Cooling Dripping	0d 12h 0m	1	23	2	2	0	60 85	10 50	10 7
		Dripping Drying 1	1d 0h 0m	1	23	2	1	1	55	7	50
		Drying 1 Drying 2	1d 0h 0m	1	21	2	1	1	60	7	50
	Conno	Drying 2 Drying 3	1d 0h 0m	1	20	2	1	1	63	7	50
	Сорра	Drying 3 Drying 4	1d 0h 0m	1							
			1d 0h 0m	1	18 16	2	1	1	68	7	50 50
		Drying 5				2	1		70	7	
		Drying 6	1d 0h 0m	1	14	2	1	1	75	7	50
		Maturing	25d 0h 0m	1	13	2	2	I	76	7	20
	Refrigerator	Refrigerator	0d 0h 0m	1	4	2	2	0	80	10	10
		Cooling	0d 12h 0m	1	3	2	2	0	60	10	10
		Dripping	0d 12h 0m	1	25	2	2	1	85	50	7
		Drying 1	1d 0h 0m	1	22	2	1	1	53	7	50
		Drying 2	1d 0h 0m	1	22	2	1	1	58	7	50
	Pancetta	Drying 3	1d 0h 0m	1	20	2	1	1	60	7	50
		Drying 4	1d 0h 0m	1	19	2	1	1	65	7	50
		Drying 5	1d 0h 0m	1	18	2	1	1	68	7	50
SALAMI		Drying 6	1d 0h 0m	1	16	2	1	1	70	7	50
		Maturing	25d 0h 0m	1	15	2	2	1	75	7	20
		Cooling	0d 12h 0m	1	3	2	2	0	60	10	10
		Dripping	0d 12h 0m	1	23	2	2	1	85	50	7
		Drying 1	1d 0h 0m	1	20	2	1	1	60	7	50
	Colomo	Drying 2	1d 0h 0m	1	18	2	1	1	64	7	50
	Salame Misto	Drying 3	1d 0h 0m	1	18	2	1	1	68	7	50
	Wiloto	Drying 4	1d 0h 0m	1	16	2	1	1	73	7	50
		Drying 5	1d 0h 0m	1	15	2	1	1	77	7	50
		Drying 6	1d 0h 0m	1	13	2	1	1	80	7	50
		Maturing	25d 0h 0m	1	11	2	2	1	82	7	20
		Cooling	0d 12h 0m	1	3	2	2	0	60	10	10
		Dripping	0d 8h 0m	1	20	2	2	1	85	50	7
		Drying 1	1d 0h 0m	1	18	2	1	1	60	7	50
		Drying 2	1d 0h 0m	1	16	2	1	1	65	7	50
	Salame	Drying 3	1d 0h 0m	1	13	2	1	1	68	7	50
		Drying 4	1d 0h 0m	1	12	2	1	1	72	7	50
		Drying 5	1d 0h 0m	1	11	2	1	1	75	7	50
		Drying 6	1d 0h 0m	1	12	2	1	1	77	7	50
		Maturing	25d 0h 0m	1	11	2	2	1	80	7	20

WORK-REST				RECOVERY				FAN	
ON/OFF	Tmax	Tmin	Work Time	Rest Time	ON/OFF	Work Time	Recovery Time	Delta T max	Low=10 High=100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	10
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	10
			211 0 111	011 00 111	0	011 0111	THI OILI	10	10
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
		_	2.1.0.111	011 00 111		011 0111	111 0111		100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
			01.0	01.00		01.0	41.0	10	400
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5	2	2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100
0	5 5	2 2	2h 0 m 2h 0 m	0h 30 m 0h 30 m	0	8h 0m 8h 0m	1h 0m 1h 0m	10 10	100
0		2			0				100
U	5		2h 0 m	0h 30 m	0	8h 0m	1h 0m	10	100

Chapter 11: SHORTCUTS

Click on to access the Shortcut menu from the Unlocked Home Screen.

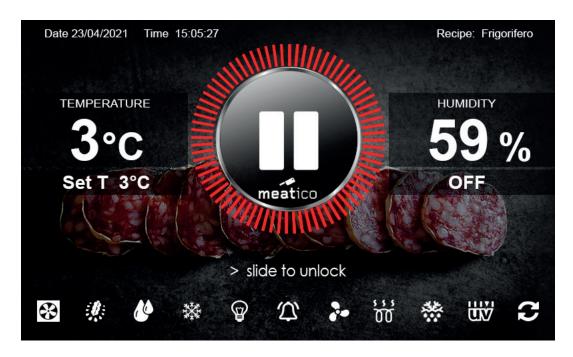


11.1 START_STOP

This key allows stopping a running recipe by pausing it STOP or restarting it START from where it was stopped.

During the STOP status the refrigerator cabinet is paused and any function is stopped.

During the STOP status, the Unlocked and Locked Home Screen show red-coloured circular crown wedges and the pause symbol on the RUNNING RECIPE KEY to indicate that the refrigerator cabinet is not active.



From the STOP status, push the START key to recover the recipe from the point in which it was stopped.

In case the refrigerator cabinet remains in the STOP status for more than 2 hours, the appliance goes to Stand by mode. Standby is an energy saving mode where the display darkens and stays in the STOP condition.

