

Microwave oven
EMWK 1050
EMWG 1050

Service Manual: H4-79-01

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1. Safety

The purpose of this service manual is to provide the customer service technicians who already have the technical knowledge necessary to repair microwave ovens with specific information on the mode of operation of the EMWK / EMWG 1050.



Danger!

***Repairs may only be carried out by a qualified electrician!
Incorrect repairs can be extremely dangerous for the user!***

To prevent electric shocks, please observe the following tips:

- In the event of faults, housing and frame may be live!
- Touching live components inside the appliance may cause dangerous currents to flow through your body!
- Unplug the appliance before repair!
- 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.
- On completion of the repair work a leak rate measurement must be made!



Note!

It is essential to observe the following notes in order to prevent damage to the appliance or the components:

- The appliances must be disconnected from the mains prior to all repairs. If inspections must be carried out on live appliances, make sure you use a residual current operated device.
- **Do not take any measurements in the high-voltage circuit during operation. Risk to life and limb!**
- The mains plug of the microwave oven must always be accessible!
- Do not replace any components as long as the appliance is functioning.
- When looking for faults proceed systematically as outlined in the fault-finding steps.
- Observe EGB instructions.
- Never attempt repairs through the **indiscriminate** exchange of components!
- Always proceed systematically and observe the notes on troubleshooting!
- Do not take any measurements in the high-voltage circuit during operation. **Risk to life and limb!**

1.1 Microwave warnings

- **The microwave oven generates high voltages which may lead to serious or even fatal injury - it is essential to observe the safety regulations contained in this repair manual at all times.**
- Always disconnect the microwave from the mains prior to removing or installing components. Never attempt to measure voltage on the inverter, the magnetron or high-voltage conducting wire. This high-voltage circuit generates voltages exceeding 4000 volts.
- Always connect the microwave oven to a residual current overload circuit breaker prior to measuring electric currents.
- Check to ensure that the power required by the oven does not exceed the nominal power of the mains power supply.
- Pull the plug out of the mains socket and discharge the high-voltage capacitors of the converter switch prior to removing or installing components.
- Connect the microwave oven with a twin-wire extension cable. The microwave oven must be earthed. Looking for faults on a microwave oven that is not earthed is extremely dangerous.
- Carry out a functional test when repair work has been completed.
- Carry out a microwave leakage current test when repair work has been completed.

1.2 Electric connection

- Only connect the appliance to sockets with a safety fuse of at least 16 A. Please also check to ensure that the main fuse in your home has a minimum output of at least 16 A so that it will not suddenly trip when the microwave oven is in operation.
- Before operation, check whether the mains voltage is the same as that indicated on the name/rating plate of the appliance and **whether the socket outlet is effectively earthed. The manufacturer assumes no liability for damage which occurs through the non-observance of these regulations.**

1.3 Converter switch warnings

- The converter switch generates current of more than 4000 volts! Never attempt to measure the voltage in this switch.
- The aluminium dissipater on the converter switch gets very hot! Allow the dissipater to cool down prior to removing the converter switch.
- Pull the plug out of the mains socket and discharge the high-power capacitors of the conversion switch before removing the converter switch.
- The converter switch must be earthed. After replacing the converter switch tighten the earth terminal and the earthed leads to the microwave oven casing. A converter switch with no earth connection may be dangerous.

2. Technical data and functions

2.1 Technical data and general information

Voltage / Frequency	230V - 50Hz
Power consumption	at 230 V 15A
Total electrical connection	3,3 kW (ready to plug in)
Microwave output	1000 W (max) (6 levels)
Grill levels	EMWG 1050 1500 W
Appliance dimensions (WxHxD)	595 x 455 x 542 mm approx.
Niche dimensions (WxHxD)	560 x 450 x 550 mm
Cooking cavity dimensions (WxHxD)	420 x 210 x 390 mm approx. (capacity: 32 l)
Weight	EMWK 1050.0 38 kg EMWG 1050.0 32 kg

2.2 Microwave power levels

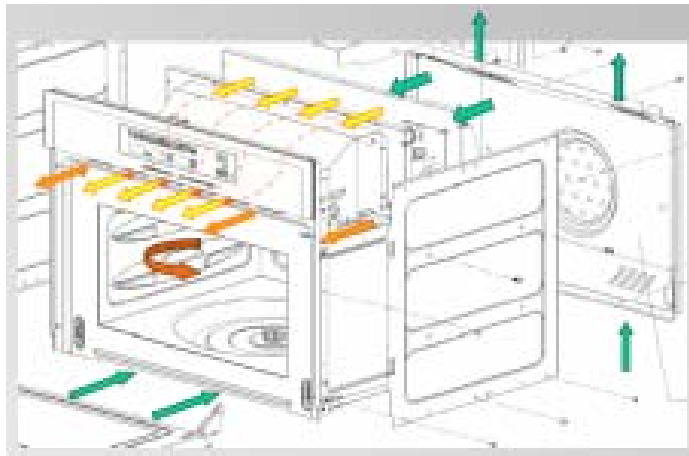
EMWG 1050

Program	P00	P01	P02	P03	P04	P05
Power (W)	0	200	400	600	800	1000
Time ON (s)	0	6	12	18	24	30
Time OFF (s)	30	24	18	12	6	0

EMWK 1050

Program	P00	P01	P02	P03	P04	P05
Power (W)	0	200	400	600	800	1000
Time ON (s)	0	6	12	18	24	30
Time OFF (s)	30	24	18	12	6	0

2.3 Ventilation system and air cycle



Air circulation

Surplus hot air in the interior flows through the holes in the rear wall.

A second flow of air flows through the air channel under the fastening clamp.

Both air currents flow through the outlet on the left and right at the front of the interior cavity.

Ventilation system

Fresh air flows from below and from the back into the housing. The cross flow fan ensures that the electrical components on the fastening clamp are cooled. Hot air is lead to the outside through the air channel. An air valve controls the supply of air during operation as follows:

- **MW and MW+GRILL:**
Air valve up, some air is supplied through the openings in the interior and also between the door and the control panel.
- **Combined mode:**
Air valve down for enclosing the air in the interior. The air circulates between the door and the control panel.

