

Foreword	41
A.1 General information.....	42
A.1.1 Introduction	42
A.1.2 New concept appliances	42
A.1.3 Easy cleaning	42
A.1.4 Recyclability and environmental impact.....	42
A.1.5 Intended use and restrictions	42
A.1.6 Testing and inspection	42
A.1.7 Definitions.....	42
A.1.8 Typographical conventions.....	43
A.1.9 Machine and manufacturer's identification data.....	43
A.1.10 Appliance identification	44
A.1.11 Copyright	44
A.1.12 Responsibility	44
A.1.13 Personal protection equipment	44
A.1.14 Keeping the manual.....	45
A.1.15 Recipients of the manual	45
A.2 Technical data.....	45
A.2.1 Materials and fluids used	45
A.2.2 Dimensions, performance and consumption.....	45
A.2.3 Mechanical safety characteristics, hazards.....	45
A.2.4 Climatic class	45
B.1 Transport, handling and storage	46
B.1.1 Introduction.....	46
B.1.2 Transport: instructions for the carrier.....	46
B.1.3 Handling	46
B.1.4 Procedures for handling operations.....	46
B.1.5 Translation.....	46
B.1.6 Placing the load.....	46
B.2 Installation and assembly.....	47
B.2.1 The customer's responsibilities	47
B.2.2 Machine space limits.....	47
B.2.3 Positioning.....	47
B.2.4 Disposal of packing.....	48
B.2.5 Fitting anti-tipping cables on 2-module glass door appliance with feet	49
B.2.6 Reversing opening of fully insulated doors	49
B.2.7 Reversing opening of half doors	51
B.2.8 Electrical connection	52
B.2.9 Electrical connection(only for appliances with cable without plug).....	52
B.2.10 Plumbing connection	53
C.1 Operation of digital models	53
C.1.1 Digital thermoregulator and control panel	53
C.1.1.1 Switching the appliance on	53
C.1.1.2 Control panel buttons (fig. 2).....	53
C.1.2 Digital thermoregulator display.....	54
C.1.3 Alarms and signalling.....	55
C.1.3.1 Alarm silencing	55
C.1.4 Product loading	55
C.2 General safety rules	56
C.2.1 Introduction	56
C.2.2 Protection devices installed on the machine.....	56
C.2.2.1 Guards.....	56
C.2.3 Safety signs to be placed on the machine or near its area	56
C.2.4 End of use	57
C.2.5 Instructions for use and maintenance.....	57
C.2.6 Reasonably foreseeable improper use	57
C.2.7 Residual risks.....	57
C.3 Normal machine use	58
C.3.1 Characteristics of personnel trained for normal machine use	58
C.3.2 Characteristics of personnel enabled to operate on the machine	58
C.3.3 Operator for normal machine use.....	58
D.1 Machine cleaning and maintenance.....	58
D.1.1 Routine maintenance	59
D.1.1.1 Precautions for maintenance	59
D.1.1.2 Cleaning the cabinet and accessories	59
D.1.1.3 Compartment cleaning	59
D.1.1.4 Precautions in case of long idle periods.....	59
D.1.2 Quick troubleshooting guide.....	60
D.1.3 Extraordinary maintenance	60
D.1.3.1 Periodical condenser cleaning	60
D.1.3.2 Maintenance intervals	60
D.2 Machine disposal	61
D.2.1 Waste storage.....	61
D.2.2 Procedure regarding appliance dismantling macro operations.....	61
D.3 Enclosed documents	62

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 people. 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.

No part of this manual may be reproduced.

A.1 General information

Thank you for choosing a quality product. We are sure our Premium refrigerator will meet all your needs for proper keeping of food.

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 New concept appliances

The "Premium" cupboard line has been created according to a new system that optimises performance and reduces energy consumption, also taking into account space requirements and environmental impact. This new system has several specific features:

- ▶ the door frame allows the side walls to be completely filled with foam insulation, whereas the inside part has been created in such a way as to increase the insulation.
- ▶ the ball-shaped door seal with three chambers has a double insulation area that reduces condensation and consumption.
- ▶ all the internal components (e.g. rear supports) are removable.
- ▶ the appliance has a conveyor that distributes the internal air flow uniformly, thereby allowing a uniform temperature to be maintained even when there is an excessive product load.
- ▶ the position of the compressor facilitates charging with gas.
- ▶ 2 types of refrigerant gas can be used : R134a/R404a or R290.

A.1.3 Easy cleaning

The cupboard line is easy to clean thanks to the rounded corners and the possibility of removing all the internal components.

A.1.4 Recyclability and environmental impact

The appliances have been designed also taking environmental impact into account, and therefore:

- ▶ cyclopentane is used for the foaming, which offers better insulation and is 100% environmentally friendly;
- ▶ the refrigerating units use an HFC (R134a/R404a) or HC (R290) refrigerant fluid allowed by the current regulations.
- ▶ the refrigerating unit can be removed in one piece;
- ▶ the appliance components are made from recyclable materials.

