

# ELECTRIC OVEN

# AGS 646/WP

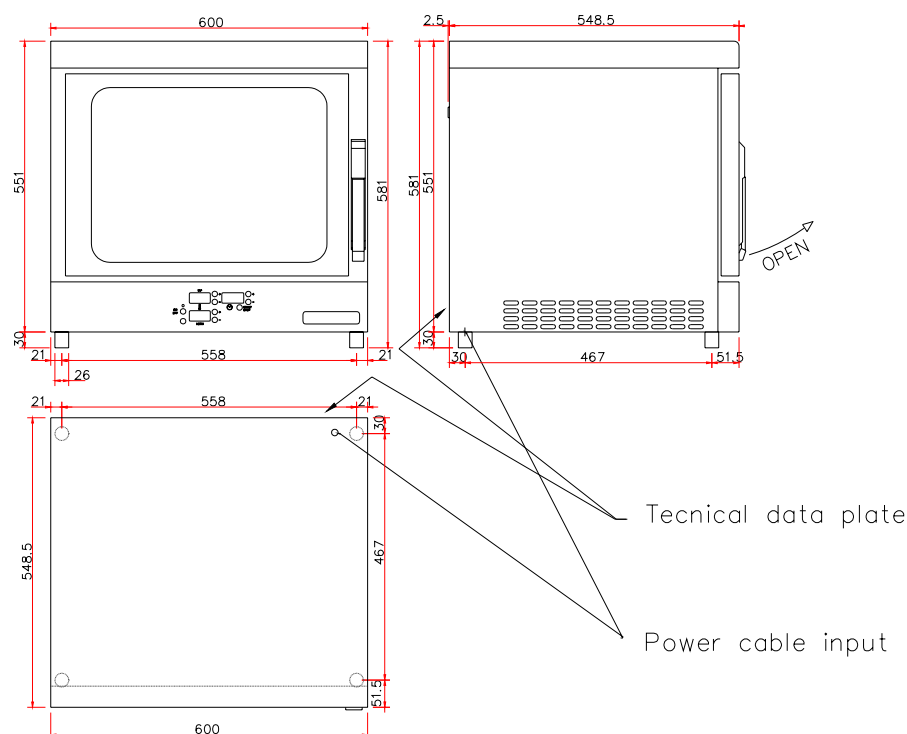
Installation, user and maintenance  
instruction



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## **SCHEMATIC REPRESENTATION**



## **GENERAL INFORMATION AND SAFETY INSTRUCTIONS**

### **GENERAL SAFETY INSTRUCTIONS**

- Carefully read the safety instructions in this booklet, as they will give you important information about how to install, maintain, and use the appliance safely.
- Keep this booklet in a safe place.
- These appliances are intended for professional use in a restaurant environment, and must therefore be used only by trained staff.
- When in operation, the appliance should not be left unsupervised.
- The appliance must be used exclusively for the specific purpose for which it is intended. Use for any other purpose may be dangerous.
- Be especially careful when the appliance is in use – the external surfaces can also become very hot!
- Disconnect the appliance if there is a fault or malfunction. If maintenance or repairs are necessary, please contact an authorized service centre.
- All the important information required for technical support can be found on the technical data plate beside the power cable input.
- If you need to call for technical assistance, give them a detailed description of the fault, to help them quickly understand the type of fault and its cause.
- We advise you to wear protective gloves during any maintenance and repair work.

## APPLIANCE SPECIFICATIONS

- The technical data plate is placed near the power cable input, and provides all the information necessary for electrical connection.


