

# MASTRO<sup>®</sup> Service



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**THIS APPLIANCE HAS BEEN MADE FOR COOKING FOOD AND MUST ONLY BE USED BY PROFESSIONALLY SKILLED PERSONNEL IN THE WAY DESCRIBED IN THIS INSTRUCTION MANUAL.**

## **1 WARNINGS**

- ◆ Read this handbook through carefully as it provides important information for a safe installation, use and maintenance.
- ◆ Keep this handbook in a safe place for future reference.
- ◆ Only professionally skilled personnel must install the appliance and, if required, convert it to receive a different type of gas.
- ◆ Only call one of the manufacturer's authorised technical assistance centres for repairs and demand original spare parts.
- Disposal and demolition of the appliance must be carried out in strict observance of current standards.

Failure to observe the above could undermine the safety of the appliance.

## **2 COMPLIANCE WITH THE "EEC" DIRECTIVES**

### **2.1 COMPLIANCE WITH "EEC" DIRECTIVES FOR ELECTRIC, FAN AND CONVENTIONAL OVENS**

The cookers are made in compliance with the essential requirements established by the EEC directives in agreement with the "EEC 73/23 Low Voltage Directive", with the "EEC 89/336 EMC Directive", supplemented by the "CE" mark according to the EEC Directive 93/68.

### **2.2 COMPLIANCE WITH "EEC" DIRECTIVES FOR GAS APPLIANCES**

This appliance has obtained the "CE" type approval certificate as it complies with the acceptance tests carried out in accordance with the following standard:  
"Essential requirements Annex I° EEC Directive 90/396 MD 26/06/1990"

#### 4 TECHNICAL DATA TABLE FOR HOBS – COOKERS (WITH GAS OVEN)

| MODEL                   | BURNERS<br>X POWER<br><br>No. x kW | POWER<br>OVEN<br><br>kW | TOTAL<br>POWER<br><br>kW | TOTAL GAS<br>CONSUMPTION                 |                                          | DIAMETER OF NOZZLES<br>IN HUNDREDTHS OF A<br>MILLIMETRE |                           |
|-------------------------|------------------------------------|-------------------------|--------------------------|------------------------------------------|------------------------------------------|---------------------------------------------------------|---------------------------|
|                         |                                    |                         |                          | LPG<br>G30 – G31<br>kg/h                 | METHANE<br>G20<br>m³/h                   | LPG<br>G30 – G31<br>28/30 mbar                          | METHANE<br>G20<br>20 mbar |
| 60/30 PCG               | 1 x 2,8<br>1 x 3,3                 | /                       | 6,1                      | 0,220<br>0,260<br>0,481                  | 0,296<br>0,350<br>0,646                  | 85<br>95                                                | 115<br>135                |
| 60/60 PCG<br>60/60 CFGE | 2 x 2,8<br>2 x 3,3                 | /                       | 12,2                     | 2 x 0,220<br>2 x 0,260<br>0,962          | 2 x 0,296<br>2 x 0,350<br>1,292          | 85<br>95                                                | 115<br>135                |
| 60/60 CFG               | 2 x 2,8<br>2 x 3,3                 | 1 x 2,6                 | 14,8                     | 2 x 0,220<br>2 x 0,260<br>0,205<br>1,167 | 2 x 0,296<br>2 x 0,350<br>0,238<br>1,566 | 85<br>95<br>80                                          | 115<br>135<br>109         |

#### Air adjustment

These burners do not require any air adjustment.

