

CE

Convection humidification oven
for professional use
MIDI ECO - MAXI ECO

CHAPTER I - INTRODUCTION

Thank you for making us your choice! Before using the oven, we remind you to read this manual carefully.

This manual contains all the information you may need for a proper use and maintenance of the oven. The purpose of this manual is to let the user take every step and to arrange all the means, human resources and materials necessary for a safe and lasting use of the oven.

This manual must be handed over to the person in charge of the use and of the regular maintenance of the appliances, who is required to keep it in a safe, dry and suitable place, available for consultation and for routine oven maintenance. In the event the oven is sold, the handbook must always accompany the appliance.

This manual is also addressed to the operators for installation and extraordinary maintenance service.

The intended purpose and configurations of the provided appliances are the only ones allowed by the manufacturer: do not attempt to use the appliances in any other way.

The intended purpose indicated is valid only for appliances in a perfect state of repair in terms of construction, mechanics and engineering.

The Manufacturer declines any and all responsibility due to improper use or operation by untrained personnel, from changes and/or repairs performed by the user or by unauthorized personnel, and from use of non-original spare parts or spare parts that are not specific for the oven model.

The manual must be kept until the final accurate disposal of the appliance, it must be kept in good conditions and available for consultation all the time. In case of lost or damage of this manual, an extra copy can be provided directly by the Manufacturer or the retailer.



In case of misunderstandings in the following translation, please refer to the Italian version.

1.1 About this manual

Pay particular attention to words in **bold** print, with LARGER font, or underlined, as they refer to particularly important operations or information.

1.2 General warnings

- Carefully read the instructions contained in this handbook to know the precautions to be taken for:
 - installation of the oven;
 - maintenance and
 - best use.
- These appliances must be used only for the purpose they were expressly designed for, namely for cooking or heating food. Any other use is to be considered improper and hence dangerous.
- The appliance and the accessories are designed for professional use and must be used by qualified personnel.
- These appliances have been tested and adjusted by expert, specialized personnel before leaving the factory to assure unbeatable performance.
- Installation, and any required repair or adjustment work, must be carried out with the utmost care and attention by qualified personnel.
Consequently, **you are strongly advised to always contact the Dealer** who sold the appliance, specifying the problem, the **model** and **serial number** of the appliance indicated on the label.
- Only contact authorized personnel, with the necessary professional qualifications, for repairs and replacement of parts, and non-routine maintenance, or if the appliance breaks down or malfunctions.
- Only use original spare parts (refer to chapter IV).
- Before the installation, make sure the electrical data on the rating plate agree with your domestic power supply.
- Electrical safety of the oven is assured by the connection to an efficient earth system (which must be checked regularly) in compliance with regulations in force.
- Only specifically trained personnel should be allowed to use and supervise ovens during use.
- Do not have the oven installed near sources of heat such as fryers, hobs, etc...
- Do not obstruct the vents.
- Ask your installer for instructions on how to use the water softener/scale eliminator properly.
(Warning: if the resin regeneration procedure is not perfect, it may cause the appliance to rust).
- The equipment requires some precautionary measures during installation, connection to the electric power and water systems. See chapter II.
- The equipment requires some precautionary measures for cleaning. See chapter III.
- Before using the oven for the first time, it must be carefully cleaned:
 - clean the outside using only a damp cloth;
 - the inside of the cooking chamber must be cleaned with water;
 - in any case, do not use steel wool scouring pads to clean the oven;
 - carefully clean the trays before the use.



