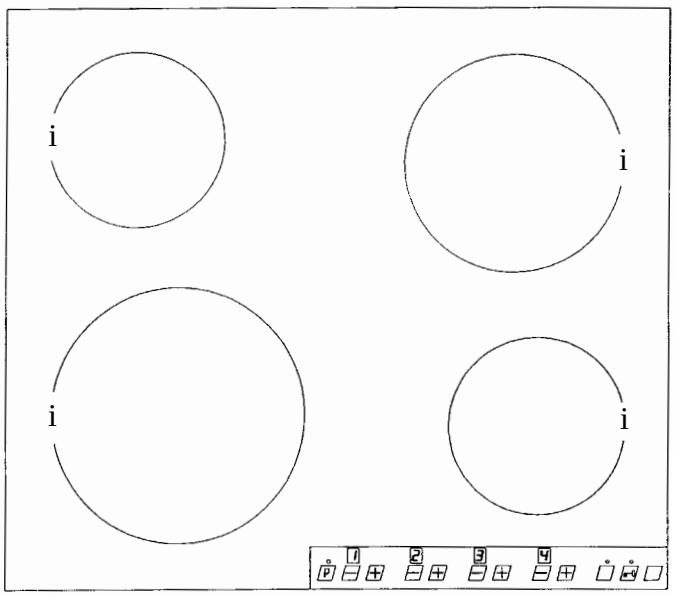

Ceramic induction hob with sensor touch controls
EKI

Küppersbusch

THE HEART OF A GOOD KITCHEN

GB

Manual: H1-50-03

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Contents

1. Induction hob of the 3rd generation

1.1 Induction: Preparing hot meals on cold zones

Induction hobs are characterised by high efficiency for initial cooking and simmering. If the cooking zones are fitted with a touch control panel, the sensor technology switches the cooking zone on when your finger touches the marking. A serial interface for bi-directional data transmission is available for combined cookers with hob and oven.

Induction hobs of the 3rd generation are ready-to-install components and consist of four induction coils each with a converter, cooling system and accessories.

In spite of the complexity due to the system design and regulations, the technology is compressed into a very small space. When installed in modern appliances, it only requires a small installation space.

In daily use induction appliances offer benefits which justify their price. The convincing arguments speak for themselves:

- Energy is only transferred when the saucepan is placed on the hob (sensors which recognise saucepans suitable for induction).
- The heat is only generated in the saucepan base and transferred immediately to the food. The initial cooking times are very short. Reactions, e.g. to changes in settings, take place at once.
- High initial cooking efficiency and excellent simmering energy consumption reduce the total energy consumption.
- The glass ceramic is only heated indirectly through the saucepan base. Any food which boils over cannot therefore burn on. And the user is protected against burns.
- If the saucepan is empty or boils dry, the cooking zone is switched off by a thermostat.
- All cooking zones can be operated at rated power independently of each other.
- One cooking zone is equipped with a power setting (3 kW).
- Processor-controlled, sensitive regulation of the power supply.

1.2 Technical mode of operation

The induction coil is arranged under the glass ceramic. It is supplied with power through a converter which converts the mains power into a higher-frequency alternating current. This AC generates an electromagnetic AC field which penetrates the glass ceramic and induces the heat-producing eddy current in the saucepan base.

The glass ceramic itself stays cold. It is merely back-heated indirectly via the saucepan base.

When the saucepan is removed, the cooking zone is switched off automatically. If a pan is empty or boils dry, deactivation is triggered by a temperature sensor.

1.3 Optimum efficiency

The efficiency of induction hobs is governed by the base material, diameter and weight (mass) of the saucepans. The saucepans and cooking zone should be matched to each other so that the advantages can be optimally exploited.

Comparatively short initial cooking times and high initial cooking efficiency are achieved owing to the energy conversion directly in the saucepan base. The favourable simmering energy consumption, which corresponds to that of conventional cooking systems, is typical of induction hobs.

In induction cooking the food can be prepared and cooked as usual. One merely has to become accustomed to the short initial cooking times and the rapid reaction to changes in settings. Therefore, it may be advisable with sensitive roasting or cooking processes not to start at full power but to offset the less favourable heat distribution due to the system with a lower initial cooking setting.

1.4 The right saucepans are what's needed

Saucepans suitable for induction are available from specialised shops or KAG. The important point is that the saucepan base has good thermal conductivity - also termed transverse conductivity - to ensure good heat distribution.

Magnetisable saucepans must be used to exploit the induction technology. For example, enamel saucepans made of magnetic steel, grandmother's cast iron roasting pots or new stainless steel saucepans with a special sandwich base.

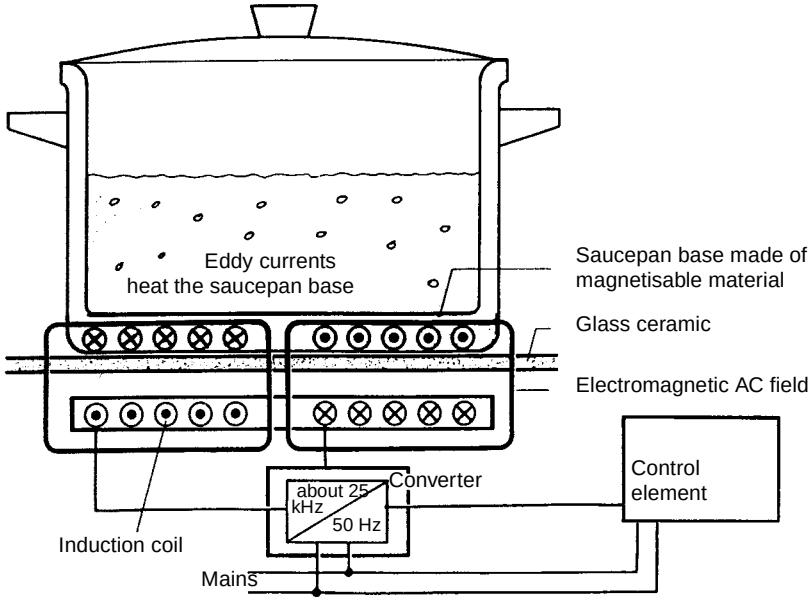
Saucepans suitable for induction can normally be also used without any limitations on conventional cookers.