A.1.5 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.

	ATTENTION! DO NOT STORE EXPLOSIVE SUBSTANCES, SUCH AS PRESSURIZED CONTAINERS WITH FLAMMABLE PROPELLANT, IN THIS APPLIANCE.
---	---

A.1.6 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.1.7 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.

A.1.10 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.1.11 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.1.12 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.1.13 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		●	○				○
Handling		●	○				
Unpacking		●	○				
Assembly		●	○				
Normal use	●	●	●*				
Adjustments	○	●					
Routine cleaning	○	●	●*	○			
Extraordinary cleaning	○	●	●	○			
Maintenance	○	●	○				
Dismantling	○	●	○				
Scraping	○	●	○				

Key: ● PPE required; ○ PPE available or to be used if necessary; ■ DPI 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.1.14 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.1.15 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. The fluorinated gases are contained in a hermetically sealed device. An HFC (R134a(GWP:1430)/R404a(GWP:3922)/R407A (GWP:2107)) or HC refrigerant fluid for models with refrigerant R290, complying with the current regulations, is used in the refrigerating units. The type of refrigerant gas used is given on the dataplate. The CO₂ equivalent of the gas may be calculated multiplying GWP value by quantity of gas.



Attention!
R290 gas is potentially flammable and explosive!
Take every possible precaution to prevent any risk linked to the nature of this gas during any routine and/or extraordinary operation carried out on the appliance. Only specialised personnel are authorised to operate on the appliance.

A.2.2 Dimensions, performance and consumption

External dimensions:	1 module	1 moduleHP	2 modules
width mm	710	740	1441
depth mm	837	885	837
height mm	2050	2080	2050

Compartment dimensions

width mm	560	560	1291
depth mm	707	707	707
height mm	1544	1544	1544
Rack dimensions mm	530x530	530x530	530x530

Gross capacity L	700	700	1400
------------------	-----	-----	------

Power supply voltage 230V/50Hz (*)

Power supply voltage 220V/60Hz (*)

Power supply voltage 220-240V/50Hz (*)

(*): depending on the model

Equivalent sound pressure level Leq (*) dB(A)	<70
---	-----

(*) The value could increase depending on the workplace where measured.

Refrigerated models with fully insulated door

Temp. range in compartment C°	-2/+10
-------------------------------	--------

Refrigerated models with glass door

Temp. range in compartment C°	+2/+10
-------------------------------	--------

Freezer models with fully insulated door

Temp. range in compartment C°	-22/-15
-------------------------------	---------

Freezer models with glass door

Temp. range in compartment C°	-20/-15
-------------------------------	---------

Refrigerated models with separate compartments

Temp. range in compartment C°	-2/+10	-2/+10
-------------------------------	--------	--------

Ref/freezer models with separate compartments

Temp. range in compartment C°	-2/+10	-22/-15
-------------------------------	--------	---------

Refrigerated models with separate compartments and 3 doors

Temp. range in compartment C°	-2/+10	-2/-6
-------------------------------	--------	-------

A.2.3 Mechanical safety characteristics, hazards

The appliance does not have sharp edges or protruding parts. The guards for the moving and live parts are fixed to the cabinet with screws, to prevent accidental access.

A.2.4 Climatic class

The climatic class given on the dataplate refers to the following values:

▶ for models with fully insulated door

5= 43°C (IEC/EN 60335-2-89)

5= 40°C room with 40% relative humidity (IEC/EN ISO 23953).

▶ for models with glass door

4= 32°C (IEC/EN 60335-2-89)

4= 30°C room with 55% relative humidity (IEC/EN ISO 23953).

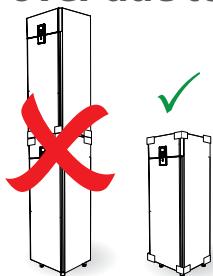
B.1 Transport, handling and storage

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 equipments 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.

Attention!

The appliance must be handled in the upright position. If the appliance is handled in a horizontal position, make sure to wait a few hours before making it operational

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 people 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.

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.



Attention!
For the choice of remote condensing unit refer to the unit recommended by the Manufacturer, given on the equipment technical sheet.



Attention!
In case of extraordinary size of the remote condensing unit refer to the technical sheet for the refrigerating capacity data or consult the Manufacturer's website or Local Service Center/Agency authorized by the Manufacturer.