#### 4.1 GAS CHARACTERISTICS

The data relative to power and consumption refer to the following types of gas:

| TYPE OF GAS                               | NET HEAT VALUE<br>(NHV) | PRESSURE<br><br>mbar | SUPPLY<br><br>mm water |
|-------------------------------------------|-------------------------|----------------------|------------------------|
| G20(methane gas)CH <sub>4</sub>           | 9,45 kW m³/h            | 20                   | 200                    |
| G30(butane)C <sub>4</sub> H <sub>10</sub> | 12,87 kW/kg             | 30                   | 300                    |
| G31(propane)C <sub>3</sub> H <sub>8</sub> | 12,68 kW/kg             | 37                   | 370                    |
| G25(G20L – DE)                            | 8,12 kW m³/h            | 20                   | 200                    |
| G25(aardgas NL)                           | 8,12 kW m³/h            | 25                   | 250                    |

When installing the appliances, the gas supply pressures must be those given above in order to have maximum burner efficiency.

Pressure mbar = 1 millibar = 1 mbar = 10 mm c.d.a. (water column millimetres)

Power = 1 kW = 860 kcal = 3.6 MJ = 3412 BTU

### 6.1 APPLIANCE INSTALLATION

- Remove the appliance from its packaging and position it (always) under a suction hood.
- Always use rigid galvanised steel or copper pipes for connecting the appliance.
- If the appliance is wall mounted, in contact with flammable material, place a layer of heat-resistant insulating material between the appliance and the wall or leave a space of 200 mm between the appliance and the wall.
- The appliance gas system and the characteristics of the room in which the appliance is installed must comply with current laws.

### 6.2 LAWS, TECHNICAL REGULATIONS AND GENERAL RULES

- Standard UNI-CIG 8723, Ministerial circular no. 68 dated 25/11/69 and variations. Circular letter No. 412/4183 del 06/02/75
- Accident prevention laws.
- Always install a cut-off cock between each appliance and the gas pipe.
- Check that aeration in the room is sufficient when the appliance is working, considering that the necessary quantity of air for combustion is 2 m<sup>3</sup>/h of air for each kW of installed power.

### 6.3 DISCHARGE OF FUMES FOR TYPE “A” APPLIANCES

The appliances must be installed on premises that are suitable for the discharge of the combustion products and must comply with the installation rules. Our appliances are considered type “A” gas appliances (see the Technical Data Tables) and are not for connecting to a natural discharge duct for combustion products.

These appliances must discharge through specific extractors, or similar devices, connected to a properly working flue or discharged directly outside.

If this is not possible, an air suction device can be used connected directly to the outside, with a capacity that must be no less than that required, see Table 1, plus the quantity of fresh air that is necessary for the well-being of the workers.

### 6.4 CHECKING FOR GAS LEAKS

Once installed, check there are no gas leaks on pipe joints using a soapy water solution. You will know if there are leaks by the foamy bubbles that form. Never use bare flames to check for leaks.

When the appliance is ready to use, check that there are no gas leaks, by checking on the gauge, if used (for a period of 30 minutes), that there is no passage or consumption of gas.

The appliance must be positioned in a well aerated place, if possible under a suction hood to ensure complete evacuation of the fumes created when cooking.

Before using the appliance for the first time, remove all the protection sheets, clean all the surfaces with a soft cloth, warm water and soap to remove all traces of the antirust products applied during production.

If the appliance is to be installed close to walls, partitions, kitchen units, decorative claddings, etc., they ought to be made with non flammable materials, if not leave a gap of at least 100mm between them and the appliance.

It is essential to comply with the fire prevention rules.

The appliances can be positioned, depending on the model, as top or stand-alone appliances or in series together with others in our range. The main switch and outlet must be near the appliance and easy to reach.

Level the appliance, adjust its height and stability by turning the levelling feet.

### **7.1 LAWS, TECHNICAL REGULATIONS AND GENERAL RULES**

Comply with the following rules during installation:

- 1) accident prevention standards;
- 2) the laws in force in the country where the appliance is installed;
- 3) read all the indications given in this handbook carefully as they provide important information for safe installation, use and maintenance;
- 4) keep this handbook in a safe place for future reference by those who use the appliance.

### **7.2 INSTALLING ELECTRICAL APPLIANCES**

Only specialised personnel must install, start and service the appliance.

Installation must be carried out in compliance with the laws in force in the country where the appliance is installed.

