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Foreword

The installation, use and maintenance Manual (hereinafter Manual) provides the user with information necessary for correct and safe use of the machine (hereinafter “machine”, “refrigerator” or “appliance”).
The following must not be considered a long and exacting list of warnings, but rather a set of instructions suitable for improving machine performance in every respect and, above all, preventing injury to persons and animals and damage to property due to improper operating procedures.
All persons involved in machine transport, installation, commissioning, use and maintenance, repair and disassembly must consult and carefully read this manual before carrying out the various operations, in order to avoid wrong and improper actions that could compromise the machine’s integrity or endanger persons. Make sure to periodically inform the appliance user regarding the safety regulations. It is also important to instruct and update personnel authorised to operate on the machine, regarding its use and maintenance.
The manual must be available to operators and carefully kept in the place where the machine is used, so that it is always at hand for consultation in case of doubts or whenever required.
If, after reading this manual, there are still doubts regarding machine use, do not hesitate to contact the Manufacturer or the authorised after-sales service centre, to receive prompt and precise assistance for better operation and maximum efficiency of the machine.
During all stages of machine use, always respect the current regulations on safety, work hygiene and environmental protection. It is the user’s responsibility to make sure the machine is started and operated only in optimum conditions of safety for persons, animals and property.
The manufacturer declines any liability for operations carried out on the appliance without respecting the instructions given in this manual.

A.1 GENERAL INFORMATION

A.1.1 INTRODUCTION
Given below is some information regarding the machine's intended use, its testing, and a description of the symbols used (that identify the type of warning), the definitions of terms used in the manual and useful information for the appliance user.

A.1.2 INTENDED USE AND RESTRICTIONS
Our appliances are designed and optimised in order to obtain high performance and efficiency. This appliance is designed for the refrigeration and preservation of foods. Any other use is deemed improper.
The appliance must not be used by people (including children) with limited physical, sensory or mental abilities or without experience and knowledge of it, unless instructed in its use by those responsible for their safety.
ATTENTION: The machine is not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, etc.).
The manufacturer declines any liability for improper use of the product.

A.1.3 TESTING AND INSPECTION
Our appliances are designed and optimised, with laboratory testing, in order to obtain high performance and efficiency. The product is shipped ready for use.
Passing of the tests (visual inspection - electrical test - functional test) is guaranteed and certified by the specific enclosures.

A.1.4 DEFINITIONS
Listed below are the definitions of the main terms used in the manual. Read them carefully before using the manual.

Operator
machine installation, adjustment, use, maintenance, cleaning, repair and transport personnel.

Manufacturer
Electrolux Professional SPA or any other service centre authorised by Electrolux Professional SPA.

Operator for normal machine use
an operator who has been informed and trained regarding the tasks and hazards involved in normal machine use.

Technical assistance or specialised technician
an operator instructed/trained by the Manufacturer and who, based on his professional and specific training, experience and knowledge of the accident-prevention regulations, is able to appraise the operations to be carried out on the machine and recognise and prevent any risks. His professionalism covers the mechanical, electrotechnical and electronics fields.

Danger
source of possible injury or harm to health.

Hazardous situation
any situation where an operator is exposed to one or more hazards.

Risk
a combination of probabilities and risks of injury or harm to health in a hazardous situation.

Protection devices
safety measures consisting of the use of specific technical means (guards and safety devices) for protecting operators against dangers.

Guard
an element of a machine used in a specific way to provide protection by means of a physical barrier.

Safety device
a device (other than a guard) that eliminates or reduces the risk; it can be used alone or in combination with a guard.

Customer
the person who purchased the machine and/or who manages and uses it (e.g. company, entrepreneur, firm).

Electrocution
an accidental discharge of electric current on a human body.

A.1.5 TYPOGRAPHICAL CONVENTIONS
For best use of the manual, and therefore the machine, it is advisable to have good knowledge of the terms and typographical conventions used in the documentation.
The following symbols are used in the manual to indicate and identify the various types of hazards:

ATTENTION!
DANGER FOR THE HEALTH AND SAFETY OF OPERATORS.

ATTENTION!
DANGER OF ELECTROCUTION - DANGEROUS VOLTAGE.

ATTENTION!
RISK OF DAMAGE TO THE MACHINE.

Words further explaining the type of hazard are placed next to the symbols in the text. The warnings are intended to guarantee the safety of personnel and prevent damage to the machine or the product being worked.
The drawings and diagrams given in the manual are not in scale. They supplement the written information with an outline, but are not intended to be a detailed representation of the machine supplied.
The numerical values given on the machine installation diagrams refer to measurements expressed in mm.

A.1.6 MACHINE AND MANUFACTURER'S IDENTIFICATION DATA
A reproduction of the marking or dataplate on the machine is given below:

F.Mod. RCHBF1P2C	Comm.Mod.		FOCLBT 2011
PNC 9VTX 728304 18	Ser.Nr. 11707001		Cyclopentane
W Tot. 0.52 kW	Volt 230V 1N ~ 50Hz		Total Current 2.6 A
Potenza Sbrinamento / Defrost Power	1.3 kW	Classe / Class 5	
Resistenza Evaporazione / Evaporation Heater El.	0 kW	Refrigerante / Refrigerant R404a	0,16 Kg
Illuminazione / Lighting	0 W	Cap. 265	

IP21

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The dataplate gives the product identification and technical data.

The meaning of the various information given on it is listed below:

F.Mod. ..... factory description of product
Comm.Model ..... commercial description
PNC ..... production number code
Ser.Nr. ..... serial number
230V 1N ..... power supply voltage
50 Hz ..... power supply frequency
0.52 kW ..... max. power input
Cyclopentane..... expanding gas used in insulation
Total Current..... current absorbed
Defrost Power ..... defrost power
Evaporation Heater El..... heating element power
Lighting..... inside light power
Class..... climatic class
Refrigerant..... type of refrigerant gas
Cap..... nominal capacity
IP21 ..... dust and water protection rating
CE ..... CE marking
Electrolux Professional SPA
Viale Treviso, 15
33170 Pordenone
(Italy)..... Manufacturer

When installing the appliance, make sure the electrical connection is carried out in compliance with that specified on the dataplate.