Attention!
Installation of the appliance and the refrigerant fluid condensing unit must only be carried out by the manufacturer's service personnel or by a qualified person

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;
- ▶ 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. Refer to par. "B.2.3 Positioning" for information regarding distances 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

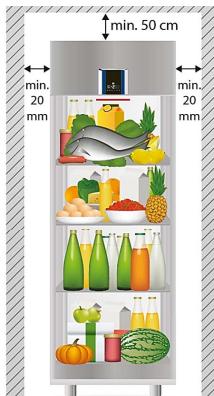
Install the appliance, taking all the safety precautions required for this type of operation, also respecting the relevant fire-prevention measures.

Install the appliance in a ventilated place, away from heat sources such as radiators or air conditioning systems, to allow correct cooling of the refrigerating unit components. When positioning to take into account the following distances:

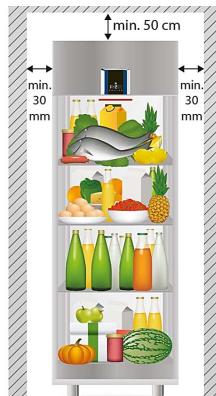
When positioning to take into account the following distances:



- at least 50 cm from the top;
- 30 mm from the back
- 20 mm (for refrigerated models) and 30mm (for freezer models) from the sides.



Refrigerated model



Freezer model

Note:

For 3-door models take into account the following distances::

- at least 50 cm from the top;
- at least 20 mm from the sides and 100 mm from the back
- Never cover the condenser, even temporarily, as this can compromise proper operation of the condenser and therefore 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 to create a protective film.

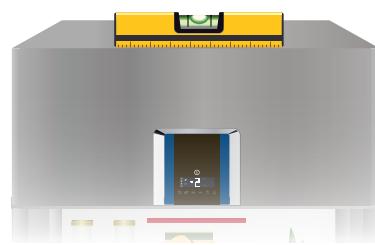
For information regarding the room temperatures in which the machine must operate, refer to par. A.2.4 "Climatic class". The machine must be taken to the place of installation and the packing base removed only when being installed.

Arranging the machine:

- position the machine in the required place;
- adjust the height and levelling with the adjustment feet, also checking correct door closing

Attention!

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



Attention!

Wait at least 2 hours before starting the appliance, to allow the oil to flow back in the compressor.



Note:

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



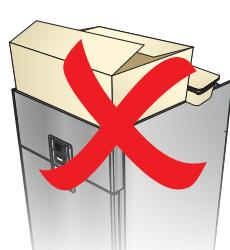
Attention!

Keep the ventilation openings in the appliance casing free of any obstructions.



Attention!

There must be free air circulation above the appliance, at the refrigerating unit. There must be no obstructions caused by trays, cardboard boxes, jars or other materials.(see par. C.1.3).



- 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 burned in an appropriate waste incineration plant. Recyclable plastic parts are marked as follows:

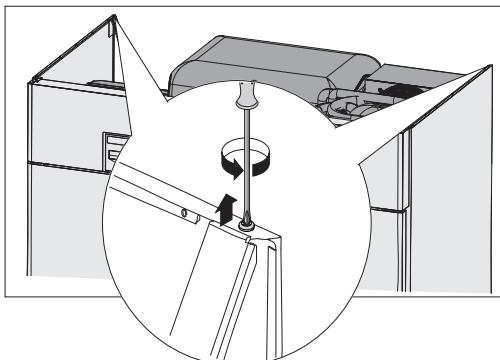
	polyethylene:	outer wrapping, instruction booklet bag
	polypropylene:	straps
	polystyrene foam	corner protectors

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

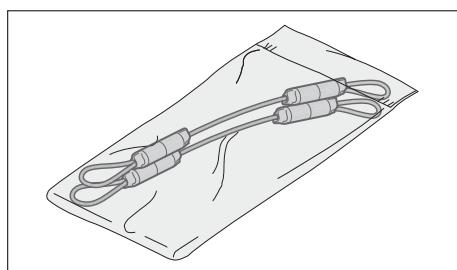
B.2.5 Fitting anti-tipping cables on 2-module glass door appliance with feet

When installing the appliance, make sure to fix the anti-tipping cables to it. To fit, proceed as follows:

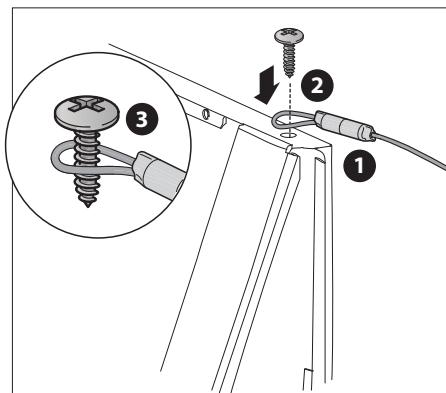
- undo the two Phillips screws securing the bracket to the rear side on the roof of the machine, as shown in the figure;



