HENNY PENNY
Engineered to Last

Service instructions

FlexFusion® ELECTRIC SPACE$AVER (PLUS)

Model

FSE- **610**

FSE- **605**

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FM06-117A en-US

Manufacturer
Copyright by MKN Maschinenfabrik Kurt Neubauer GmbH & Co. KG
Halberstaedter Strasse 2a
D-38300 Wolfenbuettel
Telephone 0 53 31 / 89-0
Telefax 0 53 31 / 89-280

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1 Password overview

Range	Password	Description	Described in
Installation / commissioning	2100	Setting all basic parameters (for example time / date).	Installation instructions
Network settings	2000	Input network addressing. Only for units with touchscreen control.	Installation instructions
Basic settings / user	111	Setting of basic values for the user, functions, software update.	Operating instructions
Lockscreen	369	Deactivating the lockscreen in cooking mode. Only for units with touchscreen control.	Operating instructions
Trade show mode	888	Activation / deactivation for exhibition mode.	Service instructions
Service menu	1967	Service range for authorized service technicians.	Service instructions

2 Introduction

2.1 About this manual

This service manual contains information needed by the service technician for professional and correct fault isolation, repair and maintenance of the unit. The service technician must also observe the contents of the installation instructions and the user manual.

Target group Target group for this service manual is qualified personnel who are familiar with the technical functioning and operation of the unit.

Figures All figures in this service manual are intended as examples. Discrepancies can arise between this and the actual unit.

Spare parts To ensure the reliability of the unit and the individual components, it is essential that only genuine OEM parts be used.
Spare parts can be identified exactly with the aid of the online database.

2.2 Warranty

The warranty is void and safety is no longer assured in the event of:

- Modifications or technical changes to the unit,
- Improper use,
- Incorrect startup, operation or maintenance of the unit,
- Problems resulting from failure to observe these instructions.

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3 Safety instructions

For servicing tasks, the service technician must be familiar with and observe regional regulations.
In addition, the notes in the service manual must be observed.

⚠ DANGER

Danger to life due to electric current

✓ Disconnect power prior to performing gas and electrical work.

- Disconnect unit from the mains supply and secure it against restart.
- Check to ensure absence of voltage.

4 Opening and closing the unit

4.1 Removing and attaching the rear panel

4.1.1 Remove the rear panel.

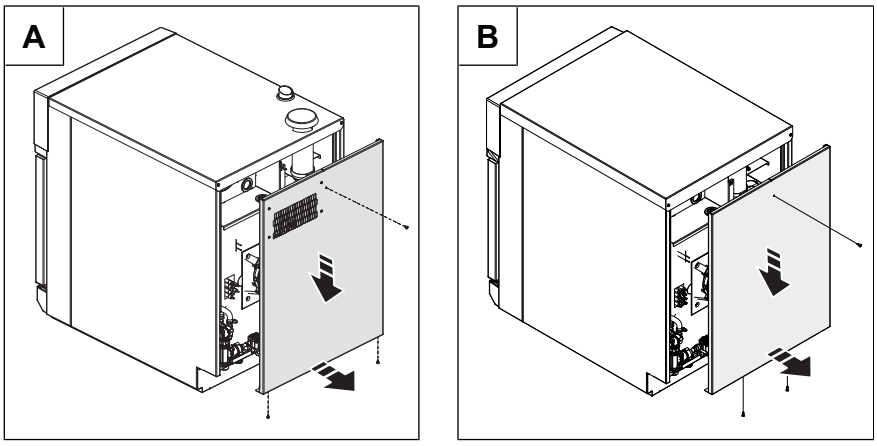

Image: Remove the rear panel, A Tabletop unit, B Built-in unit

1. Unscrew the screws in the back wall.
2. Holding the bottom edge, carefully pull the back wall down and then forward.

4.1.2 Attaching the rear panel

NOTICE

Risk of property damage from leaky housing

- Check seals when attaching the housing parts.
- Replace damaged seals.

1. Place the top of the back wall in position first and then press against the seal at the bottom.
2. Slide the back wall up.
3. Install screws in the back wall.

↳ The back wall must be in contact with the unit on all sides.

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4.2 Removing and attaching the unit cover

4.2.1 Removing the unit cover on a tabletop unit

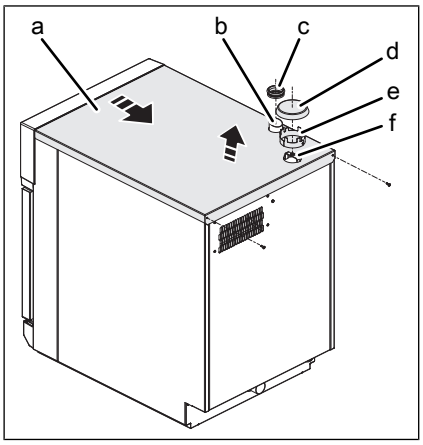


Image: Removing the unit cover

a	Unit cover	d	Lid
b	Steam outlet nozzle	e	Ventilation ring
CE symbol	Seal	f	Air inlet nozzle

1. Unscrew the lid from the air inlet nozzle.
2. Remove the ventilator ring.
3. Unscrew the screws on the unit cover.
4. Carefully remove the unit cover.

4.2.2 Attaching the unit cover on a tabletop unit

NOTICE

Risk of property damage from leaky housing

- Check seals when attaching the housing parts.
- Replace damaged seals.

1. Brush the seal on the steam outlet nozzle with an acid-free slip agent.
2. Carefully push the unit cover over the steam outlet nozzle and air inlet nozzle.

   ↳ The air inlet nizzle must be pushed through the cut-outs on the unit cover.
3. Press the unit cover onto the housing.
4. Screw in the screws on the unit cover.

   ↳ The unit cover must be in contact with the unit on all sides.
5. Put the ventilator ring on with the cut-outs facing upwards and ensure that it can not be rotated.
6. Screw the lid onto the air inlet nozzle.

4.2.3 Removing the unit cover on a built-in unit

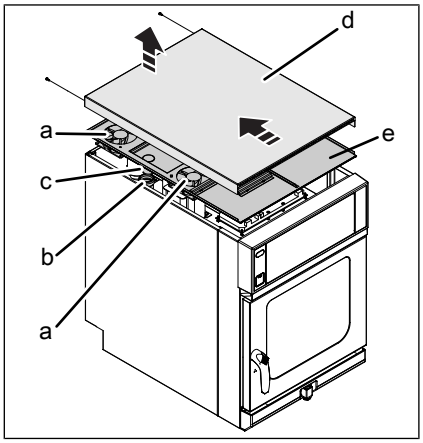


Image: Removing the unit cover

a	Fan	d	Unit cover
b	Seal	e	Air diverter
CE symbol	Steam outlet nozzle		

1. Unscrew the screws in the unit cover.
2. Carefully remove the unit cover.

4.2.4 Attaching the unit cover on a built-in unit

NOTICE

Risk of property damage from leaky housing

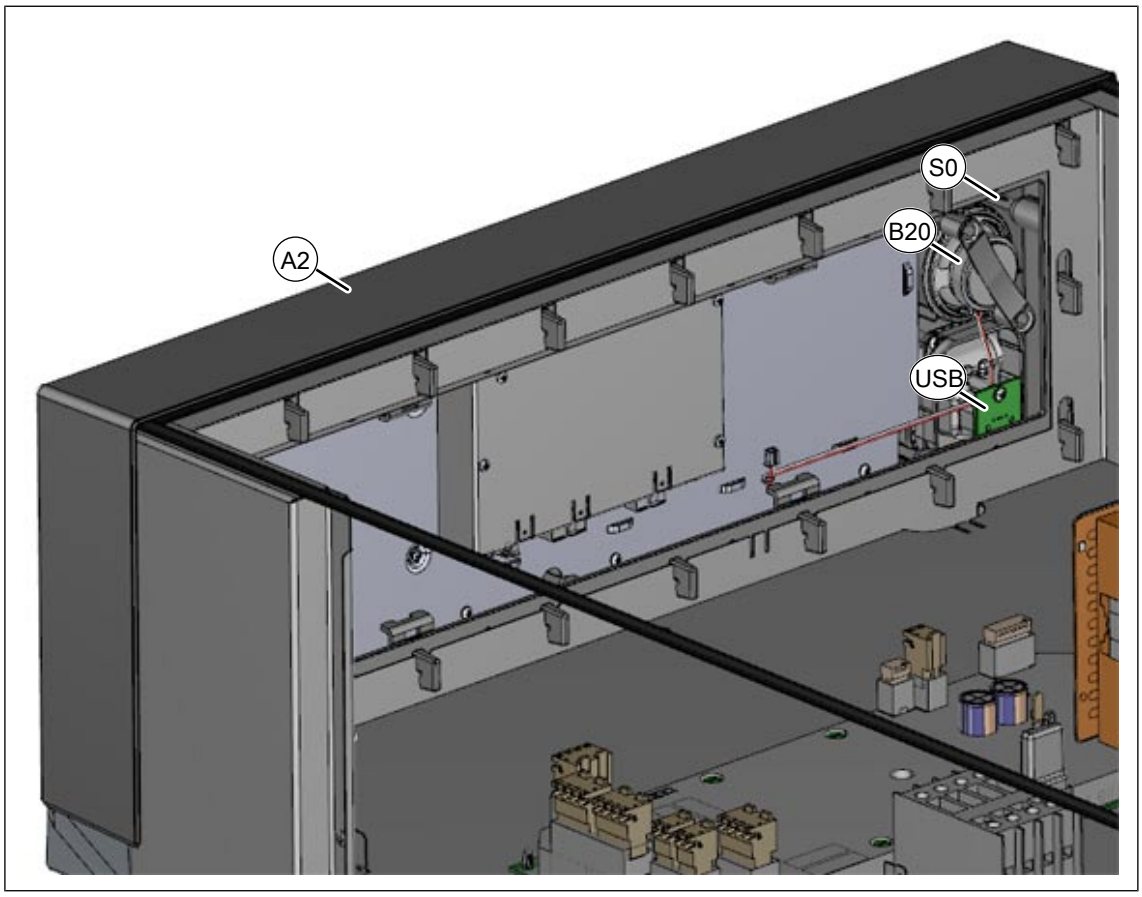
- Check seals when attaching the housing parts.
- Replace damaged seals.

1. Check that the seal on the steam outlet nozzle is seated properly.
2. Apply a film of acid-free lubricant to the seal on the steam outlet nozzle.
3. Slide the unit cover forward.
4. Carefully position the unit cover flush with the steam outlet nozzle.
5. Install screws in the unit cover.

   ↳ The unit cover must be in contact with the unit on all sides.

5 Component overview

5.1 Operating unit



A2	Operating unit	B20	Loudspeaker
S0	On / Off switch	USB	USB port

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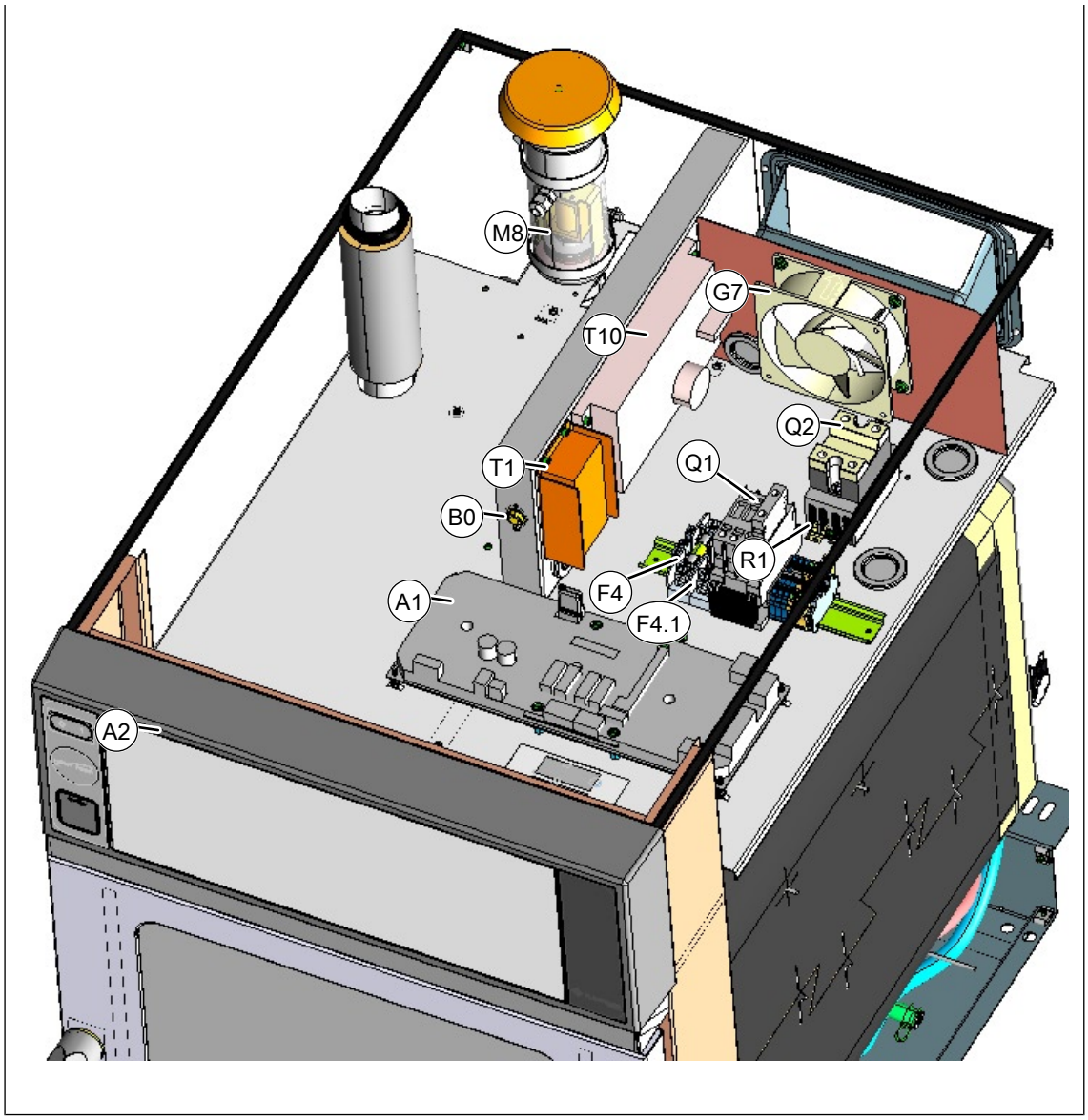
5.2 View from above