	CAT/KAT	GAS/GAZ	G30	G31	G20	G25	
	I12H3B/P	P mbar	30	30	20	-	SE <input type="checkbox"/> FI <input type="checkbox"/> DK <input type="checkbox"/> CZ <input type="checkbox"/> SK <input type="checkbox"/> SI <input type="checkbox"/>
1035°	I12H3+	P mbar	30	37	20	-	IT <input type="checkbox"/> CH <input type="checkbox"/> PT <input type="checkbox"/>
 0049	I12H3+	P mbar	28	37	20	-	ES <input type="checkbox"/> IE <input type="checkbox"/> GB <input type="checkbox"/> GR <input type="checkbox"/>
TIPO / TYPE	I12L3B/P	P mbar	30	30	-	25	NL <input type="checkbox"/>
	I12ELL3B/P	P mbar	50	50	20	20	DE <input type="checkbox"/>
	I12E+3+	P mbar	28	37	20	25	FR <input type="checkbox"/> BE <input type="checkbox"/>
MOD.	I12H3B/P	P mbar	50	50	20	-	AT <input type="checkbox"/> CH <input type="checkbox"/>
ART.	I2E	P mbar	-	-	20	-	LU <input type="checkbox"/>
N°	I12H3B/P	P mbar	30	30	20	-	EE <input type="checkbox"/> LV <input type="checkbox"/> LT <input type="checkbox"/>
	I12H3+	P mbar	28	37	20	-	EE <input type="checkbox"/> LV <input type="checkbox"/> LT <input type="checkbox"/>
Σ Qn kW	I3B/P	P mbar	30	30	-	-	NO <input type="checkbox"/> MT <input type="checkbox"/> CY <input type="checkbox"/> IS <input type="checkbox"/> HU <input type="checkbox"/>
Kg/h m³/h	I3+	P mbar	28	37	-	-	CY <input type="checkbox"/> PL <input type="checkbox"/>
Predisposto a gas - gas preset - prévu pour gaz : <input type="text"/>							
Eingestellt Für Gas - preparado para - geschukt voor : <input type="text"/>							
V AC	kW	Hz	Made in Italy				

fig.1

## LEGAL REQUIREMENTS, TECHNICAL REGULATIONS AND DIRECTIVES

The following requirements are to be observed, especially during the installation work:

- current legal regulations applicable;
- health & safety standards applicable to cooking environments;
- local and/or regional building regulations and fire prevention requirements;
- current accident prevention regulations;
- IEE recommendations regarding electrical safety;
- requirements of the electricity provider;
- any other local requirements.

## SPECIAL CONDITIONS REQUIRED FOR THE PLACE OF INSTALLATION

- The environment where the appliance is installed must be well ventilated.
- We recommend placing the appliance under an extractor hood, to allow cooking vapours to be drawn off quickly and continuously.
- As required by current regulations, an isolator that connects all poles must be placed between the appliance and the mains power supply, with a gap of at least 3 mm between contacts for each pole.

**CAUTION!:** The isolator must be placed near the appliance, in a position easily accessible by the user.

## TECHNICAL DATA

Model	Dimensions WxDxH (mm)	Nominal Voltage	Power	Cable section
AGS 646/WP	600x548x581	230 V. / 16 A.	3,7 kW	3x2.5mm <sup>2</sup>

## DESIGN CHARACTERISTICS

- Load-bearing structure of stainless steel with 4 feet adjustable in height.
- Digital controls: start-stop / temperature / timer / interior light – heating is provided by two shielded resistors equipped with a motor-fan.
- Temperature is controlled electronically, and goes ahead from room temperature to 450°C.
- Safety thermostat to protect against failure of the temperature control sensors.
- Recirculating fan.
- Orange LED is lit when the appliance is in use.
- Oven interior light.

## **POSITIONING, INSTALLATION AND MAINTENANCE**

### POSITIONING

- After removing all the packaging materials, check the appliance for damage. If there are any signs of damage, do not connect the appliance, but contact the sales outlet immediately.
- Remove the protective PVC film from the panels.
- Dispose of the packaging materials as required by the regulations. The materials are normally divided up by type and given to the municipal refuse collection department.



Fig. A

### - THE 2002/96/EC (WEEE) DIRECTIVE: INFORMATION TO USERS

This informational note is meant only for owners of equipment marked with the symbol shown in Fig. A on the adhesive label featuring the technical specifications applied on the actual product (the label also giving the serial number):

This symbol indicates that the product is classified, according to the regulations in force, as an item of electrical and electronic equipment and conforms to EU Directive 2002/96/EC (WEEE) meaning that, at the end of its service life, it must be treated separately from domestic waste, i.e. it must be handed in free of charge to a separate waste electrical and electronic equipment collection centre or returned to the reseller when buying a new equivalent item of equipment.

The user is responsible for delivering the unit at the end of its life to the appropriate collection facilities. Failure to do so shall result in the user being subject to the penalties prescribed by the legislation in force on waste.

Suitable separated collection so that the unit no longer used can be sent off for environmentally compatible recycling, treatment and disposal helps avoid possible negative effects on the environment and on health and facilitates the recycling of the product's component materials.