ATTENTION!
Do not remove, tamper with or make the machine "CE" marking illegible.

ATTENTION!
Refer to the data given on the machine "CE" marking for relations with the Manufacturer (e.g. when ordering spare parts, etc.).

ATTENTION!
When scrapping the machine, the "CE" marking must be destroyed.

A.1.7 APPLIANCE IDENTIFICATION

This manual applies to various refrigerator/freezer models. For further details regarding your model, refer to par. A.2.2 DIMENSIONS, PERFORMANCE AND CONSUMPTION.

A.1.8 COPYRIGHT

This manual is intended solely for consultation by the operator and can only be given to third parties with the permission of Electrolux Professional SPA.

A.1.9 RESPONSIBILITY

The Manufacturer declines any liability for damage and malfunctioning caused by:

- non-compliance with the instructions contained in this manual;
- repairs not carried out in a workmanlike fashion, and replacements with parts different from those specified in the spare parts catalogue (the fitting and use of non-original spare parts and accessories can negatively affect machine operation and invalidates the warranty);
- operations by non-specialised technicians;
- unauthorised modifications or operations;
- inadequate maintenance;
- improper machine use;
- unforeseeable extraordinary events;
- use of the machine by uninformed and untrained personnel;
- non-application of the current provisions in the country of use, concerning safety, hygiene and health in the workplace.

The Manufacturer declines any liability for damage caused by arbitrary modifications and conversions carried out by the user or the Customer.
The employer, workplace manager or service technician are responsible for identifying and choosing adequate and suitable personal protection equipment to be worn by operators, in compliance with regulations in force in the country of use.
Electrolux Professional SPA declines any liability for any inaccuracies contained in the manual, if due to printing or translation errors.
Any supplements to the installation, use and maintenance manual the Customer receives from the Manufacturer will form an integral part of the manual and therefore must be kept together with it.

A.1.10 PERSONAL PROTECTION EQUIPMENT

Given below is a summary table of the Personal Protection Equipment (PPE) to be used during the various stages of the machine's service life.

Stage	Protective garments	Safety footwear	Gloves	Glasses	Ear protectors	Mask	Safety helmet
Transport		X					
Handling		X					
Unpacking		X					
Assembly		X					
Normal use	X	X	X (*)				
Adjustments		X					
Routine cleaning		X	X (*)				
Extraordinary cleaning		X	X				
Maintenance		X					
Dismantling		X					
Scrapping		X					

Key:
X — PPE REQUIRED
PPE AVAILABLE OR TO BE USED IF NECESSARY
PPE NOT REQUIRED

(*) During **Normal use**, gloves protect hands from the cold tray when being removed from the appliance.

NOTE: The gloves to be worn during **Cleaning** are the type suitable for contact with the cooling fins (metal plates).

Failure to use the personal protection equipment by operators, specialised technicians or users can involve exposure to chemical risk and possible damage to health.

A.1.11 KEEPING THE MANUAL

The manual must be carefully kept for the entire life of the machine, until scrapping.
The manual must stay with the machine in case of transfer, sale, hire, granting of use or leasing.

A.1.12 RECIPIENTS OF THE MANUAL

This manual is intended for:

- the carrier and handling personnel;
- installation and commissioning personnel;
- the employer of machine users and the workplace manager;
- operators for normal machine use;
- specialised technicians - after-sales service (see service manual).

A.2 TECHNICAL DATA

A.2.1 MATERIALS AND FLUIDS USED

The areas in contact with the product are in steel or coated with non-toxic plastic material. An HFC refrigerant fluid complying with the current regulations is used in the refrigeration units. The type of refrigerant gas used is given on the dataplate.

A.2.2 DIMENSIONS, PERFORMANCE AND CONSUMPTION

REFRIGERATED MODELS

Capacity compartments		**2 compartments**	**3 compartments**	**4**
External dimensions:				
- width	mm	1236	1720	2203
- depth:	mm	700	700	700
door open	mm	1101	1101	1101
drawers open	mm	1251	1251	1251
- height:	mm	850	850	850
with splashback	mm	950	950	950
Compartment dimensions:				
- width	mm	365X2	365X3	365X4
- depth	mm	580	580	580
- height	mm	543	543	543
Rack dimensions	mm	325X530	325X530	325X530

Negative temperature counters

		2 compartments
Weight	kg	87
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

		3 compartments
Weight	kg	126
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

		4 compartments
Weight	kg	151
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

Negative temperature counters (arranged for remote unit)

Capacity compartments		**2 compartments**	**3 compartments**	**4**
External dimensions:				
- width	mm	1106	1590	2073
- depth:	mm	700	700	700
door open	mm	1101	1101	1101
drawers open	mm	1251	1251	1251
- height:	mm	850	850	850
with splashback	mm	950	950	950
Compartment dimensions:				
- width	mm	365X2	365X3	365X4
- depth	mm	580	580	580
- height	mm	543	543	543
Rack dimensions	mm	325X530	325X530	325X530

		2 compartments
Weight	kg	87
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

		3 compartments
Weight	kg	126
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

		4 compartments
Weight	kg	151
Temp. range in compartment	°C	-2/+10
Max. room temperature	°C	+43

- Recommended condensing unit for counter 2/3 compartments

		model CML60TB3N
Power supply voltage	V/ph/Hz.	230/1+N/50
Refrigerant used type	R404a	
Thermostatic valve (DANFOSS)	type	067U2076

- Recommended condensing unit for counter 4 compartments

		model CML80TB3N
Power supply voltage	V/ph/Hz.	230/1+N/50
Refrigerant used type	R404a	
Thermostatic valve (DANFOSS)	type	067U2076