A1	Control board	A2	Operating unit
B0	Thermal switch 70°c (158°F)	F4	Fuse 6.25 A inactive
F4.1	Fuse 6.25 A inactive	G7	Cooling fan
M8	Solenoid 24 V	Q1	Main contactor
Q2	Dual solid-state relay (SSR)	T1	Power pack
T10	Power board for motor		

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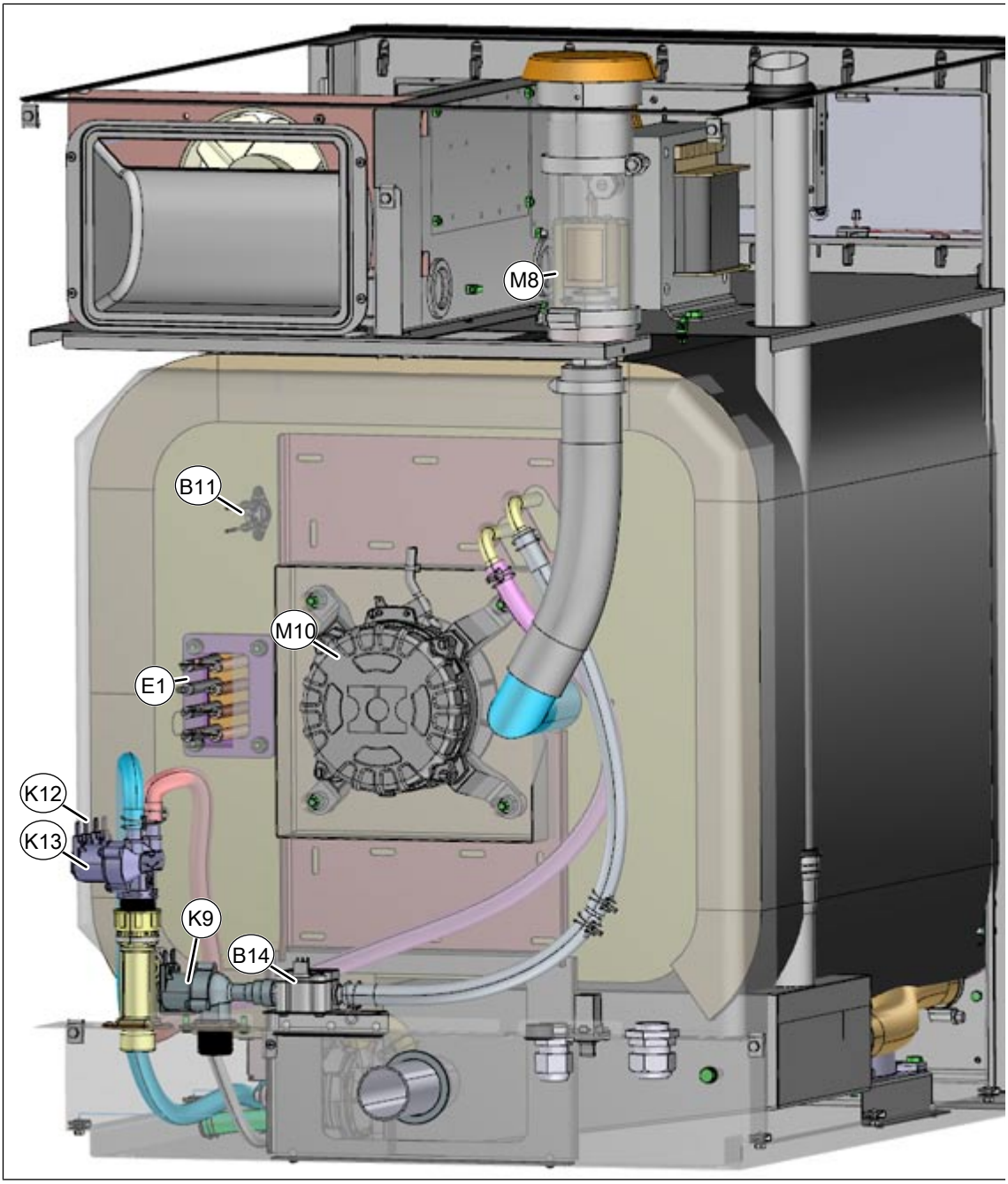
5.3 View from rear



B11	Safety temperature limiter	B14	Flowmeter
E1	Heating element	K9	Solenoid valve for steaming 24 V
K12 K13	Solenoid valve or double solenoid valve (only with option HoodIn)	M8	Solenoid 24 V
M10	Fan motor		

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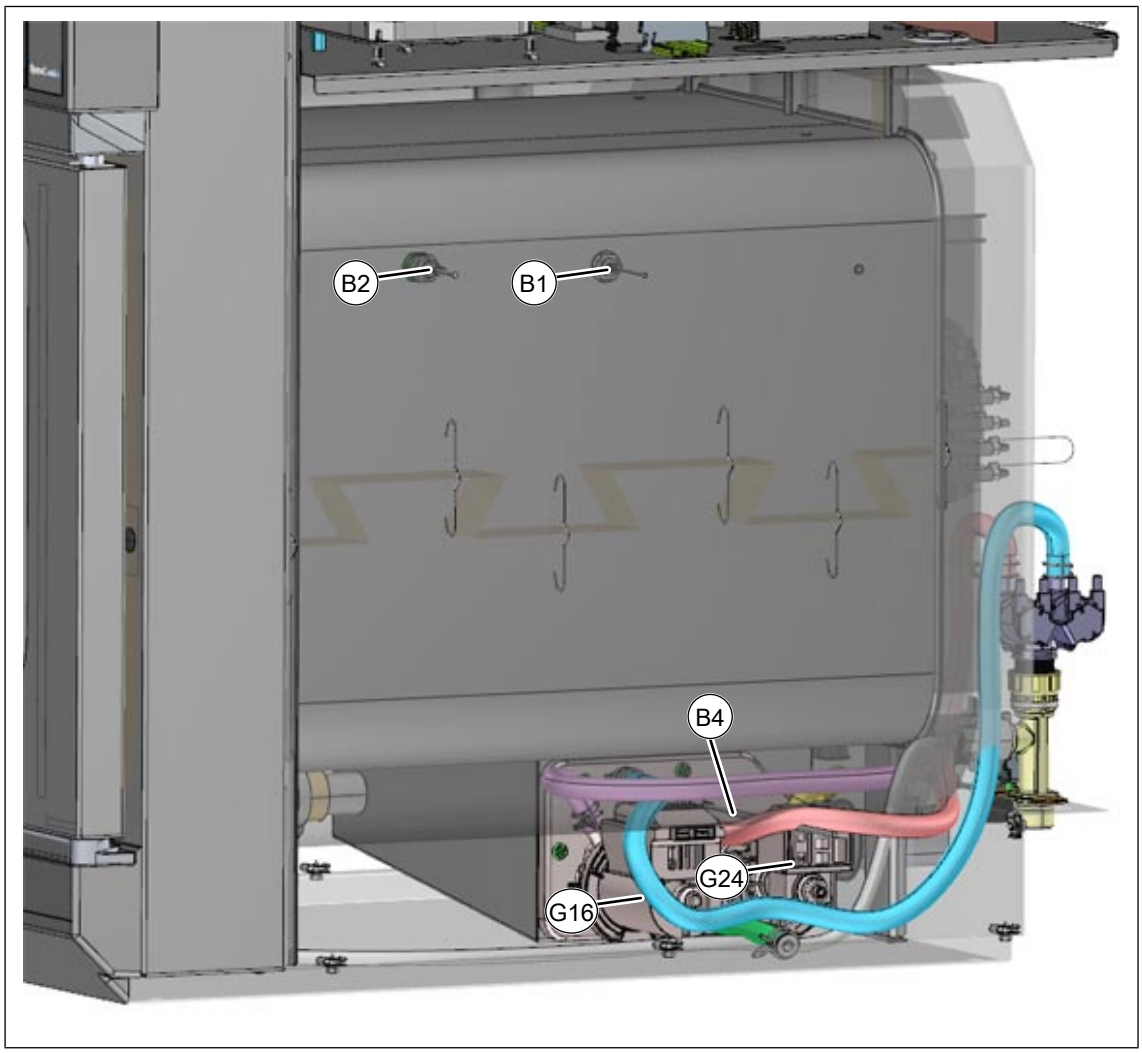
5.4 View from right



B1	Cooking chamber temperature sensor	B2	Core temperature sensor
B4	Steaming temperature sensor	G16	Circulation pump
G24	Drain pump		

Unit with HoodIn = B4 in upper position
Unit without HoodIn = B4 in lower position

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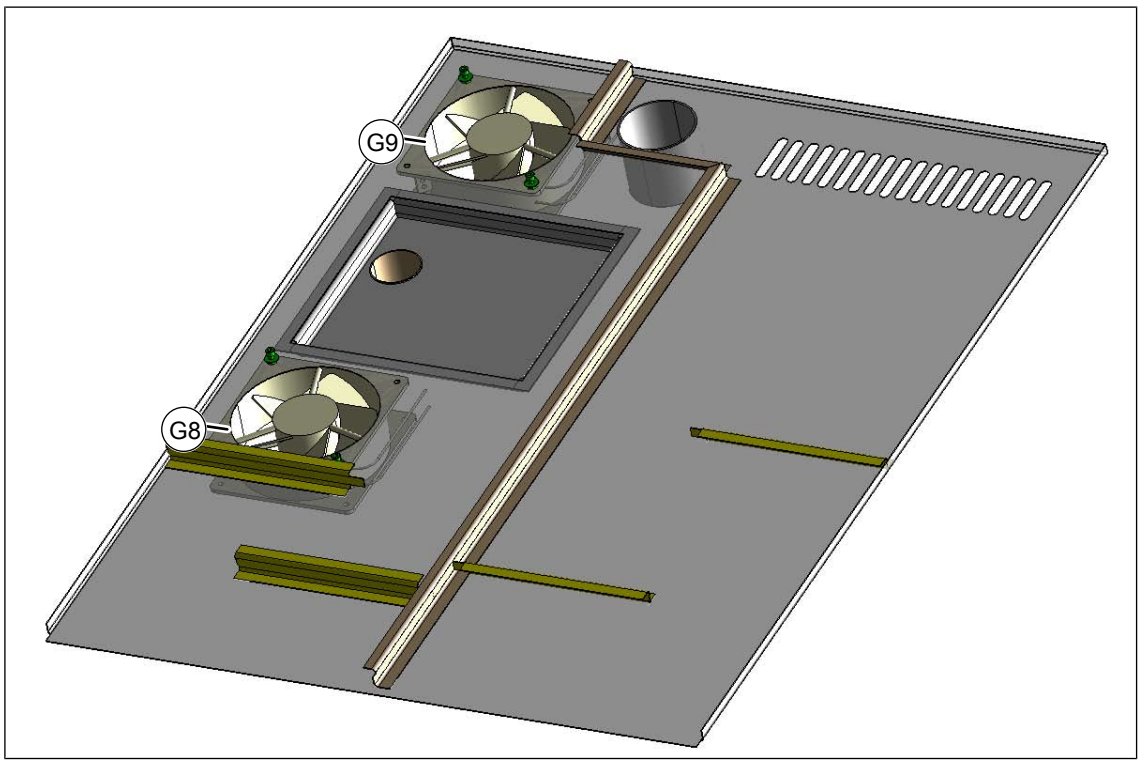
5.5 Additional plate on built-in version

The additional plate is located under the unit's cover.



G8 Cooling fan

G9 Cooling fan

6 Service menu - appliance test

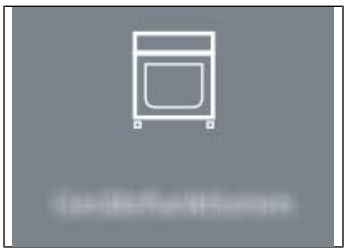
6.1 Service menu

Description

- Functional testing of individual components
- Error analysis
- Maintenance
- Change basic settings
- Software update

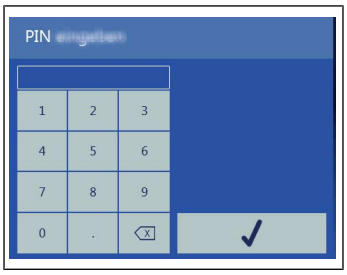
The graphics shown may deviate due to changes and different software versions.