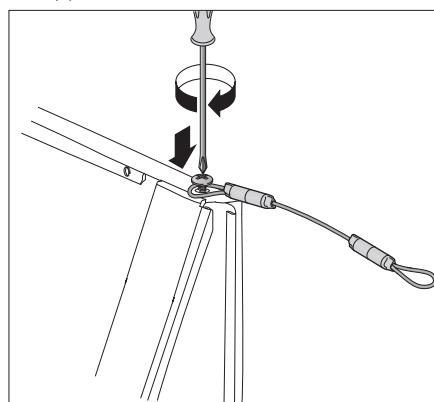
- remove the cables from their packing;



- join a slot of the cable to the screw;



- retighten the screw complete with the cable on the roof of the appliance;



- the cable must then be fixed to the wall with a plug, to permanently secure the appliance;
- Repeat the same operation also with the other cable.

B.2.6 Reversing opening of fully insulated doors

Attention!

The user cannot reverse the door opening direction in all models with glass door. Models with glass door come with opening from left to right. To reverse the opening direction, call the After-Sales Service.

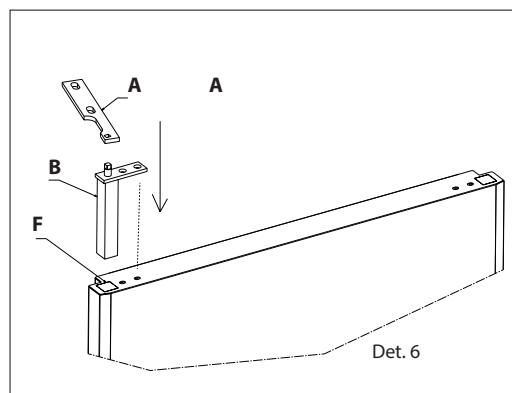
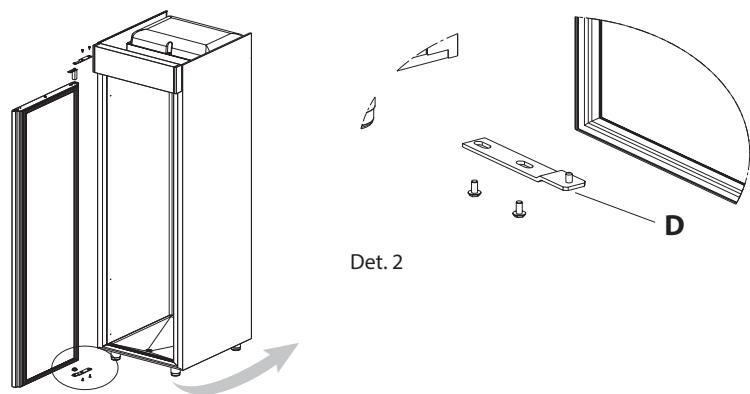
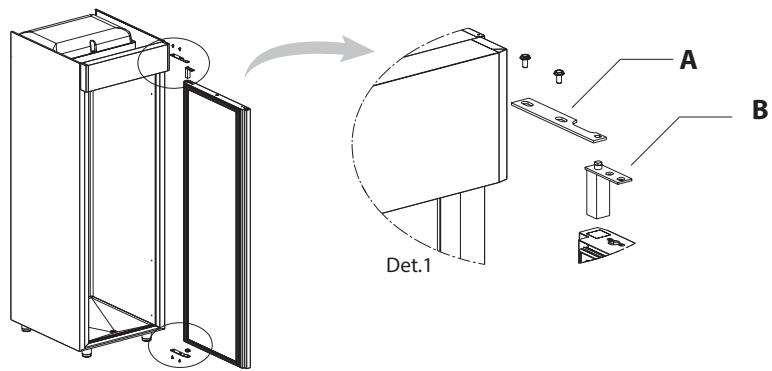
Attention!

Disconnect the appliance from the power supply before carrying out the door reversing procedure.

Single-door refrigerated cupboards are normally supplied with right opening.

When converting to left opening, proceed as follows:

- open the control panel, loosening the 2 screws located between the panel and door;
- undo the 2 fixing screws of bracket "A" and the screw securing hinge "B" (detail 1);
- remove the door and remove hinge "B" from right to left, break the precut "F" on the opposite side and insert part "B" (detail 6) and the bracket as shown in the figure;
- remove the lower bracket "D", refitting it in the special seat on the opposite side (detail 2);
- position the door on the lower bracket "D";
- position the upper bracket "A" between the door and the roof of the appliance, tightening the fixing bolts;
- before tightening the screws, align the door with the panel of the cabinet, adjusting the lower and upper brackets and making sure the seal is perfectly fitted on all sides;
- then tighten the bracket fixing bolts.