2.4 Power levels and their applications

In order to ensure maximum possible flexibility during the cooking process, the microwave oven was equipped with different power levels:

1000 W	Very rapid heating of liquids and (fresh or deep-frozen) food and for cooking vegetables
800 W	For cooking fish and poultry in general
600 W	For melting chocolate and chocolate coatings and for cooking meat in general (roasts, meat kebabs etc.)
400 W	For very slow cooking, e.g. braising joints, and for heating cakes and pastries.
200 W	For baking certain types of cake and for sensitive foods (fish, roast beef etc.)
	For defrosting according to weight or time

2.5 Setting the clock

After your microwave oven is first plugged in or after a power failure, the clock display will flash to indicate that the time shown is not correct. To set the clock, proceed as follows:

1. Press the Clock key. The hour numbers will start to flash.
2. Press key "-" and "+" to set the hours.
3. Press the Clock key to set the minutes. The minute numbers will start to flash.
4. Press key "-" and "+" to set the minutes.
5. To finish, press the Clock key again.



Hiding/Displaying the Clock

If the clock display bothers you, you can hide it by pressing the Clock key for 3 seconds. The dots that separate the hours and minutes will flash but the rest of the clock display will be hidden. If you want to see the clock display again, press the Clock key again for 3 seconds.

2.6 Safety blocking

The oven functioning can be blocked (for example, to stop it being used by children).

1. To block the oven, press the Stop key for 3 seconds. You will hear a sound signal and the display will show the word "SAFE". The oven is blocked in this state and cannot be used.
2. To unblock the oven, press the Stop key again for 3 seconds. You will hear a sound signal and the display will show the time again.



2.7 Stopping the rotating plate

1. To stop the rotating plate, press the "+" key and the Stop key at the same time
2. To start plate rotation again, press the "+" key and the Stop key at the same again.



2.8 What cookware may be used in your appliance?

Mode	Only microwaves	Combination mode	Only hot air / grill
Glass	YES	NO	NO
Pyrex	YES	YES	YES
Glass ceramic	YES	YES	YES
Terracotta dishes	YES	YES	YES
Aluminium foil	NO	NO	YES
Plastic	YES	NO	NO
Paper or cardboard	YES	NO	NO
Metal containers	NO	NO	YES

In the mode “only microwaves” and in the combination modes with microwaves all containers made of glass (Pyrex even better), ceramic, porcelain or terracotta may be used as long as they have no decorations and metal parts (decorative or gold edges, handles, feet). Heat-resistant plastic containers (200 °C) may also be used.

Containers made of metal, wood, straw and crystal are unsuitable for cooking with microwaves.

At this point you should be reminded once again that the microwaves heat the food and not the cookware and therefore the meals can be cooked directly in the serving dishes; this dispenses with the use and subsequent washing-up of pots and pans. However, it is possible for the very hot food to transfer its heat to the plate, thus necessitating the use of oven cloths.

If the appliance is set at the modes “**Only hot air oven**” or “**Only grill**”, all containers suitable for a standard oven may be used.

However, their shape and size must always permit the turntable to rotate properly.

To find out whether a container is suitable for a microwave oven, please conduct the following small test:

Place an empty container in the oven for 30 seconds at the maximum power level (function “Only microwaves”). If the container does not become warm at all or becomes only slightly warm, it is suitable for cooking with microwaves. If, on the other hand, it heats up a lot (or sparks develop), it is unsuitable.

3. Installation

3.1 Disposing of the packaging and your old appliance

The packaging material for transport is fully recyclable. Recycling the packaging saves raw materials and reduces the amount of waste. Disposed appliances still contain useful materials. Take your old appliance to a recycling collection point. Please make your old appliances unserviceable before disposing of it, to prevent it from misuse.

3.2 Before installation

- Check that the input voltage indicated on the characteristics plate is the same as the voltage of the power outlet you are going to use.
- Open the oven door and take out all the accessories and remove the packing material.
- Do not remove the mica cover on the ceiling of the interior! This cover prevents fat and pieces of food from damaging the microwave generator.
- **Warning!** The front surface of the oven may be wrapped with a protective film. Before using the oven for the first time, carefully remove this film, starting on the inside.
- Make sure that the oven is not damaged in any way. Check that the oven door closes correctly and that the interior of the door and the front of the oven opening are not damaged.
- Put the oven on a flat and stable surface. The oven must not be put close to any heat sources, radios or televisions. During installation, make sure that the power cable does not come into contact with any moisture or objects with sharp edges behind the oven. High temperatures can damage the cable.



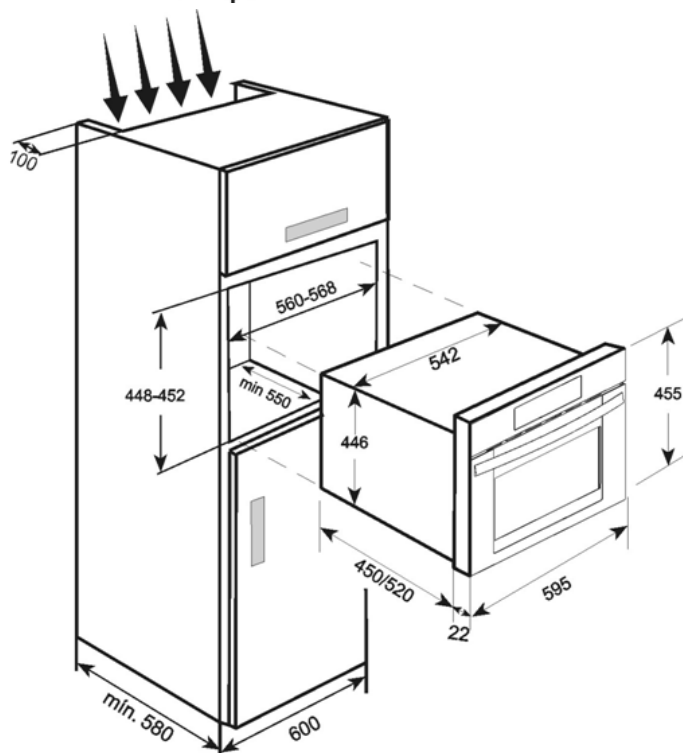
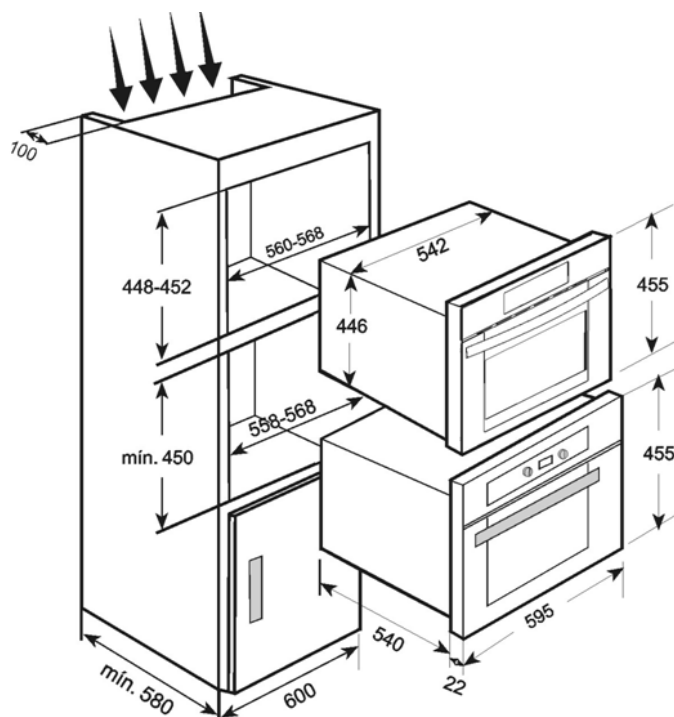
Warning!