6.1.1 Access to service area



→ Switch on the unit.
→ Tap the "Unit functions" field.
↳ Display of *Appliance functions* menu.

→ Tap the "Settings" field.
↳ Display of *PIN* window.



→ Enter password and touch *Confirmation* field.
↳ Display of *Unit test (service area)* menu.

INFORMATION

The password for the service menu is 1967

6.1.2 Service menu overview

Selecting a menu element

→ Display of the menu elements in the left area.
→ Page change by swiping upward/downward.
→ Select menu element by touching.

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6.2 Appliance information

Overview

Image: *Unit information* display

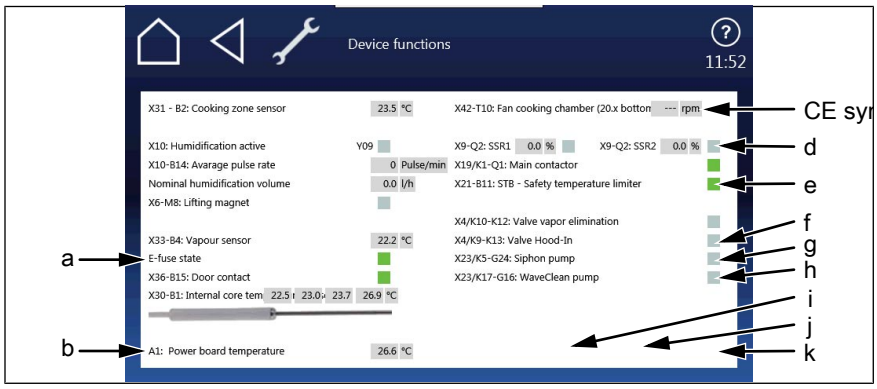
Display of the appliance-specific information

1. Software version
2. Cookbook version
3. Unit configuration
4. Serial number
5. Date of last CombiDoctor diagnosis.
6. Saved contact data

Leaving the area

Touch the *Back* field.

6.3 Status overview



a	Status of electronic fuse	b	Temperature of control board
CE symbol	Not used	d	Heat requirement in %
e	Status of safety temperature limiter	f	Only on units with HoodIn
g	Only on units with WaveClean	h	Only on units with WaveClean
i	Only on units with power optimization system connected	j	Only on units with power optimization system connected
k	Only on units with power optimization system connected		

The overview shows the technical status of the unit. Energized components and feedback messages can be recognized by the green color of the field.

The overview shows the technical status of the unit. Energized components and feedback messages can be recognized by the green color of the field.

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6.4 CombiDoctor

Description

The CombiDoctor offers an automatic check of the climate control system and WaveClean automatic cleaning. The tests are possible individually or as overall test. For instructions on performing, see the touchscreen.

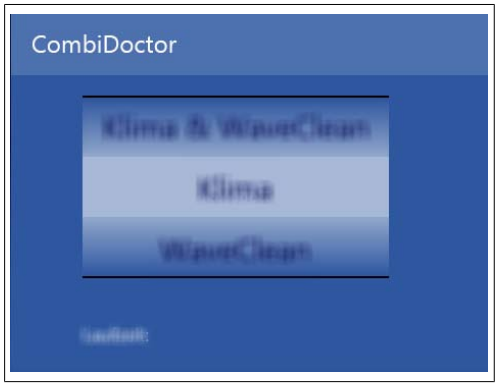

Image: Select CombiDoctor test

CombiDoctorStart

Selecting a program → Select a program by adjusting the roller.

Starting the program → Touch the "START" field.

Evaluation → The test result appears on the touchscreen.

↳ Entry in HACCP memory.

Description of the test steps

Step 1 (test door contact)

1. Open cooking chamber door and close again.

   ↳ If test successful, proceed with the next test step.

   ↳ If the door is not recognized as having been opened and closed again within the specified time (60 seconds), the test is not passed.

Step 2 (prepare for WaveClean)

1. Preparation for WaveClean test.
   Automatic water exchange via the siphon pump and the solenoid valve for steam elimination.

Step 3 (heat output)

1. Check of heat output.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Check of on-site voltage supply.

↳ Check of heating element

↳ Check of solid-state relay

↳ Check of internal fuse for load circuit (depends on unit version).

Step 4 (steam generation)

1. Check of DynaSteam² steam generation.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Ensure that water is being supplied on-site.

↳ Check of DynaSteam steaming.

↳ Check of water supply pipe for calcification.

Step 5 (steam reduction)

1. Check of steam reduction (solenoid).
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Check of solenoid via relay test. A fault is present on the component or the control board. Check associated fuses.

Step 6 (WaveClean circulation pump)

1. Check of WaveClean circulation pump.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful. Test 7 and 8 are not evaluated.

↳ Check of circulation pump via relay test. A fault is present on the component or the control board. Check the fuse on the control board.

Step 7 (water supply to WaveClean)

1. Check of solenoid valve for steam elimination.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Ensure that water is being supplied on-site.

↳ Check of solenoid valve via relay test. A fault is present on the component or the control board. Check the fuse on the control board.

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Step 8 (WaveClean siphon pump)

1. Check of WaveClean siphon pump.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Check of siphon pump via relay test. A fault is present on the component or the control board. Check the fuse on the control board.

Step 9 (temperature control)

1. Check of temperature control.
   ↳ The temperature in the cooking chamber must reach 140°C within the time specified.
   ↳ Display switches to green = test successful.
   ↳ Display switches to red = test not successful.

↳ Check region around cooking chamber sensor for soiling.

↳ Check temperatures via calibration in the service menu.

↳ If necessary, replace cooking chamber sensor or control board.

6.5 Relay test

Overview

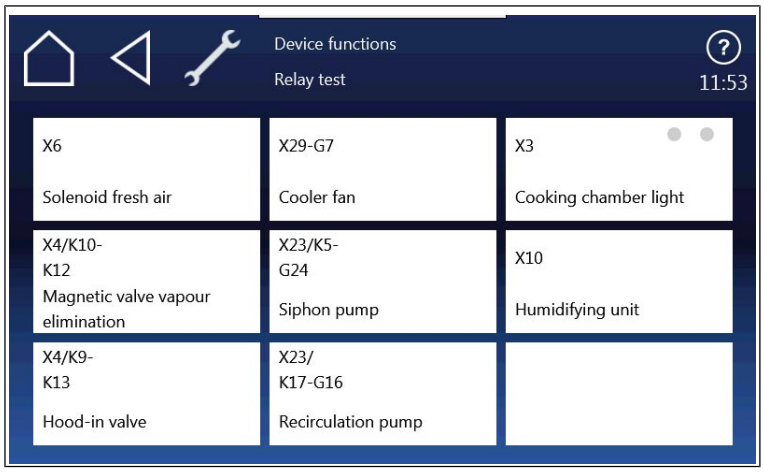

Image: Overview of relay test, side 1

Relay	Connector	No.	Description	Info
	X3	1-4	Cooking chamber light E3	24 V DC
	X6	1/2	Solenoid M8	24 V DC
	X10	6/7	Solenoid valve for steaming K9	24 V DC
K5	X23	1	Siphon pump G24	208V AC
K9	X4	3	Solenoid valve, steam Wrasen K13	208V AC
K10	X4	1	Solenoid valve, steam Wrasen K12	208V AC
K11	X29	1	Cooling fan G7	208V AC
K11	X29	3	Cooling fans G8, G9	208V AC
K17	X23	3	Circulating pump G16	208V AC

Description

The test permits separate activation of various functions.

- Testing the relay.
- Testing of individual components.

Activating/deactivating a function

Activating a function

→ Press the button for the area to test.

↳ The function is active.

↳ The button for the selected function is highlighted in green.

Deactivating a function

→ Press the button highlighted in green to deactivate the selection.

↳ The function is now inactive.

↳ The button is now highlighted in gray.

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INFORMATION

Several functions can be activated simultaneously.

6.6 WaveClean test (option)

Description

→ WaveClean test program for function check.
↳ Circulation pump
↳ Siphon pump
↳ Magnetic valve for water filling
↳ Door seal / leak tightness in door area.

INFORMATION

The test is used exclusively for functional testing and not to clean the cooking chamber.

Starting the test

→ Press the "START" button.
↳ Checking of the cooking chamber temperature.
↳ Automatic cooling off of the cooking chamber if > 70°C.
→ Rinse and fill up siphon.
↳ Draining by pump G24.
↳ Filling by magnetic valve K12.
→ Circulation and heating.
↳ The circulation pump G16 is switched on.
↳ Heating of the cooking chamber to 55°C.
→ Rinse DynaSteam and siphon
↳ The valve for steaming is energized.
↳ Another water change from the siphon.

After 30 minutes, the WaveCleanTest ends.

Ending the test

An abortion is possible at any time.
→ Tap the "Stopp" button.
↳ Automatic rinsing of the siphon.

6.7 Calibrating the cooking chamber sensor

Description

→ Calibration function for the cooking chamber sensor.

↳ Testing the calibration.

↳ Performing the calibration.

INFORMATION

The units are factory calibrated. Recalibration is required only in exceptional cases.

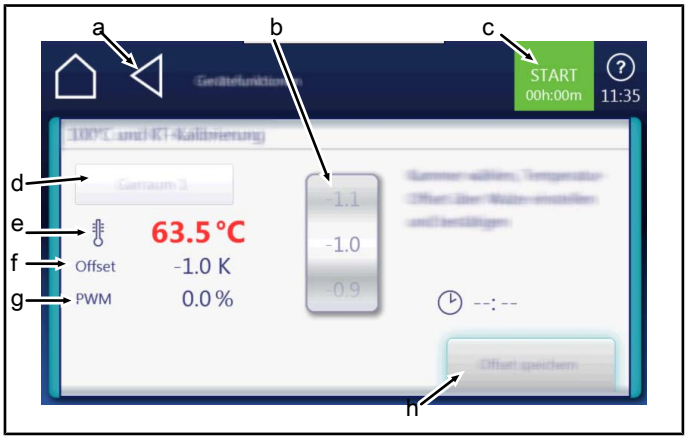

Image: Overview

a	Back	b	Offset setting
CE symbol	"Start/Stopp" field	d	Not used
e	Cooking chamber temperature	f	Saved offset
g	Average heat requirement		

Color detection of the temperature values

INFORMATION

During calibration, the temperatures are displayed in color:

Red = temperature in invalid calibration range

Green = temperature in valid calibration range

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Check calibration

Prerequisite

Calibrated digital temperature measurement device.

The temperature in the cooking chamber is < 100°C.

→ Fix temperature sensor of external measurement device in the cooking chamber.

↳ Use a grill rack for this.

↳ Point the sensor tip upward in order to prevent measurement errors.

Checking the calibration

→ Touch the "START" field.

↳ The cooking chamber is heated up to 100°C.

↳ Display of the current temperature on the touch screen.

→ Wait until the cooking chamber temperature on the touch screen indicates 100°C (± 1°C).

↳ Compare displayed cooking chamber temperature with temperature of external measurement device.

↳ The external measurement device must display a temperature between 99°C – 99.5°C.

→ If the value is within the range, end checking.

↳ Touch the "STOP" field.

→ If the value is outside of the range, calibration must be done.

↳ Continue with calibration (see „ Calibrate cooking chamber sensor“, Page 28).

Calibrate cooking chamber sensor

Prerequisite
→ Execute *Check calibration* and do not switch appliance off.
↳ Temperature display on the touch screen indicates 100°C.

Calibration
→ Adjust offset value by adjusting the roller.
↳ Let 10 minutes adjustment time elapse.
↳ The external measurement device must display a temperature between 99°C – 99.5°C.
→ If necessary, adjust offset value again.
↳ Let 10 minutes adjustment time elapse.
→ If the value is within the range, save calibration.

Saving the calibration
→ Touch "Save offset" field.
↳ Saving of set value.

Canceling the calibration
→ Touch the "STOP" field.
↳ The calibration ends.

Exiting the calibration
Touch the *Back* field.

Storing the calibration on SD card
→ Also save data on internal SD card.

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6.8 DynaSteam test

Description

The DynaSteam test allows a function test of DynaSteam steaming. Calibration is not possible / necessary.

Prerequisite Access to the water supply pipe in the cooking chamber.

→ Remove both hook-in points.
→ Dismount water supply pipe.
→ Dismount air diverter.
→ Replace water supply pipe.

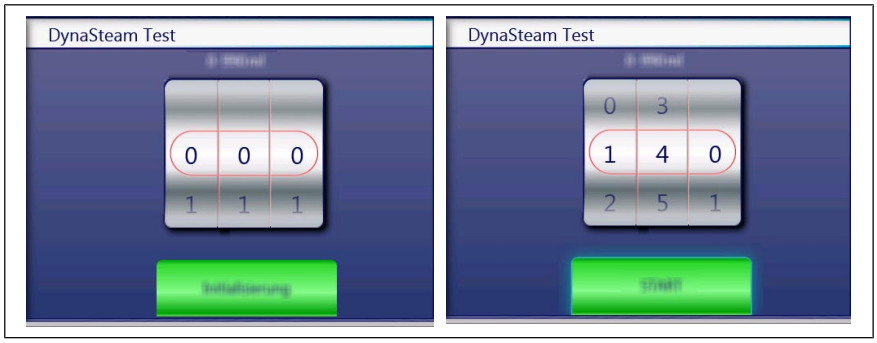

Image: Overview of DynaSteam test

Starting the test

→ Touch "Initialization" field.
  ↳ Automatic pre-rinse.
  ↳ Field changes to "START".
→ Set water quantity using the rollers.
→ Touch the "START" field.
  ↳ Energize solenoid valve for steaming.
  ↳ The water comes runs from the water supply pipe into the cooking chamber.