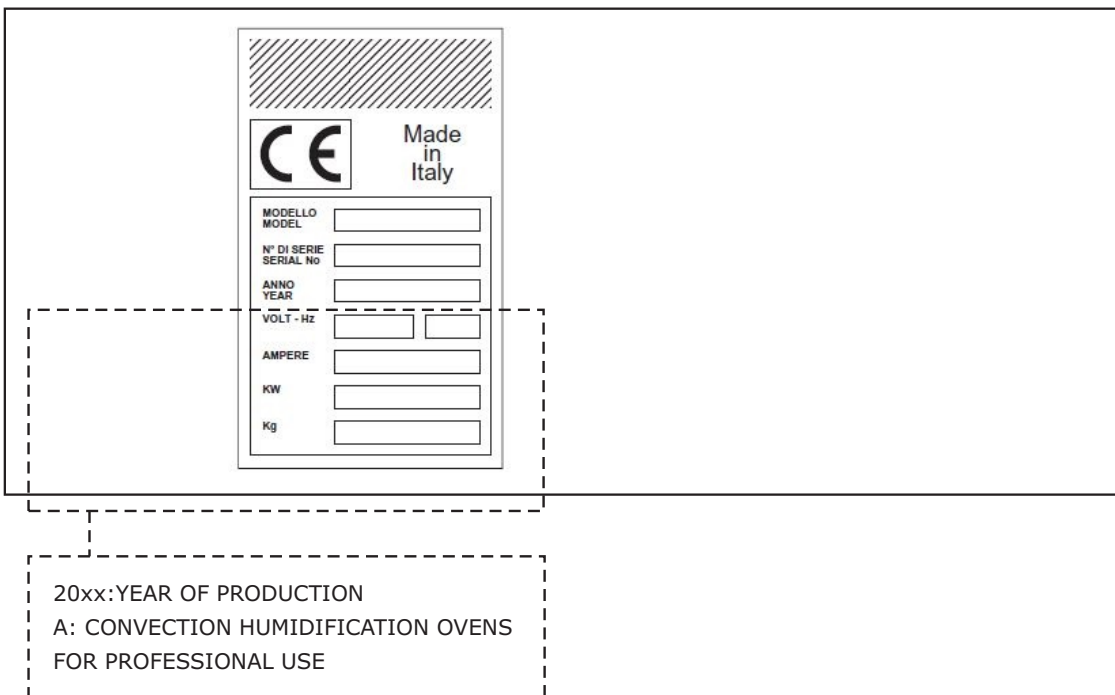
Failure to comply with these rules may compromise safety of both the appliance and the user.

The Manufacturer shall deny liability for the failure in the accomplishment of the regulations contained herein, and for any accident or trouble as a result of said non compliance.

1.3 Technical specifications and rating plate

	BRIO MIDI ECO	BRIO MAXI ECO
Dimensions	860x820x555 mm	860x820x635 mm
Electric power	3,2 kW	6,3 kW
Power supply	220-240V~50/60Hz	220-240V/380-415(2N)V50/60Hz
Wiring type	H05RN-F 3x1,5 mm ²	H05RN-F (4x2,5 mm ² / 3X4 mm ²)
No-load oven weight	59 kg	68 kg
Max. Food load	3 kg PER SHELF	3 kg PER SHELF
Number of pans	3	4
Number of fans	1	2
Mounting	OR BENCH OR STAND	
Water inlet	3/4" G	
Water pressure	150÷400 kPa (1,5÷4 bar)	
Water hardness	Max 3° F	
Insulation class	I	
IP rating	IPX3	
Control panel	ELECTROMECHANICAL	

Technical label



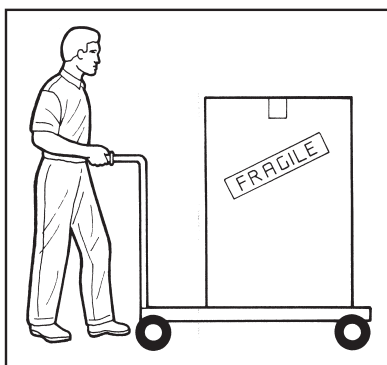
1.4 Handling, transportation and unloading

The packaging of the appliance is produced by the company according to the agreements signed case by case, to on the country the appliance is being sent to, or to the means of transport used.

Once the appliance is installed, packaging can be reused or disposed according to the regulations in force in each country.

Ovens must be carried with their original packaging as close as possible to the installation site.


Only specialized personnel can lift or handle the oven or any accessories carried independently.



Material sent is checked thoroughly before being handed over to the forwarding agent.

Make sure that the appliance has not been damaged during the delivery and that the packaging has not been damaged and some contents removed.

In case of damaged products, or missing components, immediately contact the carrier and the manufacturer providing photographic evidence.