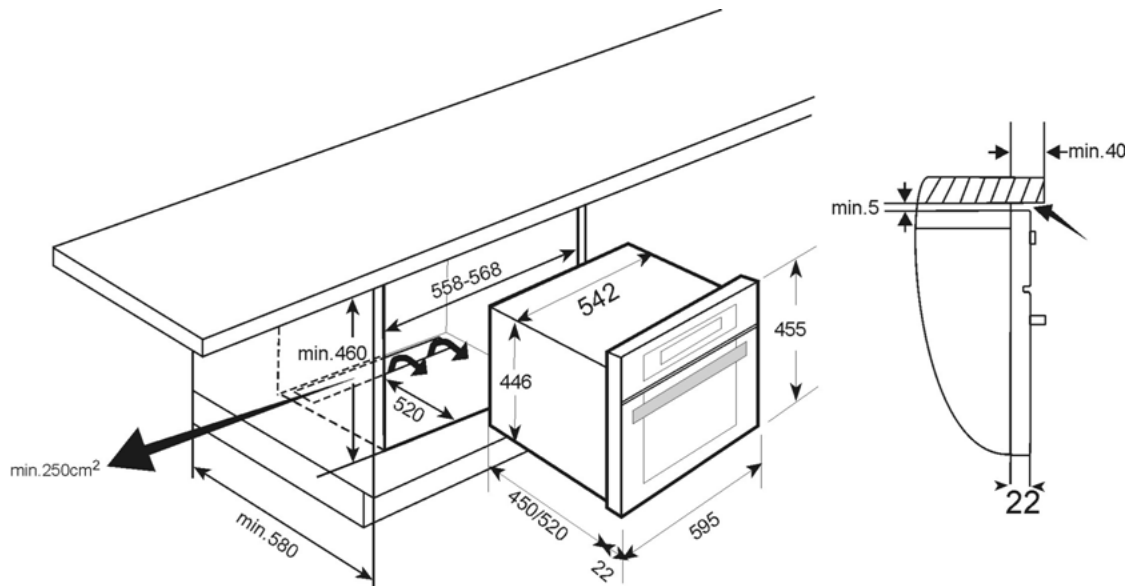
After the oven is installed you must make sure you can access the plug.

3.3 Installation

1. Open the packaging and remove the appliance.
2. Do not lift up the microwave by the door handle since this may damage the inner frame of the door.
3. Remove the adhesive tape from the door and carefully install the microwave in the niche.
4. Fasten the microwave on the inside of the frame.

The appliance needs an adequate air supply. The opening on the strip must hence be at least 100 mm wide.



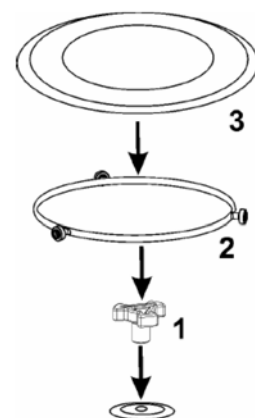


3.4 After the installation

- If the oven is to be installed on a permanent basis it should be installed by a qualified technician. In such a case, the oven should be connected to a circuit with an all-pole circuit breaker with a minimum separation of 3 mm between contacts.
- Only connect the appliance to sockets with a safety delay fuse of at least 16 A. Please also check to ensure that the main fuse in your home has a minimum output of at least 16 A so that it will not suddenly trip when the microwave oven is in operation.

WARNING! THE OVEN MUST BE EARTHED.

- The manufacturer and retailers do not accept responsibility for any damage that may be caused to people, animals or property if these installation instructions are not observed.
- The oven only functions when the door is closed correctly. After the first use, clean the inside of the oven and the accessories, following the cleaning instructions given in the section "Oven cleaning and maintenance".
- Fit the turntable support (1) in the centre of the oven cavity and put the turntable ring (2) and the turntable plate (3) on top, making sure they slot in. Whenever you use the microwave, the turntable plate and the respective accessories must be inside and correctly fitted. The turntable plate can rotate in both directions.



4. Function tests

4.1 Safety precautions - microwave energy



Service technicians must never be exposed to the microwave radiation which can be emitted by the magnetron or other components producing microwaves if the appliance is not connected correctly or operated improperly.

All input and output connections, waveguides, flanges and seals are to be attached and sealed correctly.

Never operate the appliance without having placed items in the cooking cavity which absorb the microwaves.

Never look into the open waveguide or the antenna when the magnetron is live.

The appliance must never be operated without the housing or with the door open.