FREEZER MODELS

Capacity compartments		**2 compartments**	**3**
External dimensions			
-width	mm	1234	1718
-depth	mm	700	700
door open	mm	1098	1098
drawers open	mm	1245	1245
-height	mm	850	850
Compartment dimensions			
-width	mm	365X2	365X3
-depth	mm	580	580
-height	mm	543	543
Rack dimensions	mm	325X530	325X530
Power supply voltage	V/ph/Hz.	230/1+N/50	230/1+N/50

Counter with 2 doors

Weight	kg	145
Temp. range in compartment	°C	-20/-15
Max. room temperature	°C	+43

Counter with 1 door and 2 ½ drawers

Weight	kg	150
Temp. range in compartment	°C	-20/-15
Max. room temperature	°C	+43

Counter with 3 doors

Weight	kg	216
Temp. range in compartment	°C	-20/-15
Max. room temperature	°C	+43

Counter with 2 doors and 2 ½ drawers

Weight	kg	221
Temp. range in compartment	°C	-20/-15
Max. room temperature	°C	+43

A.2.2.1 CLIMATIC CLASS
The climatic class given on the dataplate refers to the following values:
T=43°C
5= 40°C room temp. with 40% relative humidity

B.1 TRANSPORT, HANDLING AND STORAGE

B.1.1 INTRODUCTION

Transport (i.e. transfer of the machine from one place to another) and handling (i.e. transfer inside workplaces) must occur with the use of special and adequate means.

ATTENTION!
Due to their size, the machines cannot be stacked on top of each other during transport, handling and storage; this eliminates any risks of loads tipping over due to stacking.

The machine must only be transported, handled and stored by qualified personnel, who must:
- have specific technical training and experience in the use of lifting systems;
- have knowledge of the safety regulations and applicable laws in the relevant sector;
- have knowledge of the general safety rules;
- ensure the use of personal protection equipment suitable for the type of operation carried out;
- be able to recognise and avoid any possible hazard.

B.1.2 TRANSPORT: INSTRUCTIONS FOR THE CARRIER

ATTENTION!
Do not stand under suspended loads during loading/unloading operations.
Unauthorised personnel must not enter the work area.

ATTENTION!
The machine's weight alone is not sufficient to keep it steady. The transported load can shift:
- **when braking;**
- **when accelerating;**
- **in corners;**
- **on rough roads.**

B.1.3 HANDLING

Arrange a suitable area with flat floor for machine unloading and storage operations.

B.1.4 PROCEDURES FOR HANDLING OPERATIONS

For correct and safe lifting operations:
- use the type of equipment most suitable for characteristics and capacity (e.g. electric pallet truck or lift truck);
- cover sharp edges;

Before lifting:
- send all operators to a safe position and prevent persons from entering the handling area;
- make sure the load is stable;
- make sure no material can fall during lifting. Manoeuvre vertically in order to avoid impacts;
- handle the machine, keeping it at minimum height from the ground.

ATTENTION!
For machine lifting, do not use movable or weak parts such as: casings, electrical raceways, pneumatic parts, etc.

ATTENTION!
For information regarding weight, packing and handling of the remote unit, refer to the manufacturer's instructions.

B.1.5 TRANSLATION

The operator must:
- have a general view of the path to be followed;
- stop the manoeuvre in case of hazardous situations.

ATTENTION!
Do not push or pull the appliance to move it, as it may tip over.

B.1.6 PLACING THE LOAD

Before placing the load, make sure the way is free and that the floor is flat and can take the load. Remove the appliance from the wooden pallet, move it to one side, then slide it onto the floor.

B.1.7 STORAGE

The machine and/or its parts must be stored and protected against damp, in a non-aggressive place free of vibrations and with room temperature between -10°C and 50°C.
The place where the machine is stored must have a flat support surface in order to avoid any twisting of the machine or damage to the support feet.

ATTENTION!
Machine positioning, installation and disassembly must be carried out by a specialised technician.

ATTENTION!
Do not make modifications to the parts supplied with the machine. Any missing or faulty parts must be replaced with original parts.

B.2 INSTALLATION AND ASSEMBLY

To ensure correct operation of the appliance and maintain safe conditions during use, carefully follow the instructions given below in this section.

ATTENTION!
The operations described below must be carried out in compliance with the current safety regulations, regarding the equipment used and the operating procedures.

ATTENTION!
Before moving the appliance make sure the load bearing capacity of the lifting equipment to be used is suitable for its weight.

B.2.1 THE CUSTOMER'S RESPONSIBILITIES

The Customer must:
- provide an earthed power socket of suitable capacity for the input specified on the dataplate;
- provide a high sensitivity manual-reset differential thermal-magnetic switch. For information regarding the electrical connection, refer to par. B.2.8 "Electrical connection";
- check the flatness of the surface on which the machine is placed.

B.2.2 MACHINE SPACE LIMITS

A suitable space must be left around the machine (for operations, maintenance, etc.). This space must be increased in case of use and/or transfer of other equipment and/or means or if exit routes are necessary inside the workplace. Make sure to position the appliance at least 50 mm from any other machines present in the room (in fact, close proximity can create problems of condensate forming on the walls of the appliance), also taking into consideration the space needed for door opening.

B.2.3 POSITIONING

Install the appliance, taking all the safety precautions required for this type of operation, also respecting the relevant fire-prevention instructions.
Install the appliance in a ventilated place, away from heat sources such as radiators or air conditioning systems, to allow correct cooling of the refrigeration unit components. Never cover the condenser, even temporarily, as this can compromise correct operation of the appliance. If the machine is installed in a place where there are corrosive substances (chlorine, etc.), it is advisable to go over all the stainless steel surfaces with a rag soaked in paraffin oil in order to create a protective film. The appliances maintain their performance characteristics at a room temperature of +43°C; in any case the max. room temperature at which they can operate is +43°C.