B.2.7 Reversing opening of half doors

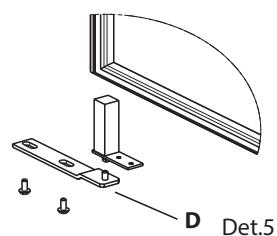
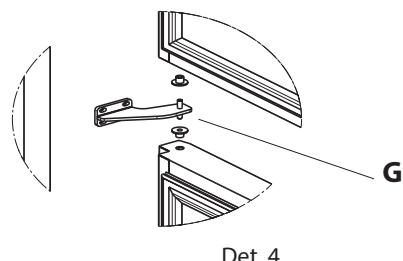
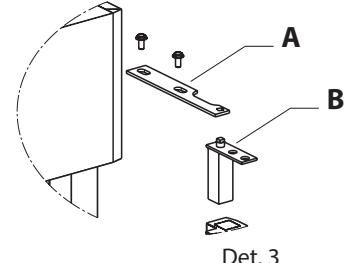
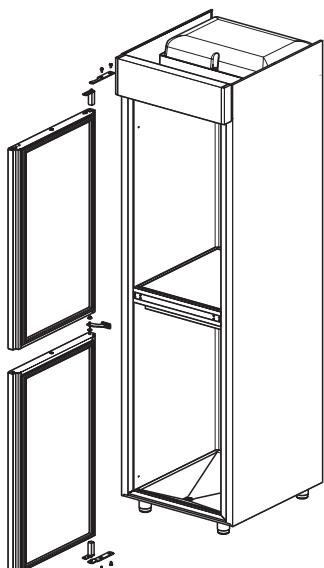
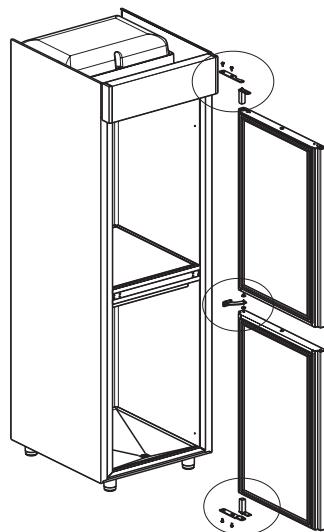
The operations to be carried out are those described in the previous section, replacing reference "D" with "F" (detail 3).

- ▶ open the control panel, loosening the 2 screws located between the panel and door;
- ▶ undo the 2 screws fixing bracket "A" and the screw securing hinge "B" of the top door;
- ▶ remove the door and remove hinge "B" from right to left, break the pre-cut "F" on the opposite side and insert part "B" (detail 6) and the bracket as shown in the figure.
- ▶ remove the middle bracket "G" (detail 4) and fix it on the opposite side of the cabinet
- ▶ remove the lower bracket "D", refitting it in the special seat on the opposite side; (detail 5)
- ▶ position the bottom door on the lower bracket "D";
- ▶ fix the middle bracket "E";

- ▶ position the top door on the middle bracket "G";
- ▶ position the upper bracket "A" between the door and the roof of the appliance, tightening the fixing bolts;
- ▶ before tightening the screws, align the door with the panel of the cabinet, adjusting the lower and upper brackets and making sure the seal is perfectly fitted on all sides;
- ▶ then tighten the bracket fixing bolts.

Note: After carrying out the above operations, the holes on the appliance must be closed with the specific plastic plugs.

Note: In case of installation on a concrete plinth, make 2 holes in the floor near the bottom hinge fixing screws.



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 information regarding the appliance power supply voltage is given on the dataplate.

For connection, just insert the power cable plug in the corresponding electrical system socket, **firstly making sure:**

- ▶ the socket has an efficient earth connection and the mains frequency matches 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 appliance working check that the power supply does not fluctuate by $\pm 10\%$ the rated voltage.

B.2.9 Electrical connection(only for appliances with cable without plug)

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 information regarding the appliance power supply voltage is given on the dataplate.

Before connecting, make sure:

- ▶ the connection point has an efficient earth contact and the mains voltage and frequency match that given on the data plate. In case of doubts regarding the efficiency of the earth wire, 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;
- ▶ the appliance must be permanently connected to the power supply, respecting the polarities:
 - brown: phase
 - yellow/green: earth
 - blue: neutral;

- ▶ a differential thermal-magnetic switch (or plug) suitable for the absorption specified on the data plate, 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 sizing of the switch or plug, refer to the absorbed current specified on the appliance data plate. **The chosen device must be lockable in the open position in case of maintenance.**

ATTENTION: When using a plug, it must comply with the national installation rules. The plug must also be:

- ▶ accessible after the appliance has been positioned in the place of installation;
- ▶ in a position always visible to the operator performing the intervention during maintenance operations.
- ▶ After making the connection, with the appliance running check that the power supply does not fluctuate by $\pm 10\%$ the rated voltage.

Attention!

 **An H05VV-F power cable (designation 60227 IEC 53) is used for the permanent connection to the power supply; when replacing it, use a type having at least these characteristics.**

Attention!