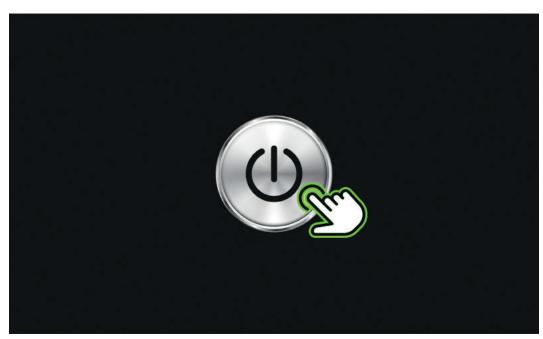


fig.22

Click on the central Stand by key (fig.22) to return to the Locked Home Screen in STOP status (fig.9).

11.2 DEFROST

Defrost

This function allows carrying out a manual defrost of the evaporator.

The refrigerator cabinet controls the evaporator and carries out a defrost, if necessary. During the defrost, the phase parameters of the recipe are not controlled.

The defrost continues automatically until defrost end condition, then a dripping phase follows, to ensure that too wet air will not be introduced in the cabinet at the restart.

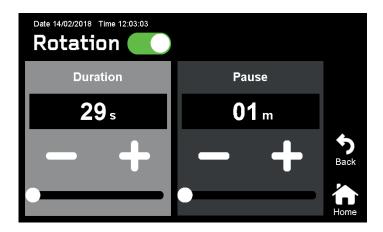
When defrost is active the corresponding icon on the Home Screens and the defrost key on the Shortcut Screen are green. By pushing again the defrost key before its automatic end, the defrost is stopped early and the refrigerator cabinet goes automatically to the dripping phase (the shortcut icon flashes).

11.3 AIR EXCHANGE

This function allows carrying out the exchange of the air circulating in the refrigerator cabinet for a pre-set time duration. By pushing again the air exchange key before its automatic end, the process is stopped. When air exchange is active, the corresponding icon on the Home Screens and the air exchange key on the Shortcut Screen are green.

11.4 ROTATION (Opt.)

This function is active only if the COLD CUTS WHIRLIGIG accessory is present. In case the accessory is not included, the Rotation key is not clickable and is grey-coloured. Access the rotation setting page by clicking on the corresponding icon.



The first step is the activation or deactivation of Cold Cuts Whirligig rotation control by moving the selector next to the Rotation name. By clicking on the icon it is possible to go from the active (green) to the not active (black) status and vice versa. In case of active rotation control, the corresponding icon on the Home Screens and the rotation key on the Shortcut Screen are green. The Cold Cuts Whirligig works by alternating two periods: a motion condition, where the whirligig rotates, and a condition where the whirligig is still. The Cold Cuts Whirligig rotates of 360° in 60 seconds.

The parameters to set are:

Rotation time

Pause time

11.5 ALARMS

Alarms
This section allows displaying the list of all alarms generated over time on the refrigerator cabinet.



Each alarm is identified by:

Code: Univocal acronym referred to an alarm, as per list on paragraph 13.3.

Description: Alarm name

Start date and time: when the alarm condition has taken place

Stop date and time: when the alarm condition has ended

There are three possible alarm statuses, each with a corresponding colour:

Red: The refrigerator cabinet is in alarm, and the problem is not solved.

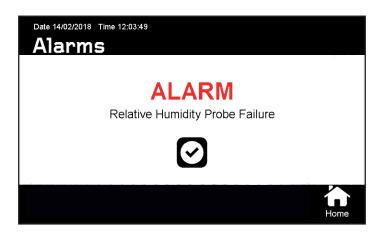
Yellow: The refrigerator cabinet warns that an alarm has taken place, but it has subsided.

Grey: The refrigerator cabinet warns that an alarm has taken place, and the user has seen it.

An alarm goes from Red to Yellow status only when the condition that has generated it is no longer verified.

An alarm goes from Yellow to Grey status when the user sees it and recognizes it by checking the side box

The condition of alarm is directly displayed also on the Home Screens by a warning pop-up and by the red colour of the alarm icon in AREA 3 (dedicated to digital output status).

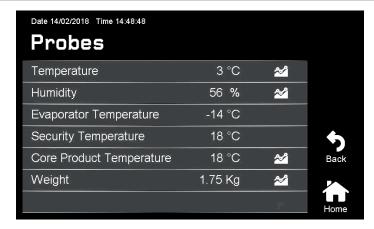


Based on the alarm type, the refrigerator cabinet continues the running process or goes automatically to the pause status (identified by the red circular crown and the pause symbol in the middle of the Home), stopping all functions. It is <u>possible</u> to delete the whole list of stored and recognized alarms

by pushing the CANC function key Can

11.6 PROBES

This page allows visualizing the list of the probes on the refrigerator cabinet and the corresponding measured values.



Complete list of Probes on the refrigerator cabinet:

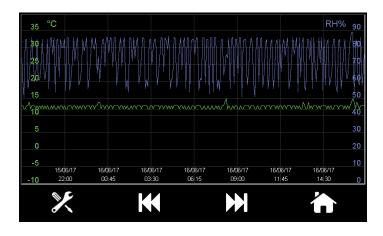
- Chamber Temperature
- Chamber Humidity
- Evaporator Temperature
- Safety Temperature
- Core temperature (optional)
- Weight (optional)
- PH (optional)

Next to the measured value of each probe, an icon of the selected variable over time.

allows visualizing graphically the trend

It is also possible to visualize the trend of Chamber Temperature and Humidity over time by the key

key on the Unlocked Home Screen.