Check the water quantity

Collect the water from the supply pipe with a measuring container.

→ Starting water test.
  ↳ After the predetermined amount of water has gone through, activation stops automatically.
↳ Compare amount of water with the set value. A deviation of +- 10% is within tolerance.

6.9 Emptying the water

Description

Water drainage removes water residue from the unit to prevent frost damage during transport and idle period.

Prerequisite

→ Both water connections are connected to compressed air.

↳ The pressure may not exceed 6 bar.

→ The cooking chamber temperature is < 130°C.

Image: Overview

Running a program

Start drain water

→ Touch the "START" field.

↳ Start of the automatic water drainage.

↳ Display of the cooking chamber temperature and remaining time.

Canceling the water drainage

→ Touch the "STOPP" field.

6.10 Setting the set-up height

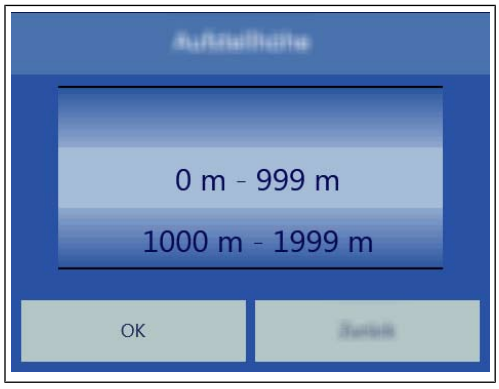

Image: Overview

Setting the set-up height

→ Set the set-up height by adjusting the rollers.

→ Tap the "OK" field.

↳ Changes saved.

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Canceling the selection → Tap the "Back" field.

6.11 Audio settings

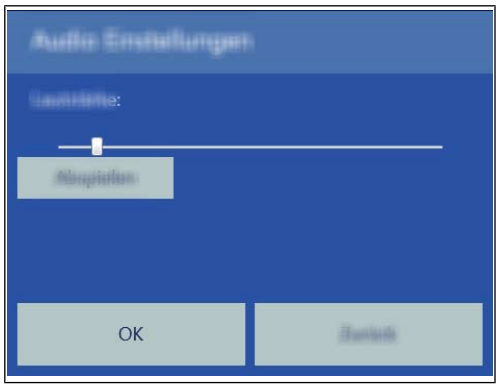

Image: Overview

Setting the volume
→ Use the slider to set the desired volume.
→ Tap the "OK" field.
↳ Changes saved.

Canceling the selection → Tap the "Back" field.

6.12 Select signal tones

Set signal tones
→ Set the profile by adjusting the rollers.
→ Tap the "OK" field.
↳ Changes saved.

Canceling the selection → Tap the "Back" field.

6.13 Log data export

Description

Log data export to an external USB flash drive. The function is only required after consultation.

Exporting log data

→ Perform according to instructions on the touchscreen.
→ Press the *Confirm* button.
↳ Log data export begins.

6.14 Software update

Description

→ Update of the software via the USB interface.

INFORMATION

Sounds, cookbooks, help texts and videos are not part of the software update. These require importing via "Importing additional content".

Performing the update

→ Perform according to instructions on the touchscreen and (see „8.1 software“, Page 39) description.
→ Tap the "OK" field.
↳ Update begins.
→ A confirmation then appears on the touchscreen.

6.15 Importing additional content

Description

Import of additional content (sounds, videos, graphics, help texts).

INFORMATION

Import is absolutely essential after the operating panel has been replaced.

Importing content

Perform according to instructions on the touchscreen.
→ Press the *Confirm* button.
↳ Import the content.
↳ A confirmation then appears on the touchscreen.
→ Tap the "OK" button.

6.16 Restoring data

Description

Import function of parameters stored on the SD card.

INFORMATION

Importing is required after the operating panel or control board have been replaced.

Importing data

Prerequisite Service menu is displayed
→ Press the "Restore data" button.

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→ Press the *Confirm* button.
↳ Restore data from the SD card.
↳ A confirmation then appears on the touchscreen.
→ Tap the "OK" button.

6.17 Backing up data

Description

Backup function for parameters (for example, customer settings, calibration values). Saving data on the internal SD card and USB stick (if plugged in).

Backing up data

Prerequisite Service menu is displayed

→ Tap the " Backup data" button.
→ Press the *Confirm* button.
↳ Backup data on the SD card.
↳ A confirmation then appears on the touchscreen.
→ Tap the "OK" button.

6.18 Water filter maintenance

Description

With use of a water filter on the soft water connection of the unit, a maintenance note may appear after the stored flow quantity has been reached.
For this, the appropriate filter capacity must be determined and entered.

Prerequisite
- The water filter supplies only one combi steamer.
- Only the soft water connection is connected to the filter.

Image: Overview

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Entering the water quantity

→ Use the number block to set the desired value.
→ Tap the "OK" button.
↳ Changes saved.

6.19 Importing contact data

Description

Import of service contact data. This data can be accessed by the operator under "Equipment information".

Preparing the data

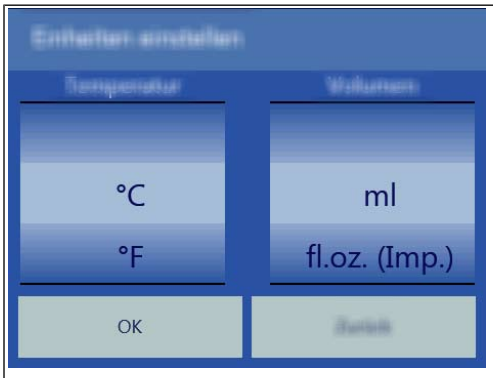
Perform according to instructions on the touchscreen.
→ Create the file "ContactData.txt" with favorite text editor on the computer.
→ Open the file on the computer.
→ Enter contact data distributed over 6 text lines.
→ Save file on a USB flash drive. For this, create a folder with the name "Cooking_CODG2".
↳ The file must be saved in the folder "Cooking_CODG2".

Importing data

→ Perform according to instructions on the touchscreen.
→ Press the *Confirm* button.
↳ Import the created contact data.
↳ A confirmation then appears on the touchscreen.

6.20 Setting units

Overview



Changing values

1. Select the desired temperature and volume.
2. Tap the "OK" button.

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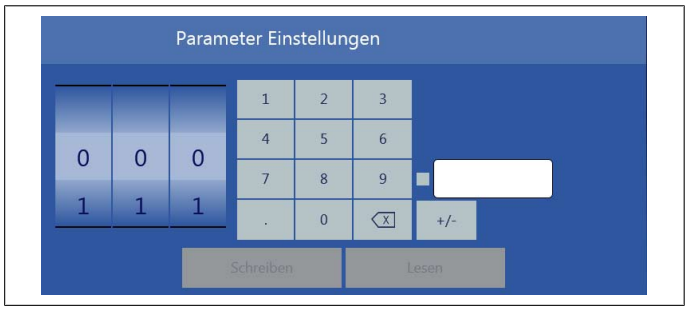
6.21 Settings parameters

Description

→ Querying and setting additional parameters.



Selecting parameters

→ Selecting parameters by adjusting the roller.
→ Tap the "Read" button.
↳ Display of set parameters.

Changing parameters

→ Use the number block to set the desired value.
→ Tap the "Write" button.
↳ Changes saved.

Parameter overview

No.	Basic setting	Standard value	Adjustment range	Explanation
7	User menu password	111	0 - 300	Password for the user menu (basic settings)
16	Cooking chamber temperature offset		-9.9 - +9.9°K	Ability to retrieve the saved temperature offset values. The can also be changed and saved. The calibration function in the Service menu is used for calibration!
21	Core temperature offset, sensor 1		-9.9 - +9.9°K	
22	Core temperature offset, sensor 2		-9.9 - +9.9°K	
23	Core temperature offset, sensor 3		-9.9 - +9.9°K	
24	Core temperature offset, sensor 4		-9.9 - +9.9°K	
42	Activation of the power optimization system	0	0 = Off 1= On	Activate the ability to connect a power optimization system. Optional equipment feature. Activate additional parameter 110.
45	Generator mode	0	0 = Off 1 = On	Only when using generators on ships.

No.	Basic setting	Standard value	Adjustment range	Explanation
48	Steam elimination mode	1	0 = Low 1 = Normal 2 = High	"Low" setting: Minimum water consumption, but higher condensate temperature and greater steam volume. "High" setting: Maximum water consumption, but lower condensate temperature and smaller steam volume.
49	Controls the cooking chamber lamp when opening the cooking chamber door	0	0-60 seconds	
50	Controls the cooking chamber lamp when closing the cooking chamber door	0	0-60 seconds	
110	Representation of power optimization system	0	0 = Off 1= On	Representation in the status information. Activate additional parameter 42.
602	Maximum power outage duration for a warm start	100 s	90 – 600 seconds	Time within which the cooking program will continue after interruption of the power supply.
607	Ready to Cook active	1	0 = Off 1 = On	When the value is "0", Ready2Cook is permanently deactivated.
609	Interval for saving the temperatures in the HACCP log	120 s	1 – 180 seconds	
618	Ready to Cook – Finished message interval	60 s	0 – 300 seconds	Reminder interval after the Ready2Cook temperature is reached
624	SES status	1	0 = Off 1 = On	When the value is "0", the SES function is permanently deactivated.
625	Minimum duration of cooking program for SES	6 min.	4-6 minutes	If the overall duration of a cooking program is less than this value, the SES does not run.
655	Limitations for Arabic	0	0 = Off 1 = On	When the value is "1", no cooking programs for pork are displayed
662	Lock screen active	0	0 = Off 1 = On	Display of Lock Screen menu item
674	Auto-start	0	0 = No auto-start 1= Direct favorites 2=Always	Automatic start of a cooking program after selection from AutoChef / Favorites
678	Scanner button available	1	0 = Hidden 1= Visible	Display of scanner function in the title bar.
695	PIN for operation lock	369	0 – 99999	

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6.22 Backing up the SD card

Description

Export the data from the internal SD card and external USB stick.

Backing up data

Perform according to instructions on the touchscreen.

→ Tap the *OK* button.

↳ Back-up of the data.

↳ A confirmation then appears on the touchscreen.

→ Tap the *OK* button.

6.23 Restoring the SD card

Description

Import the data from a backup of the SD card from a USB stick.
Required after replacing the SD card.

Restoring data

Perform according to instructions on the touchscreen.

→ Press the *Confirm* button.

↳ Restoring of the data from the SD card.

→ Tap the "OK" button.

↳ Automatic restart of the software.

6.24 Background lighting

Changing the brightness of the touchscreen

1. Select the desired brightness.
2. Tap the "OK" field.

6.25 Hour meter

Description Display of hour meters, service life, cleaning use and consumption. The arrow keys in the upper region are used to switch between the pages.

This region is currently undergoing further development. At the moment, data backup is not yet possible.

7 Status overview direct access

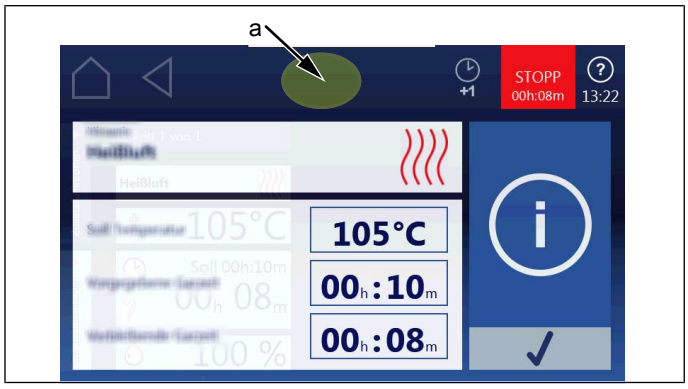
7.1 Description

Direct access allows display of all processes and temperatures during operation.

INFORMATION

The status overview is intended only for the service technician.

Overview



a Hidden field for access to status overview

7.2 Opening the status overview

→ Tap the invisible field three times quickly.

↳ This changes the display to the status overview.

7.3 Exiting the status overview

→ Tap the *Back* button.

↳ Change to the display of the cooking process.

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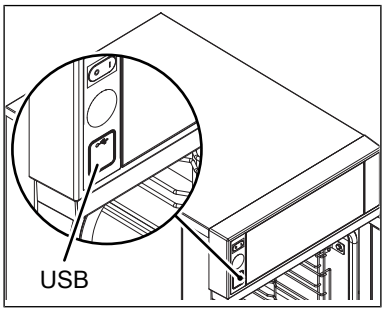
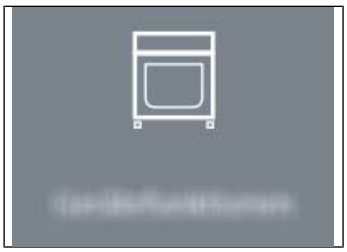
8 Software

8.1 Overview



8.2 Opening the basic settings menu



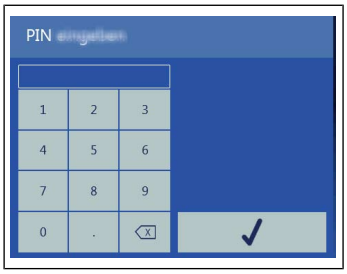
→ Switch on the unit.

→ Tap the "Unit functions" field.

↳ Display of *Appliance functions* menu.

→ Tap the "Settings" field.