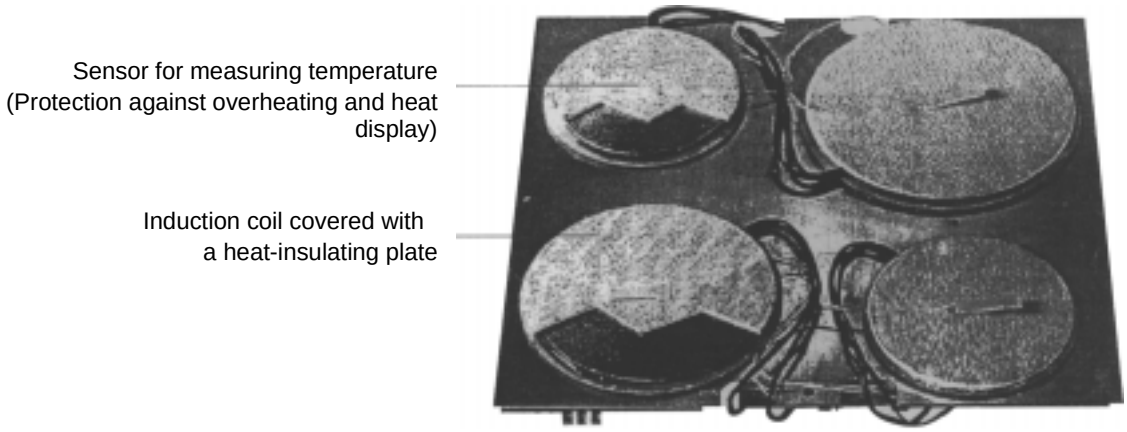
The three-piece induction cookware set from Küppersbusch (Acc. No. 159) comprises:
Saucepan with lid, ∅ 16 cm, height 11 cm
Saucepan with lid, ∅ 20 cm, height 12 cm
Frying pan, ∅ 24 cm, height 5 cm.

The complete set of saucepans from Küppersbusch (on request) comprises:
Saucepan with lid, ∅ 16 cm, height 11 cm
Saucepan with lid, ∅ 18 cm, height 12 cm
Saucepan with lid, ∅ 20 cm, height 12 cm
Saucepan with lid, ∅ 20 cm, height 17 cm
Saucepan with lid, ∅ 24 cm, height 15 cm
Casserole with lid, ∅ 16 cm, height 8 cm
Frying pan, ∅ 24 cm, height 6.5 cm
Frying pan with lid, ∅ 24 cm, height 6.5 cm
Steamer, ∅ 20 cm, suitable for saucepans, ∅ 16, 18 and 20 cm.

1.5 Design of an induction cooking zone

Schematic diagram of how an induction cooking zone works





For technical data on the induction cooking zone, see page 10.

1.6 Dimensions and ratings

The following cooking zones are available:

Nom. Ø 145 mm	1.4kW
Nom. Ø 180 mm	1.8kW
Nom. Ø 210 mm	2.2kW

The diameter 210 mm can only be combined with the smallest cooking zone owing to the connected load which is limited to 3.6 kW.

1.7 Important notes on installation

Induction hobs are supplied ready to install. They may only be used after proper installation.

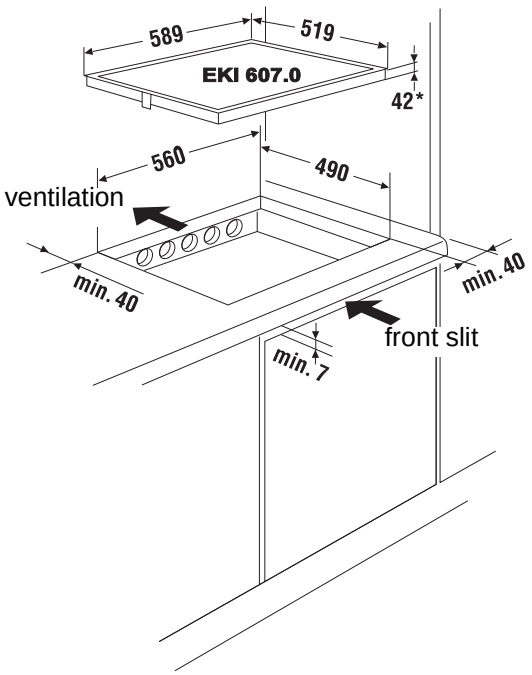
The unit must be installed on resilient supports to prevent damage to the induction system and the glass ceramic.

Induction hobs are only fully operable if they are adequately cooled by air in the finished appliance. Appropriate precautions must be taken to satisfy this requirement.

1.7.1 Dimensional drawing for installation of the induction hob

A ventilation slit of at least 7 mm mustbe provided above the panel in every method of installation. Ventilation openings are to be provided in the back of the cupboard. Cold air is drawn in through the front ventilation slit. The heated air escapes through the ventilation openings in the rear.

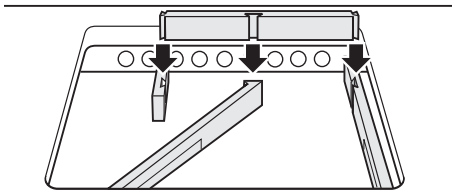
An air channel to be installed (see following descriptions) prevents the heated airflowing back to the cold air intake side.



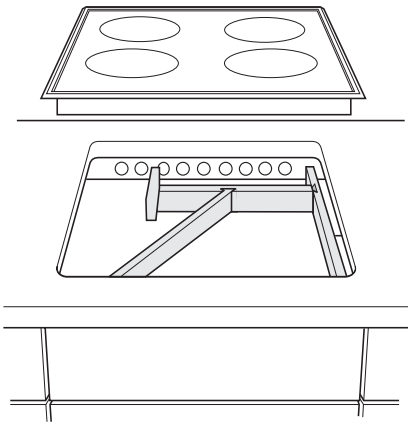
1.7.2 Installation on a cover board

If the hob is installed on a fitted cupboard, a cover board must be installed in the kitchen cupboard.

- .Install the cover board under the worktop as follows:
  with a 40 mm worktop 50 mm underneath the worktop,
  with a 30 mm worktop 60 mm underneath the worktop,
  with a 50 mm worktop 40 mm underneath the worktop.



- Assemble the enclosed foam mouldings as illustrated and place on the cover board. This prevents the heated air from flowing back to the cold air intake side. This is important for proper functioning!
- Insert the protruding foam under the worktop and install the hob.