The Graph Screen displays the trends of Temperature (green line) and Humidity (blue line) of the cabinet for the current date. The solid line indicates the values detected by the sensors, while the dashed line refers to the set-point of the recipe phase. To move along the x-axis (time axis), use the directional keys (left-right icons on the graph). By pressing the settings icon (graph settings icon), you can directly select a specific display date. The Auto Scale option automatically resizes the data on the y-axis to ensure they are fully visible.

pH Measurement (optional)

The pH electrode is used to check that the product to be aged or stored (cheeses, cured meats) meets the organoleptic characteristics required by the process.

When using an electrode for the first time: Remove the protective cap. Do not worry if salt deposits are visible; these deposits are normal and can be removed by rinsing the electrode with water. During transport, small air bubbles may form inside the glass bulb, which could hinder the proper functioning of the electrode; these can be removed by gently shaking the electrode as you would with a glass thermometer. If the bulb or junction is dry, leave the electrode in a beaker containing HI 70300L storage solution for at least an hour.

How to use the electrode for measurements:Rinse the electrode with distilled water. Immerse the sensitive bulb at least 4 cm into the sample to be tested and gently stir it for about 30 seconds, then wait for the reading to stabilize.

How to store the pH electrode when not in use: To prevent encrustations and ensure a quick response time, the sensitive bulb of the pH electrode must be kept moist. Place a few drops of HI 70300 storage solution in the protective cap.

Note: Never store the electrode in distilled water or without the protective cap.

Calibration of pH Electrode Reading: These instruments tend to drift over time and must be calibrated regularly. If the pH meter is used daily, it is recommended to calibrate it at least once every 15-20 measurements for optimal performance. Use a standard with a pH close to that of the unknown solution to minimize any "non-ideal" behavior of the electrode. For basic pH measurements, calibrate the electrode by immersing it in the 7.01 sample solution; for acidic pH measurements, calibrate the electrode in the 4.01 sample solution.

Procedure: after thoroughly cleaning the electrode, immerse it in the chosen sample solution (either 7,01 or 4,01 pH) and shake it for around 30 seconds; wait until the measure value stabilizes

and then push the key on the HOME screen to access the PROBES page; read the measured pH value on the corresponding line.



If the value is different from the one indicated on the sample solution, proceed with the calibration of the instrument.

Push then on the Unlocked Home Screen to access the PARAMETERS page. Type the password to access the restricted PARAMETERS area (chapter 13 SERVICE). Enter the CALIBRATIONS section and select parameter 56 PH PROBE CORRECTION. Calibrate the value by typing on the numeric keyboard the difference (Positive or Negative) calculated as follows:

Difference = nominal Value (7,01 or 4,01 PH) - detected value

Confirm the entry and return to the HOME screen. After the calibration, rinse the electrode with distilled water, dry it and immerse it in the HI 70300L product for storage.

Cleaning the electrode: It is advisable to carry out the cleaning of the electrode when its responses are slow or the measures are not reliable, and when it has been used for a long time, most of all with corrosive, polluting very acid or very alkaline solutions. Choose the most suitable cleaning solution according on the type of measured solution.

Meat and cold cuts: immerse in solution HI 70630 for 15 minutes

ATTENTION: after cleaning the electrode, rinse it with distilled water.

11.7 STERILIZATION (opt)

This function is subordinated to the presence of the germicide UV Lamp; in case it is not present, the key is not active and is grey-coloured.

Push the sterilization key to ACTIVATE the UV lamp, that turns on correspondingly to the working

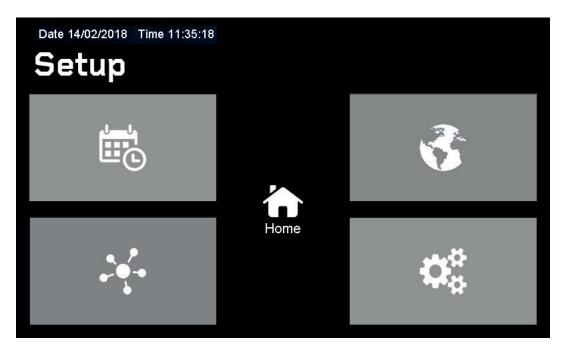
of the fans of the refrigerator cabinet (the turned-on UV is signalled by the green icon Unlocked Home Screen). The ACTIVATION condition of the UV lamp is signalled by the colour of

the shortcut

Push again the sterilization key to DEACTIVATE the function: the icon turns white

CHAPTER 12: SETUP

Click on the icon on the Unlocked Home Screen to access the Setup Menu, dedicated to the general settings of the refrigerator cabinet.



There are four Setup Areas:







LANGUAGE



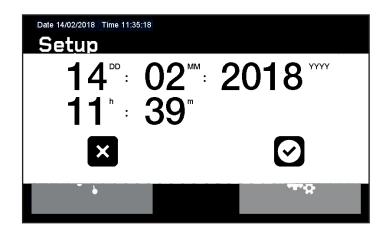


PARAMETERS

12.1 DATE AND TIME

By selecting Date and Time, a Pop-up appears to allow keying in the correct values. Confirm to implement the changes.