The manufacturer declines all responsibility if the appliance malfunctions due to incorrect installation, tampering, improper use, bad maintenance, failure to comply with the local laws and inexperience in using the appliance.

#### **INSTRUCTIONS FOR THE QUALIFIED INSTALLER**

APPLIANCE WEIGHING MORE THAN 40 Kg

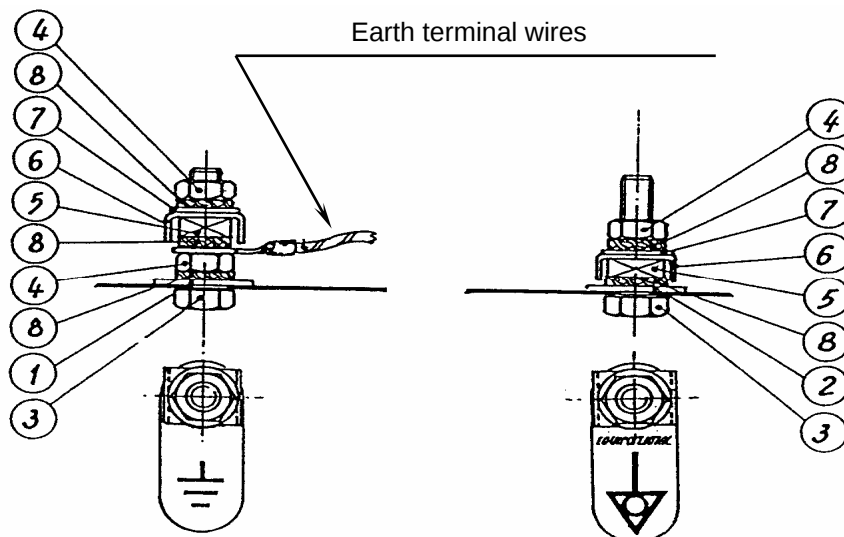
CONNECT THE POWER CABLE TO  
THE TERMINAL BOARD BEFORE PUTTING  
THE APPLIANCE IN ITS FINAL POSITION

### 7.3 ELECTRICAL CONNECTION

- 1) The cookers are delivered for working with a VAC voltage of 230 + 1
- 2) Connect to the electricity line, interposing a suitably rated automatic circuit breaker, where the opening distance between the contacts must be at least 3 mm. Furthermore, the supply voltage must not deviate from the voltage value by  $\pm 10\%$ .
- 3) The characteristics of the flexible cable chosen for connection to the electricity line must not be inferior to the type with rubber insulation H05RN-F and it must have a nominal cross section suitable to absorb maximum current; hence, as indicated in table 1.1, it must have the same minimum cross section indicated relative to the cooker model.
- 4) On the "top" hobs, cable input and the terminal board are at the back and in order to connect up you have to unscrew the screws and unhook the protection cover. To connect up: put the flexible cable through the grommet and cable relief strain, connect the single wires to their corresponding terminals. It is indispensable to connect the appliance to a working earth wire. For this purpose, near the connection terminal board there is a terminal marked with a plate with the  $\equiv$  symbol on it and to which the earth wire must be connected (yellow-green).  
This wire must be long enough so that, if the cable relief strain slackens, it can only be stressed after the power wires have been disconnected.  
NOTE: earthing must comply with current laws.

### 7.4 EQUIPOTENTIAL CONNECTION

If you are installing several appliances in a row, the kitchen must be connected to an equipotential system whose effectiveness must be verified in accordance with the relative current laws. The connection is found on the rear part of top appliances, and on the left-hand side of the base for floor-standing appliances. It is marked with the tag "EQUIPOTENTIAL".