The machine must be taken to the place of installation and the packing base removed only when being installed.
Arranging the machine:
- position the machine in the required place;
- adjust the height and levelling with the adjustment feet, also checking correct door and drawer closing:

ATTENTION!
The appliance must be levelled; otherwise its operation could be affected.

NOTE:
The plug must be accessible even after the appliance is positioned in the place of installation.

- wear protective gloves and unpack the machine, carrying out the following operations:
  - cut the straps and remove the protective film, taking care not to scratch the surface if scissors or blades are used;
  - remove the cardboard top, the polystyrene corners and the vertical protection pieces.

For appliances with stainless steel cabinet, remove the protective film very slowly without tearing it, to avoid leaving glue stuck to the surface. Should this happen, remove the traces of glue with a non-corrosive solvent, rinsing it off and drying thoroughly; it is advisable to go over all the stainless steel surfaces with a rag soaked in paraffin oil in order to create a protective film.

B.2.4 DISPOSAL OF PACKING

The packing must be disposed of in compliance with the current regulations in the country where the appliance is used.
All the packing materials are environmentally friendly. They can be safely kept, recycled or burnt in an appropriate waste incineration plant. Recyclable plastic parts are marked as follows:

PE	**polyethylene:**	outer wrapping, instruction booklet bag
PP	**polypropylene:**	straps
PS	**polystyrene foam:**	corner protectors

The parts in wood and cardboard can be disposed of, respecting the current regulations in the country where the machine is used.

ATTENTION: With remote versions, connect the appliance to the drainage system for the defrost water (kits with automatic condensate evaporation are available).

B.2.5 POSITIONING MODELS FOR USE WITH REMOTE UNITS

ATTENTION!
Installation of the appliance and the refrigerant condensing unit must only be carried out by the manufacturer's service personnel or by a specialised technician.

Place the condensing unit in a well-ventilated room away from heat sources.
If the remote unit is installed outdoors, it must be protected against the action of atmospheric agents with adequate covering, in any case ensuring correct ventilation of the condensing unit.
Choose pipe widths according to that given in the technical data (for recommended units).
Lay the copper piping, choosing the shortest path and avoiding bends, elbows and vertical sections as much as possible, keeping to the following:

- in horizontal sections, the inlet line must slope down towards the condensing unit at an angle of not less than 2%;
- traps must be installed before all upward sections of the inlet line, at a distance of 3-3.5 metres from each other;
- insulate the inlet line with suitable lagging;
- it is advisable to install the remote unit at a max. pipe length of between 15 m and 20 m from the appliance.
  NOTE: If the distance exceeds 20 m, ask the technical department for details or use a more powerful refrigeration unit.
- Install on the delivery line, in the following order: a suitably sized dehydration filter, a liquid flow indicator and a solenoid valve, if not present.

B.2.6 EVACUATING THE LINES AND CHARGING WITH REFRIGERANT GAS (for installation with remote refrigeration unit)

ATTENTION!
CHARGING WITH REFRIGERANT MUST BE DONE BY PROFESSIONALLY QUALIFIED PERSONNEL.

B.2.6.1 Leakage test
- Wash the inlet and delivery pipes with pressurised dry nitrogen;
- connect a nitrogen cylinder to the high and low pressure connectors, making sure to also install a pressure gauge (using a "**T**" union), and charge the high and low pressure lines with gas to a pressure of approx. 15 bar. Close the cylinder cock and, after at least 1 hour, check that the pressure has not dropped below the previous reading value.

B.2.6.2 Vacuum
- Empty the circuit manually by opening the cocks on the unions;
- connect the pipes to a vacuum pump (preferably a two-stage model with vacuum gauge and high and low pressure connectors). Reach a vacuum level equal to or lower than 70mTorr (0.0931 mbar). On reaching this level, maintain it for about 15 minutes and then proceed with charging the unit as described below.

B.2.6.3 Charging with refrigerant
- Charge the high pressure (HP) line with liquid refrigerant for R404A (to ensure addition of the correct mixture) until bringing the pressure above 0 bar (atmospheric pressure);
- then shut off the high pressure (HP) line, start the compressor and charge with liquefied gas slowly with short impulses from the low pressure (LP) line until the bubbles in the liquid indicator disappear, being careful not to freeze the inlet pipe (LP) near the compressor.

B.2.7 CHECKS WHEN STARTING UP THE APPLIANCE
Check on the liquid flow indicator that the circuit is sufficiently charged. Otherwise, complete charging following the instructions in § B.2.6.3.
Using a digital thermometer, check that the temperature reading on the control panel matches the instrument reading.

B.2.8 ELECTRICAL CONNECTION
Connection to the power supply must be carried out in compliance with the regulations and provisions in force in the country of use.

ATTENTION!
Work on the electrical systems must only be carried out by a qualified electrician.

The appliance works on a single phase 230V 50Hz power supply.
To connect to the power supply, insert the power cable plug in the corresponding mains socket, **first making sure:**
- the socket has an efficient earth contact and the mains voltage and frequency match that given on the dataplate. In case of any doubts regarding the efficiency of the earth connection have the system checked by qualified personnel;
- the system power supply is arranged and able to take the actual current absorption and that it is correctly executed according to the regulations in force in the country of use;
- a differential thermal-magnetic switch suitable for the input specified on the dataplate, with contact gap enabling complete disconnection in category III overvoltage conditions and complying with the regulations in force, is installed between the power cable and the electric line. For the correct size of the switch, refer to the absorbed current specified on the appliance dataplate.
- After making the connection, with the machine running check that the power supply does not fluctuate by ±10% the rated voltage.

Note: In models arranged for operation with remote units, make the
electrical connection to the condensing unit and solenoid valve as shown in the wiring diagram attached to the appliance.
The connection must be made with cable of adequate section.

If the power cable is damaged, it must be replaced by the after-sales service or in any case by qualified personnel, in order prevent any risk.

The manufacturer declines any liability for damage or injury resulting from breach of the above rules or non-compliance with the electrical safety regulations in force in the country where the machine is used.