To set a different date visualization format see the PARAMETERS section, paragraph 12.4



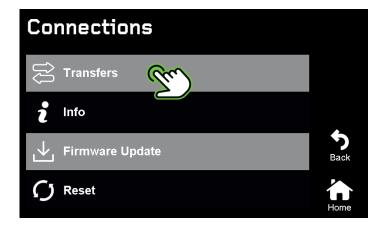
12.2 LANGUAGE

The Language screen contains the list of the currently available languages; select the desired language by clicking on the corresponding box. The check icon identifies the set-up language.



12.3 CONNECTIONS

12.3.1 Transfers:



Open the Transfers page and insert the prearranged USB stick FAT32 formatted in the slot.



After inserting the USB stick, the selection boxes next to the corresponding transfer items and the

TRANSFER icon Transfer in the function keys on the right are displayed.

The Export items always have a selection box, whereas the Import items only have it if the corresponding file is on the USB stick.

Select the boxes of the files to be imported and exported (fig.23)



fig.23

Carry out the transfer by clicking on the corresponding icon



fig.24

At the end of the process, the transfer files will be identified by the icon to remove the USB stick (fig.23).



and it will be possible

Service Parameter Export: to export all the current Service settings

Recipe Export: to export all the recipes of the archive

Recorded Data Export: to export in csv format the probe data related to the latest ten carried-out recipes that have not been downloaded by USB transfer yet. The whole recorded alarm list is also downloaded.

Service Parameter Import: to reconfigure all the Service settings of the refrigerator cabinet according to the imported file

Recipe Import: to import new recipes from the USB stick to the archive and overwrite the ones having the same name

Language Import: to import new languages

ATTENTION: Make sure that the USB stick only contains the folders to be imported/exported, and the firmware image file. In case an unsuitable USB stick is used, a forced system restore of the refrigerator cabinet will have to be carried out by unplugging and replugging it.

12.3.2 Info: In this page all the hardware codes identifying the electronics on the refrigerator cabinet and the installed Firmware version are recorded.

12.3.3 Firmware Update: They key is normally not clickable and grey-coloured. When the firmware file on the USB stick is recognized, the key becomes light blue and can be clickable. A warning popup asks the user for confirmation of the operation. The refrigerator cabinet automatically reboots: do not carry out any operation during the reboot!

Wait for the acoustic and visual signals that tell the user to remove the USB stick to complete the process!! (fig.25)

```
USB Host library started.
Waiting for USB drive connection...

USB Drive connected.
Mounting USB drive.. Done
Opening binary file.. Done
Starting Firmware Update.
Flash sectors enasing.. Wait.
Firmware Update successful.
Please pull out USB drive to reboot.
```

fig.25

ATTENTION: Make sure that the USB stick only contains the folders to be imported/exported, and the firmware image file. In case an unsuitable USB stick is used, a forced system restore of the refrigerator cabinet will have to be carried out by unplugging and replugging it.

12.3.4 Reset: The RESTART screen it is possible to:

- SYSTEM REBOOT
- REBOOT the Wi-Fi connection
- RESET the Wi-Fi settings

A warning pop-up requires user confirmation to start the operation. It is not possible to reset if a USB stick is inserted.

12.4 PARAMETERS

This area is protected by password and is intended to authorized technical personnel only.



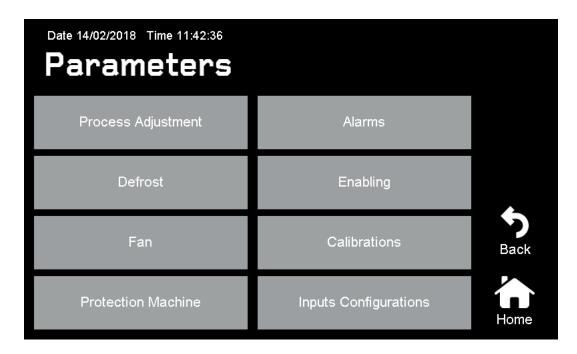
WARNING!

INSTRUCTIONS STRICTLY RESERVED TO AUTHORIZED TECHNICAL PERSONNEL

Every intervention executed by a non authorized technical personnel implies a warranty decay.

13.1 PARAMETERS

This area is protected by password and is intended to authorized technical personnel only. PASSWORD: 1956



13.2 TOUCH CONTROL PARAMETERS

N°	DESCRIPTION	VALUE	RANGE
	PROCESS CONTROL SETTINGS		
1	Minimum temperature differential	1°C	[+1;+5] °C
2	Maximum temperature differential	10°C	[+5;+45] °C
3	Maximum humidification differential	99%	[10;99]%
4	Neutral zone in humidification	3%	[0;50]%
5	Neutral zone in dehumidification	3%	[0;50]%
6	Maximum temperature differential during pause	5°C	[0;+99] °C
	DEFROST		
9	Defrost interval	4h	[1;24]h
10	Maximum defrost duration	20 min	[0;+99] min
11	Defrost end setpoint	8°C	[-35;+45] °C
12	Drip duration	2 min	[0;10] min
	VENTILATION		
17	Pause after defrost	1 min	[1;10] min
18	Fan operation	1	0=ON; 1=Controlled
19	Fan shutdown delay (after HEAT and HR)	1 min	[0;10] min
20	Air exchange interval	8h	[0;24] h
21	Air exchange duration	10 min	[1;10] min
22	Fan speed control	0	0=low/high ; 1=PWM
23	Anti-stratification interval	60 min	[30;240] min
24	Minimum speed in PWM regulation	80%	[0;100]%
	MACHINE		
25	Minimum compressor ON-OFF time	5 min	[0;15] min
26	Minimum temperature setpoint	0°C	[-10;+45] °C
27	Maximum temperature setpoint	30°C	[0;+85] °C
28	Minimum humidity setpoint	10%	[0;50]%
29	Maximum humidity setpoint	90%	[50;100]%
	40		

