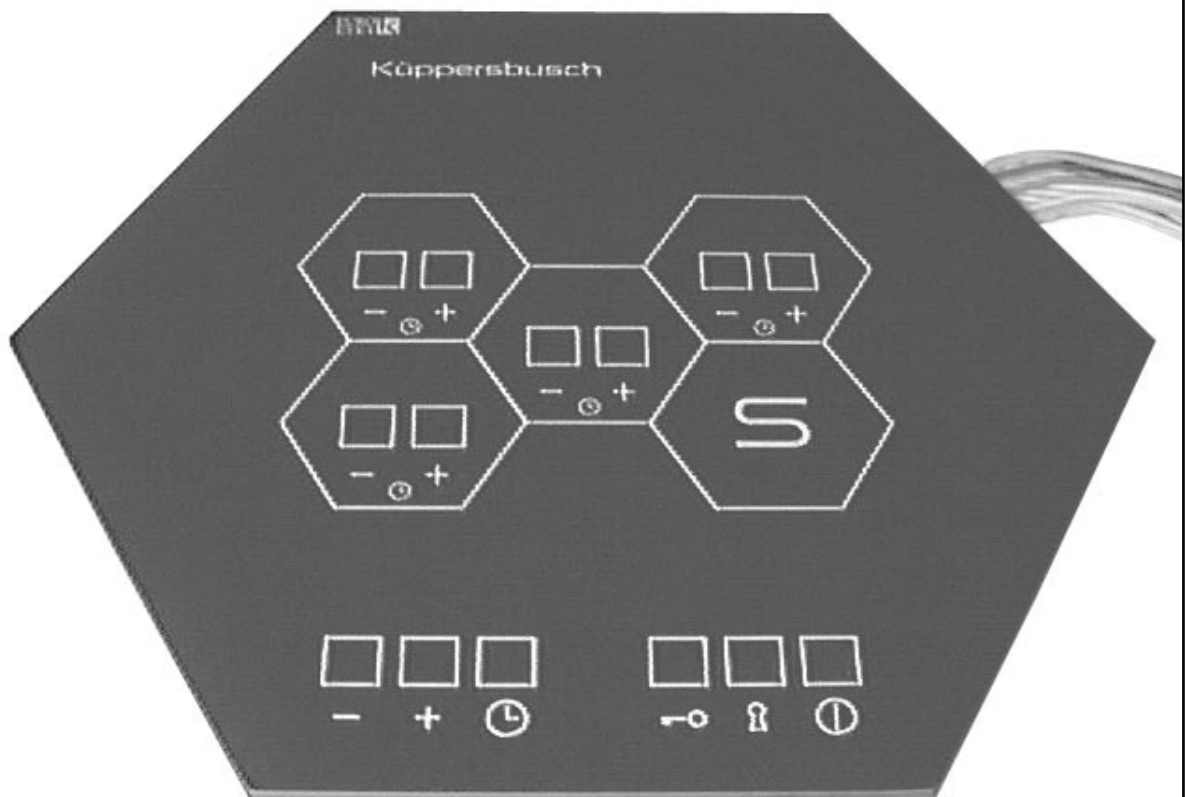


KÜPPERSBUSCH CUSTOMER SERVICE



Modification Instructions from ESW 307.6 to ESW 308.6

VKS-H	Modification Instructions from ESW 307.6 to ESW 308.6		H1-58-01-03
Responsible: Rutz	Phone.: (0209) 401-733	Fax: (0209) 401-743	Date: 26.01.1999
Contents 1. Introduction and Safety Instructions3 2. Tools and Devices4 3. Functional Changes and Functional Description of the Cooking Honeycomb . . .5 4. Components of the ESW 308.66 4.1 Power Sections6 4.2 Control System7 5. Disassembly of the Control System ESW 308.68 6. Disassembly of the Control Board from the Cabinet9 7. Conversion of the Power Section10 8. Conversion of the Power Section with Screening Plate11 9. Adjustment and Balancing of the Sensors12 10. General Notes on Possible Faults13			

1. Introduction and Safety Instructions

The control honeycomb ESW 308.6 is a sensor-controlled cooking honeycomb which allows controlling of the cooking zones without contacting them.