ATTENTION: THE DOORS ARE NOT REVERSIBLE.

C.1 CONTROL PANEL

C.1.1 CONTROL PANEL (see Fig.1)
C.1.2 DIGITAL THERMOSTAT DISPLAY
The digital thermostat has a 3-digit electronic display for showing the temperature measured by the probe, and six **ICONS** (see fig.1 and par. C.1.5).

C.1.3 BUTTONS
The digital thermostat has 4 buttons for control and programming the instrument.

- Multifunction **"ON/OFF"** and **"UP"** button  for switching the appliance on or off and increasing the values.
- **"DOWN"** and **"DEFROST"** button  for activating manual defrost and decreasing the values.
- **"Prg/mute"** button  for silencing the alarm buzzer.
- **"SET"** button  for accessing the Set point.

C.1.4 SWITCHING ON AND TEMPERATURE ADJUSTMENT
When switched on, the instrument performs a Lamp Test, i.e. for a few seconds the display and Icons flash, verifying its correct functioning. If the instrument displays the compartment temperature when switched on, the appliance is already on; if "OFF" is displayed, press the **"ON/OFF"** button  for a few seconds to activate the appliance**;** the display shows the message **"ON"** and then the compartment temperature.

To switch the appliance off, press the **"ON/OFF"** button  for a few seconds **;** the message **"OFF"** appears on the display.

To **SET** the compartment temperature, proceed as follows:

- Press the button 

for a few seconds and the**SET POINT** value appears on the display.
- To change the **SET** value, press the **"UP"** increase value button  or the **"DOWN"** decrease value button  .

If no button is pressed for 60 seconds (**"TIME OUT"**), or by pressing the **"SET"** button once, the digital thermostat memorises the last set value and the normal display is restored.

The temperature range is set from a minimum to a maximum, according to the following values:

Maximum pos.	= - 2 °C
Minimum pos.	= + 10 °C

Maximum	pos. = - 15°C
Minimum	pos. = - 20°C

C.1.5 DIGITAL THERMOSTAT ICONS
The digital thermostat has 5 signalling ICONS:

- Icon  lit up indicates compressor activation.

- Icon  lit up indicates manual defrost in progress.

- Icon  lit up indicates activation of compartment fans (if present).

- Icon ***"aux"*** lit up indicates activation of auxiliary users (if present).

- Icon  indicates that a temperature alarm has occurred during appliance operation.

- Icon  indicates that a service alarm has occurred during appliance operation.

C.1.6 ALARMS AND SIGNALLING
C.1.6.1Service alarms and signalling for models 0°C/+10°C

The alarm is signalled by lighting up of the **Icon**  alarm signalling is also indicated by the alarm code appearing on the display.
Example: Alarm signalling due to a faulty probe (compartment probe) appears directly on the instrument display with the message **"E0"** and **"rE"** flashing alternately (refer to position 1 of the alarms table).
When the alarm condition ceases, the alarm goes off. Otherwise, contact the After-Sales Service.

C.1.6.2 Signalling alarms for models -15°C/-22°C and -2°C/ +10°C

The alarm is signalled by lighting up of the **Icon**  alarm signalling is also indicated by the alarm code appearing on the display.
Example: Alarm signalling due to a faulty probe (compartment probe) appears directly on the instrument display with the message **"E0"** and **"rE"** flashing alternately (refer to position 1 of the alarms table).
Alarm signalling due to a faulty evaporator probe (evaporator probe) appears directly on the instrument display with the indication **"E1"** flashing (refer to position 2 of the alarms table).

C.1.6.3 Temperature alarms and signalling (common to all appliances)

The alarm is signalled by lighting up of the **Icon**  alarm signalling is also indicated by the alarm code appearing on the display.
Temperature alarm signalling, regarding the thermostatting probe, appears directly on the instrument display with the indication **"HI"** (max. temperature alarm) and **"LO"** (min. temperature alarm).

C.1.7 DEFROST (fig.1)
- Automatic defrost
The appliance has an automatic defrost function.
This function is signalled by lighting up of the **DEFROST icon**  .
Thedefrost water is run into a tray and automatically evaporated.

- Manual defrost activation

Keep the **"DOWN"** button  pressed for at least 5 seconds to start a manual defrost cycle.
This function is signalled by lighting up of the **DEFROST icon**  .
If defrost conditions do not exist, the display shows the message "dFb", indicating that the operation will not be carried out **(only for models -15°C/-22°C and -2°C/+10°C).**
Defrost can be stopped manually by pressing the **"DOWN"** button  for a few seconds the display shows the message **"dFE"**. Defrost cannot be activated in the programming stage.

POSITION	DISPLAY	ALARM
1	E0/rE	Compartment probe fault alarm
2	E1	Evaporator probe fault alarm
3	HI	Compartment high temperature alarm
4	LO	Compartment low temperature alarm

C.1.8 LOADING THE PRODUCT
Distribute the product evenly inside the compartment (away from the door, back and side walls) in order to ensure good air circulation.
Cover or wrap food before placing it in the refrigerator and avoid putting very hot foods or steaming liquids inside. Do not leave the door open any longer than necessary when loading or removing food.
Keep the keys out of reach of children.

Regarding the max. load for each shelf, respect that given in the table below:

MAX. LOAD FOR PAN	
HORIZONTAL REFRIGERATORS WITH DIGITAL CONTROL	**40 Kg**

C.3 GENERAL SAFETY RULES

C.3.1 INTRODUCTION

The machines are provided with electric and/or mechanical safety devices for protecting workers and the machine itself. Therefore the user must not remove or tamper with such devices. The Manufacturer declines any liability for damage due to tampering or their non-use.

C.3.2 PROTECTION DEVICES INSTALLED ON THE MACHINE

C.3.2.1 Guards

The guards on the machine are:

- fixed guards (e.g. casings, covers, side panels, etc.), fixed to the machine and/or frame with screws or quick-release connectors that can only be removed or opened with tools;
- interlocked movable guards (front panels) for access inside the machine;
- machine electrical equipment access doors, made from hinged panels openable with tools. The door must not be opened when the machine is connected to the power supply.