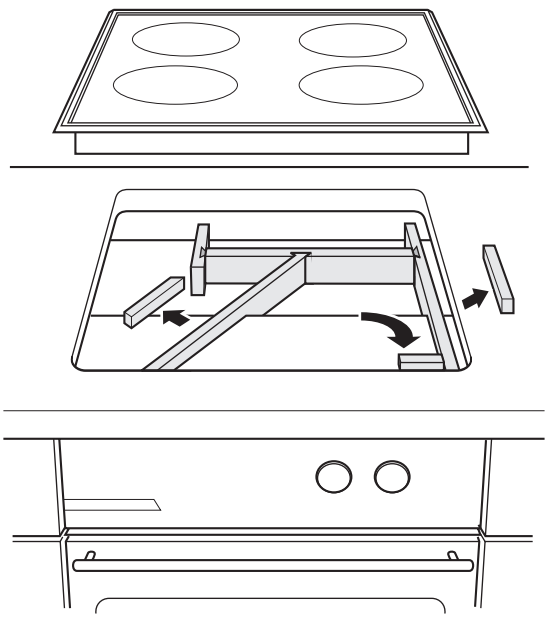


1.7.3 Installation above a Küppersbusch built-in electric oven

The induction cooking hob may only be installed above a Küppersbusch built-in electric oven with housing cooling. A ventilation slit of at least 7 mm must be provided at the front above the oven so that cold air can be drawn in.

Place the foam mouldings on the oven. The enclosed mouldings are slit. Parts of the foam are to be torn off so that the step created by the oven is offset, see next illustration.

- Also seal the front right with a torn-off piece of foam moulding, see next illustration.
- Insert the protruding foam between the cooker and the worktop and
- Install the hob.



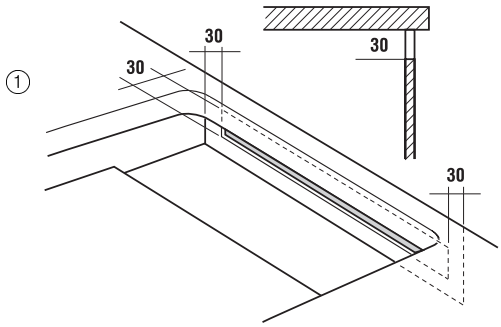
Important: Ensure good sealing so that no air short-circuit can occur between the intake side and the discharge side. For the same reason openings in the intake area of the ventilator in the oven top are to be closed with enclosed strips of adhesive tape.

1.7.4 Installation above a drawer (with accessory No. 136)

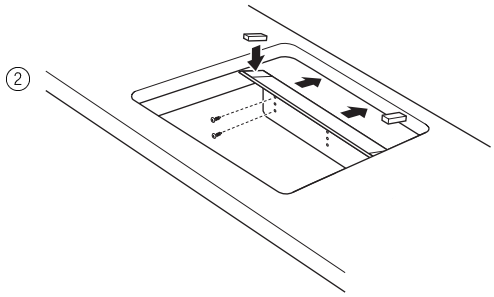
Components: 1 air channel, foam strips, 12 pan-head tapping screws, 1 protective mesh for fan

Important: The cupboard rear must be closed. The warm cooling air must not be able to return to the fan intake opening. Inadequate cooling of the power electronics results in a power eduction of the hob.

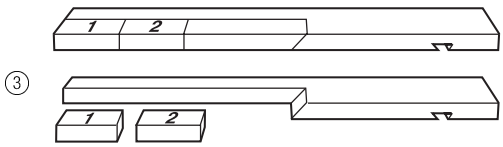
1 View of the cupboard rear from inside



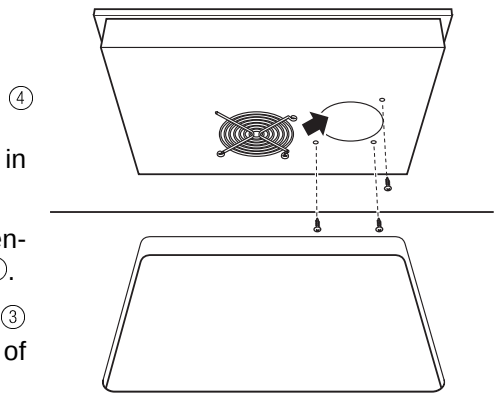
2 Cupboard view from the side



3 Foam strips



4 View of the hob from below



Installation of the air channel

- Make recess in cupboard rear according to dimensions in Fig. ①.
- Attach air channel sheet on the cupboard rear with the enclosed pan-head tapping screws as illustrated in Fig. ②.
- Tear off the foam strips with the hob as shown in Fig. ③ and stick onto the self-adhesive tape on the both sides of the sheet in order to produce a sela at the side (see Fig. ②.

Attaching the protective mesh for fan

- Turn hob over and undo the 3 screws beside the fan opening out of the bottom of the hob. When turning the hob over, protect it agianst being scratched.
- Mount the protective mesh and fasten with the 3 screws (see Fig. ④).
- Insert the hob (see Fig. ④).

2. Technical data of the induction hob

Nom. voltage:	230V ±10% AC 50Hz
Connected load:	max. 3.6kW
Cooling:	Fan cooling Air inlet temperature: < 45°C
Ambient temperature:	0°C … 85°C
Type of enclosure:	I
Dimensions (LxWxH):	470 x 410 x 40mm (50mm with fan)
Weight:	about 6.5kg
Power setting:	processor-controlled, sensitive
Power level:	Power increased to 3kW, possible for one cooking zone
Control unit power controller:	EGOTROL® or EGO touch control

2.1 Standards observed during manufacture

EN 60335-1	Safety of electrical appliances for use in the home and similar purposes
EN 60335-2-6	Cookers, table-top cooking appliances, ovens and similar appliances for use in the home
EN 61000-3	Limitation of mains pollution at power supply utilities
EN 55011, EN 55014	Radio interference suppression
EN 55104	Electromagentic compatibility

2.2 Notes on safety and hazards

Inducton hobs were designed in compliance with the latest standards.

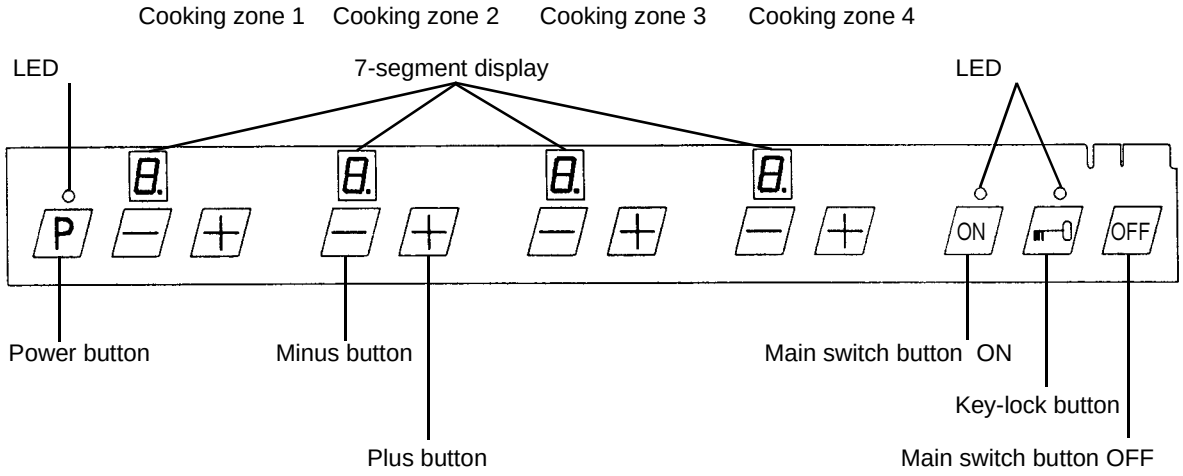
The cooking zones are co-ordinated so that they work with a very large, the same size or the next smaller size of saucepan base diameters. The saucepans should always be placed in the centre of the zones.