↳ Display of window "*PIN*".



→ Enter password and touch *Confirmation* field.

↳ The password for the Settings menu is **111**.

↳ Display of the basic settings menu.

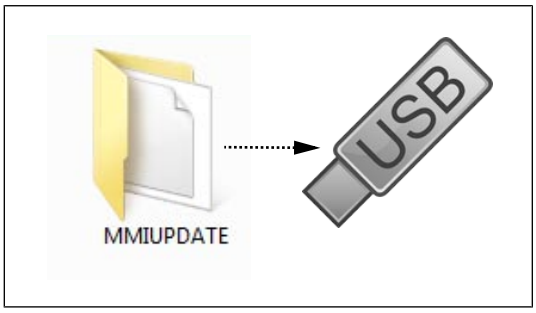
8.3 Software update

Prerequisite

→ USB stick.
  ↳ Maximum size 32 GB.
  ↳ FAT formatting (default).
  ↳ The disk should be empty if possible.
→ Current software update.
  ↳ The update is provided as packed ZIP file.

Preparing the USB stick

→ Open and download Zip file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.
→ Copy unzipped folder "MMIUpdate" to the USB stick.
  ↳ The update file is in the folder.
  ↳ The file has the extension "sw2".
  ↳ For instance, "020026.sw2" (software update V2.0.26).



Performing the update

→ Open the basic settings menu or service menu
→ Select the "Software update" field on the left area of the menu by swiping.
→ Tap the "Software update" field.
→ Tap the "OK" field.
  ↳ The update begins.

INFORMATION

The update can take up to 15 minutes. The software is restarted several times.
Do not switch unit off.

  ↳ A confirmation then appears on the touchscreen.
→ Tap the "OK" field.
  ↳ The software restarts automatically.

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INFORMATION	After the update, a blue screen may appear and the software does not start. In this case, switch the unit off and then back on. In rare cases, this may happen again.

8.4 Importing additional content

Description

Import function for manufacturer contents:

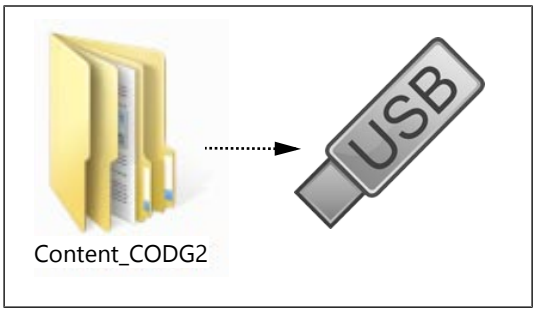
- Cookbook graphics
- Help information
- Sound files

Prerequisite

→ USB stick.
  ↳ Maximum size 32 GB.
  ↳ FAT formatting (default).
  ↳ The disk should be empty if possible.
→ Current additional content.
  ↳ Additional contents are provided as packed .ZIP file.

Preparing the USB stick

→ Open and download Zip file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.
→ Copy the unzipped folder "Content_CODG2" to the USB stick.
  ↳ In the folder there are other subfolders. This may not be changed.



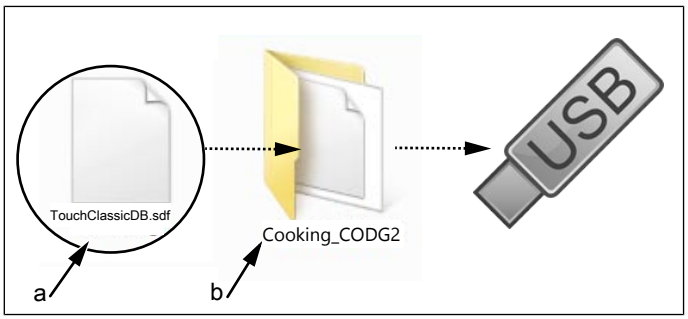
Importing

→ Open the basic settings menu or service menu.
→ Select the field "Import additional contents" on the left area of the menu by swiping.
→ Tap the "Import additional contents" field.

→ Tap the "OK" field.
↳ The data is imported.
→ A confirmation then appears on the touchscreen.
→ Tap the "OK" field.

8.5 Importing the manufacturer's cookbook

Preparing the USB stick



a Update file
b Cooking_CODG2 folder

→ Create the folder "Cooking_CODG2" on the USB stick.
→ Copy the update file to the "Cooking_CODG2" folder.
↳ The update consists of one file.
↳ The file has the wording "TouchClassicDB.sdf."

Importing a cookbook

→ Opening the basic settings menu (111)
→ Select the field "Import MKN cookbook" on the left area of the menu by swiping.
→ Tap the "Import MKN cookbook" field.
→ Tap the *OK* field.
↳ Import begins.
↳ A confirmation then appears on the touchscreen.

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9 Trade show mode

9.1 Description

Trade show mode allows appliance operation for demonstration purposes.

9.2 Connecting the unit

A single-phase power supply is required for operation.

→ Appliance is connected on L1 and N.
↳ See also installation instructions.

9.3 Opening the unit functions

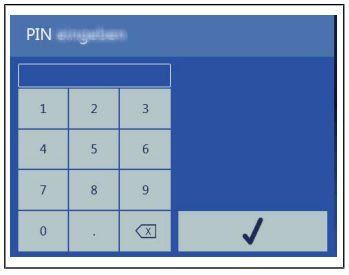
→ Connecting the unit
→ Tap the "Unit functions" field.
↳ Display of *Appliance functions* menu.

9.4 Switching the trade show mode on/off

Description Trade show mode allows appliance operation for demonstration purposes.

Prerequisite *Unit functions* menu open

→ Tap the "Settings" field.
↳ Display of *PIN* window.



→ Enter password **888** and tap the *Confirm* button.
↳ Display of *Trade show* menu.

Switching trade show mode on

→ Touch the "Trade show mode is off" field.
↳ Automatic restart of the software.
↳ Unit is in trade show mode
↳ The active trade show mode is indicated on the screen.

Switching off trade show mode

→ Call up the *Trade show mode* menu.
→ Tap the "Trade show mode is on" field.
↳ Automatic restart of the software.
↳ Appliance is normal operation.

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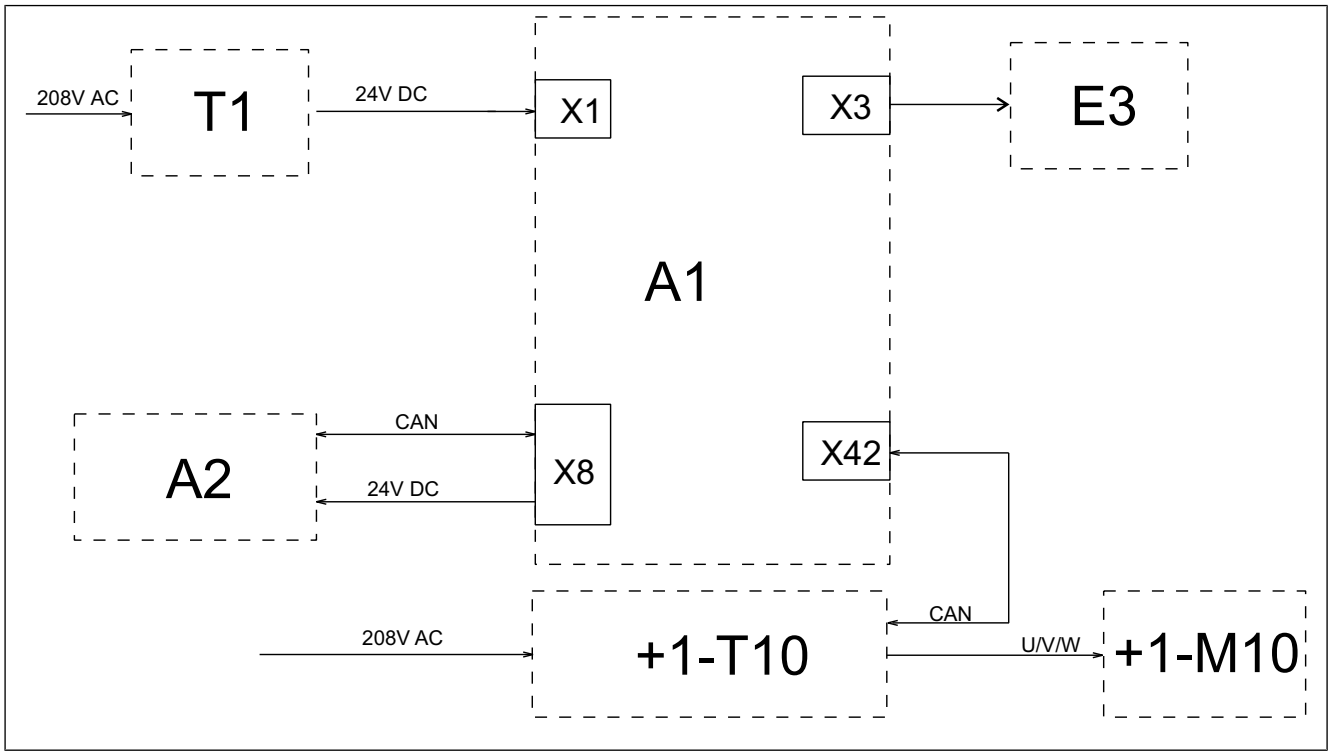
10 Electronics

10.1 Block diagram for the control



Legend

A1	Control board	A2	Operating unit
E3	LED illumination	M10	Fan motor
T1	Power pack	T10	Power board for motor

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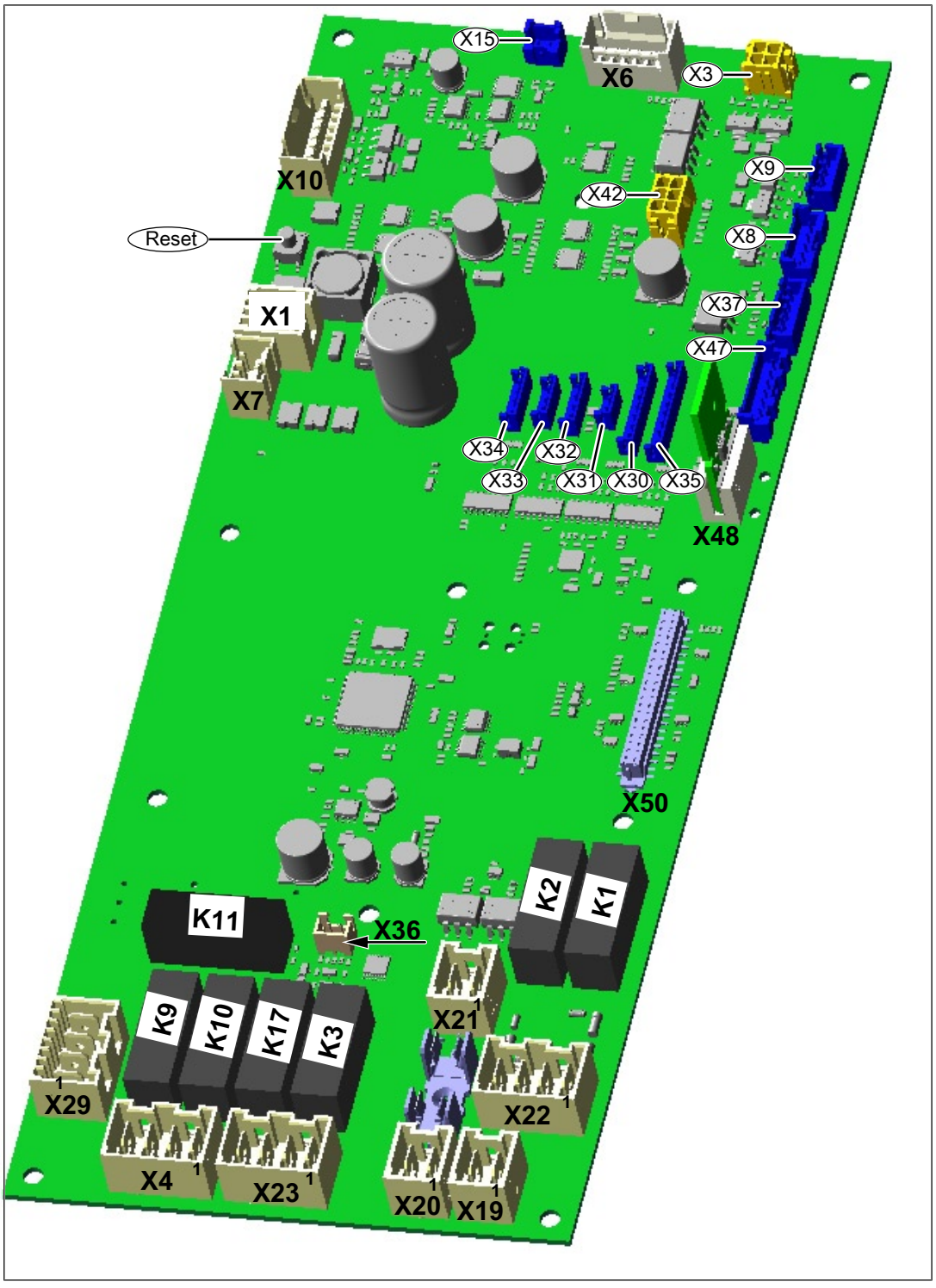
10.2 Control board

10.2.1 Layout



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10.2.2 Configuration

Reset button The Reset button resets the e-fuse (electronic fuse)

Connector X1

No.	Description
1	Power supply I/O board 24 V+ DC
2	Power supply I/O board 24 V- DC

