



Steam Cooker
EDG 6500.0

Service Manual: H3-63-02

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Contents

1. Safety instructions	4
2. Introduction.....	5
2.1 General information	5
2.2 Technical data	5
3. Installation.....	6
3.1 Installation instructions for technicians.....	6
3.2 Installation	7
4. Fittings and operation of the EDG 6500.0	8
4.1 Appliance parts.....	8
4.2 The appliance at a glance	9
4.3 Display and control elements	9
5. User settings and functions	10
5.1 Setting the time of day.....	10
5.2 Characteristics.....	10
5.3 Lock /child safety device	10
5.4 Cleaning the water channel.....	10
6. Cooking cycle	11
7. Structure – subassembly – structural components	13
7.1 Water tank	13
7.2 Electric valve	13
7.3 Steam generator.....	13
7.4 Electric heating pad	13
7.5 Double thermostat	14
7.6 Thermistor	14
7.7 Door switch.....	14
7.8 Cross-flow fan	14
7.9 Sensors	15
7.10 Lighting.....	15
8. Customer service test program	16
8.1 Important information	16
8.2 Preparation.....	16
8.3 Program sequence	16
9. Error displays	18

1. Safety instructions



Danger!

Repairs may only be carried out by a qualified electrician!

Inexpert repairs may lead to danger and injury to the user!

To prevent electric shocks, please observe the following instructions:

- In the event of a fault, housing and frame may be live!
- Touching live components inside the appliance may cause dangerous currents to flow through your body!
- Prior to repairs, disconnect the appliance from the mains!
- When inspecting live parts, a residual current operated device must be used at all times!
- The ground wire resistance must not exceed that specified in the standard! It is of vital importance for ensuring the safety of people and the functioning of the appliance.
- On completion of repairs, an inspection must be carried out in accordance with VDE 0701 [Association of German Electrical Engineers] or the corresponding regulations for your country!
- On completion of repairs, a function and impermeability inspection must be carried out.



Caution!

Make sure you observe the following instructions:

- The appliances must be disconnected from the mains prior to all repairs. If inspections need to be carried out on live appliances, make sure you use a residual current operated device.



Sharp edges: Use protective gloves.



Components may be electrostatic!
Observe handling precautions!

2. Introduction

2.1 General information

Depressurised steam cooking involves cooking food with a combination of steam and hot air. Gentle steam cooking at temperatures of between 40°C and 100°C optimally preserves vitamins and minerals as well as maintaining colours and natural aromas. Food does not dry out and nor will it burn or stick. Since only a relatively small amount of water needs to be heated, steam cooking means that a great deal of time and energy can be saved.

Depressurised steam cooking takes place at temperatures of between 40°C and 100°C, thus making it easy to cook food just as it is required. The humidity sensor steams the food in just the right conditions, irrespective of the quantity of food being cooked. Instead of being destroyed, vitamins and minerals are largely preserved. Flavour, colour and consistency are maintained – food does not lose its structure. There is therefore almost no need to add salt and spices.

To sum up: cooking with steams makes conscious, healthy eating possible without any extra effort. The steam cooker provides excellent possibilities in combination with the ökotherm® cooker or oven.

The oven can become soiled through spattering fat, especially when meat is being roasted. Dirt which has become dried can be removed more easily if the cooker, prior to cleaning, is operated with the “steam” cooking mode at a temperature of 100°C for approximately 30 minutes.

This will soften the stains. The interior of the oven will take on a golden colour when it has been used for some time.