For safety's sake large ferromagnetic objects (e.g. baking trays) should never be placed on the cooking zone (glass ceramic).

People who have pacemakers are not at risk according to present scientific knowledge if the induction cooking zones are used properly. A residual risk cannot be excluded if the cooking zones are used improperly and under unfavourable conditions.

KAG recommends people with pacemakers to consult a doctor before working with induction hobs. An appropriate hazard sign should be mounted on the finished appliance or in its instructions for use. KAG can provide information at any time on the latest state of the art.

3. Control and function elements



3.1 Control elements

- 1 Main switch button ON
- 1 Main switch button OFF
- 4 Plus buttons
- 4 Minus buttons
- 1 Power button (booster)
- 1 Key-lock button

3.2 Displays

- 4 7-segment displays (actuator displays)
- 1 LED for main switch
- 1 LED for power button (booster)
- 1 LED for key-lock button

3.3 Acoustic signal

- 1 Buzzer

3.4 Temperature measurement

- 1 NTC sensor on the heat sink
- 4 PT sensors on the cooking zones

3.5 Cooling

- 1 Fan

4. Basic functions

4.1 Switching the control on and off

4.1.1 General

Switching on and off relates here to the function of the main switch buttons as elements which release or block the functions of the other buttons. The control is always supplied with power.

4.1.2 Switching the control on

The touch control is switched on by activating the main switch button ON.
If other buttons have been activated, the control cannot be switched on until all buttons have been released and the main switch button ON has been pressed again.

After the control has been switched on, a „0“, or if the heat display was previously activated, an „H“ is displayed.
The main switch LED comes on.

4.1.3 Switching the control off

- **By the user**

  The touch control can be switched off at any time by pressing the main switch button OFF, regardless of whether other buttons are activated.
  The main switch LED goes off.

- **Automatic**

  See safety functions on page 17.

4.2 Switching a cooking zone on

A cooking zone can be switched on in two ways:

- With the corresponding plus button starting at 1.
  Pressing briefly increases the cooking level by one setting.
  Slower activation increases the setting in increments up to (9).
- With the corresponding minus button starting at 9.
  Pressing briefly lowers the cooking level by one setting.
  The value is set to 0 if the button is kept depressed.

4.3 Switching a cooking zone off

A cooking zone can be switched off in two ways:

- With the corresponding minus button
- By pressing the corresponding plus and minus buttons at the same time.

When the cooking zone is switched off, the display changes from „0“ to „H“ after 3 seconds if the cooking zone is hot.

The assignments of the plus and minus buttons to the cooking zones are stored in the EEPROM as parameters.

4.4 Booster function

A booster function (3000 W) is available on cooking zone 1. This mode is activated by pressing the power button. The booster function is started regardless of whether the cooking zone was previously switched on or off.
A 9 appears in the actuator display and the booster LED comes on.
The booster function lasts max. 10 minutes. Then the appliance switches back to cooking level 9 and the booster LED goes off.

The booster function is ended prematurely if

- the power button is activated again,
- the corresponding minus button is activated,
- the cooking zone temperature exceeds 250 °C,
- the heat sink temperature exceeds 76 °C.

If the saucepan is removed during the booster period, the time is stopped. If another saucepan is placed on the zone before expiry of the saucepan sensor time (10 minutes), the remaining time is executed.
The booster function can also be activated if there is no saucepan on the cooking zone.

As the total power of a module must not exceed 3600 Watt, cooking zone 4 is limited to 600 Watt during the booster time. If the user has specified a higher setting for cooking zone 4, the control reduces the power; this is indicated by the corresponding actuator display flashing with the desired cooking zone code and the reduced code 6. After the end of the booster function the preset power is provided again at cooking zone 4.

If the booster function is not to be switched on because of too high a cooking zone or heat sink temperature (see deactivation values), the booster LED flashes until the booster button is pressed.

4.5 Power characteristics

The parameters for the power characteristics are stored in an EEPROM for each cooking zone.

Cooking level	Nom. power	Cooking zone 1 (Ø 180 mm)		Cooking zone 2 (Ø 145 mm)		Cooking zone 3 (Ø 210 mm)		Cooking zone 4 (Ø 145 mm)	
Code	%	% DC	Watt	% DC	Watt	% DC	Watt	% DC	Watt
1	2.5	13.7	55	13.7	35	13.7	45	13.7	35
2	5.0	27.8	110	27.8	70	27.8	90	27.8	70
3	7.5	41.6	165	41.6	105	41.6	135	41.6	105
4	12.5	69.4	275	69.4	175	69.4	225	69.4	175
5	18.0	100.0	396	100.0	252	100.0	324	100.0	252
6	24.0	100.0	528	100.0	336	100.0	432	100.0	336
7	45.0	100.0	990	100.0	630	100.0	810	100.0	630
8	60.0	100.0	1320	100.0	840	100.0	1080	100.0	840
9	100.0	100.0	2200	100.0	1400	100.0	1800	100.0	1400
P	136.4	100.0	3000	–	–	–	–	–	–

DC = Duty cycle

4.6 Key-lock function

The appliance can be locked to prevent unauthorised use with the key-lock button.

On hobs manufactured up to June 1999 this children's safety feature is switched on and off again with the key-lock button.

On hobs manufactured after July 1999 the children's safety feature is only switched on with the key-lock button. It is switched off by pressing the buttons "On" and "Key-lock" at the same time and the "Power" button within 5 seconds (these buttons are easy to find as the LEDs flash).

4.7 Saucepan sensors

Every induction cooking zone is equipped with saucepan sensors. They prevent activation as long as no saucepan has been placed on the zone or if unsuitable saucepans are used. If the saucepan is removed during use, the power is cut off.