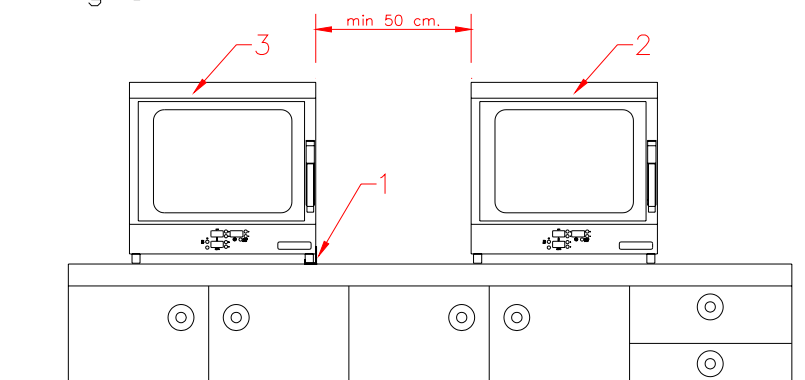
For more detailed information on available collection systems, contact the local waste disposal service or the shop you purchased the unit from.

Producers and importers fulfil their responsibility for environmentally compatible recycling, treatment and disposal both directly and by joining a collective scheme.

- Place the oven on a surface able to support the weight, with the left side at least 50 cm from the wall or from other appliances. In general, we recommend leaving a gap of at least 10 cm around all the other sides for cooling, steam evacuation and for maintenance/repair work by technical support. If the appliance is placed near walls/partitions made of inflammable material (excluding the left side, which should not be less than 50 cm from walls), we recommend applying a suitable heat-insulating material to the wall/partition surface.

**CAUTION!:** In case of appliance of many ovens next to each other, as well as the above mentioned distances, it is necessary applying a protection ( 1 Fig. 3) to avoid that the warm air of the cooling coming by the oven on the right side (2 Fig. 3) will be breathe in the oven on the left (3 Fig. 3) compromising its regular functioning.

fig. 3



**DO NOT ENCASE THE OVEN INSIDE FURNITURE OR IN WALL RECESSES. DO NOT PLACE UNDERNEATH ENCLOSED TABLES OR UNDER BENCHES.**

- Use a spirit-level when installing. Any level differences must be compensated using the adjusting feet (turning the screws to raise or lower). Substantial level differences can have a negative effect on the functioning of the appliance. **Do not switch on the appliance without adjusting the feet.**

## INSTALLATION

**CAUTION!:** Only qualified staff are authorized to install, maintain and put the appliance into service.

**CAUTION!:** Before beginning any electrical connection work, check that the appliance can support the technical characteristics of the power supply, by comparing them with the specifications on the technical data plate.

## ELECTRICAL CONNECTION AND EQUIPOTENTIAL BONDING

**CAUTION!:** The appliance is designed for connection to a voltage supply with the characteristics shown on the technical data plate.

- As already indicated, an isolator that connects all poles must be fitted between the appliance and the mains power supply, and differential protection sufficient for the nominal power specifications of the appliance (1mA per kW of power).

- Check that the earthing system is working effectively.
- The appliance must also be included in an equipotential bonding system.
- Connection is through the terminal (marked with the international symbol) provided on the back of the oven, using a cable of nominal section less than 4 mm<sup>2</sup>. This connection is applied between all installed appliances and the short-circuit stable earthing system.

## **COMMISSIONING TEST AND PUTTING INTO SERVICE**

- Once the connection work is complete, it is necessary to ensure that the appliance has been installed according to current standards and functions according to the instructions.
- In particular, check that:
  - all the protective film has been removed from external surfaces;
  - electrical connections have been made in accordance with the instructions in this booklet;
  - all the current safety requirements, regulations, legislation and directives have been complied with;
  - electrical connection complies with requirements.
- the cable and installed appliance are not subjected to strain, and are not in contact with hot surfaces.
- Follow the user instructions to put the appliance into service.
- Check that the voltage supply to the appliance does not deviate by more than +/- 10% of nominal value when in use.
- Complete all parts of the test certificate and give it to the customer to confirm acceptance by signing. The warranty period begins from the date of signing.