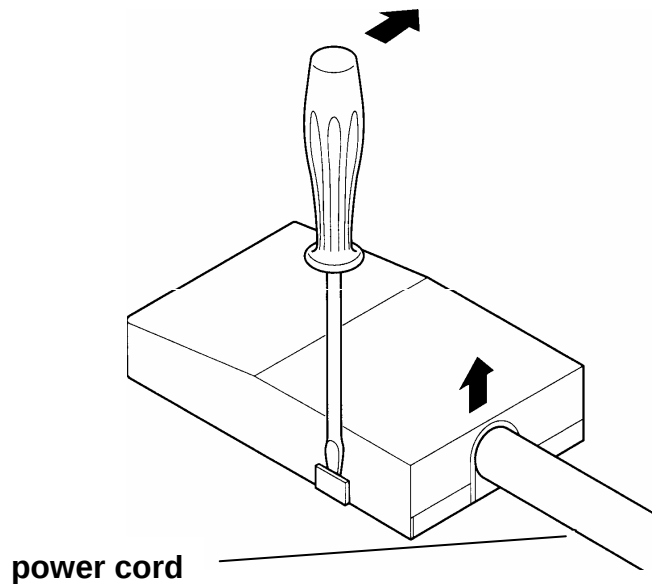


**NOTE: The manufacturer declines all responsibility if safety regulations are not complied with as described above.**

## 7.5 REPLACEMENT OF POWER CORD (GAS OVEN)

The power cord, which must be in H05 RR-F, with a section of 3x1 mm<sup>2</sup>, may be replaced in the following way:

- Open the terminal board (see fig. below);
- Insert the conductors in the respective terminals: N – L –  ;
- Fix the cable in the special cable clamp;
- Close the terminal board by pressing on the cover until it locks in place.



## 8

## MAINTENANCE

There is very little maintenance thanks to the correct way the appliances have been made. However, we do advise having the systems checked by qualified personnel at least twice a year.

**N.B.:** the manufacturer declines all responsibility for direct or indirect damage caused by incorrect installation, bad maintenance, tampering, improper use and failure to comply with the accident prevention norms regarding the prevention of fire and safety for gas systems

### 8.1 CONVERSION FOR USE WITH A DIFFERENT TYPE OF GAS – TOP BURNERS

The appliance is tested and set for working with gas according to the characteristics table affixed in proximity to the appliance's gas inlet.

In order for it to function with a different type of gas, proceed as follows:

- The conversion must be carried out by qualified personnel
- The nozzles for LPG are supplied with the appliance in a nylon bag
- Changing the burner nozzles: fig. 1  
remove the rungs (1) and the burner flame separators and replace the nozzles attached to the bottom of the burner bodies in accordance with the TECHNICAL DATA TABLE based on the type of gas. (Fig. 3)
- Regulating the minimum flame: fig. 1  
remove the cock knobs (8), with a screwdriver turn the cock (6) adjustment screw (7) until you get the minimum flame required.
- Supply pressure:  
it must be that specified on the appliance's data plate and in the instruction handbook (see the Technical Data table). Check the supply pressure by inserting a rubber pipe, with a water gauge or similar, in the pressure tap (10) welded on the gas shaft (9) removing the screw (11). After it has been checked, tighten the screw. If the supply pressure is different to that specified, find the cause and correct it.

**Attention:** after each conversion, apply the new calibration by affixing the relative plate, that you will find in the bag of nozzles, on the appliance's rating plate

#### Changing top burner parts

Safety cock (6): remove the rungs (1), disassemble the control panel (12), unscrew the burner connection pipes (13), unscrew the bridles (14) for fastening to the ramp, unscrew the thermocouple (15), replace the cock.

Thermocouple (15): unscrew the cock fitting (6), unscrew the check nuts from the thermocouple supporting square (16) and change the thermocouple.

Ignition plug (17): disconnect the plug connection wire (18), remove the holding spring (20), remove the plug.

Piezoelectric lighter (19): remove the panel (12), pull the plug connecting cable out (18), remove the piezoelectric stop nut and change the lighter.