30	Door open time limit	60 sec	[10;300] sec
	ALARMS		
33	Minimum temperature alarm	-10°C	[-45;0] °C
34	Maximum temperature alarm		[0;45] °C
35	Minimum humidity alarm	-50%	[-50;0]%
36	Maximum humidity alarm	50%	[0;50]%
37	Safety temperature alarm	55°C	[0;+99] °C
38	Alarm activation delay	60 min	[0;240] min
39	Sterilization lamp duration	9000h	[0;9999] h
40	Enable buzzer	1	0=disabled ; 1=enabled
	ENABLINGS		
41	Enable weight sensor	0	0=disabled ; 1=enabled
42	Enable PH sensor	0	0=disabled ; 1=enabled
43	Enable needle sensor	0	0=disabled ; 1=enabled
44	Enable rotation control	0	0=disabled ; 1=enabled
45	Enable sterilization	0	0=disabled ; 1=enabled
46	Enable date format (month/day/year)	0	0=disabled ; 1=enabled
47	Temperature unit of measure	0	0=°C; 1=°F
		0 (4 for	
48	Enable second evaporator	0 (1 for 1500 mo- dels)	0=disabled ; 1=enabled
48	Enable second evaporator CALIBRATIONS	1500 mo-	0=disabled ; 1=enabled
48	·	1500 mo-	0=disabled ; 1=enabled 0=NTC ; 1=PTC
	CALIBRATIONS	1500 mo- dels)	·
49	CALIBRATIONS Temperature sensor type	1500 models)	0=NTC ; 1=PTC
49	CALIBRATIONS Temperature sensor type Room sensor correction	1500 models) 0 0°C	0=NTC; 1=PTC [-10;+10] °C
49 50 51	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction	1500 models) 0 0°C 0%	0=NTC; 1=PTC [-10;+10] °C [-10;+10] %
49 50 51 52	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction	1500 models) 0 0°C 0% 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] % [-10;+10] °C
49 50 51 52 53	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction	1500 models) 0 0°C 0% 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] % [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction	1500 models) 0 0°C 0% 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] % [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54 55	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction	1500 models) 0 0°C 0% 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54 55	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction Needle sensor correction	1500 models) 0 0°C 0% 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54 55 56	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction Needle sensor correction OPTIONAL CONFIGURATION	1500 models) 0 0°C 0% 0°C 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54 55 56	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction Needle sensor correction OPTIONAL CONFIGURATION Weight sensor correction	1500 models) 0 0°C 0% 0°C 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C [-10;+10] °C
49 50 51 52 53 54 55 56 57	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction Needle sensor correction OPTIONAL CONFIGURATION Weight sensor correction PH sensor correction	1500 models) 0 0°C 0% 0°C 0°C 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C
49 50 51 52 53 54 55 56 57 58 59	CALIBRATIONS Temperature sensor type Room sensor correction Humidity sensor correction Evaporator sensor correction Safety sensor correction Expansion evaporator sensor correction Expansion safety sensor correction Needle sensor correction OPTIONAL CONFIGURATION Weight sensor correction PH sensor correction Microdoor contact	1500 models) 0 0°C 0°C 0°C 0°C 0°C 0°C 0°C	0=NTC; 1=PTC [-10;+10] °C [-10;+10] °C

Note: safety alarm is enabled by the safety probe temperature and is an ABSOLUTE value.

The other 4 alarms (minimum and maximum temperature; minimum and maximum humidity) are enabled by the ambient and humidity probes and are RESPECTIVE to the current setpoint

The alarm activation delay is intended only for these 4 alarms; the safety alarm has no delay.

13.3 ALARMS

The control board warns users about possible failures through alarm codes visualized on the display (by pop-up or in the 'Alarms' page) and through an acoustic signal issued from a buzzer inside the operator Console (if activated). In the case of an alarm condition, one of the following messages will be displayed:

ALARM	DESCRIPTION	CAUSE	SOLUTION	COMPETENCE
A0	Safety klixon intervention	The temperature of the evaporator compartment has reached the maximum safety value	Check the functionality of the internal fan	Operator
A2	High temperature probe alarm	The temperature of the evaporator compartment has reached the maximum set value	Check the functionality of the internal fan	Operator
A3	Ambient probe fault	Internal compartment probe faulty	Replace probe	Service
W4	Evaporator probe fault	Defrost evaporator probe faulty	Replace probe	Service
A5	High temperature probe fault	Evaporator compartment probe faulty	Replace probe	Service
A6	Relative humidity probe fault	Internal humidity probe faulty	Replace probe	Service
W7	Pin probe fault	Pin probe faulty	Replace probe	Service
W8	pH probe fault	pH detection probe faulty	Replace probe	Service
W9	Weight probe fault	Product weight detection probe faulty	Replace probe	Service
W10	Communication alarm	The touch display does not communicate with the relay board	Turn off the device po- wer for a few seconds and then turn it back on	Operator
	High ambient temperature	The internal compartment tempe-	Check the functionality of the cooling unit	Service
W11	probe	rature has exceeded the set limit	Check the functionality of the internal fan	Operator
			Control unit faulty	Service
W12	Low ambient temperature probe	The internal compartment temperature has exceeded the lower set limit	Heating resistance faulty	Service
			Set humidity too low	Operator
		The compartment humidity level	No water in the humidifier	Operator
W13	Minimum humidity alarm	has exceeded the lower minimum	Humidifier faulty	Service
		set limit	Humidity probe not calibrated	Service
		The compartment humidity level	Humidifier faulty	Service
W14	Maximum humidity alarm	has exceeded the maximum upper set limit	Humidity probe not calibrated	Service
W15	Exhausted UV lamps	The germicidal lamp has exceeded the maximum working hours provided to remain efficient	Replace the UVC lamp	Service
W16	RTC backup battery discharged	The control unit backup battery is discharged	Replace battery	Service
N17	Power failure alarm	During operation, the power supply voltage failed	Check the electrical connection	Operator