## **MAINTENANCE OF THE APPLIANCE**

**CAUTION!: All maintenance work must be carried out exclusively by qualified service personnel!**

- To maintain the efficiency of the appliance, maintenance should be performed once per year, including a check on the condition of all parts subject to wear, electrical components, etc.
- It is advisable to replace worn parts during maintenance, to avoid the need for more calls to technical support and unexpected failures of the appliance.
- We therefore recommend a maintenance contract with the customer.

## **USING AND CLEANING THE APPLIANCE**

### **USER INFORMATION AND SAFETY INSTRUCTIONS**

- This booklet contains all information necessary for using your appliances correctly and safely.
- **Keep this booklet in a safe place for future reference.**
- This appliance is designed for collective use, and must therefore be used only by sufficiently qualified and trained staff.
- It is essential for the appliance to be supervised while in use.

**CAUTION!: The manufacturer cannot accept liability for any injury or damage to property resulting from failure to observe the safety regulations, or from inappropriate use of the appliance by the operator.**

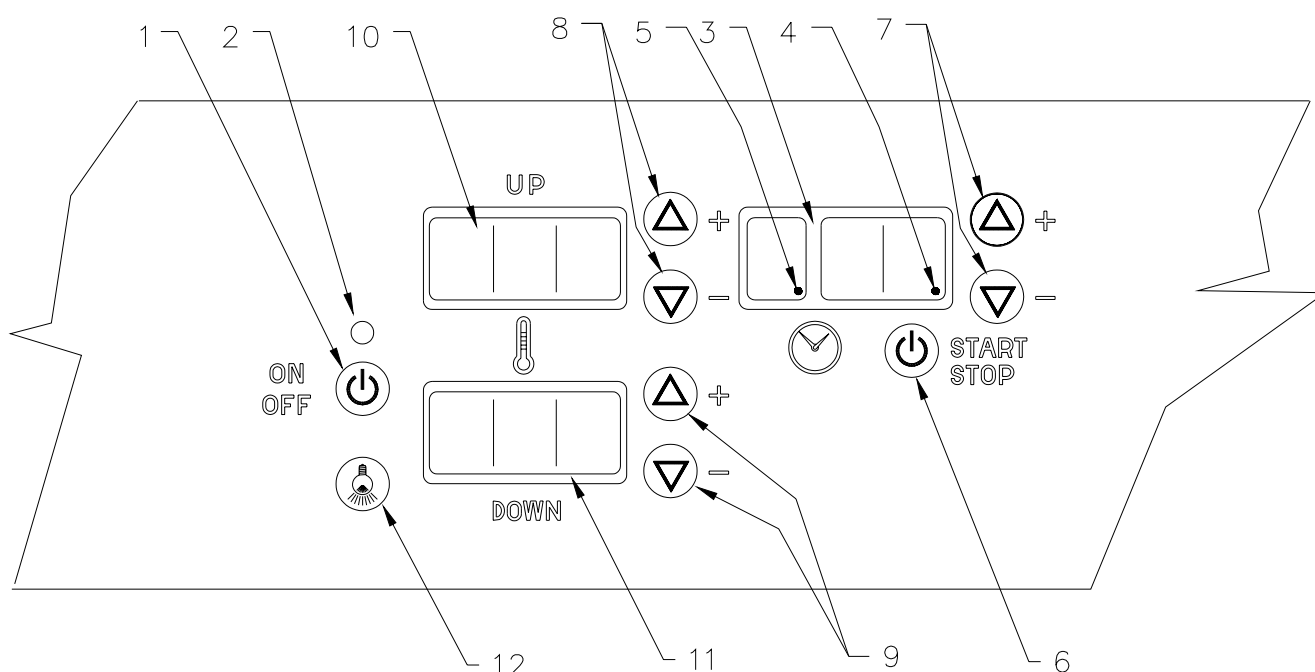
- Certain functional faults can be due to user error, and it is therefore very important that staff should be correctly trained.
- **All installation and maintenance work must be carried out by a company duly entered on the company register.**
- Keep to the maintenance intervals recommended with the appointed technical support company.

- In the event of a malfunction in the appliance, disconnect all power supplies and call technical support.
- If a fault occurs repeatedly, technical support must be called.

## **USER INSTRUCTIONS**

- Before switching on and using the appliance for the first time, it is essential to carefully clean the oven interior and any accessories that come into contact with food.