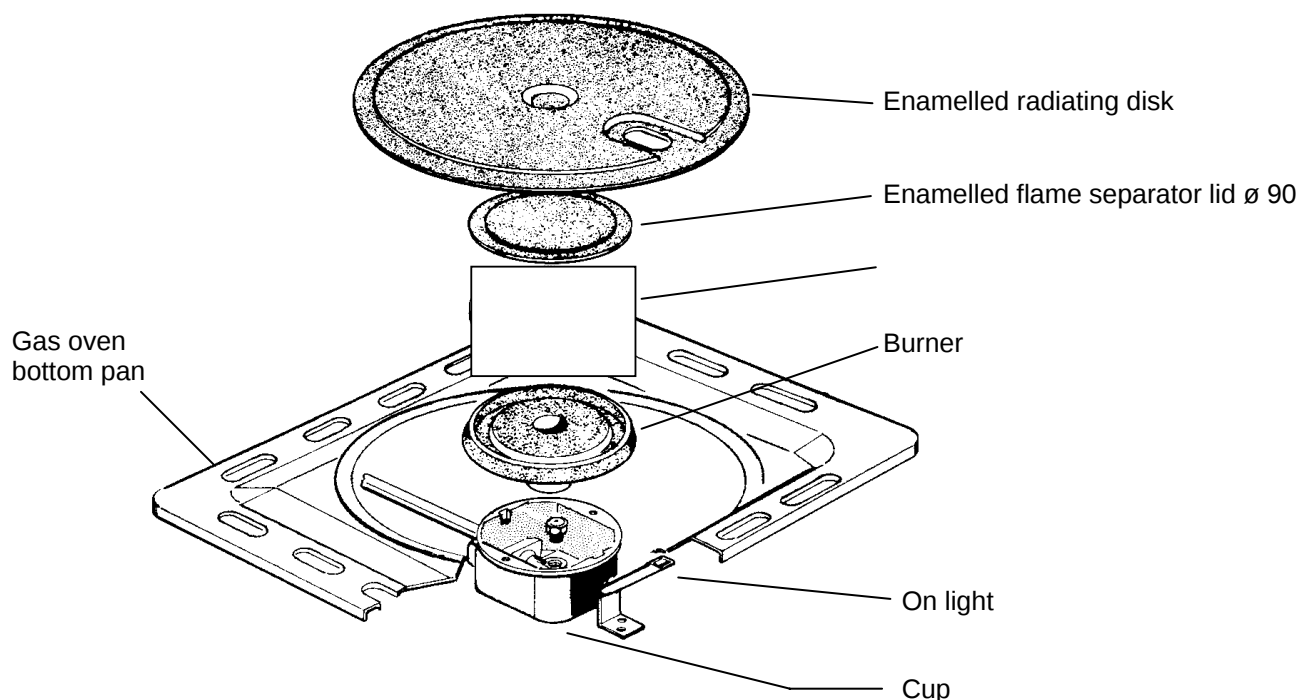
## 8.2 CONVERSION FOR USE WITH A DIFFERENT TYPE OF GAS – GAS COOKER OVENS

The appliance is tested and set for working with natural gas (see the characteristics table affixed in proximity to the appliance's gas inlet).

In order for it to function with a different type of gas, proceed as follows:

1. The conversion must be carried out by qualified personnel
2. The nozzles for LPG are supplied with the appliance in a nylon bag

### 8.2.1 Diagram for installing burner on gas oven



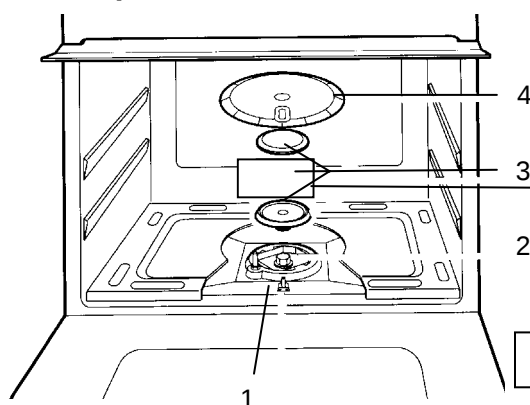
### 8.2.2 Adaptation of oven burner for different gas types

This model is equipped with a special burner that does not require any air adjustment. For this reason, to adapt the appliance for operation with a type of gas which is different from the one for which it is set up, it is sufficient to replace the nozzle and to adjust the minimum.