ATTENTION!
Several illustrations in the manual show the machine, or parts of it, without guards or with guards removed. This is purely for explanatory purposes. Do not use the machine without the guards or with the protection devices deactivated.

C.3.3 SAFETY SIGNS TO BE PLACED ON THE MACHINE OR NEAR ITS AREA

PROHIBITION	MEANING
	**Do not remove the safety devices.**
	**Do not use water to extinguish fires (shown on electrical parts).**

DANGER	MEANING
	**DANGER OF BURNS.**
	**DANGER OF ELECTROCUTION (shown on electrical parts with indication of voltage).**

ATTENTION!
Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.

C.3.4 END OF USE

When the appliance is no longer to be used, make it unusable by removing the power supply wiring.

C.3.5 INSTRUCTIONS FOR USE AND MAINTENANCE

Risks mainly of a mechanical, thermal and electrical nature are present in the machine.
Where possible the risks have been neutralised:

- directly, by means of adequate design solutions,
- indirectly by using guards, protection and safety devices.

Any anomalous situations are signalled on the control panel display.
During maintenance several risks remain, as these could not be eliminated, and must be neutralised by adopting specific measures and precautions.
Do not carry out any checking, cleaning, repair or maintenance operations on moving parts.
Workers must be informed of the prohibition by means of clearly visible signs. To guarantee machine efficiency and correct operation, periodical maintenance must be carried out according to the instructions given in this manual. In particular, make sure to periodically check correct operation of all the safety devices and the insulation of electrical cables, which must be replaced if damaged.

ATTENTION!
Machine maintenance operations must only be carried out by specialised Technicians provided with all the appropriate personal protection equipment (safety shoes, gloves, glasses, overalls, etc.), tools, utensils and ancillary means.

ATTENTION!
Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.

ATTENTION!
Before carrying out any operation on the machine, always consult the manual which gives the correct procedures and contains important information on safety.

C.3.6 REASONABLY FORESEEABLE IMPROPER USE

Improper use is any use different from that specified in this manual. During machine operation, other types of work or activities deemed improper and that in general can involve risks for the safety of operators and damage to the appliance are not allowed.
Reasonably foreseeable improper use includes:

- lack of machine maintenance, cleaning and periodical checks;
- structural changes or modifications to the operating logic;
- tampering with the guards or safety devices;
- failure to use personal protection equipment by operators, specialised technicians and maintenance personnel;
- failure to use suitable accessories (e.g. use of unsuitable equipment or ladders);
- keeping combustible or flammable materials, or in any case materials not compatible with or pertinent to the work, near the machine;
- wrong machine installation;
- placing in the machine any objects or things not compatible with refrigeration, freezing or preservation, or that can damage the machine, cause injury or pollute the environment;
- climbing on the machine;
- non-compliance with the requirements for correct machine use;
- other actions that give rise to risks not eliminable by the Manufacturer.

ATTENTION!
The previously described actions are prohibited!

C.3.7 RESIDUAL RISKS

The machine has several risks that were not completely eliminated from a design standpoint or with the installation of adequate protection devices.
Nevertheless, through this manual the Manufacturer has taken steps to inform operators of such risks, carefully indicating the personal protection equipment to be used by them.
Sufficient spaces are provided for during the machine installation stages in order to limit these risks.
To preserve these conditions, the areas around the machine must always be:

- kept free of obstacles (e.g. ladders, tools, containers, boxes, etc.);
- clean and dry;
- well lit.

For the Customer's complete information, the residual risks remaining on the machine are indicated below: such actions are to be considered incorrect and therefore strictly forbidden.

RESIDUAL RISK	DESCRIPTION OF HAZARDOUS SITUATION
Slipping or falling	The operator can slip due to water or dirt on the floor.
Burns/abrasions (e.g. heating elements, cold tray, cooling circuit plates and pipes)	The operator deliberately or unintentionally touches some components inside the machine without using protective gloves.
Electrocution	Contact with live parts during maintenance operations carried out with the electrical panel powered.
Falling from above	The operator works on the machine using unsuitable systems to access the upper part (e.g. rung ladders, or climbs on it).
Crushing or injury	The specialised Technician may not correctly fix the control panel when accessing the technical compartment. The panel could close suddenly.
Tipping of loads	When handling the machine or the packing containing it, using unsuitable lifting systems or accessories or with the load unbalanced.
Chemical (refrigerant gas)	Inhalation of refrigerant gas. Therefore always refer to the appliance labels.

C.4 NORMAL MACHINE USE

C.4.1 CHARACTERISTICS OF PERSONNEL TRAINED FOR NORMAL MACHINE USE

The Customer must make sure the personnel for normal machine use are adequately trained and skilled in their duties, as well as ensuring their own safety and that of other persons. The Customer must make sure his personnel have understood the instructions received and in particular those regarding work hygiene and safety in use of the machine.

C.4.2 CHARACTERISTICS OF PERSONNEL ENABLED TO OPERATE ON THE MACHINE

The Customer is responsible for ensuring that persons assigned to the various duties:

- read and understand the manual;
- receive adequate training and instruction for their duties in order to perform them safely;
- receive specific training for correct machine use.

C.4.3 OPERATOR FOR NORMAL MACHINE USE

He must have at least:

- knowledge of the technology and specific experience in operating the machine;
- adequate general basic education and technical knowledge for reading and understanding the contents of the manual;
- including correct interpretation of the drawings, signs and pictograms;
- sufficient technical knowledge for safely performing his duties as specified in the manual;
- knowledge of the regulations on work hygiene and safety.

In case of a significant fault (e.g. short circuits, wires coming out of the terminal block, motor breakdowns, worn electrical cable sheathing, etc.) the operator for normal machine use must:

- immediately deactivate the machine.