 **Please check the supplied material matches order specifications. Don't drag or incline the oven for any reason. The oven is to be lifted up perpendicularly to the floor, moved in a horizontal direction and then laid down perpendicularly to the floor.**

 **WARNING!**
It is recommended not to install the oven on a slippery floor.

1.5 Conformity in compliance with directives/Standards

Ovens comply with the provisions and safety requirements indicated in the following European Directives and their specific associated standards:

- directive **2006/42/CE** on machinery and subsequent updates;
- low voltage safety directives **2006/95/CE** and subsequent updates (Standard **EN60335-1** , **EN60335-2-42**);
- directive **2004/108/CE** on electromagnetic compatibility and subsequent updates (Standard **EN50165**, **EN55014**, **EN55014-1**, **EN50366** e **EN61000** series).

According to the previous directives, the Manufacturer declares that its products comply with the European legislation in force and, consequently, feature regulation CE marking enabling them to be sold in European countries.

The functional components of the oven have a noise emission level of less than **70 dB(A)**.

CHAPTER II - INSTALLATION INSTRUCTION AND MAINTENANCE

2.1 Installation site and positioning

WARNING!

The installation, transformation and non-routine maintenance of the oven must be performed only by authorized installers or by the electricity company according to the current and local safety regulations.

TO CARRY OUT THIS OPERATION, ALL MEASURING INSTRUMENTS MUST BE PERFECTLY EFFICIENT AND PERIODICALLY CALIBRATED.

The manufacturer denies any and all responsibility for the failure of the accomplishment of these obligations.

The oven must only be installed in adequately ventilated places, preferably under an extraction hood able to remove the cooking steam to the outside of the room.

The oven can be installed on a fixed bench (with feet) or on a special support stand supplied by the manufacturer as an accessory.

In any case:

- the oven must be perfectly stable;
- the oven is not suitable for recess mounting or for installation in sets;



Ensure a distance of at least 30 cm from the ceiling if it is made of combustible material or if it is not heat-insulated.



Before first use, remove the protective film and any residuals of glue from the surfaces using a suitable solvent.

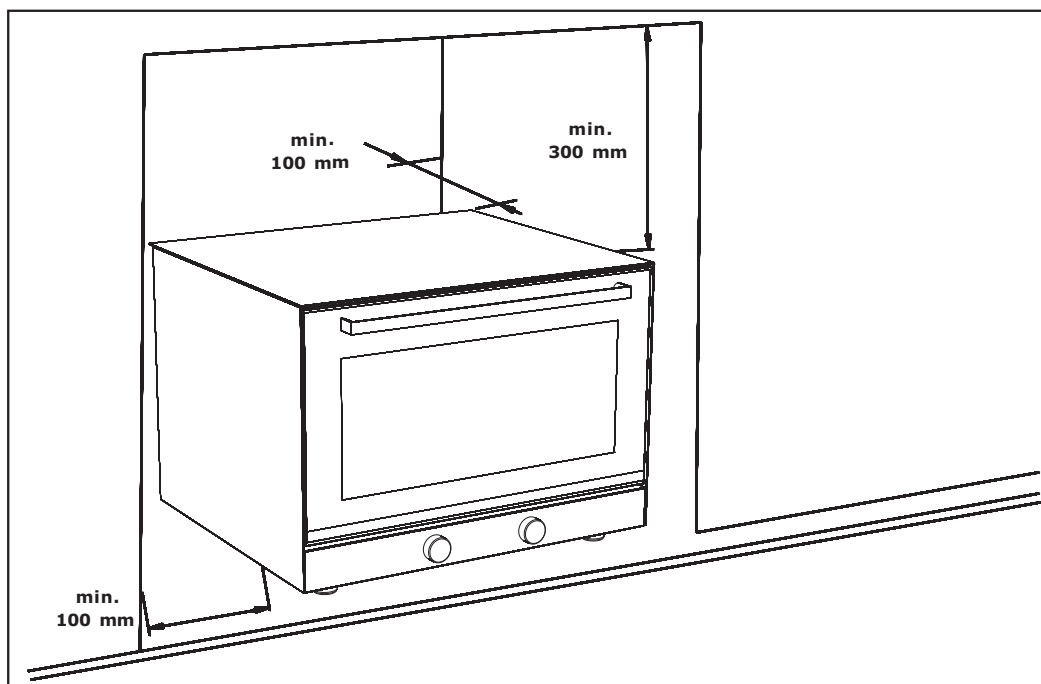


Figura 1

2.2 Plumbing, vents and drain

Connection to the power mains

Connection to the power mains must be made according to the current international, national and local regulations.