#### a) nozzle replacement

Open the oven, remove the enamelled radiating disk 4 – fig. 5, and the burner 3 – fig. 5; with the wrench provided, remove nozzle 2 – fig. 5 and replace it with the one enclosed, carefully observing the mark and the "Technical Data" table.

#### Description



**FIG. 5**

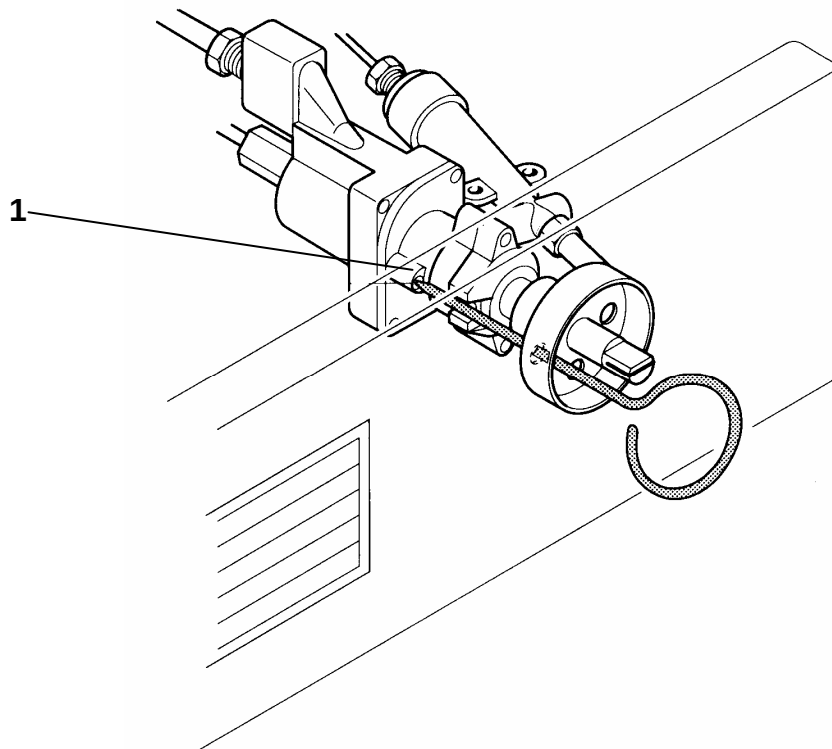
- 1 - Hole for ignition of gas oven
- 2 - Nozzle
- 3 - Oven burner
- 4 - Radiating disk

**b) Regulating the minimum flame**

Turn on the oven burner, place the knob at the minimum temperature and wait a few minutes so the thermostat can place the burner at minimum once the set temperature is reached.

Then remove the cock knob and use a screwdriver on screw 1 – fig. 6, turning it to the right to decrease the flame or to the left to increase it, until the desired minimum is obtained.

If operation is with liquid gas (G30/G31), the minimum adjustment screw must be completely tightened.



**Description:**

Fig. 6

1 – Minimum adjustment screw

## 9.1 TECHNICAL CHARACTERISTICS

**The control panel** The control panel of the oven includes all of the instruments which are needed for easily programming and monitoring the cooking cycle: the function selector, the thermostat, the cooking programmer and the indicator light which indicates electrical operation of the oven. Also, in all electric ovens, a second indicator light shows constant temperature control.

**Dual-joint balanced hinge** The use of dual-joint balanced hinges makes it easier to open the door and makes it possible to remove it, if necessary, without the need for the use of other tools.

**Oven temperature** The technology and safety of the electric ovens is such that the cooking chamber temperature can reach 300 °C at the centre.

**Important** The oven must be empty when lit for the first time, because during its first moments of operations the oven may emit smoke or unpleasant odours.