### **CONTROL PANEL fig.2**



### **SWITCHING ON (fig.2)**

- Operate the main switch upstream of the appliance.
- Press the ON-OFF button (1); displays 3, 10 and 11 come on. The appliance is now ready for you to set the temperatures and the timer (see paragraphs "SETTING AND USING THE TIMER" and "SETTING THE TEMPERATURE").
- If you press the ON-OFF button again; the orange LED indicator (2) comes on and the oven begins to heat.

### **SETTING AND USING THE TIMER (fig.2)**

- Switch on the oven (see paragraph "Switching on").
- The display (3) shows the time on 3 fields.
- These fields represent the following respectively: **minutes, tenths of seconds and seconds**, up to a maximum of 9 minutes and 59 seconds. If the time is increased over 9 minutes and 59 seconds, the three fields represent the following respectively: **hours, tenths of minutes, and minutes**, up to a maximum of 9 hours and 59 minutes.



- When point symbol (4) is lit, it indicates that the time is set in **hours/minutes**; when off, the setting is in **minutes/seconds**. To indicate that the timer is running, point symbol (5) flashes at the rate of one flash per second.
- To set the time, use buttons (7), (+) to increase and (-) to decrease. The set value increases or decreases by one unit each time a button is pressed; if the button is pressed and held for more than 3 seconds, the value increases/ decreases in jumps of 10 units until the button is released.
- To start and/or stop the timer, use the START/STOP button (6). **Countdown** begins when the button is pressed.
- When countdown is complete, display (3) shows three flashing zeros and a continuous audible signal is sounded. No temperature control function is performed, and it is up to the operator to remove the dishes from the oven to prevent any deterioration.
- To stop the audible signal, simply press the START/STOP button. Pressing the button also automatically resets the time set previously.
- If the timer is stopped and then re-started, countdown resumes from the value at which the timer was stopped.
- The set time can even be changed during the countdown, without stopping the timer.

### SETTING THE TEMPERATURE (fig.2)

- Switch on the oven (see paragraph "Switching on").
- Two different temperatures can be set: one of the upper zone and one for the lower zone, from 0 °C (heating element off) up to 450 °C.
- Use the buttons (7) to set the temperature in the upper zone; the temperature is then indicated on display (10). Use buttons (8) to set the temperature in the lower zone; the temperature is then indicated on display (11).
- Three seconds after the temperatures have been set, the display changes automatically from "temperature set" to "current temperature inside the oven".
- The set temperature can be displayed again for 3 seconds by pressing one of the buttons (+ or -) once.
- If buttons + and - of (8) or (9) are pressed simultaneously for 3 seconds, the corresponding heating element is switched off and the word OFF appears on the display. The fans continue to operate, even though both heating elements are off. To bring the heating elements on again, simply press one of the buttons + or -. The heating elements can be switched on/off while the oven is in operation or when it is switched off.
- To interrupt operation, press the switch (1).
- **When the oven is in operation, a third fan comes on to cool the internal components. Along with the interior fans, this fan remains on for 30 minutes, even after switching OFF; after this period, the fans are switched off automatically. To ensure long life for all the internal components in the appliance, it is essential, after using the oven, to wait for about 30 minutes before shutting off power at the main switch upstream of the appliance.**

### INTERIOR LIGHT (fig. 2)

- Switch on the oven (see paragraph "Switching on").
- To switch on the interior light, press button (12).

## COOKING

### Pizza:

- Insert the cooking cylinders before switching the oven on.
- When the oven reaches the set temperature, (400°C-420°C down and 380°C-400°C up), the oven is ready for cooking. Working temperature is reached in about 4 minutes. Meantime, you can spread out the pasta, place it on the grate, season it and insert in the oven. It is cooked in about 1' 40". When cooking is complete, take out the grate using the shovel supplied, and slide the pizza onto the board. Depending on the temperature settings, cooking may be complete in 1'40" / 2'; cooking time can be lengthened or shortened by adjusting the UP and DOWN thermostats by 10°C / 20°C using the + or - buttons.
- If using the oven for heating up or toasting, place the product on the grate and insert in the oven. Heating takes between 20" and 60", depending on the consistency of the product. When heating is complete, take out the grate and slide the product onto the board.

### Pre-cooked chips:

- When the oven reaches the set temperature, (300°C (down) and 275°C (up), the oven is ready for cooking. Insert the aluminium basin with the product on the cooking net. Cooking is complete in 3'.