 **When replacing the cable, the earth wire must be kept longer than the live and neutral wires.**

Attention!

 **If the power cable is damaged, it must be replaced by the service centre 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.

B.2.10 Plumbing connection

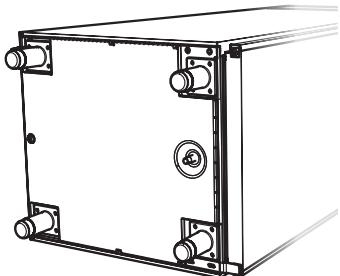


Attention!

The plumbing connection must be carried out by a specialised technician.

The machine has a drain hole for any liquids present in the compartment. Connect the compartment drain hole "C", located on the bottom of the appliance and provided with a closing plug, to a drain.

The drain hole diameter is "**17.5 mm**", therefore it is advisable to connect it to a "**17.5 mm**" drain pipe.



C.1 Operation of digital models

C.1.1 Digital thermoregulator and control panel

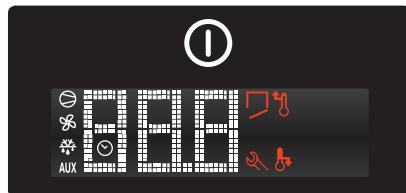


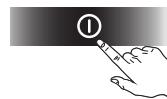
Fig. 1



Fig. 2

The digital thermoregulator has a button for switching the appliance on and off (fig.1) and 6 buttons for control and programming the instruments (see fig. 2).

C.1.1.1 Switching the appliance on



Connect the power cable to a power socket. The instrument display performs a Lamp Test and the message OFF will appear. To activate and deactivate the appliance press the button, for 5 seconds.

The display will show the message **ON**(for activation) or **OFF** (for deactivation).Even if the machine is deactivated with the ON/OFF button it still remains powered. This button only disconnects the power to the loads connected to the instrument.

C.1.1.2 Control panel buttons (fig. 2)

History button



Records the temperature every 24 hours from activation, for a total of 62 saves. Records high/low temperature alarms.



The first press of the History button brings up the list of daily recorded values (t00=current day;t01,t02,t03,etc.=recording days going back).Use the buttons to display the temperatures of previous days.



Press the **Set** button to display the recorded temperature of that period;to return to the list of stored values press the button **P**.



Press the button **P** for a few seconds to exit the History function.At least 24 hours must pass after installation of the appliance before the first temperature can be recorded.



Keeping the button pressed for a few seconds resets the previous recordings.



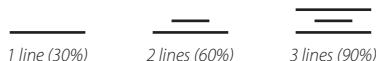
Programmes button

It is used in the HISTORY function (see par. C.1.1.2).
Pressing the button **P** also brings up the Technical Menu, which cannot be modified.



Humidity button

Present only on refrigerated models, it is used to set 3 different humidity levels. Depending on the humidity level, the display will show the images with 1, 2 or 3 lines that indicate: low, medium and high humidity.



Use the buttons to select the most suitable humidity level.

Table of categories, compartment temperature and humidity setting

Categories	Temp. °C	Humidity
Fresh meat (beef, mutton, pork)	4	90%
Poultry	-2	90%
Fruit & Vegetables	6	90%
Eggs, Butter, Cheese, Charcuterie	6	90%
Fresh fish	4	90%
Patisserie	6	90%
Beverages	8	60%



To confirm the degree of humidity selected, press the button **P** for 5 seconds.



Set button

Press for more than 1 second to display and/or set the **setpoint**. To increase or decrease the values use the buttons.

To confirm the new value, press the Set button



Continuous cycle button

Press the button for more than 5 seconds to activate the Turbo Cooling "TC" cycle function (the message ccb=start appears); the temperature reinstatement function is activated, skipping Defrost. During the continuous cycle the compressor remains on; the low temperature alarm is deactivated; the message TC and the temperature value alternate on the display. The continuous cycle ends:

- ▶ when the button is pressed (the message cce=end appears);
- ▶ when the min. foreseen temperature is reached;
- ▶ when the max. duration (time 1h) is reached; when the instrument is



switched off.



Up"button

for increasing the values



"Down"button

for decreasing the values



Defrost button



Attention!

Do not use mechanical devices or other means to speed up the defrost process, unless recommended by the manufacturer.



Attention!

Do not damage the circuit



The appliance has an automatic defrost function. A manual defrost cycle can be started by keeping the button pressed for at least 5 seconds (the display shows the message **DFb**).



This function is signalled by lighting up of the defrost icon. Defrost is with forced ventilation only for refrigerated models with compartment set point higher than or equal to "+2"



Defrost can be stopped manually by pressing the button for a few seconds (the display shows the message "**dFE**"). Defrost cannot be activated in the continuous cycle programming phase*

*If the continuous cycle is activated and the button is pressed, defrost will be carried out at the end.