If the fuse blows, always block the system operability first (all microswitches) before the appliance is switched on again. If a microswitch is defective, always replace all microswitches.

Before activation of the magnetron or before repair work, check the following points with all appliances:

- The door does not close properly at the frame because it is deformed or the hinges are damaged.
- Door or door seal damaged.
- Appliance obviously damaged.

All defective or incorrectly set components in the locking, control, door locking, microwave generator and transmission systems must be repaired, replaced or correctly set. Service technicians must first remove their watches for all work on or near the magnetron.

- **Attention!**

The high-voltage capacitor could still be electrically charged about 30 sec. after the appliance has been switched off. It is advisable to discharge the capacitor each time through both poles using a suitably insulated cable. Secondary power circuits of the transformer have a high voltage and a low amperage and for this reason it is extremely dangerous to work near these components if the appliance is plugged into the mains. Never touch cables with your bare hands or with non-insulated tools when the appliance is in operation.

- Do not measure the electric voltage of a high-voltage circuit or magnetron filament.
- Make sure that the door is not loose or missing. If the screws are not properly tightened, this could lead to the discharge of microwaves.
- Before you switch on the appliance, check that all electric connections are tight.
- Ensure with a reasonable procedure that no microwaves are emitted.
- Do not insert any metal objects through the lamp gap or through any other gap as such objects could act as an antenna and could result in the emission of microwaves.

5. Cleaning

Prior to all maintenance or cleaning work always pull out the mains plug and wait until the appliance has cooled down.

5.1 Cavity

The cavity is made of stainless steel and therefore cleaning is extremely easy. Always keep the cover panel of the microwave outlet opening free of oil and grease splashes.

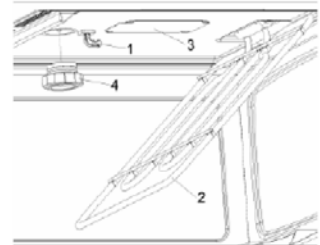
5.2 Surfaces

Never use scouring agents, metal wool or sharp metal objects for cleaning the surfaces. Moreover, make sure that no water or liquid cleaning agent enters the waste air and vapour extractor slits on the top of the appliance. No alcohol, scouring agents or ammonia-containing cleaning agents are to be used for cleaning the inside and outside of the door. To ensure perfect closing, always keep the inside of the door clean and make sure that dirt and food residues are not jammed between the door and the appliance front.

5.3 Grill

If the oven ceiling is dirty, the grill can be lowered to make cleaning easier. To avoid the danger of burning, wait until the grill is cold before lowering it. Proceed as follows:

1. Turn the grill support by 90°.
2. Lower the grill gently (2). Do not use excessive force as this may cause damage.
3. The mica cover (3) located in the ceiling must always be kept clean. Any food remains that collect on the mica cover can cause damage or provoke sparks. Do not use abrasive cleaning products or sharp objects. To avoid any risk, do not remove the mica cover.



Caution! After cleaning, correctly position the grill heating element again and hook it on. The combination microwave oven must not be operated with the grill heating element flapped down. Never operate the microwave oven without a mica cover!

4. After cleaning the ceiling re-position the grill (2) by proceeding in reverse order.

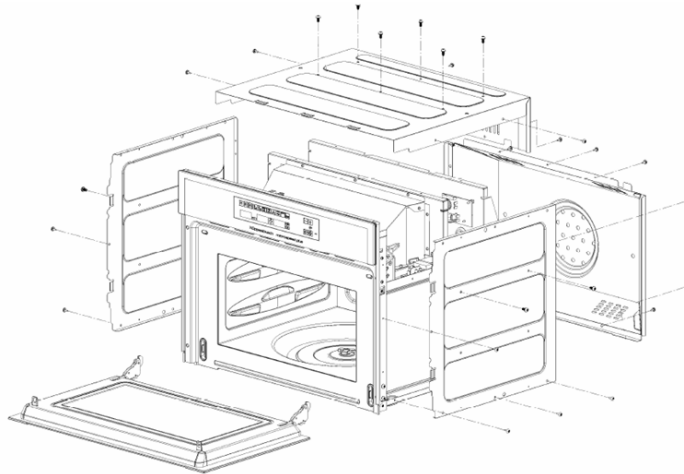
5.4 Turntable

The turntable and the corresponding holder should also be removed for cleaning and the bottom of the microwave oven cleaned from time to time.

Clean the turntable and the holder with normal washing-up liquid (they are also dishwasher-safe).

Do not immerse the turntable after prolonged heating in cold water; it would break owing to the severe temperature shock.

6. Accessing the individual components



Open the top casing to access:

- High-voltage circuit
- Electronic controls
- Grill
- Wiring
- Cross flow fan
- RFI filter

Remove the lower B1 air channel to access:

- Thermostat 90°+150° C
- Thermal cut-off device
- Halogen lamp transformer
- Electromagnetic activator
- Air valve lever

Remove the back casing to access:

- Fan motor (only wiring and heating)
- Thermostat 150 °C

Remove the turbo chamber to access:

- Recirculating air heater
- Motor and fan

Remove the side panels to access:

- Catch
- Hinged fastenings

Remove the fastening bracket to access:

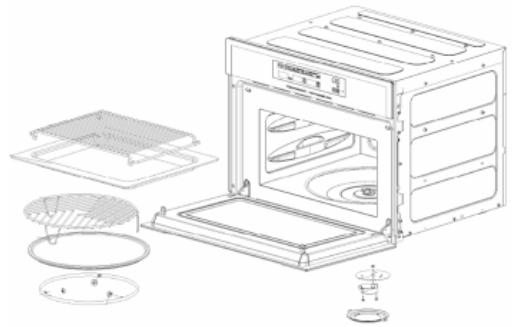
- Halogen lamp holder

6.1 Turntable motor

1. Remove the attachments.
2. Close the door and lie the microwave down on the back.
3. Remove the motor cover.

Pay close attention to the silicone sealing and the insulation panel of the grill (for combination models only).

Caution! *The motor of the turntable must have a metal shaft!*



6.2 Door, inner frame, hinges and closing device

In order to be able to re-use individual elements without any damage we have below listed the correct procedure for removing the door and its components. The inner frame is only pressed on without the help of any devices such as screws or pins.