A18	Expansion safety klixon intervention	The temperature of the second evaporator compartment has reached the maximum safety value	Check the functionality of the internal fan	Operator
A19	High temperature probe alarm expansion	The temperature of the second evaporator compartment has reached the maximum set value	Check the functionality of the internal fan	Operator
W20	Expansion evaporator probe fault	Second evaporator defrost probe faulty	Replace probe	Service
A21	High temperature probe fault expansion	Second evaporator compartment probe faulty	Replace probe	Service
22	Slave communication alarm	The expansion board does not communicate with the main relay	Turn off the device power for a few seconds and then turn it back on	Operator
22	Slave communication alarm	board	Check that the RJ cable is connected to the relay board	Operator
W23	Door open alarm	The door remains open for more than 60s	Check the door condition: if it is open, close it; if it is closed, check the related parameter	Service
W24	Sterilization lamps expiring	The germicidal lamp has exceeded 90% of the maximum number of hours	Contact service	Service



13.4 REPLACEMENT OF UVC GERMICIDE LAMPS

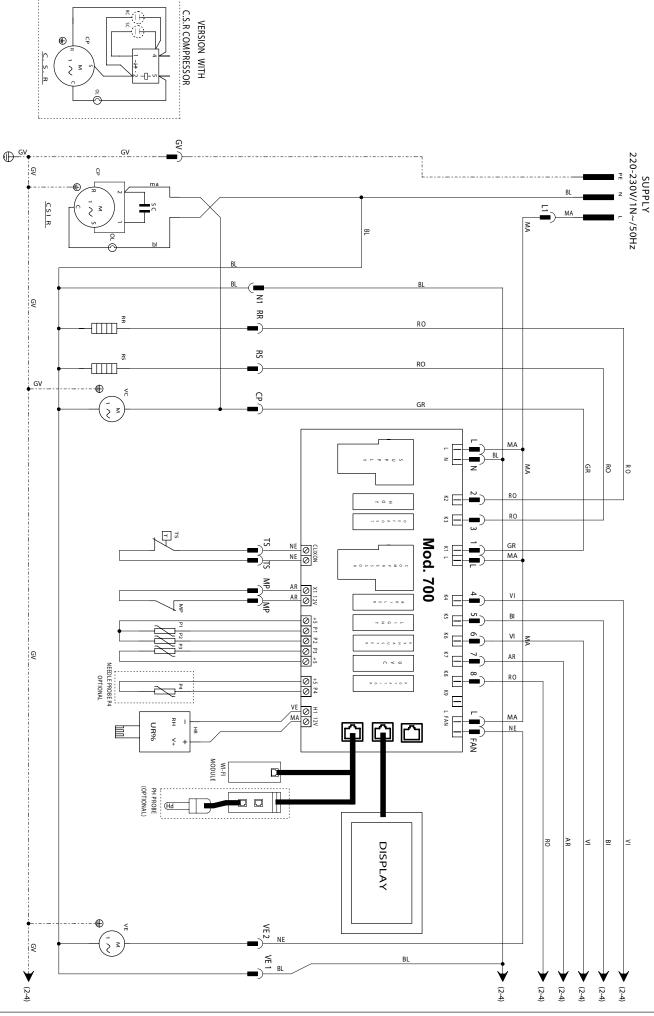
U.V. LAMPS: U.V. lamps should be replaced after around 9000 working hours. An alarm POP-UP will indicate that replacement is needed.

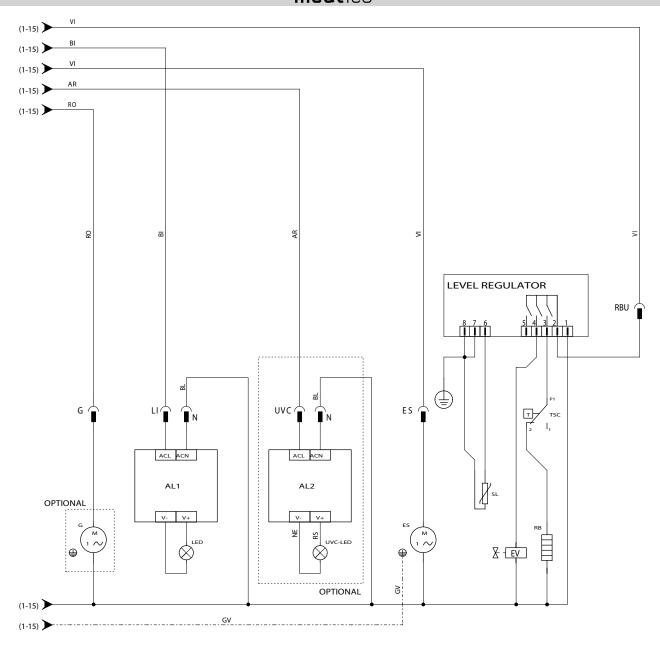
This operation must be carried out only by specialized personnel with the manufacturer's authorization, as the light of ultraviolet ray lamps can damage the skin and the eyes.