### Other dishes:

- Insert the grid holders before switching the oven on.
- Oven AGS 646/WP is suitable for cooking all types of food.
- Set the desired temperature and insert the food when the oven is hot.

**IMPORTANT!: For even cooking and to protect the appliance over time, temperature should not go over 300°C when cooking on a pan or grid (without the PIZZA cylinders).**

## CLEANING AND CARING FOR THE APPLIANCE

- Do not use aggressive cleaning agents or abrasive detergents for cleaning the stainless steel parts of the oven.
- Avoid using steel wool on the steel parts, as this could cause rust to form. For the same reason, protect them from coming into contact with ferrous materials.
- Do not use glass paper or abrasive paper for cleaning; for special cases, we recommend using abrasive sponges (such as Scotch-Brite).
- We recommend cleaning the oven when it is cold.

**IMPORTANT!: never use water jets to clean the appliance, as components may be damaged by water infiltration.**

- Remove internal accessories from the oven (cylinders, grates, grids and grid holders). Wash with soap and water and leave to dry.
- The internal and external surfaces should be cleaned with a sponge moistened with hot water and one of the neutral detergent easily available on the market. Rinse, then dry off carefully using a soft cloth.
- Clean the glass parts and lining when the oven is cold, using soap and water, and dry carefully.

## **PRECAUTIONS IF NOT USING FOR LONG PERIODS**

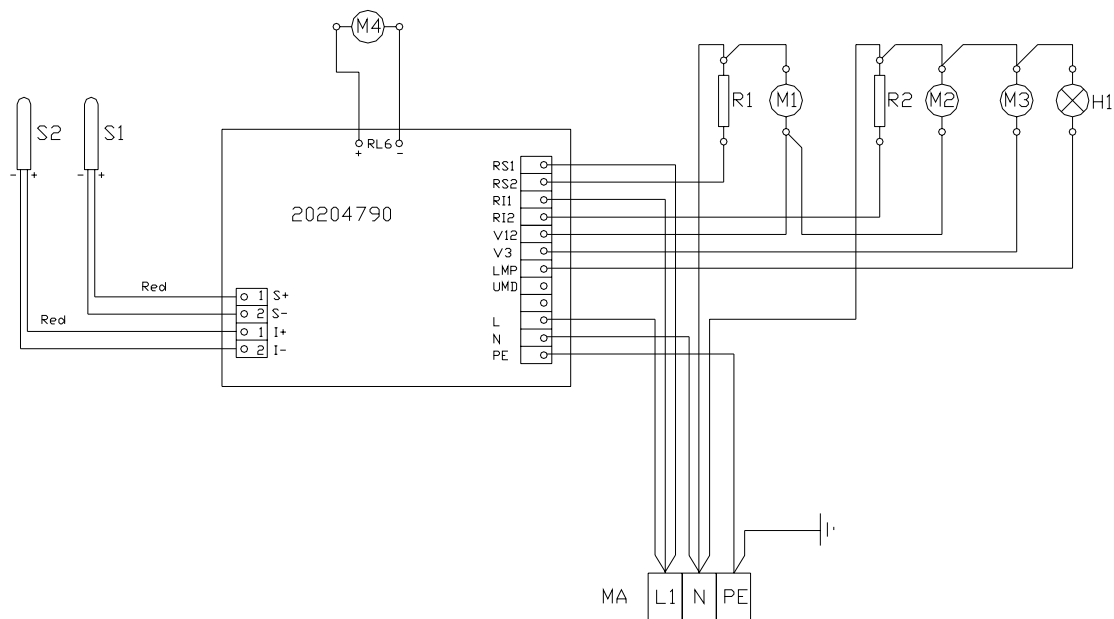
- If not using for long periods, clean the appliance thoroughly and remove any residues, then dry perfectly.
- We recommend leaving the door slightly open to allow air to circulate inside the oven and preserve the lining.
- You can use the protective substances commonly available on the market to protect the stainless steel parts.
- Disconnect the appliance from the power supplies.
- The room should be kept dry and well ventilated.

## **PRECAUTIONS IN THE EVENT OF A MALFUNCTION**

- If any malfunctions occur while the oven is in use, switch off immediately and disconnect all power supplies.
- Call technical support.