Light button

Present in models with glass door, its purpose is to switch on the inside light.

C.1.2 Digital thermoregulator display

The digital thermoregulator has a 3-digit electronic display and seven signalling icons (see fig.1)



lit up indicates compressor activation



lit up indicates the defrost function

	lit up indicates activation of compartment fans
	lit up signals useful information regarding appliance operation (alarms)
	lit up indicates activation of auxiliary users (if present)
	lit up indicates HISTORY function on

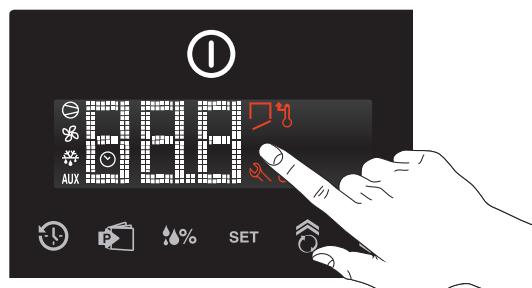
C.1.3 Alarms and signalling



The message is signalled by lighting up of the icon. The alarm icons are also associated with the colour of the lamp which changes when there is an alarm (red). Signalling also occurs with the respective code appearing on the display and the activation of an audible alarm.

C.1.3.1 Alarm silencing

Alarms are silenced by pressing on the lit icon. The value indicated on the display is also automatically reset.



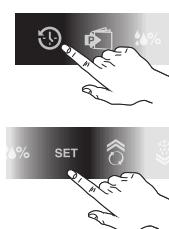
C.1.3.2 Alarm icons



Compartment high temperature alarm

The icon lights up and an audible alarm sounds when the compartment temperature exceeds the set maximum value. The alarm ceases when the temperature returns to the Set Point. A timer, which counts the alarm duration time until it is silenced, is also activated.

Pressing the History button displays the code HI and then in sequence, pressing the button "set" the number of hours since the alarm occurred. To deactivate the icon, briefly press on it.

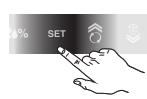


Compartment low temperature alarm

The icon lights up and an audible alarm is activated when the compartment temperature exceeds the set minimum value. The alarm ceases when the temperature



returns to the Set Point. A timer, which counts the alarm duration time until it is silenced, is also activated.



Pressing the History button displays the code LO and then in sequence, pressing the button "set", the number of days since the alarm occurred. To deactivate the icon, briefly press on it.

Door open alarm



The icon lights up when the door is opened. After the max. door opening time the icon stays on fixed and the buzzer is activated. The alarm ceases when the door is closed.



Service alarms

Symbols	Meaning	What to do
E0 "rE"	Compartment sensor fault	
E1	Room probe fault	
E2	Condenser sensor fault	
CLN (*)	The condenser needs cleaning	call service centre
"Ser"	Condenser fan failure	
CN	Communication between thermoregulator and compartment lamp interrupted	

(*)If the message "CLn" appears, firstly make sure there are no obstructions on top of the machine; otherwise, they must be immediately removed. Then, after the signalling is reset, check if the condenser is very dirty and clean it if necessary (operation not requiring After-Sales Service).

Note: The signalling message "CLn" is factory-set in maximum room temperature operating conditions (43°C) and considering the condenser completely obstructed.

C.1.4 Product loading

Distribute the product evenly inside the compartment (away from the door and back) to allow good air circulation.

In case of excessive product loading, the temperature remains uniform thanks to the removable rear supports which act as an air conveyor.

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. It is advisable to keep the keys in a place only accessible to authorised personnel.

To prevent unauthorised personnel from using the appliance, it is advisable to always close it with the key.



Attention!

Do not use electrical appliances inside the appliance compartments for storing frozen food, unless such equipment is recommended by the manufacturer.

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

Shelf max. load

vertical refrigerators with digital control

54 Kg

C.2 General safety rules

C.2.1 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.

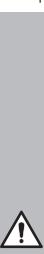
The Manufacturer declines any liability for damage due to tampering or their non-use.

C.2.2 Protection devices installed on the machine

C.2.2.1 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 (door) for access inside the machine;
- ▶ machine electrical equipment access doors, made with 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.2.3 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.2.4 End of use

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

C.2.5 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;
- ▶ or 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!
Extraordinary 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.2.6 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.2.7 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 (e.g. rung ladders, climbing) to access the upper part.
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.3 Normal machine use

C.3.1 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.3.2 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.3.3 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 anomaly (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.

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)

Attention!

Use a ladder with suitable protection for work on appliances with high accessibility.

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 appliance 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.