Connector X3 (24V DC)

No.	Description
1/2	Power supply for left light
3/4	Power supply for right light

Connector X4 (208V AC)

No.	Description
1/2	Solenoid valve K12 (water vapor elimination)
3/4	Solenoid valve K13 (water vapor illumination, only with HoodIn)

Connector X6 (24V DC)

No.	Description
1/2	Solenoid M8

Connector X7 (24V DC)

No.	Description
1/2	On/Off switch S0

Connector X8

No.	Description
1/2	Operating unit supply 24 V DC
3-5	CAN communication operating unit

Connector X9

No.	Description
1/2	Energizing of SSR Q2, area A
3/4	Energizing of SSR Q2, area B

Connector X10 (24 V DC)

No.	Description
1/2	Flowmeter B14
6/7	Solenoid valve for steaming K9

Connector X19 (208V AC)

No.	Description
1/2	Main contactor Q1

Connector X20 (208V AC)

No.	Description
1	Input voltage 208 V AC
2	Input voltage N (neutral)

Connector X21

No.	Description
1	Safety temperature limiter B11 (input)
2	Safety temperature limiter B11 (output)

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Connector X22 (power optimization, option)

No.	Description
1	Output 208 V, unit (relay K1) On
2	Output 208 V, unit (relay K2) Active
3	Input 208 V (POS C)
4	N (neutral)

Connector X23 (208V AC)

No.	Description
1/2	Siphon pump G24
3/4	WaveClean pump G16

Connector X29 (208V AC)

No.	Description
1/2	Cooling fan G7
3/4	Cooling fans G8, G9. Only on built-in version EKE

Connector X30 B1 core temperature sensor

Connector X31 B2 cooking chamber sensor

Connector X33 B4 Vapor sensor

Connector X36 Reed contact switch for cooking chamber door B15

Connector X42 CAN communication to motor power board T10

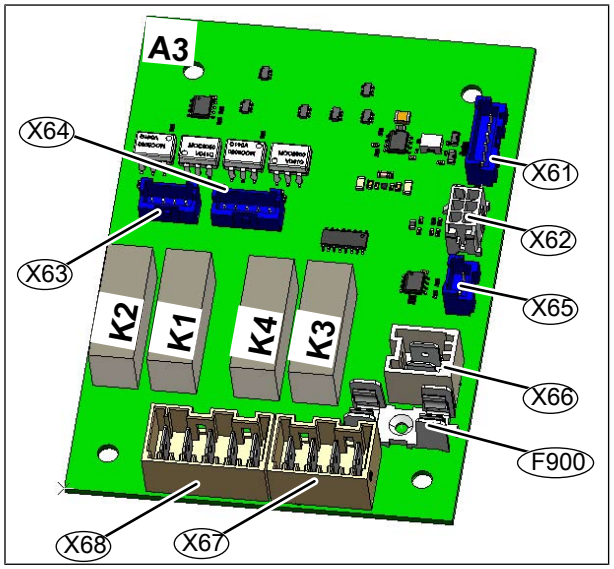
Connector X48 Digital key

Connector X50 Slot for optional board A3

10.3 Additional circuit board

10.3.1 Layout

The additional circuit board is present only on units with the MagicHood exhaust hood.



10.3.2 Configuration

Connector X66 (potential-free)

No.	Description
4	Line from hood, X20
5	Line from hood, X20

Fuse F900 Not used

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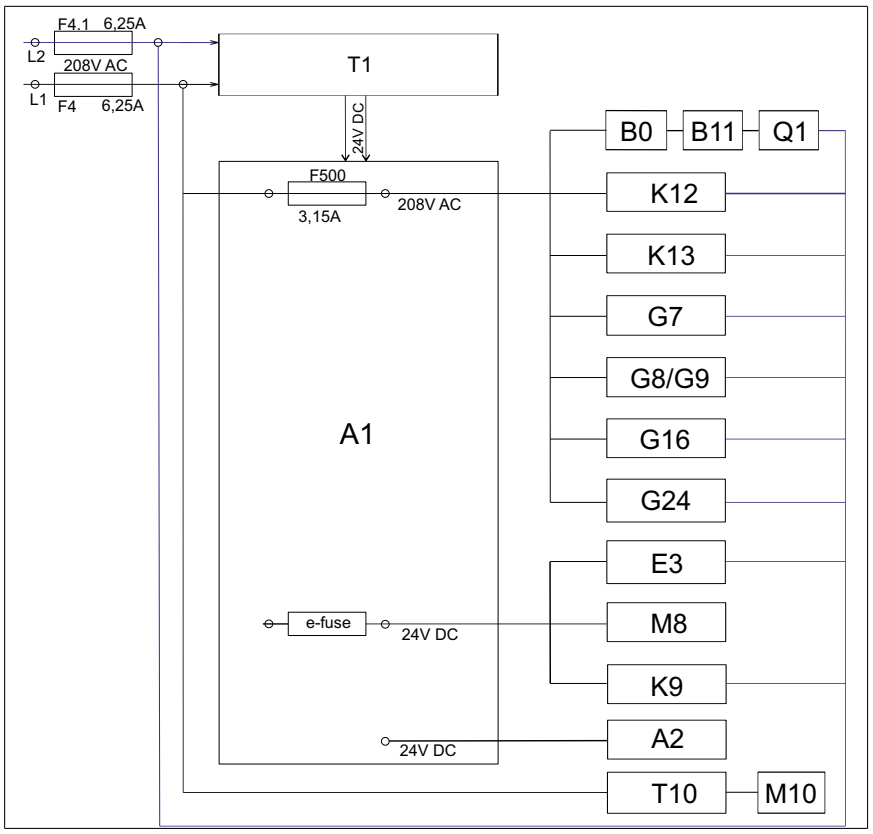
10.4 Safety overview



Legend

A1	Control board	A2	Operating unit
B0	Thermal switch	B11	Cooking chamber STL
E3	LED illumination	F	Fuse
G7	Cooling fan	G8/9	Cooling fan for built-in version
G16	WaveClean pump*	G24	Siphon pump*
K9	Solenoid valve for steaming	K12	Magnetic valve extinguishing
K13	Solenoid valve HoodIn**	M8	Solenoid
M10	Fan motor	Q1	Main contactor
T1	Power pack	T10	Power board for motor

* = only on version with automatic WaveClean cleaning system.

**= Only on version with HoodIn

Fuses 6.25A slow-blow, 20 x 5 mm, item number 10016452
3.15 A slow-blow, 20 x 5 mm, item number 203742

11 Fault messages & troubleshooting

11.1 Overview

No.	Fault message displayed	Section
694	Cooking sensor defective	Cooking chamber sensor defective (694, 695)
695		
699	Core temperature sensor defective	Core temperature sensor defective (699, 700)
700		
701	Fan defective. Cooking program was canceled	Fan defective. Cooking program was cancelled (701)
1481	Fan defective. Operation not possible (1481)	Fan defective. Operation not possible (1481)
709	Water pressure too low	Water pressure too low (709)
424	The water pressure is too low; cleaning has been paused.	Water pressure during WaveClean too low
710	Vapour sensor defective	Water vapor sensor defective (710)
1478	The operating unit battery is empty	The operating unit battery is empty
FAN_ID23	Fan error: Attempt to restart	FAN_ID23: Fan error: Attempt to restart
ID18	Excess temperature in the cooking chamber	Excess temperature in the cooking chamber (ID18, ID73)
ID73		
MMI_ID50	Critical temperature in the electronics	Critical temperature in the electronics (MMI_ID50)
1520	The NFC tag is not present	The NFC tag is not present
SA_ID	Fault in moisture removal control. Limited operation	Fault in moisture removal control. Limited operation
TMP_ID2	Overtemperature in control	Overtemperature control (TMP_ID2)
TMP_ID72	Risk of frost	Risk of frost (TMP_ID72, MMI_ID51)
MMI_ID51		
	Unit was restarted after power failure	Unit was restarted after power failure

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11.2 Emergency operation

Description In order to allows limited use in case of error, the appliance has various emergency programs. Emergency operation is activated automatically and displayed. After elimination of the error indicated, the controller switches back into regular operation automatically. A reset is not necessary.

INFORMATION Emergency programs handle the limited further operation of the appliance until servicing. Deviating cooking results and temperature deviations are possible.

Overview

Fault message displayed	Description
Cooking sensor defective.	The core temperature sensor takes over the function of the cooking chamber sensor.
Water vapor sensor defective	The software controls the water vapor elimination. This results in higher water consumption.
Core temperature sensor defective. Cooking program was canceled.	Function no longer available.

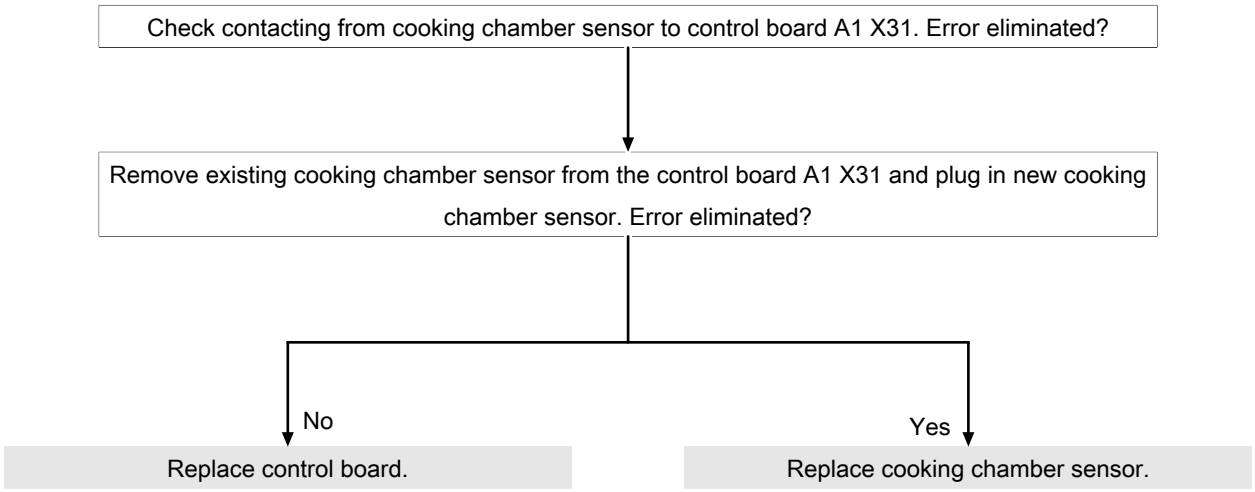
11.3 Temperature sensor area

Cooking chamber sensor defective (694, 695)

Description

Emergency operation is activated automatically and displayed. The core temperature sensor takes over the function of the cooking chamber sensor. Cooking program with core temperature sensor is no longer available.

Troubleshooting



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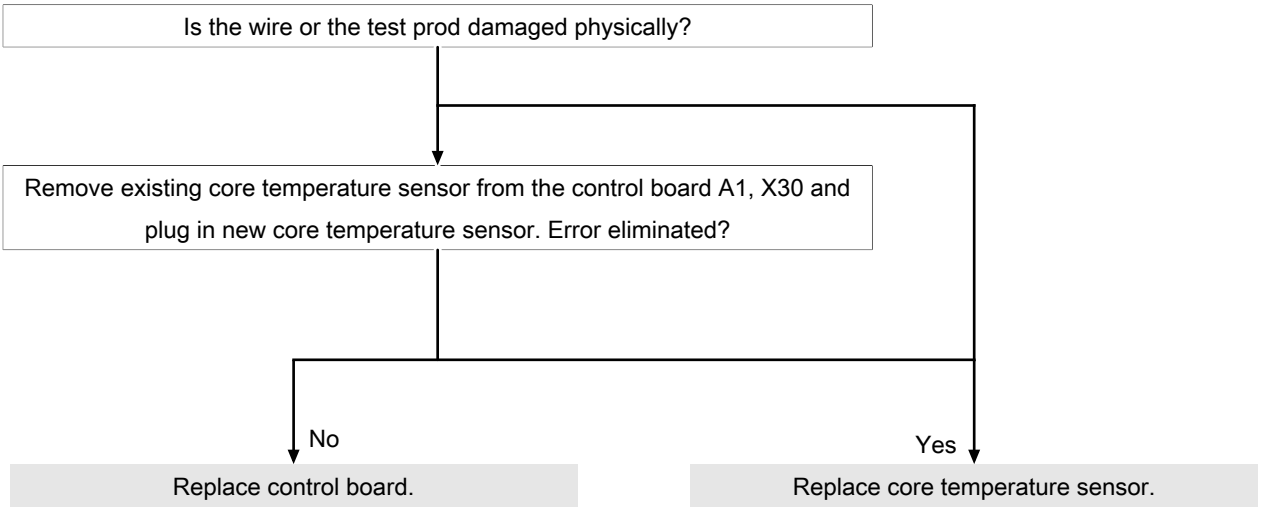
Core temperature sensor defective (699, 700)

Description

The core temperature function is no longer available.