In contrast to the forerunning model ESW 307.6, the ESW 308.6 is additionally equipped with a minute minder. From the outside, however, the functions have remained identical while the internal structure of the control electronics has completely changed. With the ESW 308.6 manual balancing of the sensors is no longer required. The control system will be automatically calibrated upon commissioning (factory-set). The calibration procedure is dealt with in detail in a separate chapter.

Furthermore, power supply unit and power section of the ESW 308.6 have been assembled on a joint printed-circuit board mounted on the lid. The connectors have also been changed.

The appliances are manufactured in accordance with the applicable safety regulations.

The appliances may only be connected up to the mains, serviced and repaired by a qualified electrician according to the valid safety regulations. Work carried out incorrectly will endanger your safety.

When the appliance is connected up to the mains it must be ensured that there is a device which makes it possible to disconnect it from the mains at all poles with a contact opening width of at least 3 mm. Line-protecting switches, fuses and contactors are suitable cut-out devices.

Before opening the appliance always disconnect it from the power supply!

Further general notes are included in the "Operating and installation instructions for honeycomb cooking areas with sensor control, series ESW/EKW".

2. Tools and Devices

The following tools are required for a trouble-free performance of a customer service call:

- digital multimeter incl. measuring leads
- IC extraction tool for 28 poles
- small ratchet box
- 5.5 mm socket spanner (type Belzer No. 6400-5.5)
- 8.0 mm socket spanner
- side cutting pliers, small
- flat pliers, small
- screwdriver for slotted screws, various sizes (very important: with short handle)
- screwdriver for recessed head screws, various sizes (very important: with short handle)
- torch, hand lamp

Furthermore the following devices are required:

- setting device for basic calibration of the sensors
- balancing sheet for sensor calibration Te Tronik Art. No. 8-6084

- glass cleansing agent, Sidolin or similar
- cleaning cloths

3. Functional Changes and Functional Description of the Cooking Honeycomb

Notes:

From the beginning of April 1998 the ESW 308.6 is only supplied with minute minder function.

Furthermore, the before-mentioned automatic sensor calibration function has been integrated.

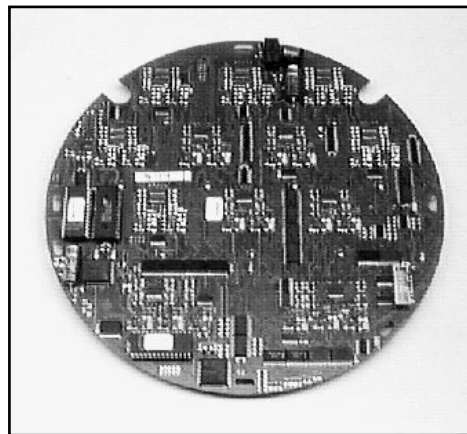
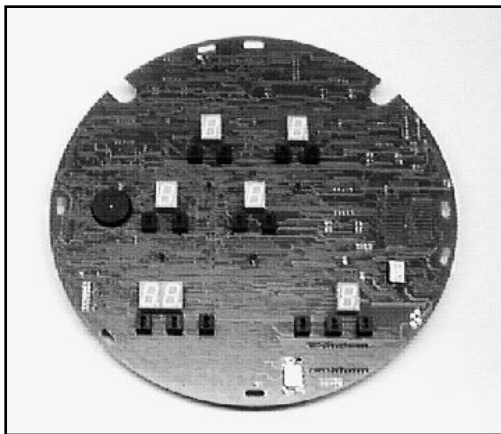
This means in practical operation that an old pc board without minute minder can be replaced by a new one. This new board will then be factory-configured in such way that it replaces the functions of the old pc board. To this end, minor modifications have to be performed which will be described in more detail furtheron in this documentation.