2.2 Technical data

	Appliance dimensions	Oven dimensions	Niche dimensions
Height	38.6cm	18.2cm	38.0cm
Width:	59.5cm	38.5cm	56.0cm minimum
Depth:	40.5cm	33.5cm	55.0cm minimum
Oven:	23.5l		
Water tanks	removable, for approx. 1 litre of water		

Electric connection

Mains voltage	220-240V ~50Hz
Power requirement	1.77kW

Heating output

Hot-air output	2.2kW
Steam generator:	1.4kW
Floor heater:	0.14kW

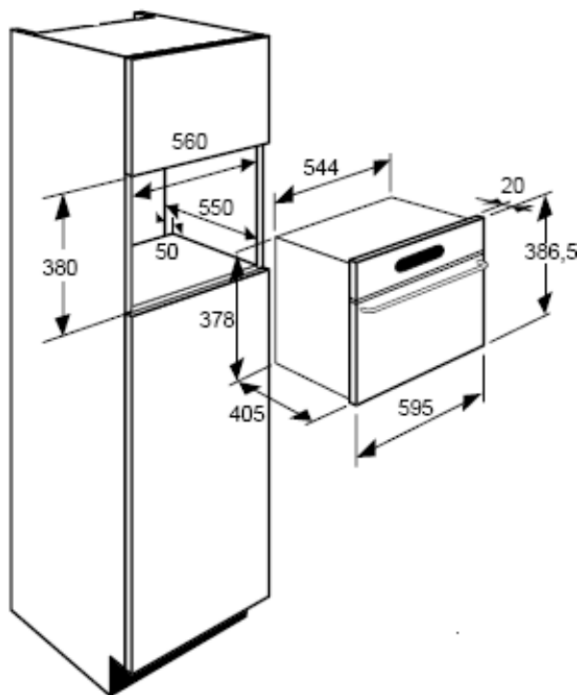
3. Installation

3.1 Installation instructions for technicians

- Statutory regulations and the connection specifications issued by local power supply companies must be strictly observed.
- Always disconnect the appliance from the mains when installing it, carrying out repair work or replacing a light bulb. Pull out the plug of the appliance or disconnect the fuse.
- The appliance must be installed in such a manner that it is fully protected against accidental contact.
- The appliance is supplied ready to be plugged in. It may only be connected to a properly-protected wall socket. Installing and wiring sockets, exchanging terminal wires and zero conductors and replacing connection cables may only be performed by an electrician who must observe the relevant regulations.
- The electrical connection must be provided with a 10A safety fuse.
- Should the plug not be accessible subsequent to installation, a universal disconnection device with a contact clearance of at least 3mm must be available at the installation point in order to fulfil relevant safety regulations.
- Built-in kitchen units for steam cookers must be resistant to heat of up to 100°C. This applies particularly to veneers, edge strips, plastic coatings, adhesives, and paints and varnishes. Adjacent unit fronts must be resistant to temperatures of up to at least 70°C.
- It is essential that the appliance be installed horizontally on a firm, level base which is absolutely rigid.
- The kitchen unit must be fixed to the wall, using an angle bracket if required.
- A safety switch that conforms with regulations will need to be fitted onto the mains cable if the appliance is to be permanently connected. If not, the mains plug will need to be accessible when the appliance has been installed.
- Do not use the appliance if the electrical mains cable or the plug has been damaged; the respective damaged part is to be immediately repaired or replaced.

3.2 Installation

in a suitable niche



The appliance may either be installed under a worktop or in a cabinet niche.