Troubleshooting

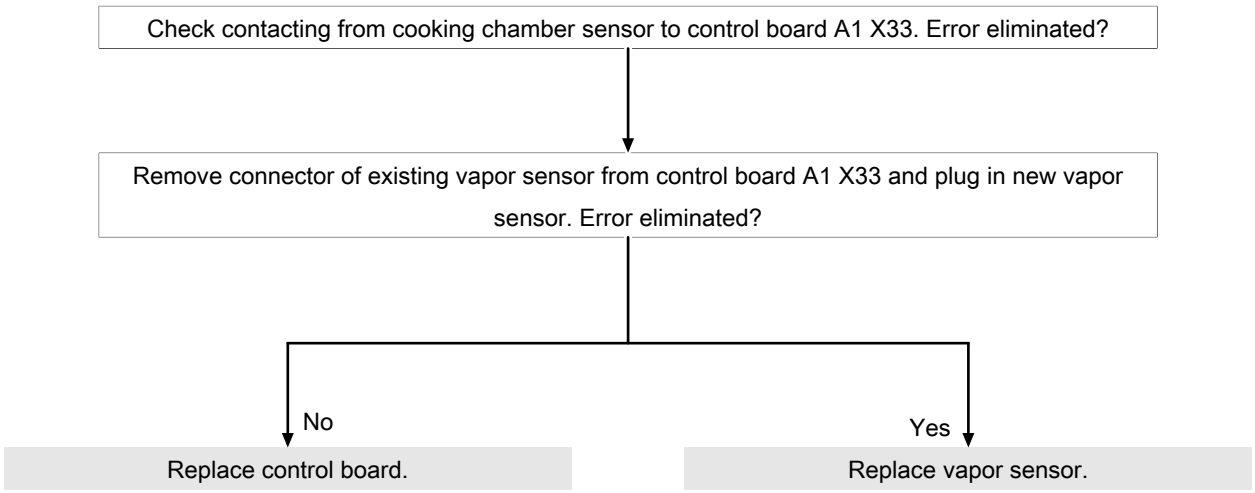


Water vapor sensor defective (710)

Description

In the event of an error, emergency operation is activated and displayed automatically. The software controls steam elimination. In this case, increased water consumption may result.

Troubleshooting



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Risk of frost (TMP_ID72, MMI_ID51)

Description

The unit is not ready for use. The temperature sensor on the control board is measuring a temperature of <0°C.

Troubleshooting

→ Increase the room temperature and switch on unit again.

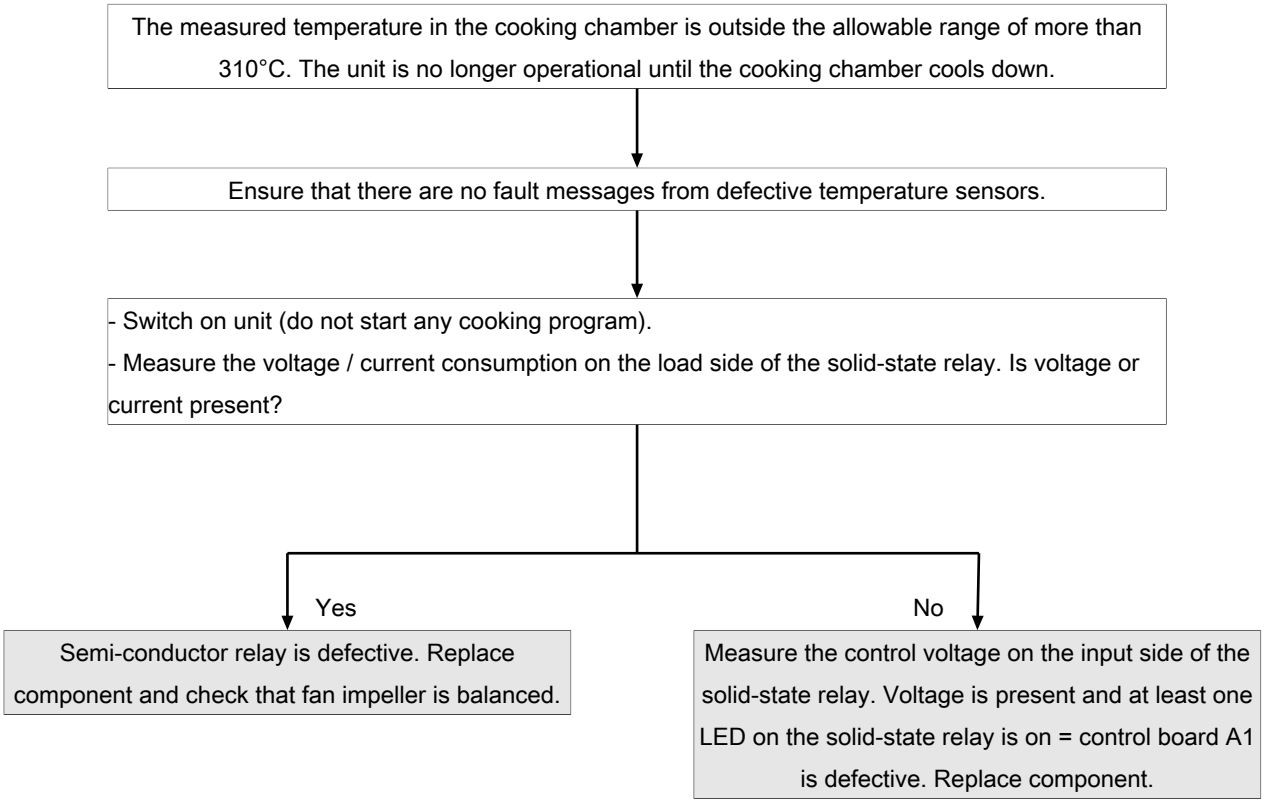
→ Change location of the unit.

Excess temperature in the cooking chamber (ID18, ID73)

Description

The measured temperature in the cooking chamber is outside the allowable range of more than 310°C. The unit is no longer operational until the cooking chamber cools down. The measurement is taken by the cooking chamber sensor, core temperature sensor and the moisture sensor.

Troubleshooting



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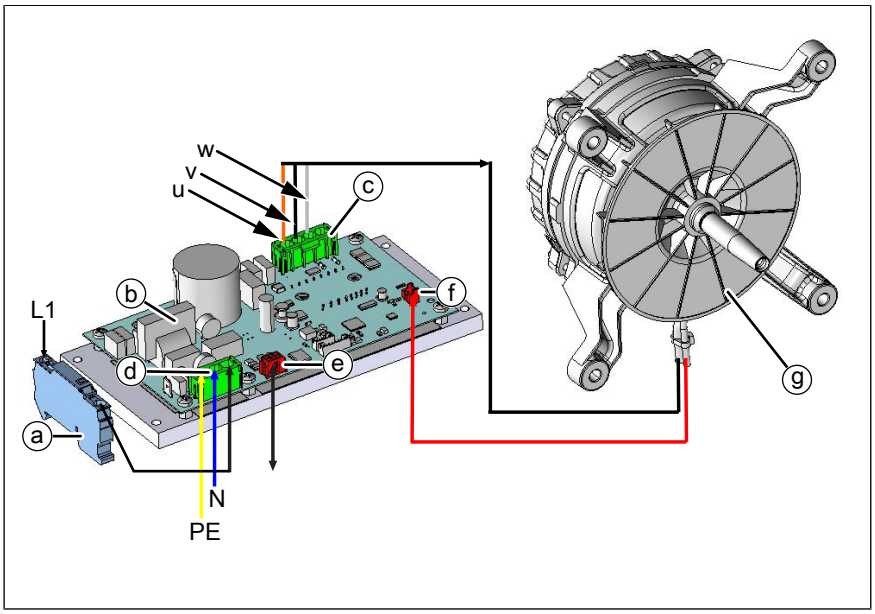
11.4 Motor area

⚠ DANGER

Warning: electric shock! Danger of death!

When working on the power board, make sure that energized parts are exposed. Work on these components during operation and up to 3 minutes after enabling is not allows. Even if the motor is stopped and the appliance is de-energized, the connection terminals and components can conducted dangerous voltage!

Overview



a Fuse F1 6.3 A
b Power board
c Connector S300. Motor power supply
d Connector S100. Power supply circuit board
e Connector S500. CAN connection to control circuit board
f Connector S501. Input for temperature switch from motor

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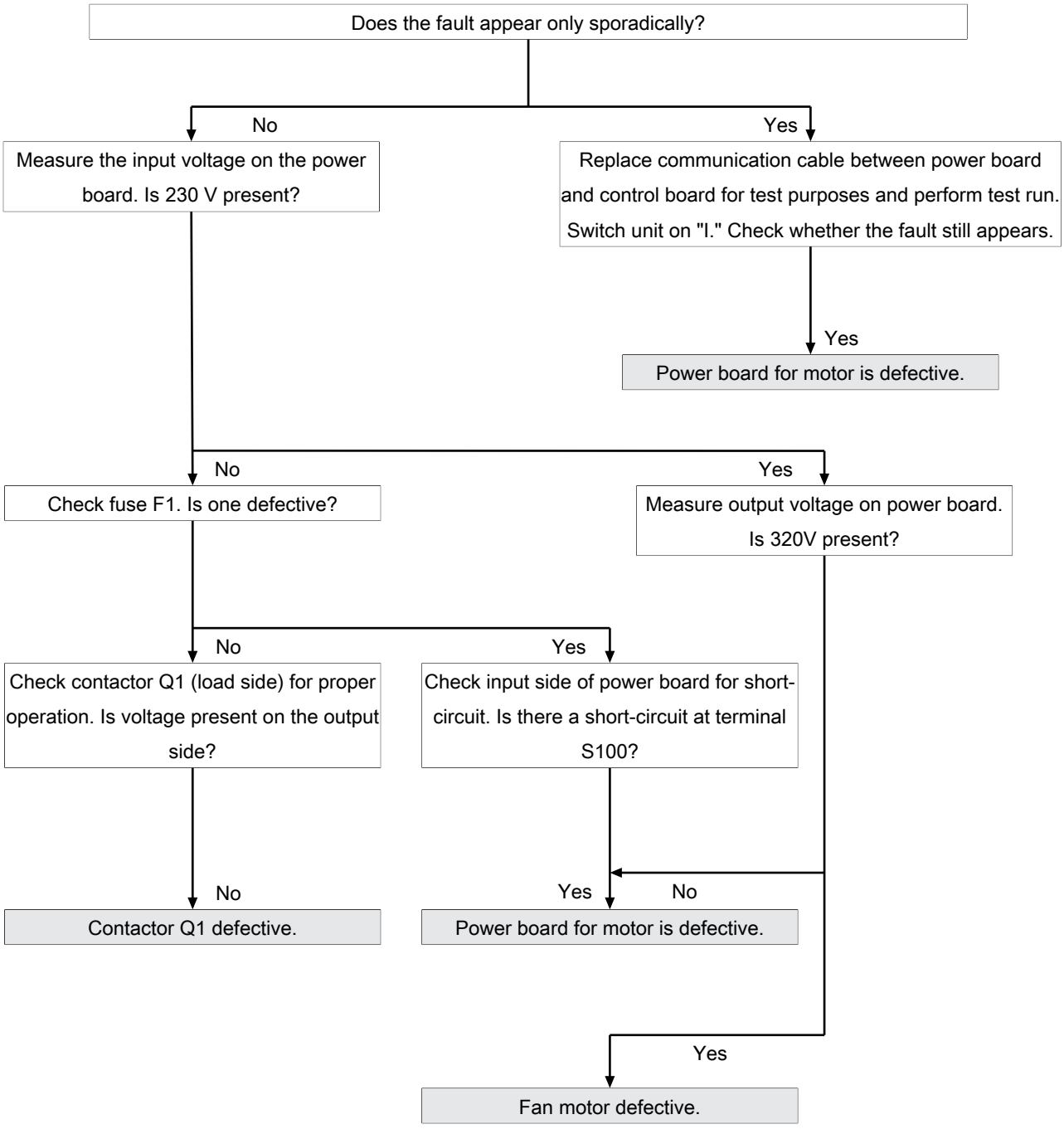
Fan defective. Operation not possible (1481)

Description

The control board A1 does not receive any response via the CAN bus cable from motor power board T10. There is an fault in the fan area.

Troubleshooting



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Fan defective. Cooking program was cancelled (701)

Description

The control board A1 does not receive any response via the CAN bus cable from motor power board T10. There is an fault in the fan area.

Troubleshooting

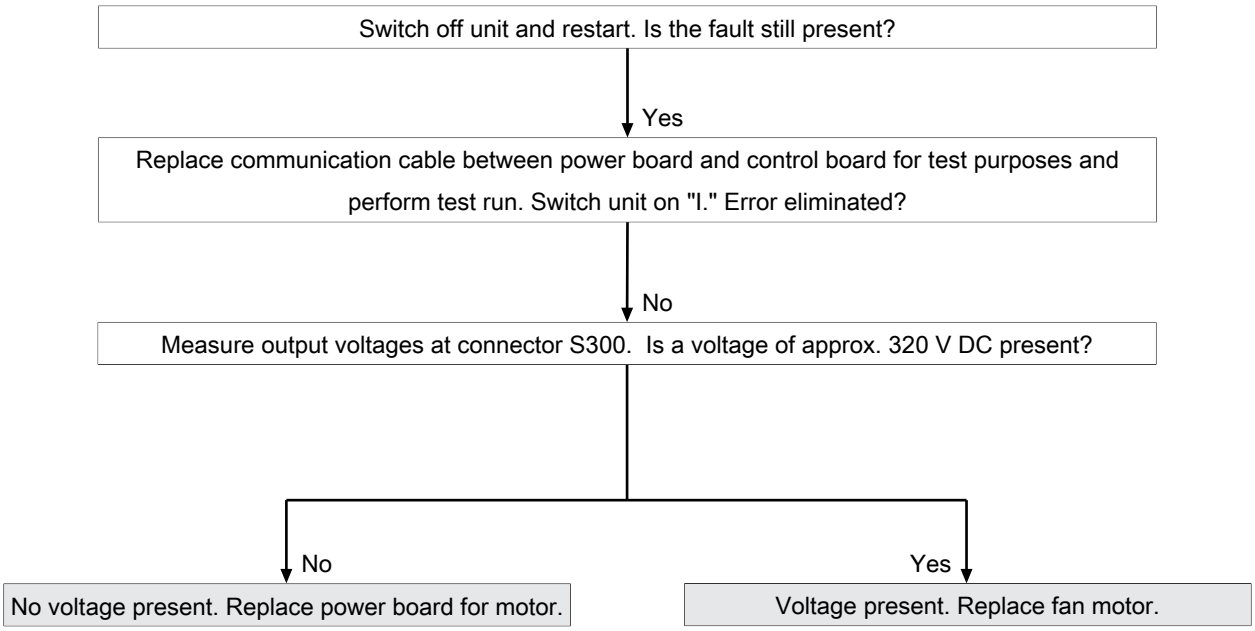
(see „ Troubleshooting“, Page 58)

FAN_ID23: Fan error: Attempt to restart

Description

The control board A1 does not receive any response via the CAN bus cable from motor power board T10. There is an fault in the fan area.