D.1 MACHINE CLEANING AND MAINTENANCE

ATTENTION!
Before carrying out any cleaning or maintenance operation, disconnect the appliance from the power supply and carefully unplug it.
Disconnect the appliance from the power supply at least 30 minutes before carrying out any cleaning or maintenance operation.

ATTENTION!
During maintenance, the cable and plug must be kept in a visible position by the operator carrying out the work.

ATTENTION!
Do not touch the appliance with wet hands or feet or when barefoot. Do not remove the safety guards.

ATTENTION!
Use suitable personal protection equipment (protective gloves).

D.1.1 ROUTINE MAINTENANCE

ATTENTION!
Disconnect the power supply before cleaning the appliance.

D.1.1.1 Precautions for maintenance

Routine maintenance operations can be carried out by non-specialised personnel, carefully following the instructions given below. **The manufacturer declines any liability for operations carried out on the machine without following these instructions.**

D.1.1.2 Cleaning the cabinet and accessories

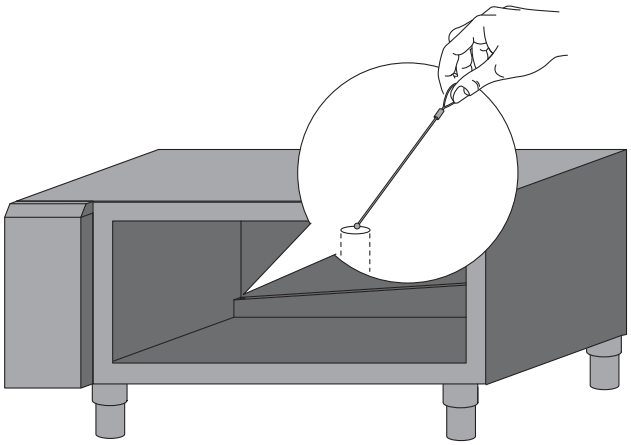
Before using the appliance, clean all the inside parts and accessories with lukewarm water and neutral soap or products that are over 90% biodegradable (in order to reduce the emission of pollutants into the environment), then rinse and dry thoroughly.
Do not use solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders for cleaning.
It is advisable to go over the stainless steel surfaces with a rag moistened with paraffin oil in order to create a protective film.
Check the power cable regularly and replace it in case of signs of wear.
Have the appliance checked periodically (at least once a year).

ATTENTION!
Do not clean the machine with jets of water.

ATTENTION!
Do not use steel wool or similar material to clean stainless steel surfaces. Do not use detergents containing chlorine, solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders.

D.1.1.3 Compartment cleaning

To clean the compartment, remove all the racks, remove the screws fixing the wire structures, clean the compartment with products that are over 90% biodegrable, then rinse and dry thoroughly.
ATTENTION: These appliances do not have a water drain hole.
For refrigerated models: periodically clean the defrost water drain hole (located on the back of the compartment) by means of the "swab" provided, it order to clear the hole if clogged (see figure below)



ATTENTION! After cleaning, do not leave the "swab" in the drain hole.

NOTE: This operation cannot be carried out on freezer models.

D.1.1.4 Precautions in case of long idle periods
If the appliance is not going to be used for some time, take the following precautions:
- unplug it;
- remove all food from the compartment and clean the inside and accessories;
- leave the door ajar so that air can circulate inside, preventing the formation of unpleasant odours;
- air the premises periodically.

ATTENTION!
Machine maintenance, checking and overhaul operations must only be carried out by a specialised Technician or the After-Sales Service, provided with adequate personal protection equipment (safety shoes and gloves), tools and ancillary means.

ATTENTION!
Work on the electrical equipment must only be carried out by a specialised electrician or the After-Sales Service.

ATTENTION!
Put the machine in safe conditions before starting any maintenance operation.

After carrying out maintenance make sure the machine is able to work safely and, in particular, that the protection and safety devices are efficient.

ATTENTION!
Respect the requirements for the various routine and extraordinary maintenance operations.
Non-compliance with the instructions can create risks for personnel.

D.1.2 EXTRAORDINARY MAINTENANCE

ATTENTION!
WEAR PROTECTIVE GLOVES AND A MASK WHEN CARRYING OUT ANY EXTRAORDINARY MAINTENANCE OPERATIONS.

Extraordinary maintenance must be carried out by specialised personnel, who can ask the manufacturer to supply a servicing manual.

D.1.2.1 Periodical condenser cleaning
For the appliance to work efficiently, the refrigeration unit condenser filter, located under the control panel, must be cleaned at least once every 3 months.
If the appliance is installed in a dusty or poorly ventilated place, the condenser filter must be cleaned more frequently, about once a month.
Note: It is advisable to use a brush or vacuum cleaner to remove the dirt accumulated on the filter.

ATTENTION!
Do not clean the appliance with jets of water.

D.1.2.2 Replacing the power cable
To replace the power cable, proceed as follows:
- Disconnect the power supply;
- Remove the electrical system guard;
- Replace the power cable;
- Refit the guard;
- Reconnect the power supply.

D.1.2.3 Quick troubleshooting guide
In some cases, faults can be eliminated easily and quickly; The following is a list of possible problems with their solutions:

A. *The appliance does not switch on:*
- make sure the plug is properly inserted in power socket.
- make sure the socket is powered.

B. *The inside temperature is too high:*
- check the thermostat setting;
- make sure there is no heat source near the appliance;
- make sure the door closes properly.

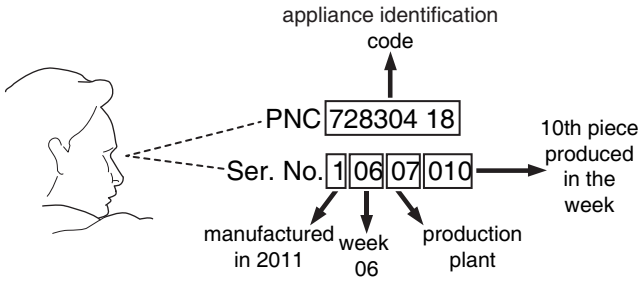
C. *The appliance is too noisy:*
- make sure the appliance is properly levelled. An unbalanced position can set off vibrations.