Before the connection, make sure that the electrical data on the rating plate located at the bottom of the rear side panel agree with the power supply (**Fig.2**).

A voltage variation of $\pm 10\%$ is allowed.

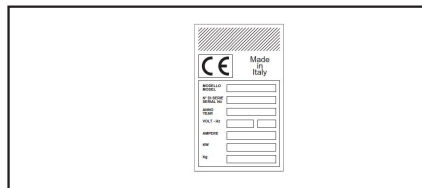


Fig. 2

The oven must be connected to the power mains permanently using at least a HO7RN-F cable (poly-chloroprene heavy rubber cable) with wires featuring a cross-section suitable for the maximum power demand (**see paragraph 1.3**).

In case of direct connection to the grid (without plug), it is necessary to include a device allowing disconnection from the grid, with a break distance of contacts enabling complete disconnection under the conditions of overvoltage category III, in compliance with installation rules.

Suitable automatic high-sensitivity ground fault switches must be installed to guarantee protection against direct and indirect contact of live electrical parts and fault currents towards the bonding cable according to the regulations in force.


This switch must be installed in the permanent electrical system of the facility where the appliance is installed, and in the immediate vicinity of the actual appliance where it can be reached easily by operators.

Check data in the specifications table for appropriate sizing of the supply line, master switch and cable (**see paragraph 1.3**).

Earthing

The oven must be earthed.

The yellow/green wire of the cable must be fastened to the terminal marked 

The oven must be included in an equipotential system. Connection must be made with a wire featuring a cross-section of at least 10 mm² connected to the terminal marked  located on the rear of the oven.

The cable must be carried to the oven through a metal tube with any sharp parts suitable removed, or in a stiff plastic tube.

To connect the cable to the terminal board of the oven, follow the instructions:

Connect the wires of the cable to the terminal board on the rear side of the oven, following the electrical scheme proposed. Make sure that the yellow/green ground wire is 3 cm longer than neutral and live wires. This must be the last wire to disconnect in case of dragging, and it can guarantee protection against electric shock. Block the cable and close the lid of the terminal board.



WARNING!

If the power cable is damaged, it must be replaced by the manufacturer or by its technical assistance service, or in any case by a person having a similar qualification, so as to prevent any risk.

Plumbing (optional)

Connect the water supply pipe to the $\frac{3}{4}$ " G inlet, screwing on the coupling (**A - Fig. 3**). Fit the circuit with a suitable mechanical filter and a shutoff cock.

To work properly, the oven requires drinking water with a maximum hardness of 3°F to prevent scaling inside the cooking chamber.

Where necessary, install an appropriate water softener on the water circuit's supply line. Permanently connect the appliance to the water distribution system. Do not use a set of separable couplings.

The admitted supply pressure range is min. 150 kPa (1,5 bar), max 400 kPa (4 bar).

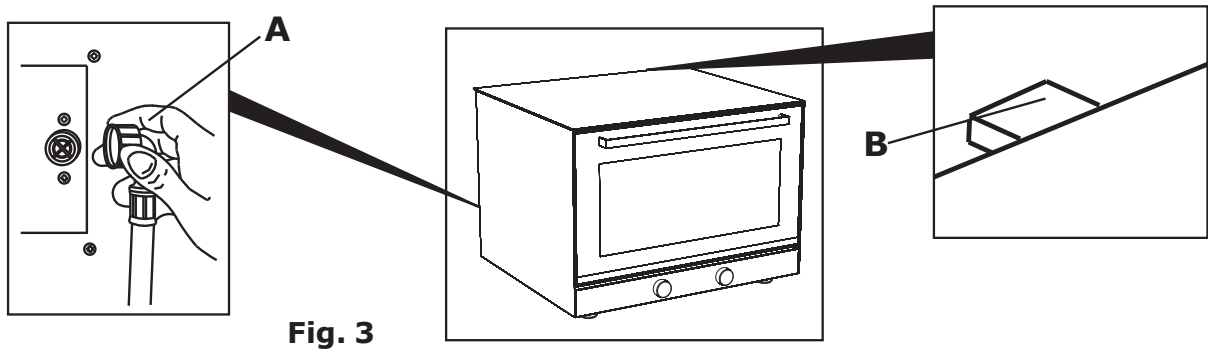


Fig. 3

Vents

The vents (**B-Fig.3**) must be kept free; it cannot be blocked.