Before replacing the U.V. lamps, enter the SETUP-PARAMETER menu (password 1956) in the ACTIVATIONS section, select parameter (45) ENABLE STERILIZATION, and type up value 0 to deactivate the U.V. lamps.

Exit the menu by pushing the HOME key. Enter the ALARM menu as described on page 42, par. 11.5 ALARMS and select the current alarm to confirm its acknowledgement. Exit the menu by pushing the HOME key.

After replacing the U.V. lamps, enter the SETUP-PARAMETER menu (password 1956) in the ACTIVATIONS section. Select parameter (45) "ENABLE STERILIZATION", and type up value 1 to activate the U.V. lamps. Exit the menu by pushing the HOME key.

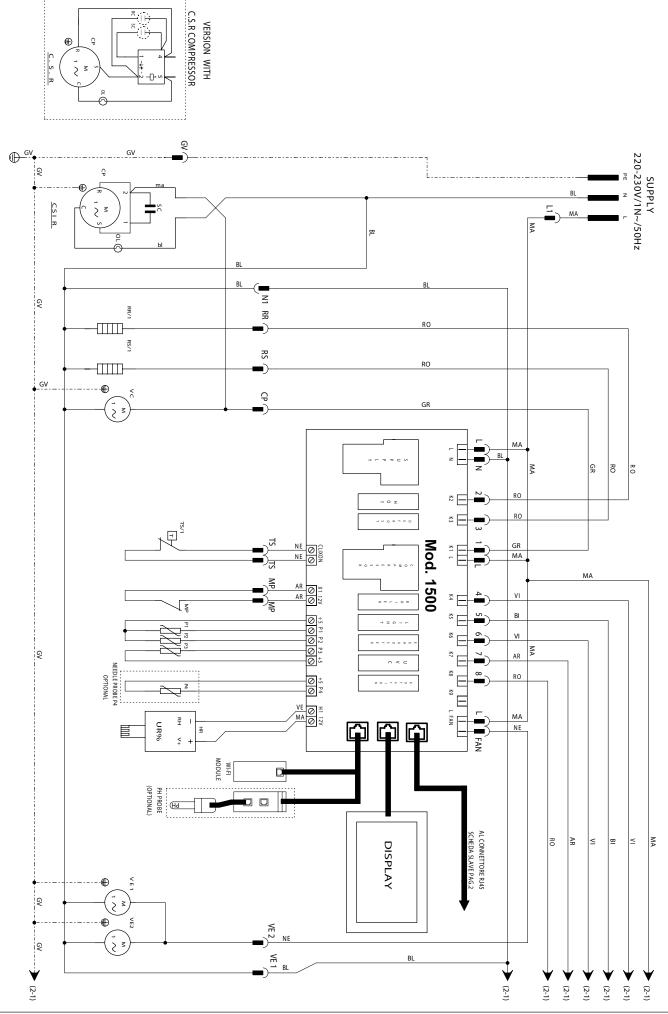


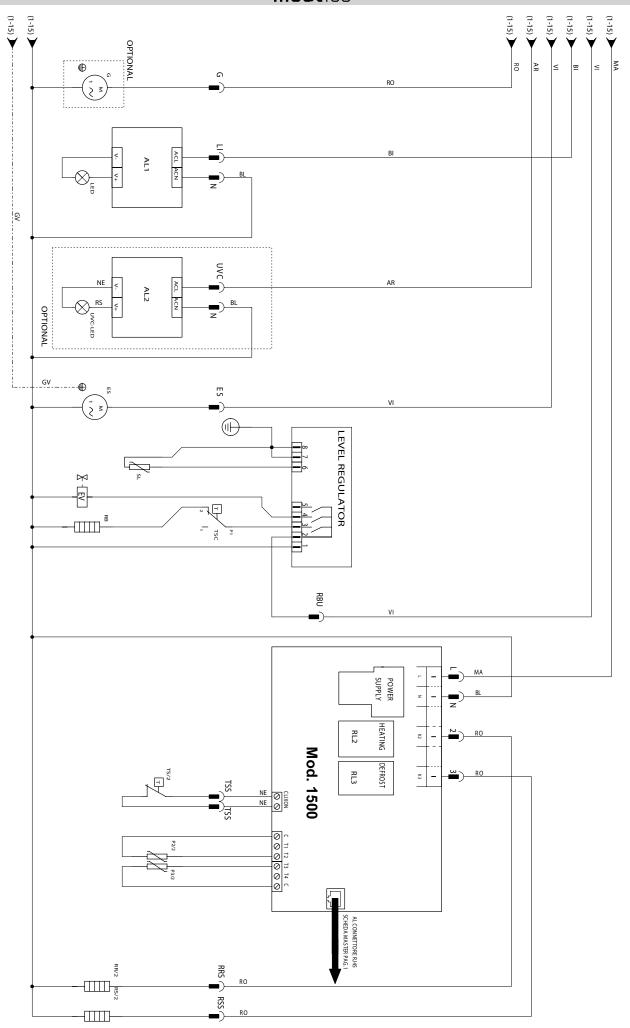


LEGENDA SCHEMA ELETTRICO / WIRING DIAGRAM KEY

	DESCRIZIONE	DESCRIPTION
CP	COMPRESSORE	COMPRESSOR
RR	RESISTENZA RISCALDAMENTO	HOT HEATERS
RS	RESISTENZA SBRINAMENTO	DEFROST HEATERS
MP	INTERRUTTORE PORTA	DOOR SWITCH
AL1	ALIMENTATORE LED	LED POWER SUPPLY
AL2	ALIMENTATORE LAMPADA UVC	UVC LAMP POWER SUPPLY
P1	SONDA AMBIENTE	ROOM PROBE
P2	SONDA EVAPORATORE	DEFROST PROBE EVAPORATOR
P3	SONDA DI SICUREZZA CALDO	HOT SECURITY PROBE
P4	SONDA SPILLONE	PRODUCT PROBE
PH	SONDA PH	PH PROBE
VC	VENTILATORE CONDENSATORE	CONDENSER FAN
VE	VENTILATORE EVAPORATORE	EVAPORATOR FAN
HR	SONDA UMIDITA'	HUMIDITY PROBE
TS	TERMOSTATO SICUREZZA CALDO	HOT SECUIRTY THERMOSTAT
ES	VENTOLA ESTRATTRICE ARIA	AIR EXCHANGE FAN
EV	SOLENOIDE UMIDIFICATORE	HUMIDIFIER SOLENOID
RB	RESISTENZA UMIDIFICATORE	HUMIDIFIER HEATER
SL	SONDA DI LIVELLO	LEVEL PROBE
G	MOTORE ROTAZIONE GIOSTRA	ROTATION MOTOR

	LEGENDA COLORI	COLOURS KEY
NE	NERO	BLACK
GR	GRIGIO	GREY