As long as the cooking zone is switched on, any missing or unsuitable saucepan is displayed on the corresponding actuator display with the symbol "Saucepan missing" (see Annex C).

The saucepan sensors operate for 10 minutes. If no suitable saucepan is placed on the cooking zone during this time, the zone is switched off. The display changes from the symbol "Saucepan missing" to 0.

4.8 Displays - Optical signals

4.8.1 7-segment displays for cooking zones

A display is assigned to each actuator (cooking zone). In addition to the signals for the settings and the heat display, the user is also shown the modes "Saucepan missing", "Cooking zone temperature sensor breakage/short-circuit" and "Failure of the mains synchronising pulse".

Control	Cooking zone	Mode	Display	
			7-segment	LED
Off	Off	Cooking zone cold	Dark	
Off	Off	Cooking zone hot	H	
On	Off	Cooking zone cold	0	Main switch LED comes on
On	Off	Cooking zone hot	H[1)]	
On	On	Without saucepan	Symbol "Saucepan missing"[1)]	
On	On	With saucepan	Cooking level[2)]	
On	On	Booster function with saucepan	Max. cooking level[3)]	Booster LED comes on
On		Key-lock function active		Key-lock LED comes on
On	On	Sensor breakage, sensor short-circuit, mains synchronising pulse not available	F[1)]	

1. The display of the selected cooking zone changes on activation of the plus or minus button from the display of the special symbol to the current cooking level. After the button is released, the display changes back after 2 sec. to the special symbol. If activation of the button does not result in any change to the cooking level (activation too short), no acoustic signal is emitted, either.
2. If the temperature limiting values for power reduction are exceeded, the display flashes between the set cooking level value and the cooking level actually executed (66%). Should the temperature limiting values for deactivation be exceeded, the display flashes between the set cooking level and "0".
3. If in booster mode the second cooking zone belonging to the module is also to be used, its display flashes between the set cooking level value and the actual value executed (max. 600 W) if the power set is greater than 600 W.

4.8.2 LED for main switch

With the control switched on, an LED above the main switch button ON comes on.

4.8.3 LED for booster function

Activation of the booster function is displayed by an LED above the booster button.
At the end of the function the LED goes off.

4.8.4 LED for key-lock function

With the control switched on, activation of the key-lock function is displayed by an LED above the key-lock button.

4.9 Buzzer

Each activation of a button which results in a sensible and feasible action is acknowledged by a brief acoustic signal. These actions are:

- Switching the touch control on and off with the main switch buttons.
- Switching the key-lock function on and off with the key-lock button.
- With the key-lock deactivated, switching a cooking zone on and off with the plus or minus buttons.
- With the key-lock deactivated, changing the cooking level with the plus or minus buttons.

4.10 Fan

A fan is used to improve the cooling of the power components. It is activated at two speed levels and depends on the heat sink and cooking zone temperatures.

4.10.1 Fan activation via heat sink temperature

The fan is switched on at half speed at a heat sink temperature of over 50 °C. If the temperature rises to above 60 °C, the fan switches over to full speed. If the temperature falls below 45 °C, the fan is switched off.

The parameters of the temperatures are stored in the EEPROM.

4.10.2 Fan activation via the cooking zone temperature

The fan switches to full speed irrespective of the heat sink temperature if the temperature of one cooking zone exceeds 250 °C. If the heat sink temperature does not necessitate otherwise, the fan is switched off again at about 30 K less.

The activation value is stored in the EEPROM as a parameter (see power reduction control via cooking zone temperature - Cancelling reduction control). The deactivation value is calculated using a constant.

5. Safety functions

5.1 Automatic deactivation of the control

The touch control is switched off automatically when

- after activation the user does not press any more buttons and no cooking zone is in use within 10 seconds;
- no button is reactivated after deactivation of the last cooking zone still in use. The deactivation time for this is 10 seconds and is displayed by the decimal points flashing;
- one or more buttons is/are pressed for longer than 10 seconds.
  (Apart from the repeat functions of the plus and minus buttons; here the 10 seconds only start after the end value has been reached).

After deactivation of the control the H is still displayed if the cooking zone is hot.
Otherwise all displays and LEDs go off.

5.2 Heat display

If the temperature sensor of a cooking zone reports a cooking zone temperature of > 65°C, an “H“ is displayed in the corresponding actuator display with the touch control switched off or with the touch control switched on but the cooking zone switched off. If the temperature falls below 60°C, the display goes off with the control deactivated. With the control activated the display changes from “H“ to “0“.

The parameters of the temperature values are stored together for all cooking zones in the EEPROM.

5.3 Power reduction due to excess temperature

5.3.1 Cooking zone temperature

A PT sensor is provided at each cooking zone which protects the induction coil from overheating.
The following action is taken if the cooking zone temperature is too high:

- At a cooking zone temperature > 250°C the fan is switched on at full speed.
  If cooking zone 1 exceeds this temperature, any active booster function is also ended.
  The booster LED goes off.
- At a cooking zone temperature > 280°C the power supplied is limited to max. 66% (cooking level 8).
  If the cooking zone is used at cooking level 9, the power reduction is indicated in the corresponding actuator display by the flashing of the values 9 and 8.
- If the cooking zone temperature rises to over 300°C, the zone is switched off.
  The corresponding actuator display indicates “0“ and changes to “H“ after 3 seconds.

The parameters of the temperature values are stored for each cooking zone in the EEPROM.

5.3.2 Heat sink temperature

An NTC sensor which protects the electronic components against overloading is arranged on the heat sink. The following action is taken if the heat sink temperature is to high:

- At a heat sink temperature > 76 °C any active booster function is ended.
  The booster LED goes off.
- At a heat sink temperature > 85 °C the power supplied is limited to max. 66% (cooking level 8).
  If the cooking zones are used at level 9, the power reduction to 66% is indicated in the corresponding actuator displays by the flashing of the values 9 and 8.
- If the heat sink temperature rises to over 90 °C in spite of the preceding power reduction, all cooking zones are switched off.
  The corresponding actuator displays indicate this by the flashing of "dark" and “0“.
- When the heat sink temperature falls below 85 °C again, the cooking zones are switched on again.
  If the set power is greater than 66% (cooking level = 9), this takes place at reduced power.
  Then the value between 9 and 8 flashes in the actuator displays.
- As soon as the heat sink temperature is < 80 °C, the cooking zones work at the set cooking level 9 again with the desired power.
  The actuator displays stop flashing and indicate the cooking level set.