Removing the door

1. Pull the door right open.
2. Insert rivets into the holes of the hinge.
3. Pull the door upwards out of the hinges.

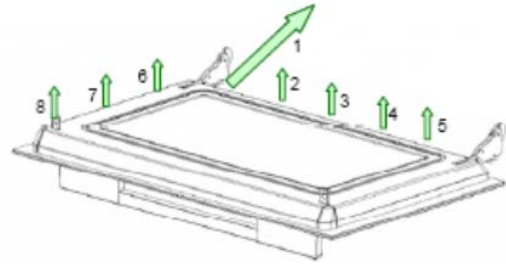


Removing the inner frame

1. Lift up the frame direct next to the hinges and remove it. The frame is a little thinner at this point and can be lifted out more easily.

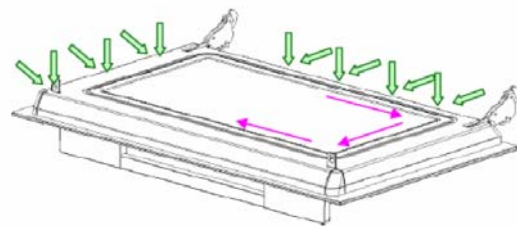


2. Firstly use a screwdriver to carefully lift out the frame on the outside between the two hinges direct next to the glass.
3. Repeat this procedure on the left side.
4. Remove the inner clips on both sides of the frame.
5. Finally carefully remove the silicon sealing.



Re-assembling the inner frame

1. Insert the hob seal all around, without any gaps. Begin in the centre of the underside of the new frame. The beginning and the end must meet. Make sure that the seal is not deformed.
2. Put the frame into the hinges and align it with the door.
3. Now begin pressing the frame on the underside and check to ensure that the inner profiles on the door are properly fitted (2 elements). Make sure that the clips are in the proper mounting position.
4. Now press the left side and check here too to ensure that the profiles and the clips have been properly fitted.
5. Repeat these steps on the other two sides.
6. Now press around the inner edges and make sure that the clips are correctly positioned.
7. Check all around the outer frame. It must be fully inserted and must touch the glass surface.



Re-assembling the door and the closing device

1. Remove the rivets and suspend the hinges in the holders.
2. Close the door and check the respective positions with the control panel.
3. Align the door and the hinges again if necessary.
4. Check to ensure that the micro-switches are working properly and that the door closes smoothly.



Attention!

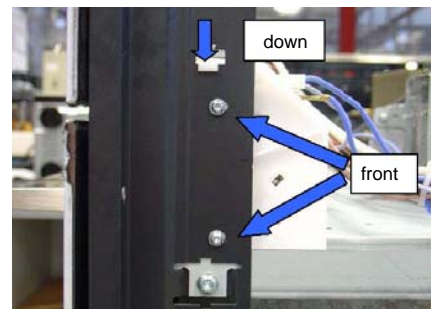
It is very easy to remove the door, but the inner frame may break while you are doing so. To avoid having to replace the whole door, the frame is available under spare-part no. 528949.

6.3 Closing device and door alignment

Closing device

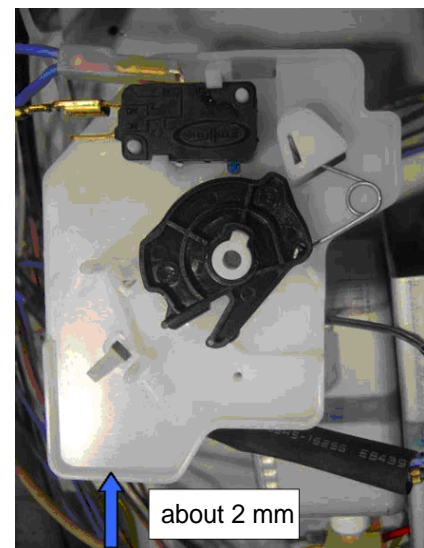
Two essential items need to be observed to enable the closing device to function properly.

1. The position of the box for the closing device (right and left): this box must be mounted securely in the fastening clips and must be installed flush with the front edge of the oven (right-hand box: spare part no. 528925, left-hand box: spare part. no. 528926).
2. The shape of the original black box was modified so that the box fitted better. In order to distinguish between the boxes, the new box is now available in white under the same spare-part number.



Please note!

Now and then the problem may occur with the newly-designed holders too, when the appliance has been used frequently or when it has been used for grilling for a longer period. Expansion of the metal cover causes it to press the switch holder out of its position. In this case the underside of the holder, which makes contact with the oven cover, will need to be sandpapered or cut to shorten it by about 2 mm.



Door alignment

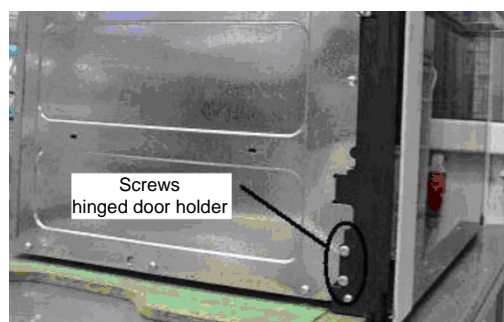
The door must be parallel and flush with the control panel. The clearance between the door and the control panel must be approx. 7 mm.

7 mm

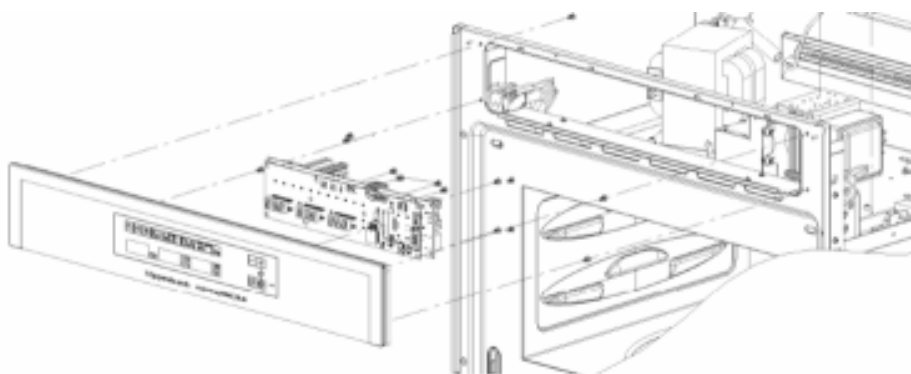
In order to avoid alignment problems as a result of transporting the appliance, the door is fastened to the casing with adhesive tape to protect the appliance from strong vibrations.