See Operating and Installation Instructions ESW, valid: July 1997

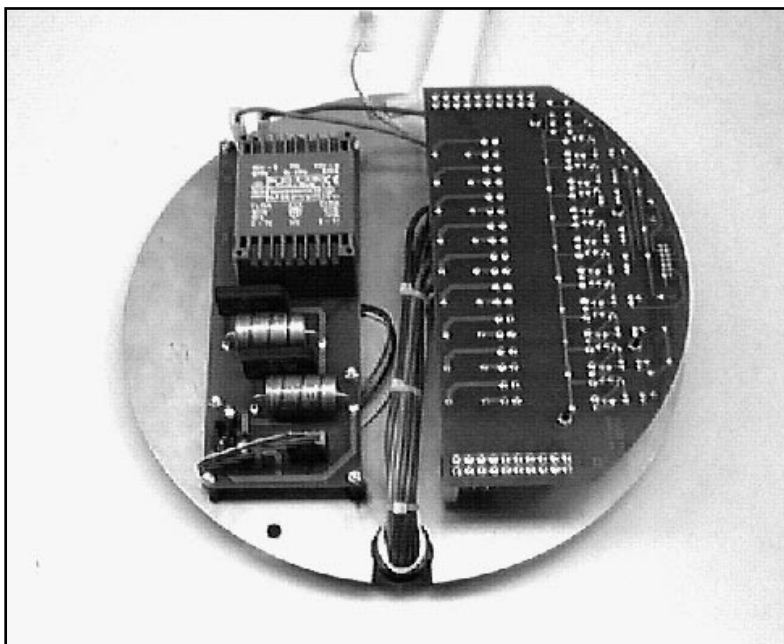
4. Components of the ESW 308.6

4.1 Power Sections

PC board - sensors "new"



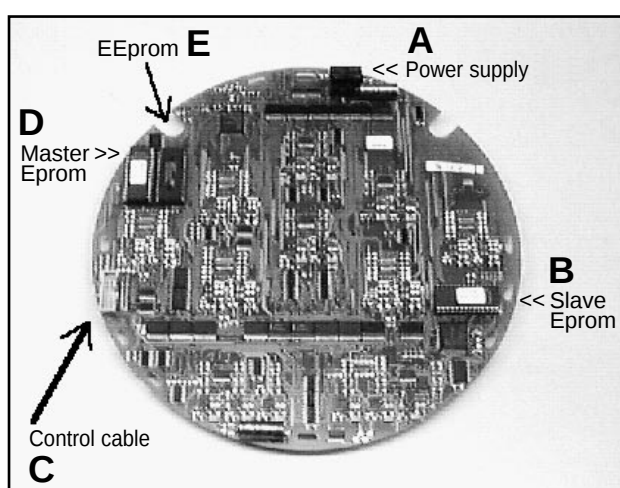
**Lid with power supply unit and relay board (power section)
prior to conversion with the new control board.**



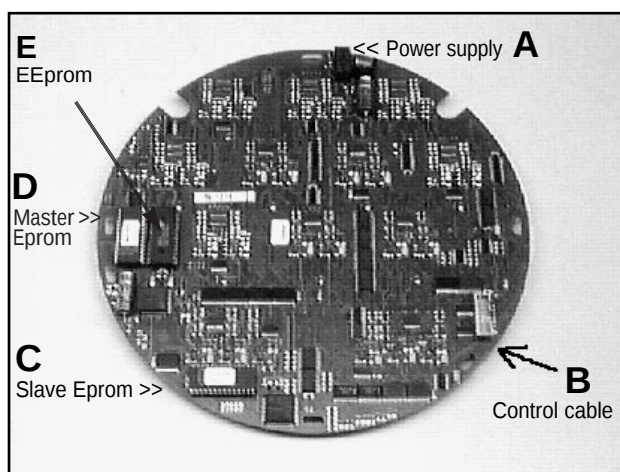
4.2 Control System

The control board is connected to the power section by means of 2 cables.