This is due to the heating of the thermal insulation and the grease used during manufacturing. Therefore, heat the oven for approximately 60 minutes. During this operation, ventilate the room.

When this cycle is complete, let the oven cool and carefully clean the interior with warm water and delicate detergent.

During use the appliance gets very hot. Take care not to touch the heating elements inside the oven.

**Internal heat-reflecting glass** The oven door is equipped with a double-pane tempered hypothermal glass panel, with heat-reflecting interior and heat-resistant seal which protect the outer glass from heat, limits heat loss and helps to reduce the consumption of electrical energy. The interior glass panel is also easily removable to facilitate cleaning.

For accurate cleaning inside the door glass panels, it is advisable to remove the inner glass panel;

Completely open the door and unscrew the two screws that hold the inner glass panel.

Clean both glass panels with warm water and a soft cloth.

Re-assemble all after cleaning.

## 9.2 Ventilated electric oven knob symbols

|                                                                                   |                                                       |                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Fan only operation<br>(rapid defrost)                 | The use of the fan only without any heating makes it possible to defrost foods quickly and efficiently.                                                                                             |
|  | Multiple ventilated cooking                           | The simultaneous action of the two heating elements and of the fan make it possible to cook different kinds of foods on more than one level without mixing aromas.                                  |
|  | Ventilated grill                                      | The combined action of the grill and the fan ensures uniform cooking. Even large pieces of meat and especially high-volume foods can be grilled perfectly.                                          |
|  | Operation with only traditional grill heating element | With the operation of only the upper heating element excellent results are obtained in the cooking of meats of low to medium thickness. Perfect for toasting bread, for baked pasta and vegetables. |

### 9.2.1 INDICATOR LIGHTS (electric oven)

The ovens are equipped with 2 indicator lights, one green and one orange.

The green light indicates that any single component, whereas the orange one is connected to the thermostat and operates intermittently whenever the thermostat cuts in to keep the temperature constant.

### 9.2.2 SAFETY THERMOSTAT (electric oven)

In order to avoid dangerous overheating due to improper use of the appliance or defective components, the oven is equipped with a safety thermostat which disconnects the electrical power supply in case of abnormal operation. When the oven temperature lowers, the thermostat resets automatically. Therefore, if the thermostat cuts in, to use it again it is sufficient to wait for the oven to cool and eliminate the cause. If however the thermostat has cut in due to a component defect, it is necessary to contact technical service.

## 9.3 GAS OVEN



The gas oven, thanks to the stabilized-flame burner and the under-oven pan with radiating plate, ensure uniform heat distribution. It is an oven that reaches the desired temperature in a short time and with low energy consumption. The combustion fumes are discharged through a special discharge pipe. The temperature is adjusted by a thermostat with a safety valve. It is equipped with an electric grill and rotisserie, and a spit.

### 9.3.1 DESCRIPTION AND USE OF THE GAS OVEN

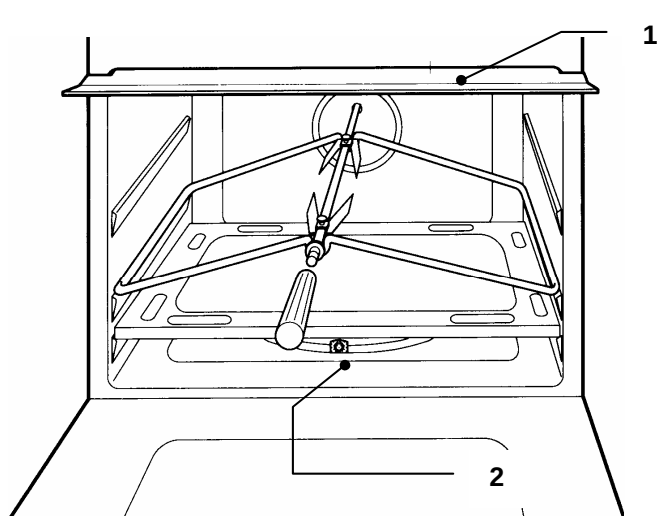


Fig. 2

#### Description:

1 - smoke deflector for grill use

#### Use:

The oven burner is easy to install: just observe the special reference notches, on both the burner and the ring.