AR	ARANCIONE	ORANGE
RO	ROSSO	RED
MA	MARRONE	BROWN
BL	BLU	BLUE
BI	BIANCO	WHITE
GV	GIALLO-VERDE	YELLOW-GREEN
RA	ROSA	PINK
VI	VIOLA	PURPLE
AZ	AZZURRO	LIGHT BLUE





LEGENDA SCHEMA ELETTRICO / WIRING DIAGRAM KEY

	T	
	DESCRIZIONE	DESCRIPTION
CP	COMPRESSORE	COMPRESSOR
RR/1	RESISTENZA RISCALDAMENTO 10 EVAP.	HOT HEATERS 1st EVAPORATOR
RR/2	RESISTENZA RISCALDAMENTO 20 EVAP.	HOT HEATERS 2nd EVAPORATOR
RS/1	RESISTENZA SBRINAMENTO 10 EVAP.	DEFROST HEATERS 1st EVAPORATOR
RS/2	RESISTENZA SBRINAMENTO 20 EVAP.	DEFROST HEATERS 2nd EVAPORATOR
MP	INTERRUTTORE PORTA	DOOR SWITCH
AL1	ALIMENTATORE LED	LED POWER SUPPLY
AL2	ALIMENTATORE LAMPADA UVC	UVC LAMP POWER SUPPLY
P1	SONDA AMBIENTE	ROOM PROBE
P2	SONDA 10 EVAPORATORE	DEFROST PROBE 1st EVAPORATOR
P2/2	SONDA 20 EVAPORATORE	DEFROST PROBE 2nd EVAPORATOR
P3	SONDA DI SICUREZZA CALDO 1	HOT SECURITY PROBE 1
P3/2	SONDA DI SICUREZZA CALDO 2	HOT SECURITY PROBE 2
P4	SONDA SPILLONE	PRODUCT PROBE
PH	SONDA PH	PH PROBE
VC	VENTILATORE CONDENSATORE	CONDENSER FAN
VE1	VENTILATORE EVAPORATORE 1	EVAPORATOR FAN 1
VE2	VENTILATORE EVAPORATORE 2	EVAPORATOR FAN 2
HR	SONDA UMIDITA'	HUMIDITY PROBE
TS/1	TERMOSTATO SICUREZZA CALDO 1	HOT SECUIRTY THERMOSTAT 1
TS/2	TERMOSTATO SICUREZZA CALDO 2	HOT SECUIRTY THERMOSTAT 2
ES	VENTOLA ESTRATTRICE ARIA	AIR EXCHANGE FAN
EV	SOLENOIDE UMIDIFICATORE	HUMIDIFIER SOLENOID
RB	RESISTENZA UMIDIFICATORE	HUMIDIFIER HEATER
SL	SONDA DI LIVELLO	LEVEL PROBE
G	MOTORE ROTAZIONE GIOSTRA	ROTATION MOTOR

	LEGENDA COLORI	COLOURS KEY
NE	NERO	BLACK
GR	GRIGIO	GREY
AR	ARANCIONE	ORANGE
RO	ROSSO	RED
MA	MARRONE	BROWN
BL	BLU	BLUE
ВІ	BIANCO	WHITE
GV	GIALLO-VERDE	YELLOW-GREEN
RA	ROSA	PINK
VI	VIOLA	PURPLE
AZ	AZZURRO	LIGHT BLUE