1. a 2-pole cable for power supply
2. a 4-pole ribbon cable for power section control



Type "FLAT"

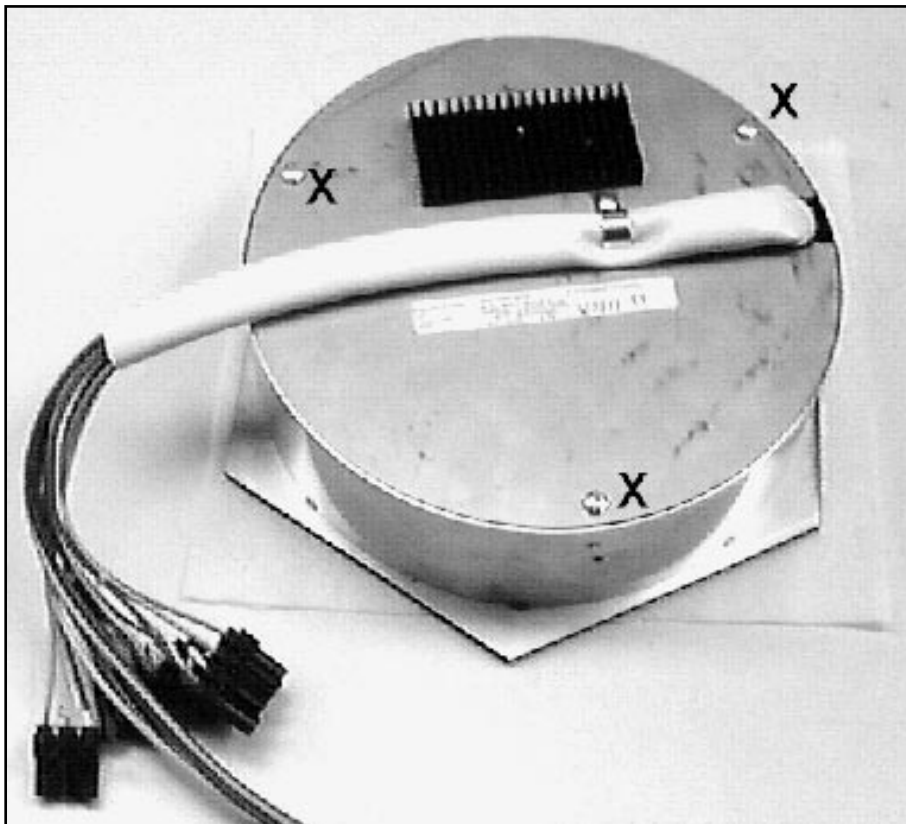


Type "POINTED"

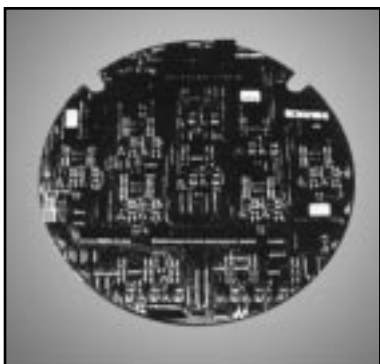
5. Disassembly of the Control System ESW 308.6

Before opening the appliance make sure to observe the safety instructions!

In order to loosen the lid of the cabinet unscrew the 3 screws (marked with an "X").



6. Disassembly of the Control Board from the Cabinet



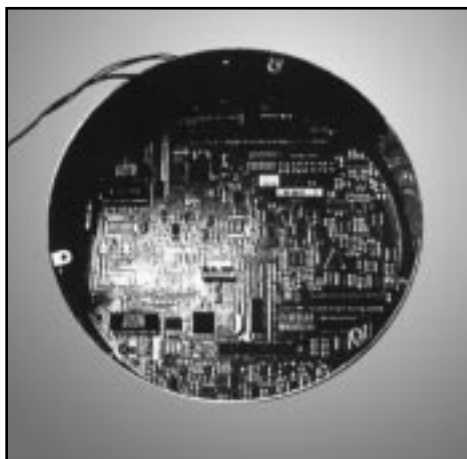
Control board

For the disassembly of the control board the steps "Removing and loosening the lid with power section" have already been performed.

Afterwards the 3 fastening screws of the control board are removed. The pc board is removed towards the top with the recess matching one of the top fastening brackets. The new pc board is inserted and fastened by means of the 3 screws.