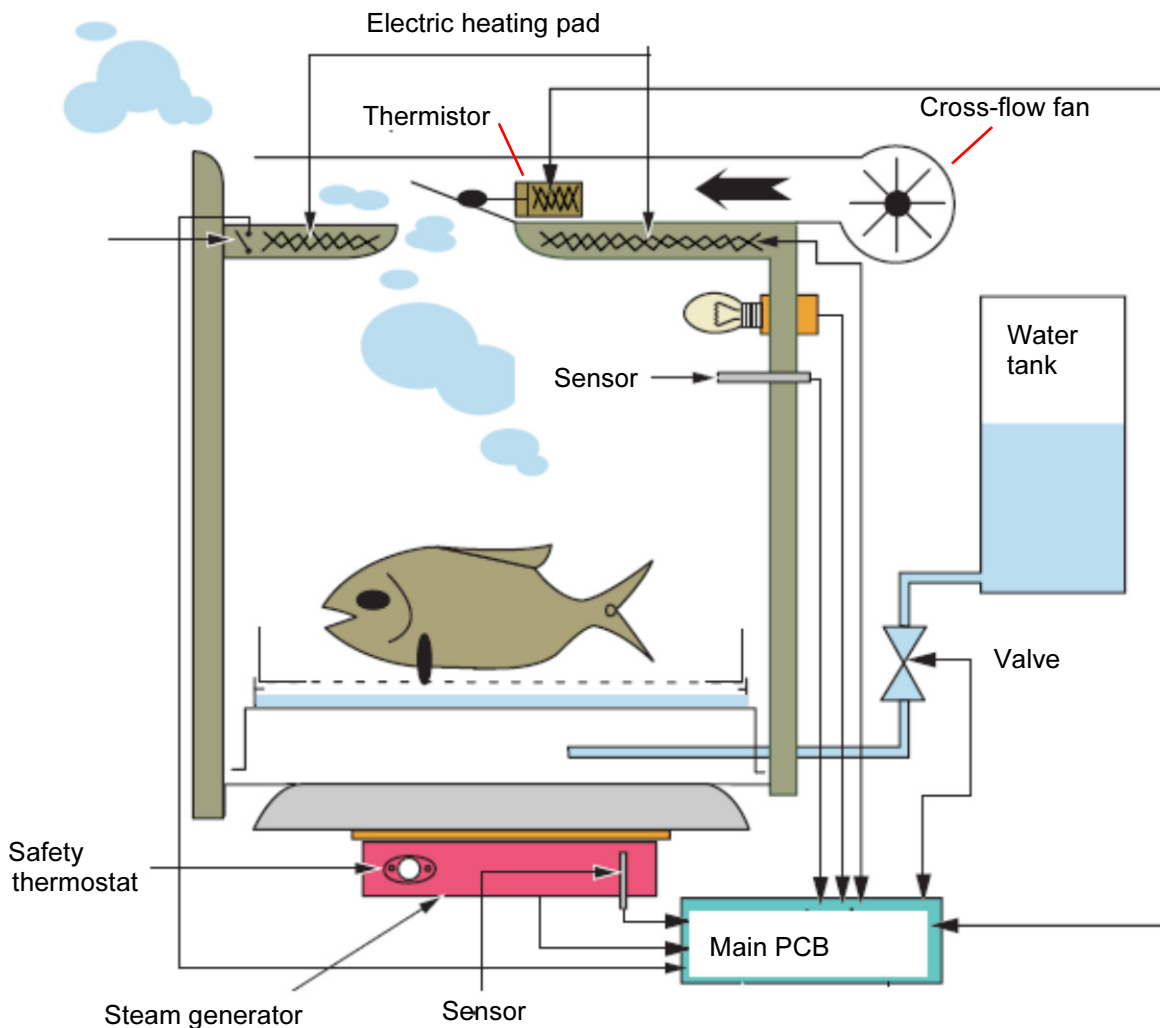
1. A 50mm x 50mm hole is to be cut out of the rear panel and the connection cable of the appliance is to be pushed through this cut-out.
2. Position the appliance and align it horizontally.
3. Slide the oven right into the cabinet niche. Do not jam the lead of the appliance!
4. Check to ensure that the appliance has been properly aligned.
5. Fasten the appliance with two screws which are inserted into the holes in the side struts provided for this purpose in order to enhance stability.
6. Connect the appliance. Make sure that the plug remains accessible after the appliance has been installed.