The door can also be aligned when it has been mounted. The hinged door holder (spare-part no. 528895) must be released in order to relieve the door tension. The door will then need to be adjusted so that the clearance between the door and the control panel is 7 mm. The screws are then tightened again.

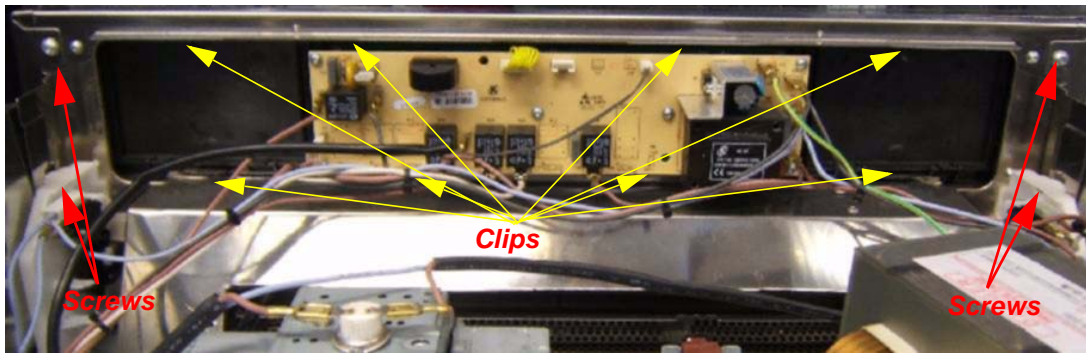


6.4 Control panel

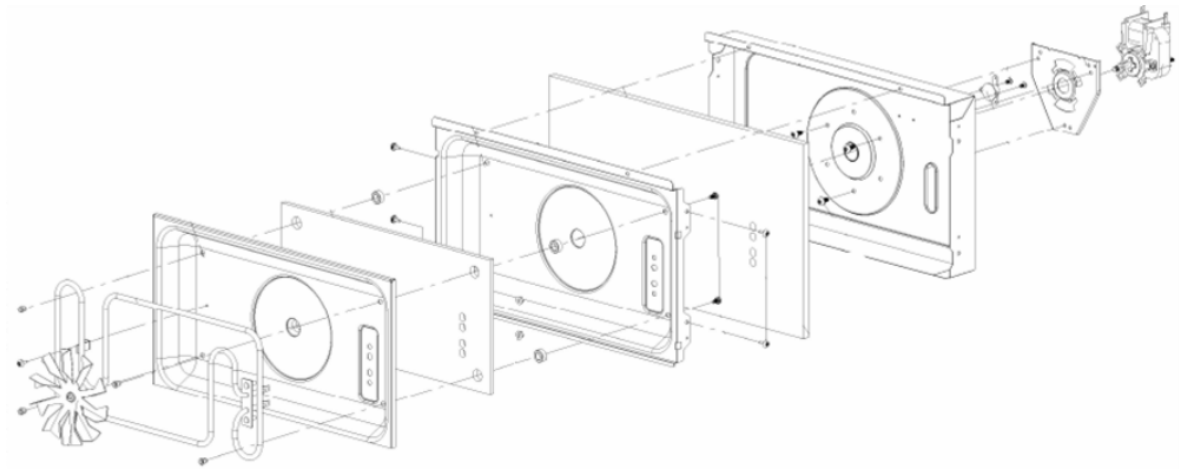


1. Remove the four fastening screws.
2. Loosen the four clips on the lower edge first and then those on the top edge.
3. Now carefully pull out the control panel, paying close attention to the cables and the electronic components.

Caution! *Be particularly careful with the inner frame after the control panel has been removed, since it may break.*



6.5 Ventilator

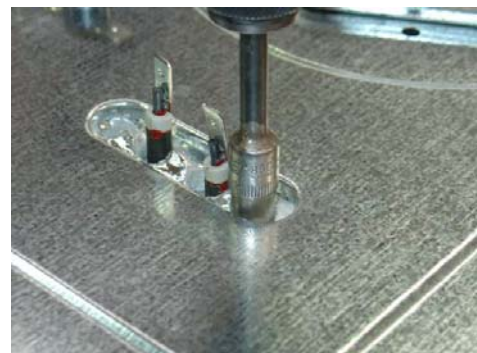


Remove the casing at the back in order to access the motor. The pre-chamber must be completely removed before the ventilator can be replaced.

1. Remove the nut so that the coil spring can move freely.
2. Turn the motor anti-clockwise to release it.

6.6 Convection air

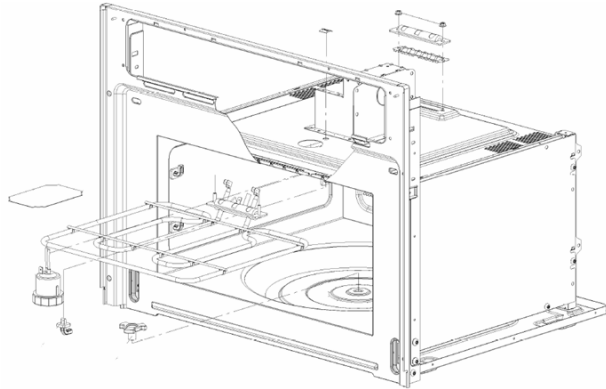
1. Remove the complete pre-chamber.
2. Remove the nuts in order to loosen it.
3. When replacing the chamber, pay attention to the pre-chamber in the interior to make sure that it is properly connected to the back fastenings. Only screw the pre-chamber tight after it has been properly aligned.



6.7 Grill

The top part of the casing will need to be removed in order to be able to directly access the grill. The grill is fastened with a microwave-resistant sealing comprising two metal parts in the interior of the oven:

- the top fastening serves to fasten the grill and to shield off microwaves
- the middle fastening shields off microwaves and ensures perfect electrical contact between the grill and the interior.