The parameters of the temperature values are stored in the EEPROM.

5.4 Operating time limit

Each cooking zone has its own operating time limit. This depends on the cooking level set and is reloaded each time the level is changed.
Once the operating time limit is reached, the corresponding cooking zone is switched off.

The values are defined together for all 4 cooking zones as constants.

Cooking zone	Operating time limit
Code	[Hours]
1	10
2	10
3	5
4	4
5	3
6	3
7	2
8	2
9	1
P	1

5.5 Power failure

The control can bridge a mains power failure of 1 second by switching off almost all power-consuming components. This means that the starting condition of the hob can be reinstated if the power failure time is less than 1 second. Reset then takes place on the microcontroller, i.e. the control initialises itself again and all the user settings are lost. During this initialisation period E-00 appears in the actuator displays. After initialisation of the control, the key-lock function is active when the appliance is first switched on again.

6. Fault messages

A fundamental difference is made between two types of fault:

- Faults which permit further use
  (fault is limited to cooking zone(s) or module)
- Faults which do not permit further use
  (fault has an effect on the entire hob)

6.1 Cooking zone

The fault where the temperature sensor on the coil is defective (sensor breakage or sensor short-circuit) can occur on one single cooking zone. If this is the case, the power to the corresponding cooking zone is switched off (cooking level > 0) and an F appears in the actuator display corresponding to the cooking zone. No fault is indicated if the cooking zone is switched off.

The other cooking zones can continue to be used.

6.2 Module

The fault where the pulse for the mains-synchronising activation and deactivation of the cooking zones is not available can occur on one module. If this is the case, the power to the corresponding cooking zone (cooking level > 0) is switched off and an F is shown in the actuator display corresponding to the module. No fault is indicated if the cooking zone is switched off.

The other module can continue to be used.

6.3 Hob

The faults listed below result in the hob not being able to be used. If the fault is already known when the main switch button ON is activated, the fault code is then displayed. If the fault occurs during use, all cooking zones are switched off and the fault code is displayed.

Faults which affect the entire hob are indicated in the following form:

Display	Meaning	Display
Actuator 2	Fault	E
Actuator 3		–
Actuators 1 and 4	Fault code	two-digit decimal

The display goes off after 10 seconds or if the main switch button OFF is activated before expiry of the time.

Fault messages

Fault code	Description	Comments
E-00	Reset	Control is initialising itself again. Automatic process after voltage supplied (not a fault).
E-13	EEPROM does not receive any valid data.	EEPROM not equipped. EEPROM not programmed. Comparative parameters not OK.
E-22	Touch control defective.	Button bank always provides the same A/D value.
E-27	Heat sink sensor defective.	Sensor breakage, sensor short-circuit.
E-28	Saucepan sensor parameter	Transmission to the ASIC not OK.
E-29	Cooking zone assignment	Assignment of the actuators to the cooking zones is not OK (EPROM).

7. Customer service diagnosis

The induction heating system of the 3rd generation is equipped with a customer service diagnosis feature, i.e. it is possible to call up and test functions of the induction heater in the installed condition.

7.1 Call-up of the diagnosis menu

The following sequence must be observed to call up the diagnosis mode. Otherwise the diagnosis menu is not started:

- The control must be off.
- Switch the control ON with the main switch button ON.
- End any active key-lock function.
- Set cooking level 8 with the plus button (cooking zone 4)
- Set cooking level 3 with the minus button (cooking zone 4).
- Set cooking level 7 with the plus button (cooking zone 4).
- Set cooking level 1 with the minus button (cooking zone 4).
- Set cooking level 2 with the plus button (cooking zone 4).

The counting direction may only be changed at the specified cooking levels.

If this has been carried out in a period of 40 seconds after activation of the control, the diagnosis mode is started.

7.2 Diagnosis mode

The diagnosis menu is shown as follows in the actuator displays:

Display	Meaning	Indication
Actuator 2	Diagnosis	d
Actuator 3	Diagnosis result	dark, 0 or 1
Actuators 1 and 4	Diagnosis code	two-digit hexadecimal

All other displays are dark.

A diagnosis can now be selected with each plus or minus button; the corresponding diagnosis code is displayed.

The diagnosis is performed by activating the key-lock button. As long as the diagnosis is being carried out, the LED of the key-lock button remains on.

Diagnoses which end automatically can be restarted.
Otherwise the diagnosis is ended by activating a plus or minus button (selection of a new diagnosis).

Some diagnosis points provide the user with clear good/bad results. This is unfortunately not possible all the time as only activation but not feedback takes place (see table on page 23).

7.3 Diagnosis

7.3.1 Brief overview

Diagnosis code	Diagnosis	Diagnosis end	Diagnosis result
d 01	Fan	Plus/minus button	1 - Fan was switched on.
d 05	Buzzer	Automatic	1 - Buzzer was tested.
d 0A	Displays	Automatic	1 - Displays were tested.
d 1F	Temperature sensor coil cooking zone 1	Plus/minus button	0 - defective 1 - not defective
d 2F	Temperature sensor coil cooking zone 2	Plus/minus button	0 - defective 1 - not defective
d 3F	Temperature sensor coil cooking zone 3	Plus/minus button	0 - defective 1 - not defective
d 4F	Temperature sensor coil cooking zone 4	Plus/minus button	0 - defective 1 - not defective
d 51	Mains synchronising pulse module 1	Automatic	0 - not available 1 - available
d 52	Mains synchronising pulse module 2	Automatic	0 - not available 1 - available

7.3.2 [d 01] - Fan

The fan is switched on. After 5 seconds at half speed it is changed over to full speed. “A 1“ appears in the display diagnosis result.

7.3.3 [d 05] - Buzzer

The buzzer is switched on for 3 seconds. “A 1“ appears in the display diagnosis result.

7.3.4 [d 0A] - Displays

All displays are switched off for 1 second then switched on for 5 seconds. After another second in which all displays are off, the diagnosis menu is displayed again. “A 1“ appears in the display diagnosis result.

7.3.5 [d 1F] - [d 4F] - Temperature sensor cooking zone 1 - 4

The temperature sensor of the corresponding cooking zone is checked for sensor breakage and short-circuit. If the sensor is defective, a “0“ appears in the display diagnosis result, otherwise a “1“ is shown for an operable sensor.
The cooking zone designation corresponds to the view of the user (see Annex A).