4. Fittings and operation of the EDG 6500.0

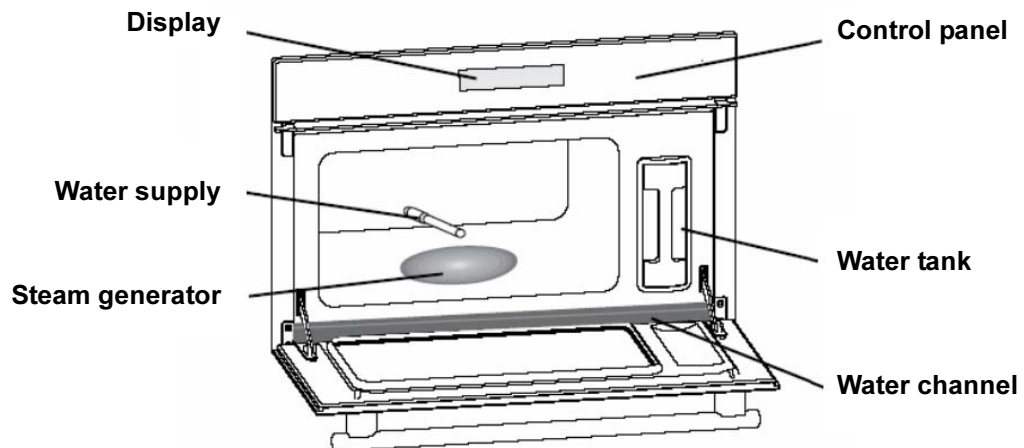
The water in the water tank is turned into steam with the electric valve located on the steam generator. A hose transports the water from the tank into the inside of the oven. An evaporation plate is located in the bottom part of the oven. When water drips onto the hot plate it is immediately converted into steam. It is therefore not necessary to fill water into the cookware. A pressure flap is closed to keep this steam inside the oven. The pressure flap has several holes which prevent pressurisation and regulate the pressure system.

The principle is not the same as for cooking in a pressure cooker, since here the internal pressure exceeds the atmospheric pressure. The steam oven firstly fills up with steam and the temperature almost reaches 100°C. An electric heating pad has been installed in the top part of the oven in order to avoid condensation. A cross-flow cooling fan constantly cools the appliance and the pressure flap opens three minutes before the cooking cycle is completed, hence enabling steam to escape. A safety thermostat (210°C) protects the appliance from becoming overheated and two sensors located inside the oven and in the steam generator constantly monitor the temperature.

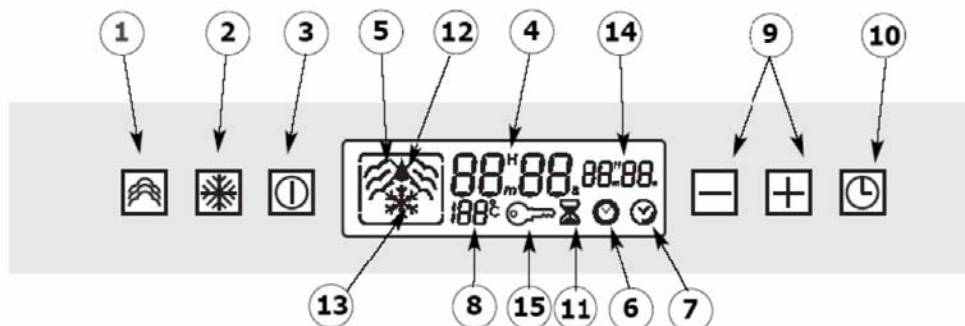
4.1 Appliance parts



4.2 The appliance at a glance



4.3 Display and control elements



Displays

- | | |
|------------------------------|--|
| 1 Steam cooking button | 9 Button for setting the cooking time |
| 2 Defrost button | 10 Selector button |
| 3 ON/OFF button | 11 Symbol for separate timers |
| 4 Time of day / cooking time | 12 Warning signal for faults in the water cycle |
| 5 Steam cooking symbol | 13 Defrost symbol |
| 6 Cooking time symbol | 14 Display of cooking time set (direct or delayed start) |
| 7 Cooking symbol | 15 Sensor locks |
| 8 Temperature display | |

5. User settings and functions

5.1 Setting the time of day

When the appliance is used for the first time the time of day will need to be set. As soon as the appliance is supplied with power 12.00 will blink in the display. The correct time of day can be set with the minus and plus buttons. Then press the selection button (10) to confirm the setting. The time set will however also be automatically assumed after a few seconds.

Changing the time

The current time of day will be shown all the time. Press the plus and minus buttons simultaneously until the time shown starts to blink. Set the correct time with the plus and minus buttons and confirm the setting with the selection button (10). If you do not confirm the setting the time set will automatically be assumed after a minute.