**IMPORTANT: the manufacturer cannot accept liability or claims under warranty for any damage to property resulting from failure to observe the safety regulations, or from incorrect installation. This also applies where the appliance is used by the operator for purposes other than those for which it was designed.**

## **RESERVED FOR TECHNICAL SUPPORT**



MA = Line input terminal block  
 S1 = Upper temperature sensor  
 S2 = Lower temperature sensor  
 R1 = Upper resistor (1600W)  
 R2 = Lower resistor (2100W)

M1 = Upper resistor motor-fan  
 M2 = Lower resistor motor-fan  
 M3 = Cooling motor-fan  
 M4 = Keyboard fan cooling (+ red / - black)  
 H1 = Owen interior light

## **SERVICE CONNECTIONS**

Connector	Description	Notes
CN2	TTL serial port for use by Technical Support for updating the software	Requires a suitable adaptor for connection to a Personal Computer
CN9	Jumper for selecting Test mode	Activates Test mode when inserted
CN1	Factory programming connector	Reserved for the manufacturer

## **THERMOCOUPLE CONNECTIONS**

Terminal	Name	Description	Notes
CN3-1	<b>S+</b>	Positive wire upper thermocouple	J Type or K Type
CN3-2	<b>S-</b>	Negative wire upper thermocouple	--
CN4-1	<b>I+</b>	Positive wire for lower thermocouple	J Type or K Type
CN4-2	<b>I-</b>	Negative wire for lower thermocouple	--

## POWER CONNECTIONS

Terminal	Name	Description	Notes
CN5-1	RS1	Common contact Control relay for upper resistor	Max. capacity 10A
CN5-2	RS2	Normally Open contact Control relay for upper resistor	Max. capacity 10A
CN5-3	RI1	Common contact control relay for lower resistor	Max. capacity 10A
CN6-1	RI2	Normally Open contact Control relay for lower resistor	Max. capacity 10A
CN6-2	V12	Control relay NO contact Upper and lower fans [RL3]	Max. capacity 1A
CN6-3	V3	Control relay NO contact for air recirculation fan [RL4]	Max. capacity 1A
CN7-1	LMP	Control relay NO contact for oven interior light [RL5]	Max. capacity 1A
CN7-2	UMD	--	Not connected
CN7-3	--	--	Not connected
CN8-1	L	Phase 230Vac supplying circuit board + common contact for relays RL3, RL4, RL5 and RL6.	Max. capacity 1A
CN8-2	N	Neutral 230Vac supplying circuit board	Max. capacity 1A
CN8-3	PE	Earth connection	--

**RL3** : Key board cooling fan connection (12V + and -) – until serial no. 205280399.

**RL6** : connection clutch for key board cooling fan (12 V + and -) – from serial no. 205280400.

## TEST MODE AND THERMOCOUPLE CONFIGURATION

### AUTO-TEST

Short-circuit contact CN9 on the back of the circuit board using a jumper.

The following functions will be available while CN9 is short-circuited:

- The relays will be activated cyclically, one at a time.
- The parts of the display will be lit up, one at a time.
- Press button 8 (fig. 2) + for the upper zone temperature (SW1) to light up the three upper parts of the upper zone temperature display.
- Press button 8 (fig. 2) - for the upper zone temperature (SW2) to light up the three lower parts of the upper zone temperature display.
- Press button 9 (fig. 2) + for the lower zone temperature (SW3) to light up the three upper parts of the lower zone temperature display.
- Press button 9 (fig. 2) - for the lower zone temperature (SW4) to light up the three lower parts of the lower zone temperature display.
- Press button 7 (fig. 2) + for the timer (SW5) to light up the three upper parts of the timer display.
- Press button 7 (fig. 2) - for the timer (SW6) to light up the three lower parts of the timer display.
- Press START/STOP button 6 (fig. 2) for the timer (SW10) to light up the three centre parts of the timer display.
- Press ON/OFF (SW9) button 1 (fig. 2) to light up the centre parts of all displays.

- Press button 12 (fig. 2) for the interior light (SW11) to light up all parts of the display.
- Remove jumper CN9 to exit AUTO-TEST mode and automatically go into analog channel display mode. See also **“Resetting the thermocouple offset”**. To go back to normal working mode, press the timer START/STOP button.