2.3 Safety devices

The oven features the following safety and protection devices:

- Oven cooking chamber safety thermostat; if the oven cooking chamber overheats, this device trips, cutting off the power supply to the heating elements .
Safety thermostat (**A-Fig.4**) can only be reset manually by pressing the red button once the left side panel has been removed to reach the part (see "How to replace and adjust some units" section). Before performing this operation, make sure the power supply has been disconnected;
- door switch that switches off the oven when opened, heating system and chamber fan-motor will be disabled;
- protection grids to prevent the access to moving parts in the cooking chamber;



WARNING!

Resetting operations must be performed by qualified technical personnel, and only once the problems responsible for tripping have been solved.

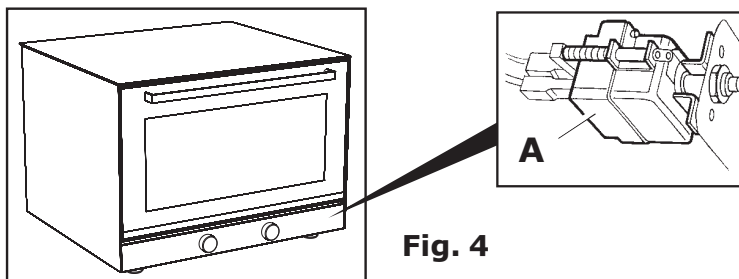


Fig. 4

2.4 Troubleshooting

	Possible causes
Cooking chamber heating does not operate	<ul style="list-style-type: none"> • Safety thermostat tripped. • Temperature control thermostat faulty. • Heating elements contactor faulty. • Timer faulty. • Wires to heating elements disconnected or fuses tripped. • Motor faulty. • Door not fully closed or door micro-switch out of order.
Temperature control incorrect	<ul style="list-style-type: none"> • Temperature control thermostat faulty. • Thermostat bulb faulty or not in place.
Fan motor does not operate	<ul style="list-style-type: none"> • Wires disconnected or fuses tripped. • Capacitor faulty. • Door not fully closed or door micro-switch out of order. • Fan timer faulty.
Oven disabled	<ul style="list-style-type: none"> • Electric supply interrupted. • Door micro-switch faulty.
Incorrect amount of steam produced	<ul style="list-style-type: none"> • Mains water supply incorrect. • Electrical valve fault. • The pressure reducer is obstructed.

2.5 How to replace and adjust some elements



WARNING!

Elements replacement and adjustment work is classed as non-routine maintenance, meaning it must be carried out by an authorized installer. Before starting any repair or maintenance work, you must switch off the appliance at the main power source in order to avoid any electrical contacts. Close the water supply taps too.



Remember to restore and put back the seals, sealants and sheathing inserted, before finishing the work.

Door's disassembly

The hinges **A** have been equipped with two moveable levers **B** these levers hook on to the hinge sections **C**, and hold the door in place when it is completely open.

Pull it away from the oven by completing the two movements illustrated (**Fig. 5**), to complete these operations hold the door by the sides at the bottom near the hinges.

To replace the door put the hinges back into their appropriate positions. Before closing the door do not forget to remove the two levers **B** which were used to hook the two hinges.

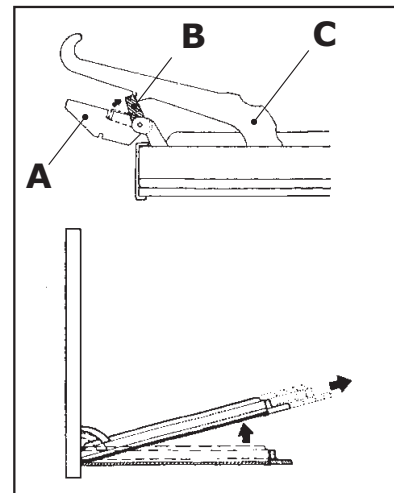


Fig. 5

Oven lamp

Unscrew the protective cap (**A - Fig. 6**) which sticks out of the inside of the oven to provide access to the lamp. Immediately after the bulb has been changed, remount the protection cover **A**.