5.2 Characteristics

Standard steam cooking	100°C
Defrosting	60°C
Timer	Setting with the button 

5.3 Lock / child safety device

Press the  button for a few seconds until a buzzer sounds and a key symbol appears in the display. All of the buttons will have been locked.

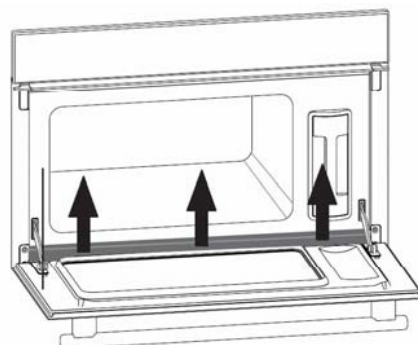
To unlock the buttons, press the  button for a few seconds until a buzzer sounds and the key symbol in the display goes off.

5.4 Cleaning the water channel

Pull the water channel upwards out of the three grooves, clean it and replace it in the grooves again.



Do not clean the appliance with a steam cleaner!



6. Cooking cycle

A cooking cycle is completed in five steps:

- Step 1: Heating up and generating steam
- Step 2: Maintaining the level of steam
- Step 3: Steam dissipation and temperature reduction
- Step 4: Keeping food warm
- Step 5: Drying the inside of the oven

Step 1: Heating up and generating steam

As soon as the appliance is started up the valve, the cross-flow fan, the heating element, the electric heating pad and the thermistor are supplied with electricity. Steam which is generated is evenly circulated throughout the inside of the oven with the hot-air fan. The valve regulates the temperature every 15 to 30 seconds as soon as it exceeds 130°C.

Step 2: Maintaining the level of steam

A humidity sensor regulates the heating element. The thermistor, the electric heating pad and the cross-flow fan are still live.

Step 3: Steam dissipation and temperature reduction

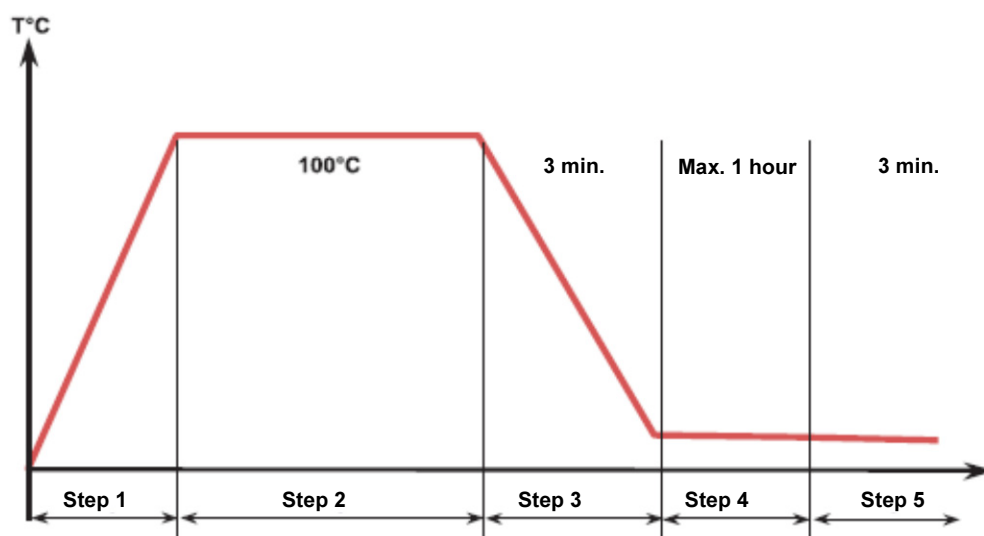
The thermistor and the electric valve are switched off three minutes before the cooking process is completed. The vent flap opens and the steam is blown out of the oven by the cross-flow fan. The electric heating pad is still switched on in order to prevent condensation from occurring.