7.3.6 [d 51], [d 52] - Mains synchronising pulse

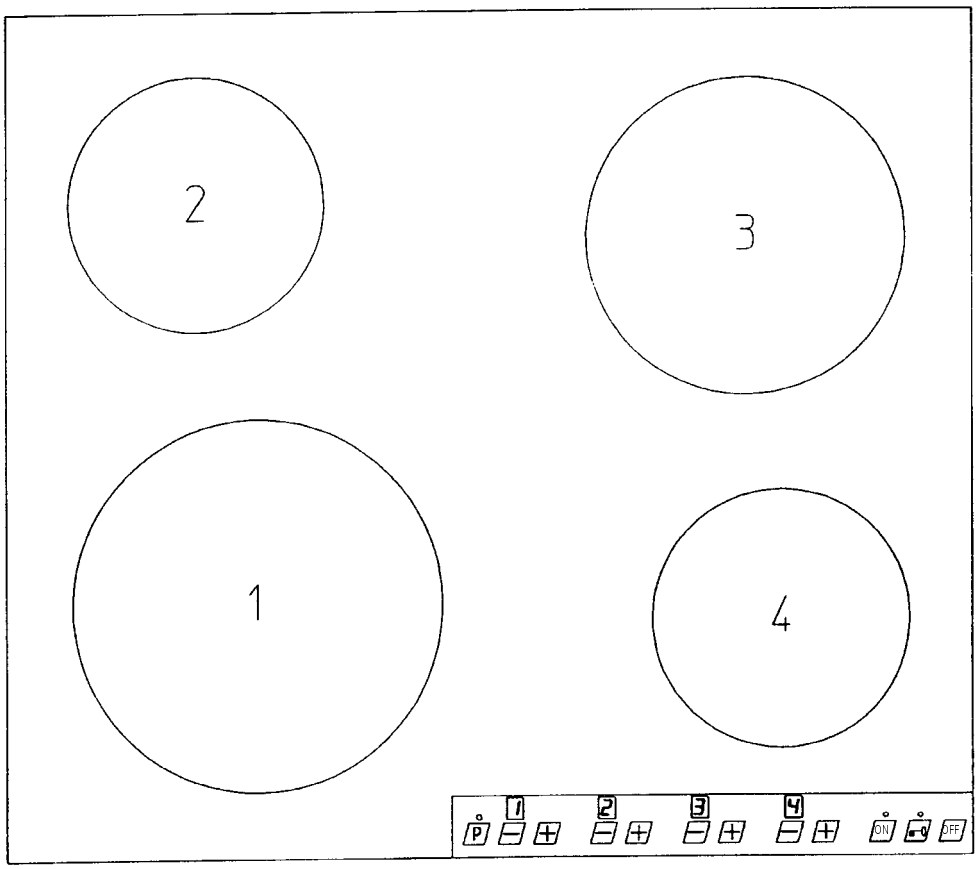
A check is made to see whether the mains synchronising pulse for switching the cooking zones on and off arrives at the corresponding module. To this end the relevant mains relay is switched on, then a check is made for 2 seconds to see whether the signal triggers an interrupt. Then the mains relay is switched off again. If no mains synchronising signal has been registered, a “0“ appears in the display “Diagnosis result“, a “1“ appears if the signal has triggered an interrupt.
The module designation corresponds to the internal view (see Annex B).

7.4 Ending the diagnosis mode

- The diagnosis mode can be ended at any time by activating the main switch button OFF.
- The control is automatically switched off five minutes after the last button was activated.

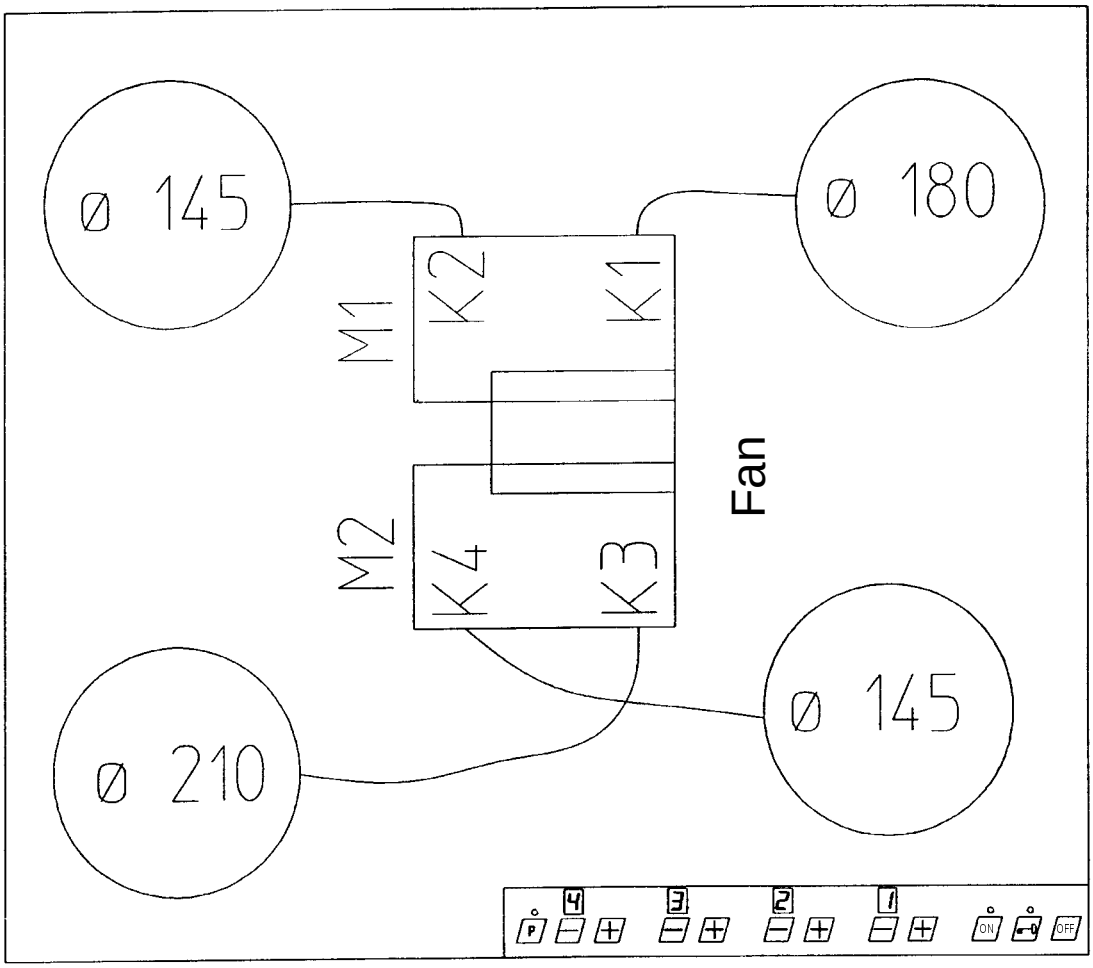
Annex A

Cooking zones: Designation - User (view from above)