6.8 Replacing the light bulb

Disconnect the oven from the power supply!

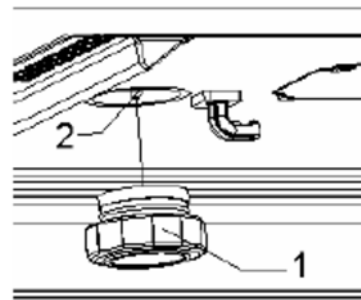
1. Unscrew and remove the glass light cover (1).
1. Remove the halogen light bulb (2).

Warning! The bulb may be very hot!

2. Fit a new 12V / 10W halogen bulb.

Warning! Do not touch the light bulb surface directly with your fingers because you may damage the bulb. Follow the lamp manufacturer's instructions.

3. Screw the glass light cover into place (1).
4. Connect the oven again to the power supply.



Lamp holder

The glass cover of the lamp (1) is located on the ceiling of the oven and can easily be removed for cleaning purposes. Screw the cover off when cleaning and rinse it with water and some detergent.

1. Turn the ceramic hooks to replace the holder.
2. Position the holder in the top of the casing and screw it tight again.
3. Then adjust the catches.

7. Safety precautions during troubleshooting

Before it leaves the factory, every appliance is carefully checked but it must be correctly installed and operated. In spite of all safety measures, safety depends on correct installation and correct operation and maintenance by the customer.



Service technicians must never be exposed to the microwave radiation which can be emitted by the magnetron or other components producing microwaves if the appliance is not connected correctly or operated improperly. Make sure you observe the following instructions "5.1 Safety precautions - microwave energy" on page 13.

8. Leak test (leak indicator gauge)

The rate of leak is understood as the microwave energy that escapes from the oven despite intact leak systems. It is measured with suitable measuring instruments as energy density at 5 cm intervals. A measuring unit is mW/cm^2 . Limits for permissible readings and the conditions for measurement are stipulated in VDE regulation 0700/No. 25. They are as follows:

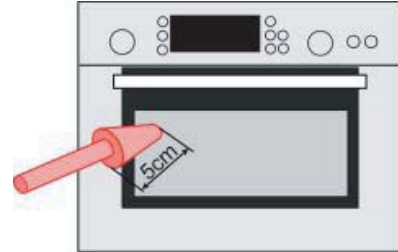
8.1 Abnormal operation (no-load operation)

Microwave output power: Maximum 1000 W

Load: None (no-load operation)

Max. permissible reading: $10 \text{ mW} / \text{cm}^2$

Measuring interval: 5 cm



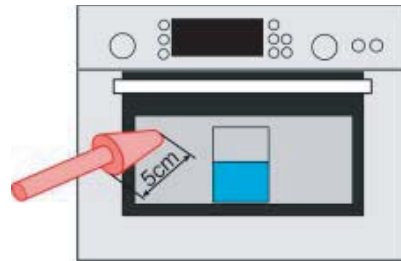
8.2 Normal operation, loaded

Setting: Maximum power level of the appliance

Load: 275 cm^3 water

Permissible limit: $5 \text{ mW} / \text{cm}^2$

Spacing: 5 cm



This test is to be performed on the door, the lock, the microswitches and the magnetron every time maintenance work has been carried out.

Test equipment

- 600 ml glass beaker
- Microwave measuring instrument

Test procedure

1. Pour 250 ml of water into the beaker and then place this in the centre of the microwave oven.
2. Switch on the microwave oven. Set it to 5 minutes at the maximum power level.
3. Hold the test sensor of the microwave measuring instrument vertical to the door edge of the appliance and slowly move it along.

The following areas must be tested for microwave leaks:

- Door and control section
- All ventilation slits
- All folded joints
- Weld on the underside
- Base plate

Procedure:

1. Open the door just so much that the appliance is not switched off.
2. The distance between the door and the sensor must not be less than 5 cm.
The maximum admissible radiation leak is $4 \text{ mW} / \text{cm}^2$.

9. Measuring the output power of the magnetron

The following procedure provides information on the working conditions of the magnetron but it does not reproduce an accurate measurement of the microwave output power.

The test load is one litre (1000 ml) of water with a starting temperature of 15 - 24 °C in a container with a capacity of 1000 ml. The use of a different amount of a different material may lead to a distortion of the test results.

Proceed as follows to measure the output power:

1. Measure the voltage of the AC power and set the voltage to the correct value.
2. Remember that the test result is affected by the value of the supply voltage.
3. If the voltage is too high or too low, the test result will not be accurate.
4. Place a container holding exactly 1000 ml of water at 15 - 24 °C in the centre of the microwave oven.
5. Use an accurate thermometer to measure the exact starting temperature (T1).
6. Run the appliance for 63 seconds at maximum power.
7. At the end of this period quickly stir the water and read off the final temperature of the water. The difference between the final temperature T2 and the initial temperature T1 represents the rise in temperature.

Result: *The microwave output power of the appliance can be determined with the following formula: $P (W) = 70 \times (T_2 - T_1)$
If the output power is more than 15% of the nominal rating of the microwave oven, the high-voltage capacitor and possibly also the magnetron must be replaced.*

Determining the microwave output

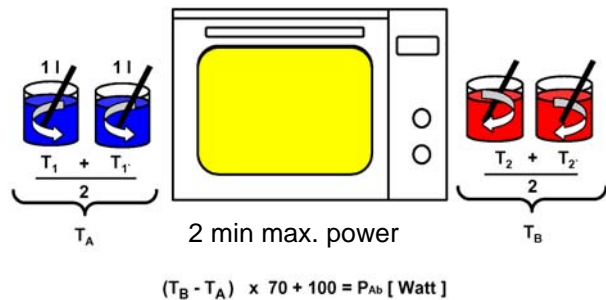
The PAb output is determined by heating up a certain quantity of water (cold tap water).

Required:

- 2 vessels suitable for microwave ovens each holding 1 litre.
- 1 thermometer with an immersion sensor.

Procedure:

1. Determine the initial temperature (average).
2. Cooking time 2 min. at max. power.
3. Determine the final temperature (average).
4. Calculate the difference in temperature.
5. Calculate the output.