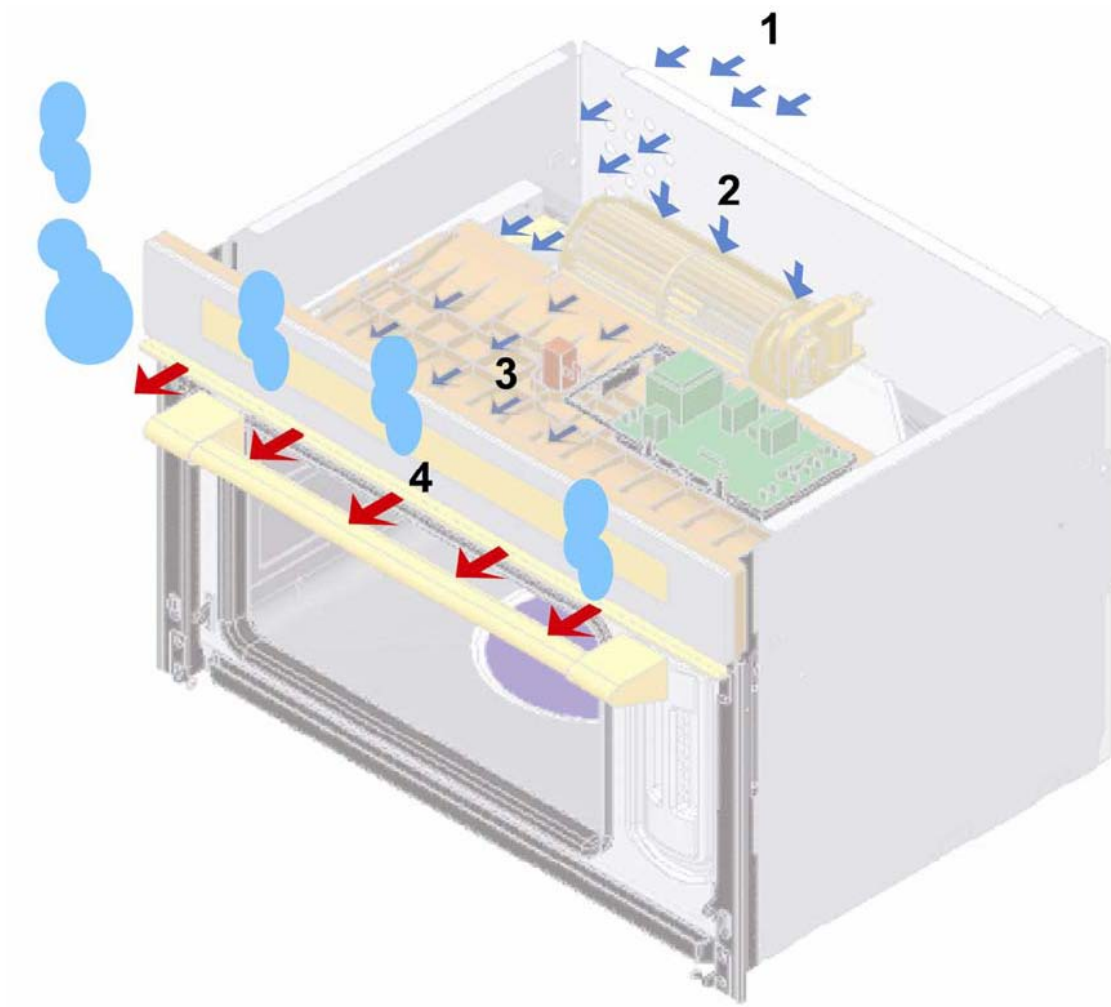
Step 4: Keeping food warm

This is only possible if the door remains closed after the cooking time has lapsed. The cross-flow fan and the electric heating pad remain switched on.
for a maximum of three hours.

Step 5: Drying the inside of the oven

This step commences as soon as the door is opened or at the latest one hour after the cooking time has lapsed. The process takes three minutes. The cross-flow fan and the electric heating pad remain switched on.



Air circulation – steps 1 to 4

7. Structure – subassembly – structural components

7.1 Water tank

Tank for an independent supply of water for the steam oven.