Annex B

Cooking zones: Designation and assignment - internal (view from above)

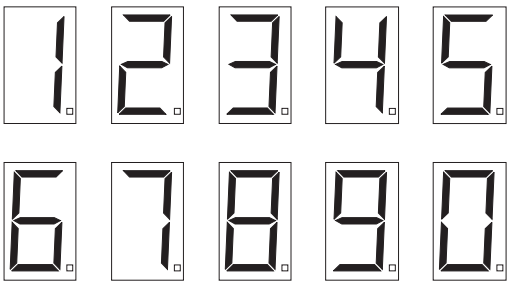


Module	Cooking zone	Actuator
M1	K1	2
M1	K2	3
M2	K3	4
M2	K4	1

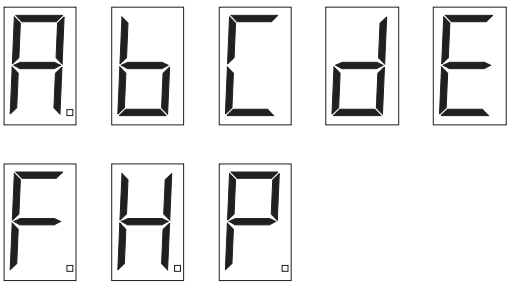
Annex C

7-segment display symbols

Numbers



Letters



Special characters

Saucepan missing

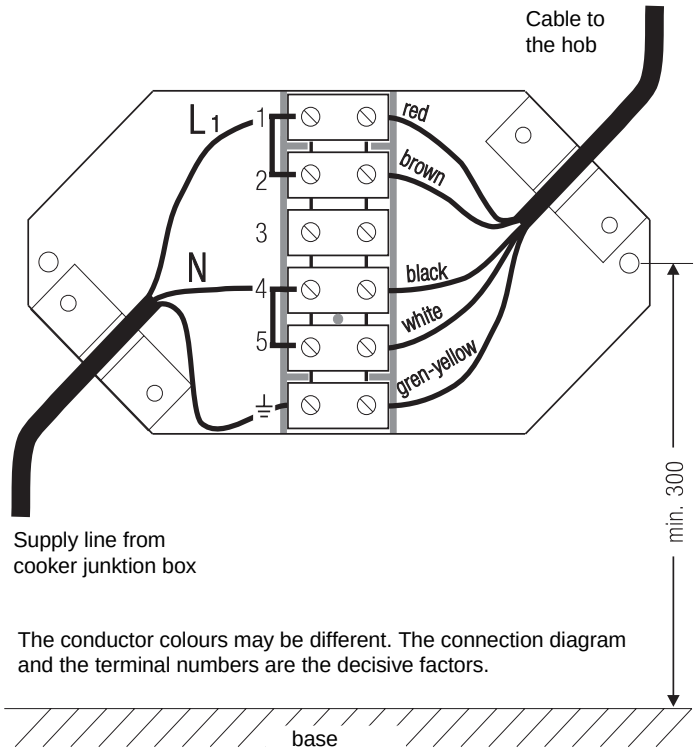
Electrical connection

- **The built-in hob must be connected to the mains supply by a qualified electrician who is authorised to carry out such work!**
- Both legal wiring regulations and the requirements of your local electricity supply board must be fully complied with.
- When connecting the appliance 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 or contactors are suitable cut-out devices.
- When connecting and repairing the appliance disconnect it from the electricity supply with one of these devices.
- The appliance must be installed in such a way that it is completely contact-voltage proof.
- The earthed conductor lead must be sufficiently long so that, in the event of failure of the strain relief, it is not subjected to strain until after the live wires of the connection cable.
- Any superfluous cable must be removed from the installation area beneath the appliance.
- The induction cooking hob is provided at the works with a temperature-resistant cable with connector box for cooker connection cables.
- The connector box is fastened on the kitchen wall behind the fitted cupboard. If no built-in oven is installed underneath, the connector box can also be fastened to the furniture under the hob.
- When installing the connector box, a minimum distance to the ground of 300 mm is to be observed in accordance with the drawing.
- The connector box must not come into contact with hot parts of the appliance.
- The connector box must not be used as a power distributor for other appliances.
- The mains connection is made in accordance with the connection diagram on the connector box. The connection may only be made in the connector box.
- **The connector box must not be removed.**
- The attached connection line must be replaced by the Küppersbusch customer service in the event of damage.
- The end of the green/yellow protective conductor must be stripped more than the other conductors.
- The appliance has to be earthed.

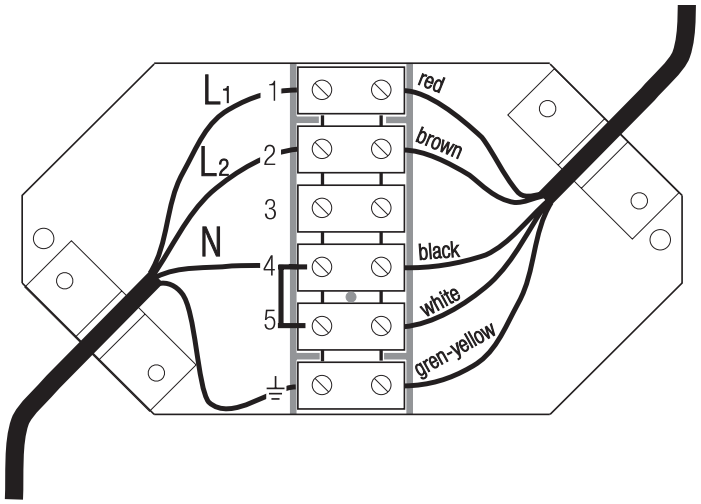
Caution:
Incorrect connection results in the total destruction of the power electronics.

Electrical connection	Permanent connection by means of an oven connection socket.
Connection diagram	is depicted on the underside of the appliance, suitable for the various types of mains.
Connection data	Permanent connection 400 V 2 N ~ 50 Hz
Electronics	Voltage: 230 V Electrical connection 6,8 kW 400 V 2 N ~ safety current 16 A 230 V 1 N ~ safety current 32 A 230 V 3 ~ safety current 16 A
Connection cable	Use H 05 RR-F or H 07 RN-F. Cable length as necessary.

Single-phase connection 230 V phase against neutral conductor



Two-phase connection 400 V system with 230 V phase against neutral conductor



Three-phase system 230 V phase against phase