10. Troubleshooting

Fault	Cause / Remedy
The appliance does not work.	Check to ensure that <ul style="list-style-type: none"> • the plug has been properly inserted into the socket; • the power supply circuit for the appliance has been switched on; • the door is properly closed. It must be heard as it engages; • no foreign bodies are located between the door and the front of the interior.
Nothing happens when the buttons are pressed.	Check to ensure that <ul style="list-style-type: none"> • the safety lock is activated (see page 8).
Condensation on the cooking surface, inside the cavity or near the door.	<ul style="list-style-type: none"> • If food containing water is cooked, it is completely normal for the steam which forms inside the appliance to precipitate in the cavity, on the cooking surface or on the door frame as condensation.
Sparkling in the appliance.	<ul style="list-style-type: none"> • In the modes with microwaves and in combination mode, do not operate the appliance without food. • In the above-mentioned modes do not use any metal containers, bags or packing with metal clips for cooking.
The food does not heat up and is not cooked through.	Check to see whether <ul style="list-style-type: none"> • you have used metal dishes; • you have selected a suitable operation time or power setting; • you have put a larger or colder quantity of food than you normally do into the inside of the oven.
The food is excessively hot, dry or burned!	Check to see whether <ul style="list-style-type: none"> • you have selected a suitable operation time or power setting.
Strange noises can be heard during operation!	Check to see whether <ul style="list-style-type: none"> • arcs occur inside the oven which are caused by foreign metal bodies (see type of dishes on page 9); • dishes are touching the sides of the oven ; • there are skewers or spoons inside the oven; • the high-voltage diode is defect -> replace the diode.
The oven functions but the interior lighting does not go on!	If all of the functions are working the lamp will probably have burnt out. The oven can still be used.

10.1 General faults

Error specification	Possible causes of faults	Possible repair measures
The food heats up but the turntable doesn't rotate.	<ul style="list-style-type: none"> Defective turntable motor. The connector is disconnected. The wiring connection to the programmer is interrupted. 	<ul style="list-style-type: none"> Replace the motor. Connect it again. Replace the wiring.
The microwave oven works for approximately 2 minutes and then it turns off.	<ul style="list-style-type: none"> Defective fan motor. The fan is blocked. The fan motor connector is disconnected. 	<ul style="list-style-type: none"> Replace the motor. Clean the fan. Connect it again.
The grill does not work.	<ul style="list-style-type: none"> Broken grill heater. Broken thermostat. Defective wiring. 	<ul style="list-style-type: none"> Check the continuity between the grill heater terminals. Check if the terminals are in contact with metallic parts. Replace the grill. Be sure that the thermostat is working. Replace the thermostat. Ensure that the terminals of the grill circuit are properly connected. Tighten the terminals.
The fan does not work.	<ul style="list-style-type: none"> Motor on open circuit. Helix is blocked. Defective terminals. 	<ul style="list-style-type: none"> Check the continuity of the motor's winding. Replace the motor. Remove the helix and check to ensure that it turns in both directions afterwards The connection to the motor's terminals are firm and that the wiring is in good condition. Tighten the terminals.

Error specification	Possible causes of faults	Possible repair measures
The turntable doesn't rotate.	<ul style="list-style-type: none"> Terminal disconnected. Defective programmer/timer. Defective wiring. Adjustment of the door system. 	<ul style="list-style-type: none"> Remove the turntable motor cover and check the motor connections. Restore the connection and be sure if the terminal is fixed firmly. Check if there are some burned or damaged components. Replace the programmer/timer. <p>Attention! Before you make the replacement be sure that the motor and the connections are correct!</p> <ul style="list-style-type: none"> Check the continuity of the motor circuit. Replace the wiring. With the door closed, check if the micro switches are completely actuated.
The lamp doesn't turn on.	<ul style="list-style-type: none"> Lamp blew. Defective programmer/timer. Adjustment of the door system (lamp is always on). 	<ul style="list-style-type: none"> Replace the lamp Check if there are some burned or damaged components. Replace the lamp and the programmer/timer. <p>Attention! Before you make the replacement be sure that the motor and the connections are correct!</p> <ul style="list-style-type: none"> With the door closed, check if the micro switches are completely operating.

10.2 Internal faults

Component	Possible cause	Possible repair measures
High voltage diode	<ul style="list-style-type: none"> • Diode in short circuit. • Diode in open circuit. 	<ul style="list-style-type: none"> • If the high voltage diode is in short circuit, the fuse may not blow but the transformer secondary winding will overheat. Replace the high voltage diode. • If the circuit has been interrupted the transformer will make peculiar noises. Replace the diode.
Magnetron	<ul style="list-style-type: none"> • Magnetron filament in open circuit. • Magnetron in short circuit. 	<ul style="list-style-type: none"> • Check the continuity of the filament with the cables disconnected. If there isn't continuity, the filament is broken. Replace the magnetron. • Check the continuity between the magnetron terminals and the body. If there is continuity the magnetron is defective. Replace the magnetron.
Digital / electro-mechanical programmer	<ul style="list-style-type: none"> • Digital programmer. • Electro-mechanical programmer. 	<ul style="list-style-type: none"> • Microwave and/or grill function control failure. -> Replace the digital programmer. • Time and control error function fault -> replace the electro-mechanical programmer.

Component	Possible cause	Possible repair measures
High voltage transformer	<ul style="list-style-type: none">• Secondary winding terminal is on short circuit.• The transformer windings are on open circuit.	<ul style="list-style-type: none">• If the fuse does not blow immediately but just after some seconds, then one of the transformer terminals maybe on short circuit-> Replace the high voltage transformer.• Check the continuity of the primary and secondary coil. If there isn't any continuity, the transformer is defective. Replace the high voltage transformer.
High voltage capacitor	<ul style="list-style-type: none">• Defect isolation between the capacitor terminals.• Capacitor on short circuit.	<ul style="list-style-type: none">• Check the continuity between the terminals of the transformer. If there is continuity, the capacitor is defective. Replace the high voltage capacitor.• Check the continuity between the terminals of the capacitor and the carcass, with the cables disconnected. If there is continuity, the capacitor is defective. Replace the high voltage capacitor.