1 litre capacity (max. filling level shown).

The water tank must:

- be filled up prior to commencing with cooking;
- be emptied after every cooking process.



Fill up the tank with cold water if possible in order to facilitate servicing and cleaning the appliance. Do not use demineralised water since this is not permitted in connection with food.



7.2 Electric valve

The electric valve supplies the steam generator with water.

Technical data:

- 220/240V ~
- 2l/min.
- 3.7k Ω



7.3 Steam generator

The steam generator converts water to steam. The condensate is recycled at the end of the cooking time.

Two safety thermostats in the bottom part of the oven protect it against becoming overheated (210°C).

Technical data:

- 220/240V ~
- 1600W
- 35 Ω

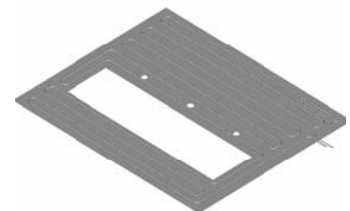


7.4 Electric heating pad

The electric heating pad remains switched on during the entire cooking process in order to prevent any build-up of condensation. It covers the top of the oven and its temperature is almost 100°C. It is protected by a safety fuse.

Technical data:

- 220/240V ~
- 160W
- 350 Ω
- Thermal cut-out: 120°C

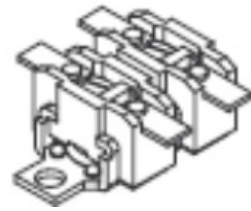


7.5 Double thermostat

The double thermostat prevents the appliance from becoming overheated. It is located under the heating element.

Technical data:

- 220/240V ~
- Opens at 210°C

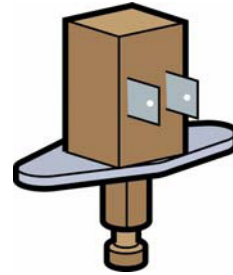


7.6 Thermistor

The thermistor keeps the vent flap closed while the oven is in operation.

Technical data:

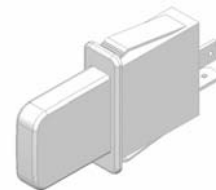
- 220/240V ~
- 5W
- 1 kΩ



7.7 Door switch

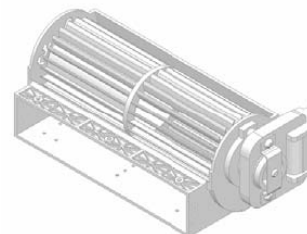
The door switch enables the cooking cycle to be changed when the door is open.

Door open:	switch off
Door closed:	switch on



7.8 Cross-flow fan

The cross-flow fan guarantees consistent ventilation of the oven during the cooking process and enables steam to leave the oven during the final three minutes of a cooking cycle.



7.9 Sensors

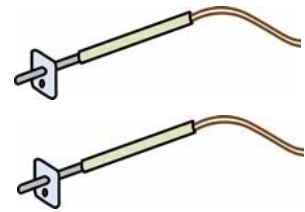
The sensors measure

- the temperature of the steam generator
- the temperature in the oven

They are automatically recognised by a microprocessor; faulty wiring cannot occur.

NTC technical data:

- 55k Ω at 20°C
- 4.7k Ω at 90°C



Temperature sensor resistance data

Heating element (blue-yellow), spare-part no. 531242 (board on the left)

Oven (red-white), spare-part no. 531241 (board on the right)

Temperature Resistance

20°C	58k Ω
30°C	39k Ω
40°C	32k Ω
50°C	25k Ω
60°C	18k Ω
70°C	12k Ω
80°C	9k Ω
90°C	7k Ω
100°C	5k Ω
110°C	3.5k Ω
120°C	2.5k Ω
130°C	2k Ω

7.10 Lighting

The light bulb is located inside the oven, at the back on the right-hand side.

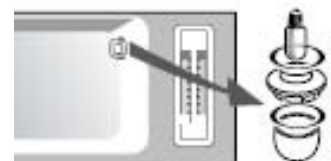


Disconnect your steam oven from the mains prior to carrying out any work on the lamp in order to avoid electric shocks.