To light the oven burner, it is necessary to **push the knob all the way down and rotate it counter-clockwise to the maximum temperature position**, with the oven door open. **Hold the knob down for about 5 seconds, to allow the safety valve to heat up.** Then ascertain that ignition has taken place, by observing the burner through hole 2 Fig. 2. If necessary, repeat the operation. After ignition, gently close the oven door so that the flame is not extinguished, and set the knob to the desired temperature. Once the set temperature is reached, the thermostat will set the burner to minimum automatically, so that the temperature in the oven remains constant. If the flame accidentally goes out

during operation, the safety valve stops the supply of gas after about 40 seconds.

#### Use of the lamp, electric grill and rotisserie:

The selector knob controls both the internal light and the grill and rotisserie. Turn the knob to ☀, to turn on the light; turn the knob to 🍷☀, to turn on simultaneously the light and the grill heating element; finally, place the knob at (++) 🍷☀ to switch on the light, the heating element and the rotisserie motor. The indicator light will confirm that the operation has taken place.

Once the grill and the rotisserie are on, insert the spit support frame and put the spit in place, as shown in fig. 2. Remove the grip, install the deflector 1 – fig. 2, and cook **with the door in the first position.**

This type of cooking is not regulated by a thermostat, therefore the user must monitor it directly, keeping in mind that accessible parts may become hot when the grill is used.

#### Thermostat knob

This is used to light the oven, and it makes it possible to select the desired temperature for cooking.

#### Cleaning the gas oven burner

Remove the burner from its place and wash it with warm water and liquid detergent. Then dry it completely before returning it to its place, making sure that no opening are obstructed with impurities. It is indispensable for the burner to be installed correctly, since improper positioning may cause serious abnormalities in combustion.

**Attention:** Periodically lubricate the gas thermostatic cock: this must be done by qualified personnel, who must be contacted any time you discover abnormalities in the way the appliance is operating.

**ATTENTION: you must never spray the appliance with direct jets of water nor use a water cleaner!**

Before you start cleaning the appliance it must be disconnected from the electricity via the main switch.

Clean the steel parts with a soft cloth, water and detergent. The detergent used must not contain chlorine or abrasives as they can damage the steel surfaces. After it has been cleaned, rinse with water and dry with a dry cloth.

### **Cleaning of oven interior**

Wash the enamelled parts with lukewarm water, detergent, and a soft sponge. Do not use steel wool or abrasive substances, to avoid damaging the enamel. Rinse well and dry with a soft cloth. If there are food residues after cooking it is advisable to clean the oven, so that the food residue does not burn and become more difficult to clean after the next use.

### **Cleaning the gas oven burner**

Remove the burner from its place and wash it with warm water and liquid detergent. Then dry it completely before returning it to its place, making sure that no openings are obstructed with impurities. It is indispensable for the burner to be installed correctly, since improper positioning may cause serious abnormalities in combustion.

- What to do if the appliance is going to be out of use for long periods of time.  
First of all disconnect it from the electricity. Clean it thoroughly, following the instructions, and dry it.
- What to do in the case of malfunctions.  
In the case of failures, turn the appliance off and notify the assistance service.
- Maintenance.  
Only specialised personnel must be allowed to service the appliance. Before starting, disconnect the appliance from the mains socket.  
We advise you to have the appliance checked at least once a year by a qualified installer. We also advise you to stipulate an assistance contract.

### **Electrical repair work**

Before calling out technical service, check that:

- The plug is plugged firmly into the socket;
- The main electrical switch of the home is on;

if necessary, after making these checks have authorized personnel carry out necessary repairs.

**N.B: before carrying out any disassembly operations, unplug the appliance from the electrical power supply.**