### Setting the thermocouple type

The thermocouples used are the “J” type, but this can be changed to the “K” type by modifying the factory setting

To change this setting, proceed as follows:

Keeping CN9 short-circuited, press ON/OFF button 1 (fig. 2) (SW9) for 3 seconds. Upper zone temperature display (10) shows the letters: **“S – J”**, to indicate that the J type thermocouple is selected. You can now change from J type to K type by pressing the buttons (8) (fig. 2) +/- for upper zone temperature (SW1 and SW2). To save the selected type, press button 9 (fig. 2) + for lower zone temperature (SW3).

Reset by removing the power supply.

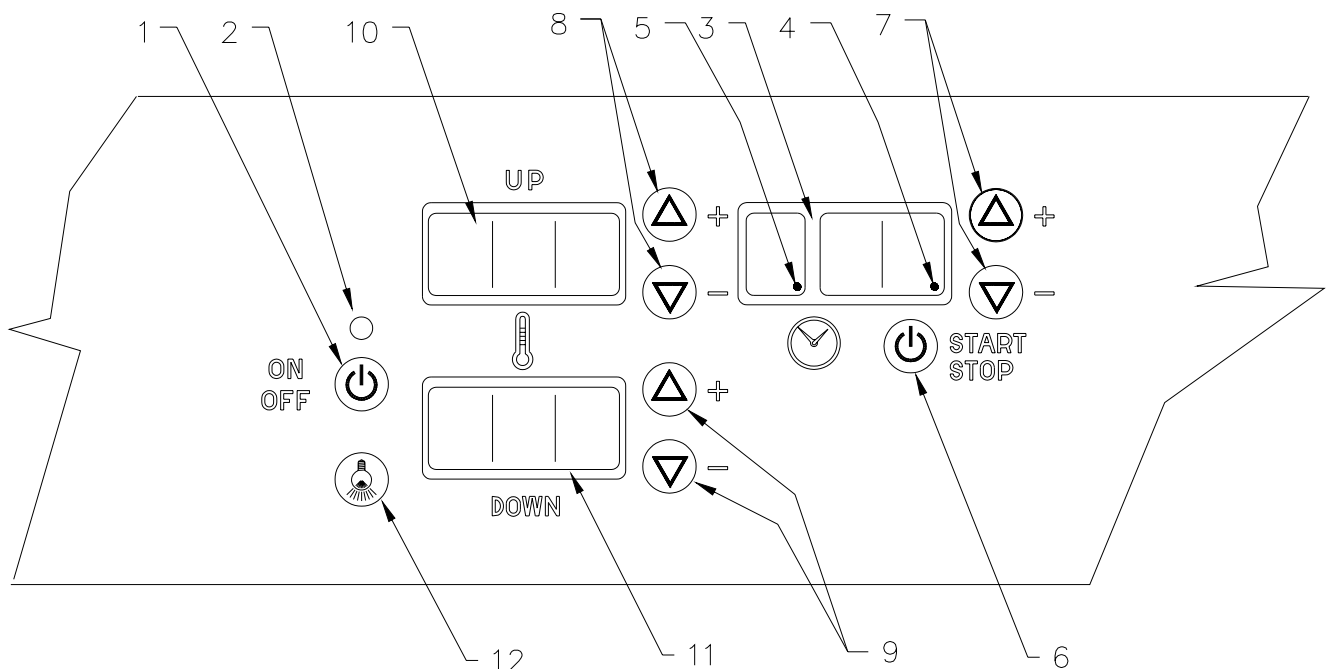
### Resetting the thermocouple offset

Go into analog channel display mode by inserting and removing the jumper at CN9.

Upper and lower zone temperature displays 10 and 11 (fig. 2) show the microprocessor reading in bits for the two thermocouples.

**If the thermocouples are connected and are at ambient temperature**, the two displays should show 0 (zero). If they do not, press ON/OFF button 1 (fig. 2) to perform a software reset (of the offset). To save the new parameter and go back to normal working mode, press timer START/STOP button 6 (fig. 2). The two displays then show the correct ambient temperature.

**CONTROL PANEL fig.2**



**NOTICE:**

The manufacturer cannot accept liability for any inaccuracies that may occur in this booklet due to transcription or printing errors. They also reserve the right to make any modifications to the product that they consider useful or necessary, without changing the essential specifications.

**The manufacturer will not accept any liability whatsoever if the regulations and instructions described in this manual are not strictly observed.**

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