Heating element

From inside the oven, remove the rack supports and the fan cover-grid, the heating element is removed by unscrewing it from the inside of the cooking chamber. The electrical connections are accessible from behind once the back panel has been removed.

Oven fan

Once the back has been removed, take off the side racks and the fan protection from inside the oven. Unscrew the central nut, eventually the lateral screw on the motor's rotor too, to free the fan. Pull it out and then unscrew the screws holding the motor flange.

Door seal

By hand, take out the seal from its position and replace it with a new one without tool.

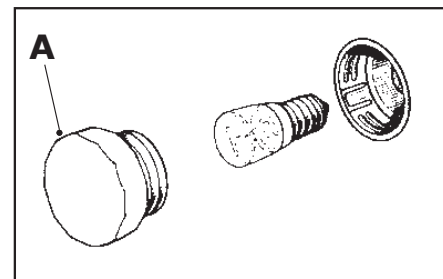


Fig. 6

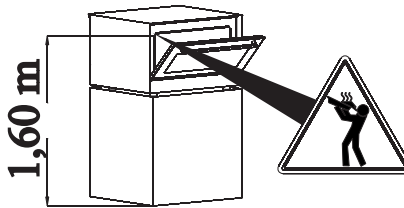
CHAPTER III - OPERATING INSTRUCTIONS

3.1 Preliminary warnings

- The appliance is designed for professional use and must be used by trained personnel.
- The oven must be used for cooking food only. Any other use shall be considered improper.
- All installation and non-routine maintenance work must be carried out by authorized personnel with the required professional qualifications only.
It is advisable to have the oven checked at regular set intervals. Contact only authorized Support Centres for repairs, and ask for original spare parts to be used.
- If you find a fault or malfunctioning, switch off the appliance's power supply with the master switch and close the water and gas supply cock, when available, on the appliance's supply line. Contact authorized Support Centres for repairs. The user is required to perform only routine maintenance on the oven, namely checking the oven's general efficiency and cleaning it daily.
- Read this manual carefully as it contains important information and instructions regarding safety during installation, use and maintenance.
Keep it available for future reference.
- Surfaces liable to come into contact with food must be cleaned thoroughly before switching on the oven.
- Carefully open the door in order to avoid cooking steam from blowing out on the user.



• Parts marked with the following symbol get very hot. Be careful and, if necessary, use gloves for safety.



- For safety reasons, the last tray should NEVER be placed at a height greater than 1,60 m. If necessary to do so, post the sticker contained on the oven's packaging at the height shown in the figure.

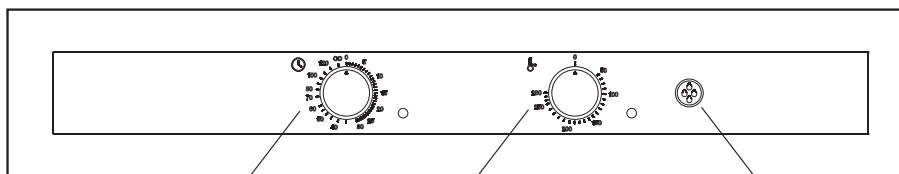


Never clean the inside of the oven or the door glass with jets of cold water when still at temperatures higher than 70° C.



Failure to fulfil these duties shall relieve the Manufacturer of any liability.

3.2 Control panel and manual control instructions



M1

M2

U1

- M1** On/Off knob and cooking timer knob
- M2** Thermosta knob
- U1** Humidifier button (optional)

Switching the oven on and off

In ovens simplified with two knobs, the ignition by turning the timer knob **M1**. Opening the door while the oven is on, has the same effect as the "stop knob", except, the oven restarts automatically when the door is closed again.

Setting temperature cooking

The knob **M2** allows to regulate the wished temperature of cooking (60-270°C).