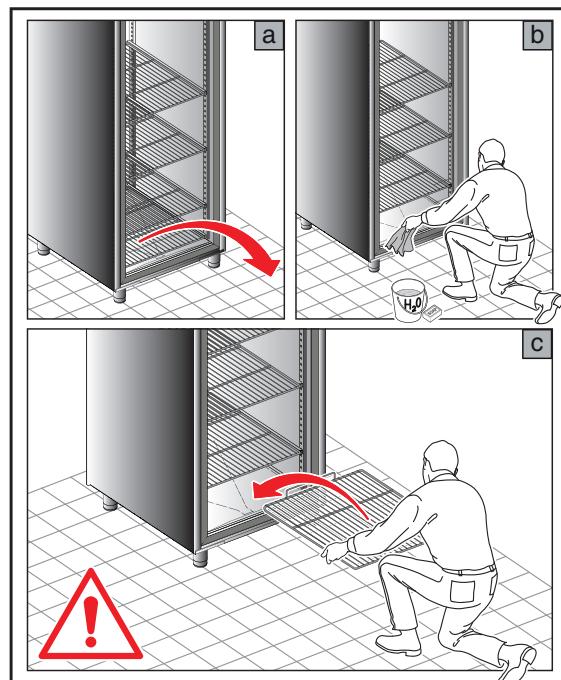
D.1.1.3 Compartment cleaning

The racks can be removed in order to thoroughly clean the compartment, therefore remove them before cleaning. For this, use products that are over 90% biodegradable (do not use solvents or abrasive powders), then rinse and dry thoroughly. Lastly, remove the plug closing the drain hole (refrigerated models only) and drain the water (only if it is connected, see section B.2.10). Pay special attention when cleaning the front control panel: make sure water sprays do not go beyond the

panel.

ATTENTION:

There is an extra rack on the bottom of the compartment. When cleaning, if this rack is temporarily removed, remember to refit it in its original place, as shown in the figure (detail "c"), in order to ensure proper operation of the appliance:



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:

- ▶ remove the plug from the power socket;
- ▶ remove all food from the compartment and clean the inside and accessories;
- ▶ clean the cabinet, going over all the stainless steel surfaces vigorously with a cloth moistened with paraffin oil in order to create a protective film;
- ▶ 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 Quick troubleshooting guide

In some cases, faults can be eliminated easily and quickly by following a brief troubleshooting guide:

A. The appliance does not switch on:

- ▶ make sure the plug is properly inserted in power socket.
- ▶ make sure the socket is powered.
- ▶ check (if present) the suitability of the fuse on the plug; otherwise contact the assistance service to replace the fuse, which must have the same characteristics as the one being replaced..

B. The inside temperature is too high:

- ▶ make sure there is no heat source near the appliance;
- ▶ make sure the door closes properly.

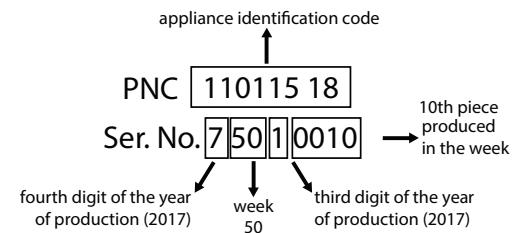
C. The appliance is too noisy:

- ▶ 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.

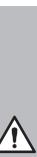
If the fault persists after carrying out the above checks, contact the After-Sales Service, remembering to give the following details:

- ▶ the type of fault;
- ▶ the appliance PNC (production 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 Extraordinary maintenance



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

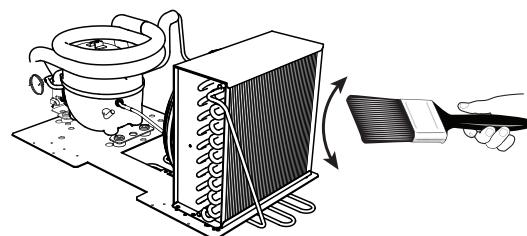
D.1.3.1 Periodical condenser cleaning

Periodical cleaning of the equipment depends on the frequency of its use.

⚠ Pay attention to the electrical cables!

Make sure not to obstruct the air passage on models with wire and tube condenser (located in the roof of the machine). This type of condenser does not require cleaning and does not lose its efficiency over time. To ensure optimum appliance operation clean the refrigerating unit condenser at least once every three months.

Note: It is advisable to use a brush or vacuum cleaner to remove the dirt accumulated on the condenser. Do not use sharp objects, which could damage the condenser



D.1.3.2 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, careful and periodical machine maintenance is advisable in order to minimise interruptions of the service.

It is advisable to carry out the checks with the frequency given in the following table:

Maintenance, checks, inspections and cleaning	Periodicità
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 the electrical components installed inside the Electric 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
General machine overhaul	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.

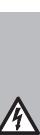


Attention!
It is advisable to stipulate a scheduled preventive maintenance contract with the After-Sales Service.

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 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