- Turn the glass cover a quarter of a turn in an anti-clockwise direction.
- Turn the light bulb anti-clockwise to screw it out.
- Change the light bulb, replace the glass cover and make sure that the seals are in the right position.
- Re-connect your steam oven to the power supply.

Technical data:

- 15W - 300°C
- 220 - 240V
- E14 base



8. Customer service test program

8.1 Important information

- If possible, connect an electric current metre to the mains power supply.
- Carry out a full test program.
- Make a note immediately of any deviations which may occur while the program is running.
- Carry out a check and if necessary replace the respective component(s).
- Repeat the test program in order to ensure that the components which were replaced are working properly.

8.2 Preparation

Fill up the water tank and insert it.

Disconnect the oven from the mains for at least 10 seconds.

Start the test program within a minute.

Press each button in sequence from the left to the right and at the same time keep the right button pressed for 3 seconds.

8.3 Program sequence

Press any button (apart from the plus and minus buttons) to exit the test program. If no button is pressed the program will automatically be exited after 3 minutes.

Step 1

The display will automatically light up as shown on the right. **The test program will commence with preliminary information on programming.**

Repeat the measures for preparation if the display does not light up as shown on the right.

If the display lights up, press the plus button once to move on to



Step 2

The display will automatically light up as shown on the right. **All of the segments will blink.**

The display will have developed a fault if they fail to do so.

If the display blinks, press the plus button once to move on to



Step 3

The display will automatically show the **temperature of the NTC sensor no. 1 in °C as shown on the right.**

Check the NTC sensor if an abnormal temperature is shown: 55kΩ for 20°C, 4.7kΩ for 90°C.

If not, press the plus button once to move on to



Step 4

The display will automatically show the **temperature of the NTC sensor no. 2 in °C as shown on the right.**

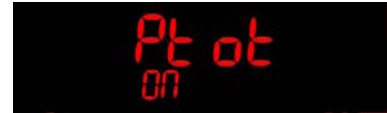
Check the NTC sensor if an abnormal temperature is shown: 55kΩ for 20°C, 4.7kΩ for 90°C.

If not, press the plus button once to move on to

**Step 5**

The display will automatically light up as shown on the right in order to indicate that **all of the elements are being supplied with electricity.**

Press the plus button once to move on to

**Step 6**

The steam generation symbol will blink. The heater will switch on.

Check

the safety thermostat I = 0

the wiring I = 0

the steam generator resistance I = 0

the circuit board I = 0

Press the plus button once to move on to

**Step 7**

Normally the valve will have supplied the heating element with water. If this process has not yet been completed, *VRNN ON* will appear in the display. If the display shows *VRNN OFF* open the door of the oven and check the water.

Attention! *The oven door will need to be opened in order to continue.*

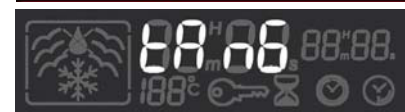
Once the oven door has been opened and closed, press the plus button once and proceed to

**Step 8**

The cross-flow fan and the electric heating pad remain switched on. Open the door and check the temperature of the top of the oven. The ceiling of the inside of the oven must be very hot.

Check the wiring and the electric heating pad if it is not hot. The reading must be around 350Ω.

Press the plus button once to move on to

**Step 9**

VER ON will appear in the display to indicate that the thermistor is switched on. The flap will close slowly. Should *VER ON* not be indicated in the display, check the power supply of the activator and the resistance (1kΩ).

Press the plus button once to move on to

**Step 10**

Close the program.



9. Error displays

E1 Communication problems

between the Reed card and the network interface card or between the network interface card and the display card

If error code E1 appears all of the power elements will be switched off.

E2 Sensor off or short-circuited

E3 Problems with the water cycle

Power elements will be switched off.

A continuous acoustic signal will sound.

The fan will switch off three minutes after the error has been detected.

Fill up the water tank, insert it and press start.