Set time cooking

The knob **M1** allows to set regulate time necessary to the wished cooking. The rotation of the knob starts the oven and activates the rotation of the fan. Counterclockwise (∞) allows continuous functioning. Clockwise allows the desired cooking time to be set up to a maximum of 60 minutes. At the end of the cooking the timer **M1** goes to the zero position turns off the oven and indicates the end of the cycle with a buzzer.

Humidification (optional)

The button (**U1**) activates the electric valve of the water which generates steam in the chamber. To obtain the doses of steam wished, it is necessary to maintain pressed the humidifier button.

3.3 Cleaning and routine maintenance

Ovens must be cleaned daily if high levels of performance, hygiene and efficiency are to be maintained. If a fault occurs, do not attempt to solve the problem - contact the technical service centre instead, which will deal with the problem. Do not attempt to disassemble the appliance - all work must be carried out by specialized personnel.

Perform routine cleaning as described below, complying with the instructions given:

- before cleaning the oven, disconnect the general power switch, close the water tap and let the oven cool down, remove residual dust and residual protection or production oil;
- clean stainless steel parts once a day with warm water or suitable detergents, rinsing thoroughly and drying well. Do not use detergents containing chlorine (bleach, hydrochloric acid etc.), and avoid cleaning steel surfaces with steel wool, brushes or scrapers, which might be caused of rust formation;
- do not leave food on stainless parts (especially acid food such as salt, vinegar, lemon...), as it may cause damage;
- you should not wash the outside of the appliance with jets of water aimed directly at it as any water that does manage to get inside might limit the safety of the appliance. Only use a moist cloth and then dry all the surfaces, remove residual dust and residual protection or production oil;
- do not use corrosive substances (e.g. Muriatic acid) to clean the oven support top, since these could unintentionally damage the lower parts of the appliance;
- the use of gloves to protect from high temperatures is recommended while moving pans or trails;
- call in an authorized engineer at least once a year to give the oven a general check-up.

Room chamber cleaning

Clean at the end of the working day, with chamber temperature below 50-60°C, proceeding as follows:


- Remove the pan supports in order to clean them separately without hitting the bulbs on the cooking chamber left side;
- spray the chamber with a suitable food-grade degreasing detergent;
- close the door and wait for 15-20 min to give the detergent time to work;
- rinse the oven cooking chamber with clean water;
- run a convection cooking cycle at 150°C to dry the cooking chamber.

3.4 Baking councils

In the following table the most important cooking instructions for certain main dishes have been indicated. The recommended cooking times in this table are indicative.

Preparation	° C	minutes	Weight (Kg)
First plates			
Baked lasagna	200-220	20-25	0,5
Baked pasta	200-220	25-30	0,5
Rice Creole	200-230	20-25	0,5
Pizza	210-230	30-45	0,5
Meats			
Roast beef (ox)	170-190	40-60	1-1,2
Roast veal	160-180	65-90	1-1,2
Roast beef (steer)	170-180	65-90	1-1,2
Roast pork	160-170	70-100	1-1,2
Roast-Beef	180-190	40-45	1-1,5
Roast lamb	140-160	100-130	1,5
Roast chicken	180	70-90	1-1,2
Roast duck	170-180	100-160	1,5-2
Roast goose	160-180	120-160	3-3,5
Roast turkey	160-170	160-240	~5
Roast rabbit	160-170	80-100	~2
Roast hare	170-180	30-50	~2
Fish	160-180	--	
Sweet (pastries)			
Fruitcake	180-200	40-50	
Ciambella cake	160-180	35-45	
Margaret cake	200-220	40-45	
Sponge cake	200-230	25-35	
Schiacciata d'uva	230-250	30-40	
Croissants	170-180	40-60	
Strudel	160	25-35	
Sweet pastries (small)	180-200	20-30	
Apple fritters	180-200	18-25	
Savoyard pudding	170-180	30-40	
Savoy cookies	150-180	50-60	
Toast	230-250	7	
Bread	200-220	40	

 **To ensure good cooking, you should preheat the oven for about 12-15minutes.**

 **The manufacturer declines any responsibility in the event of failure to comply with the current accident-prevention and waste disposal regulations in the Country where the oven is used.**
The manufacturer reserves the right to change the above indications at any time.

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