- make sure the appliance is not touching other appliances or parts which could reverberate.

D. *Water in the compartment:*
- make sure the drain is clean. If necessary, clean it by following the instructions given in par. D.1.1.3.

If the fault persists after carrying out the above checks, contact the After-Sales Service, remembering to give the following details:
- the type of fault;
- the appliance PNC (production number code);
- the Ser. No. (appliance serial number).

Note: The code and serial number are essential for identifying the type of appliance and date of manufacture:



D.1.3 MAINTENANCE INTERVALS
The inspection and maintenance intervals depend on the actual machine operation conditions and ambient conditions (presence of dust, damp, etc.), therefore precise time intervals cannot be given. In any case, to minimise interruptions of the service, careful and periodical machine maintenance is advisable.
It is advisable to stipulate a preventive and scheduled maintenance contract with the after-sales service.

D.1.3.1 Maintenance frequency
In order to guarantee constant machine efficiency, it is advisable to carry out the checks with the frequency given in the following table:

MAINTENANCE, INSPECTIONS, CHECKS AND CLEANING	FREQUENCY
Routine cleaning General cleaning of machine and surrounding area	**Daily**
Mechanical protection devices Check condition, and for any deformation, loosening or removed parts.	**Monthly**
Control Check mechanical part, for any breakage or deformation, tightening of screws. Check readability and condition of words, stickers and symbols and restore if necessary.	**Yearly**
Machine structure Tightening of main bolts (screws, fixing systems, etc.) of machine.	**Yearly**
Safety signs Check readability and condition of safety signs.	**Yearly**
Electrical control panel Check electrical components installed inside the Electrical Control Panel. Check wiring between the Electrical Panel and machine parts.	**Yearly**
Electrical connection cable and plug Check connection cable (replace it if necessary) and plug.	**Yearly**
Extraordinary machine maintenance Check all components, electrical equipment, corrosion, pipes, ……	**Every 10 years (*)**

(*) the machine is designed and built for a duration of about 10 years. After this period of time (from machine commissioning) the machine must undergo a general inspection and overhaul. Some examples of checks to be carried out are given below.
- check for any oxidised electrical components or parts; if necessary, replace them and restore the initial conditions;
- check the structure and welded joints in particular;
- check and replace bolts and/or screws, also checking for any loose components;
- check the electrical and electronic system;
- check the functionality of safety devices;
- check the general condition of protection devices and guards.

ATTENTION!
Machine maintenance, checking and overhaul operations must only be carried out by a specialised Technician or the After-Sales Service, provided with adequate personal protection equipment (safety shoes and gloves), tools and ancillary means.

ATTENTION!
Work on the electrical equipment must only be carried out by a specialised electrician or the After-Sales Service.

D.1.4 DISASSEMBLY
If the appliance has to be disassembled and then reassembled, make sure the various parts are assembled in the correct order (if necessary mark them during disassembly).
Before disassembling the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break. Before starting disassembly:
- remove all the pieces (if present) in the machine;
- disconnect the power supply;
- enclose the work area;
- place a sign on the Main Electrical Panel indicating that the machine is undergoing maintenance and not to carry out manoeuvres;
- carry out the disassembly operations.

ATTENTION!
All scrapping operations must occur with the machine stopped and cold and the electrical power supply disconnected.

ATTENTION!
Work on the electrical equipment must only be carried out by a qualified electrician, with the power supply disconnected.

ATTENTION!
To carry out these operations, appropriate PPE must be used.

ATTENTION!
During disassembly and handling of the various parts, the minimum height from the floor must be maintained.

D.1.5 DECOMMISSIONING
If the machine cannot be repaired, carry out the decommissioning operations, signalling the failure with a suitable sign, and request assistance of the manufacturer's after-sales service.

D.2 MACHINE DISPOSAL

ATTENTION!
DISMANTLING OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.

ATTENTION!
WORK ON THE ELECTRICAL EQUIPMENT MUST ONLY BE CARRIED OUT BY A QUALIFIED ELECTRICIAN, WITH THE POWER SUPPLY DISCONNECTED.

D.2.1 WASTE STORAGE
At the end of the product's life-cycle, make sure it is not dispersed in the environment. The doors must be removed before scrapping the appliance.
Special waste materials can be stored temporarily while awaiting treatment for disposal and/or permanent storage. In any case, the current environmental protection laws in the country of use must be observed.

D.2.2 PROCEDURE REGARDING APPLIANCE DISMANTLING MACRO OPERATIONS
Before disposing of the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break during scrapping. The machine's parts must be disposed of in a differentiated way, according to their different characteristics (e.g. metals, oils, greases, plastic, rubber, etc.). Different regulations are in force in the various countries, therefore comply with the provisions of the laws and competent bodies in the country where scrapping takes place. In general, the appliance must be taken to a specialised collection/scrapping centre. Dismantle the appliance, grouping the components according to their chemical characteristics, remembering that the compressor contains lubricant oil and refrigerant fluid which can be recycled, and that the refrigerator components are special waste assimilable with urban waste.

The symbol  placed on the product indicates that it should **not** be considered as domestic waste, but must be correctly disposed of in order to prevent any negative consequences for the environment and the health of people.
For further information on the recycling of this product, contact the local dealer or agent, the after-sales assistance service or the local body responsible for waste disposal.

ATTENTION!
Make the appliance unusable by removing the power cable and any compartment closing devices, to prevent the possibility of someone becoming trapped inside.

ATTENTION!
When scrapping the machine, the "CE" marking, this manual and other documents concerning the machine must be destroyed.

D.3 ENCLOSED DOCUMENTS

- Set of test and inspection documents
- Wiring diagram
- Installation diagram