The pc board is now illuminated from the rear side by means of a torch so that the position of the display elements can be checked from above. In case the photo sensors - 7-segment displays do not match the imprint on the glass ceramic surface, the pc board must be loosened again in order to position it correctly. When the position finally matches the imprint, the 3 screws are tightened.

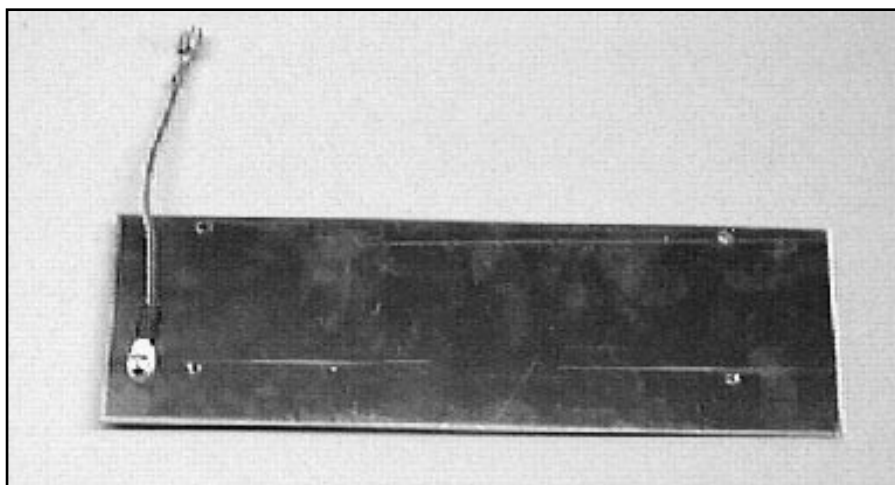
At this point the balancing procedure of the sensors has to be performed (see separate description on the following pages).



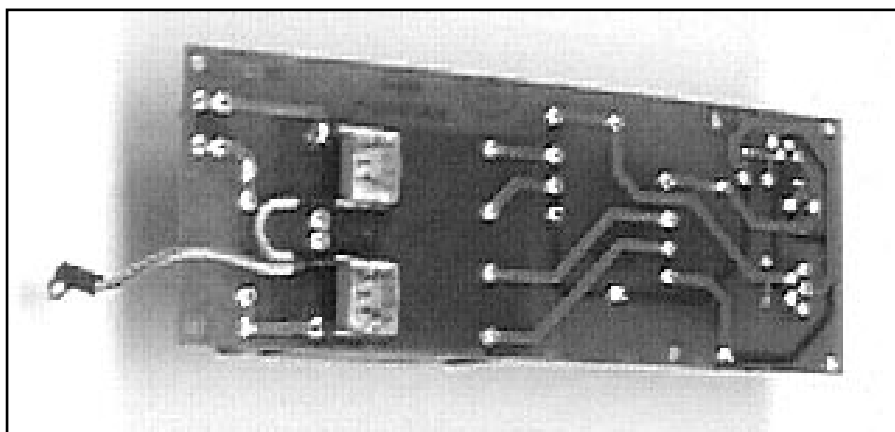
7. Conversion of the Power Section

The conversion of the power section includes 3 new components:

1. A screening plate with earthing cable to be mounted onto the relay board.

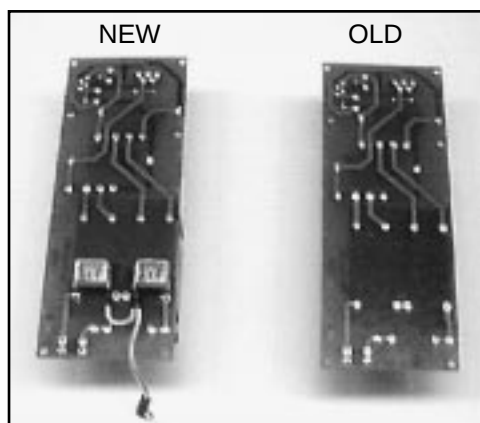


2. A modified power supply unit with 2 additional capacitors.

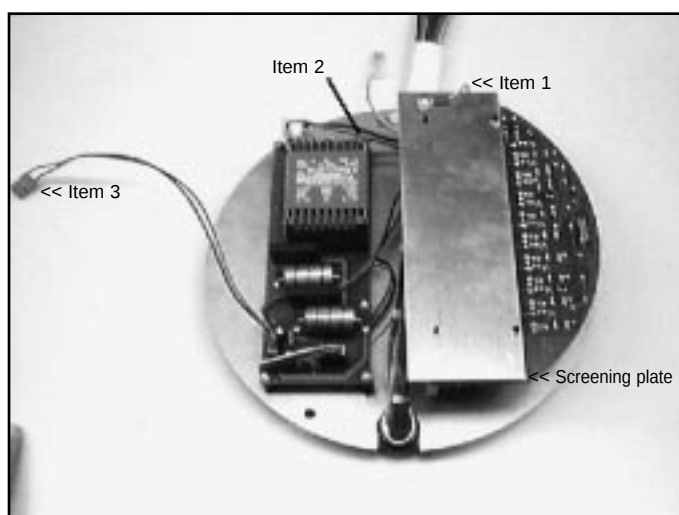


3. The control cable which connects the power supply unit to the control board. In contrast to the previous type, this version is fully pluggable. (The old type had to be screwed down to the control board).

8. Conversion of the Power Section with Screening Plate



Once again, old and new power supply unit compared with each other.



The screening plate is mounted on the relay board by means of 4 spacer pin extensions. Item 1 is screwed down to the plate together with a tooth lock washer, the other end with the flat connector is plugged onto the PE strip of the relay board.

Item 2, here the PE cable of the two radio interference suppression capacitors is also screwed down under the nut used to lock the power supply unit.

Item 3 of the new pc board is now pluggable (polarised).

9. Adjustment and Balancing of the Sensors

Caution: Calibration error!

After installation of the pc board and relay board make sure to place the balancing device upon the control honeycomb.

The new control board comes always supplied with an empty EEPROM. The calibration mode is automatically activated by switching on the mains supply.

The calibration process can be interrupted by disconnecting the mains supply and continued by reconnecting.

The calibration process is terminated by 4 audio signals and stored in the EEPROM.

The stored data cannot be deleted.

The COMMAND MODE is not available with this type.

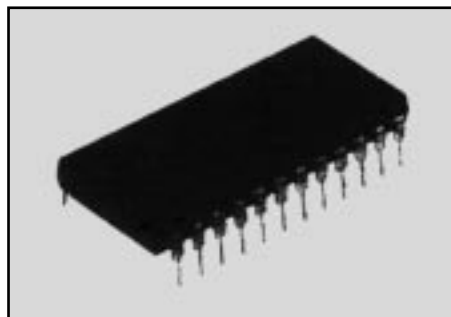
In case of a calibration error, the EEPROM must be pulled out of the base and replaced by an empty EEPROM.

Calibration is started by switching on the mains supply.

After termination of the calibration process, 4 audio signals will sound.

EEPROMS (E²Proms)

EEPROMS are electrically deletable EPROMS that can be written-on and deleted like static RAMs. In case of a power failure the written data will, however, be kept.



10. General Notes on Possible Faults

The control honeycomb ESW 308.6 is not equipped with an optical fault display.



Three defects may occur:

1. defective heater
2. control board of the ESW 308.6 is defective
3. power section of the ESW 308.6 is defective

In order to be able to differentiate between control board and power section, a testing unit will be available in the near future which optically displays the power section control.



In case the control board is defective, a printed board assembly will be made available to the Customer Service for the types "pointed" and "flat". If this board is used, the slave Eprom and the master Eprom must be removed from the defective pc board by means of a special tool (IC extraction tool) and installed on the new board (**see page 7**).

IC extraction and installation tool

A power section assembly will also be made available to the Customer Service.

Thus faults may be located and remedied very quickly.

With respect to the control electronics, generally only 2 basic faults can occur, i. e. a complete failure or a sensor problem. In most cases, a sensor problem can be remedied as described above without opening the appliance.

When removing the PROMS it is important to pull them vertically upwards out of the bases without jamming.

When installing the PROMS it must be absolutely ensured that the notch of the PROM matches that of the base.