Troubleshooting



The safety temperature limiter has tripped. Operation not possible (1480)

Description

There is a response from the safety circuit on the control board.

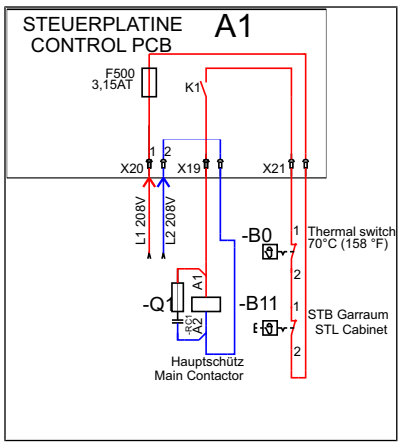


Image: Overview of the safety circuit

A1	Control board	B0	Thermal switch
B1 1	Safety temperature limiter	Q1	Main contactor

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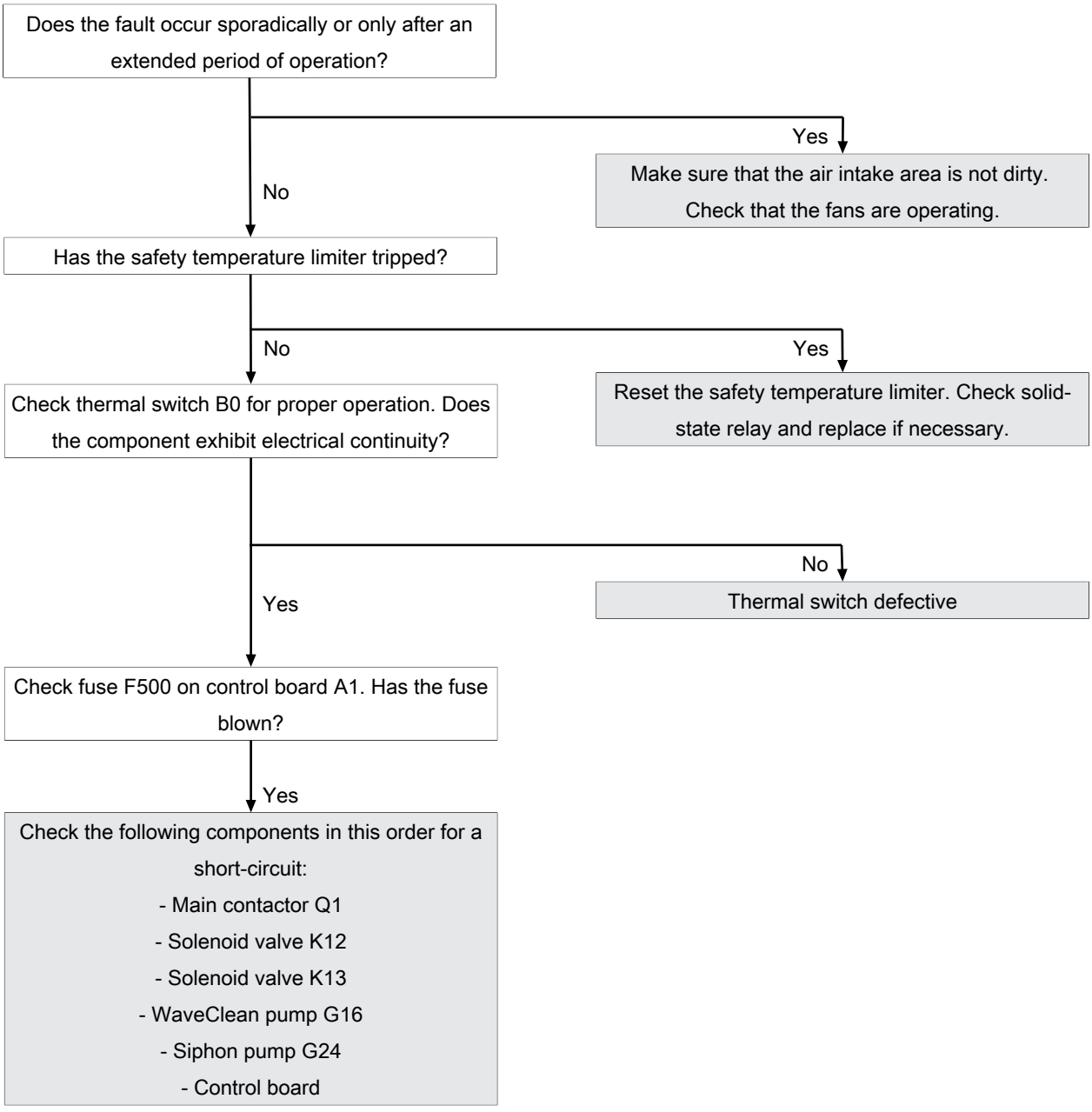
Troubleshooting



The safety temperature limiter has tripped. Cooking program has ended. (1479)

Description

There is a response from the safety circuit on the control board.

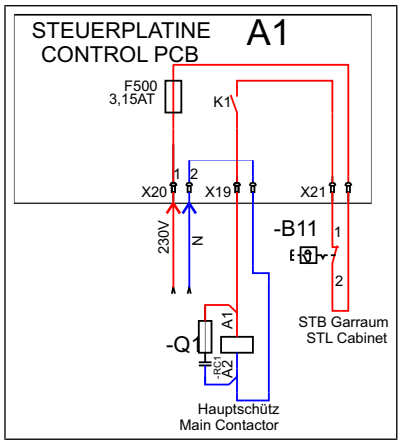


Image: Overview of the safety circuit

A1 Control board
Q1 Main contactor
B11 Safety temperature limiter

Troubleshooting

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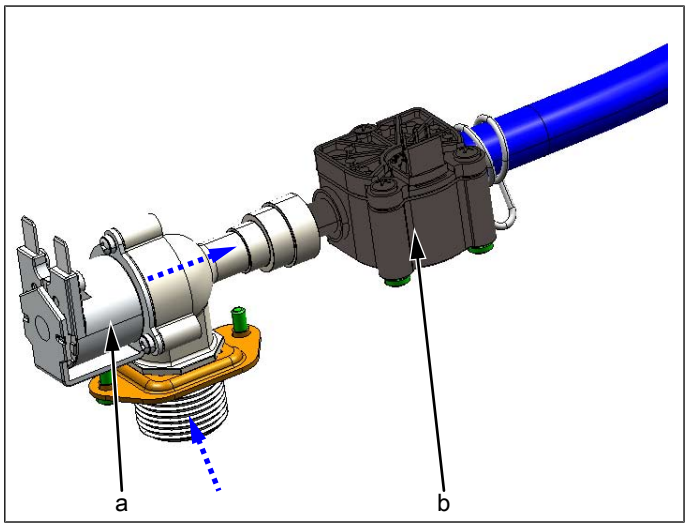
11.5 Water area

Water pressure too low (709)

Description

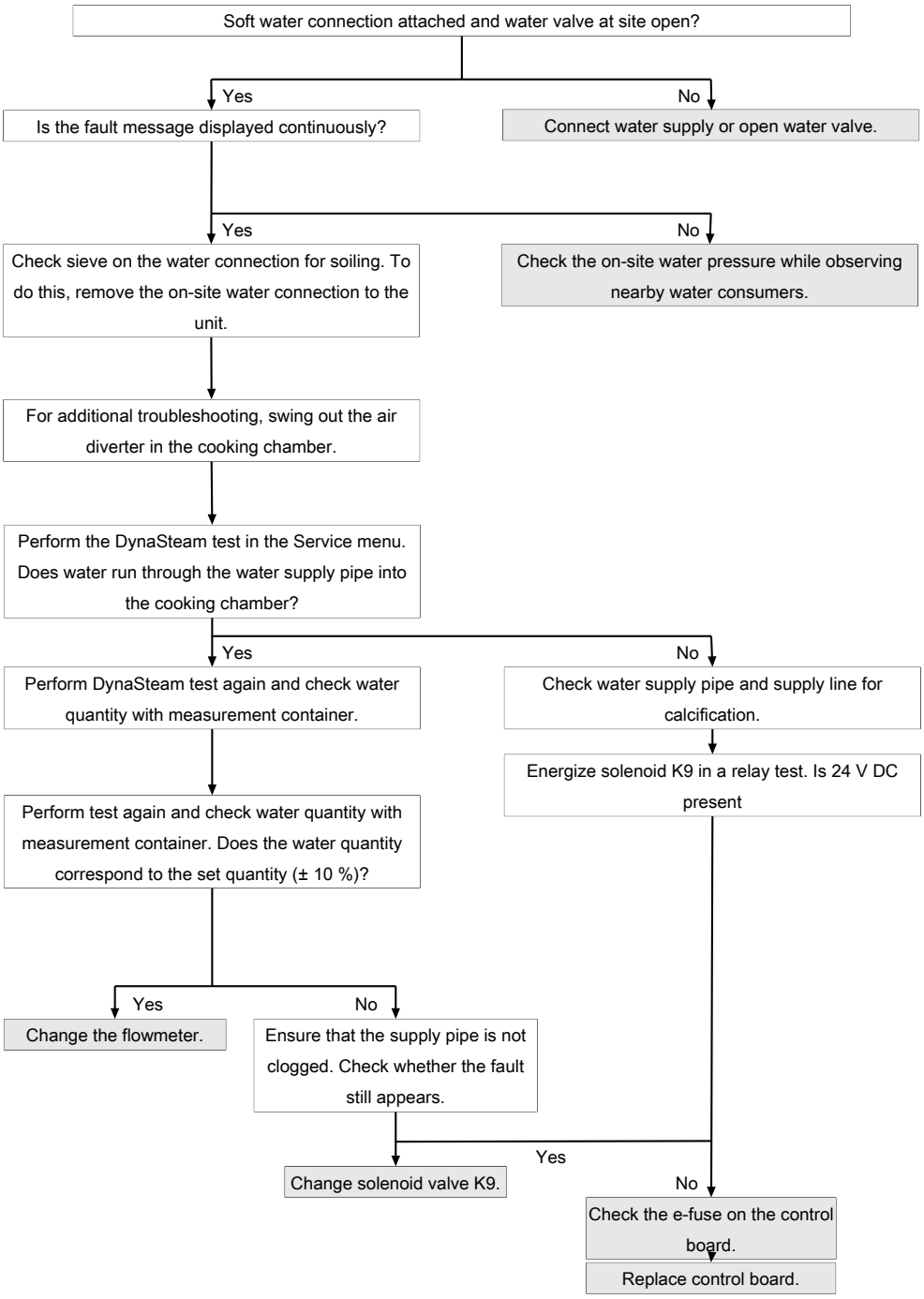


a Magnetic valve b Flowmeter

The message appears when the water pressure is too low. This is a notification that does not result in interruption of the cooking program.

Troubleshooting

The water pressure at the water connection must be at least 2 bar.


Soft water connection attached and water valve at site open?
Yes
No
Is the fault message displayed continuously?
Connect water supply or open water valve.
Yes
No
Check sieve on the water connection for soiling. To do this, remove the on-site water connection to the unit.
Check the on-site water pressure while observing nearby water consumers.
For additional troubleshooting, swing out the air diverter in the cooking chamber.
Perform the DynaSteam test in the Service menu. Does water run through the water supply pipe into the cooking chamber?
Yes
No
Perform DynaSteam test again and check water quantity with measurement container.
Check water supply pipe and supply line for calcification.
Energize solenoid K9 in a relay test. Is 24 V DC present
Perform test again and check water quantity with measurement container. Does the water quantity correspond to the set quantity (± 10 %)?
Yes
No
Change the flowmeter.
Ensure that the supply pipe is not clogged. Check whether the fault still appears.
Yes
Change solenoid valve K9.
No
Check the e-fuse on the control board.
Replace control board.

FM06-117A

The water pressure is too low; cleaning has been paused.

Description

The fault message appears if the flowmeter registers an insufficient water quantity during WaveClean. The program is stopped until the water pressure is sufficiently high again.

Troubleshooting

Ensure customer-supplied water supply on the soft water connection of unit. The supply pressure on the water connection must be at least 2 bar. If the fault occurs sporadically, check the on-site water pressure while observing nearby water consumers.

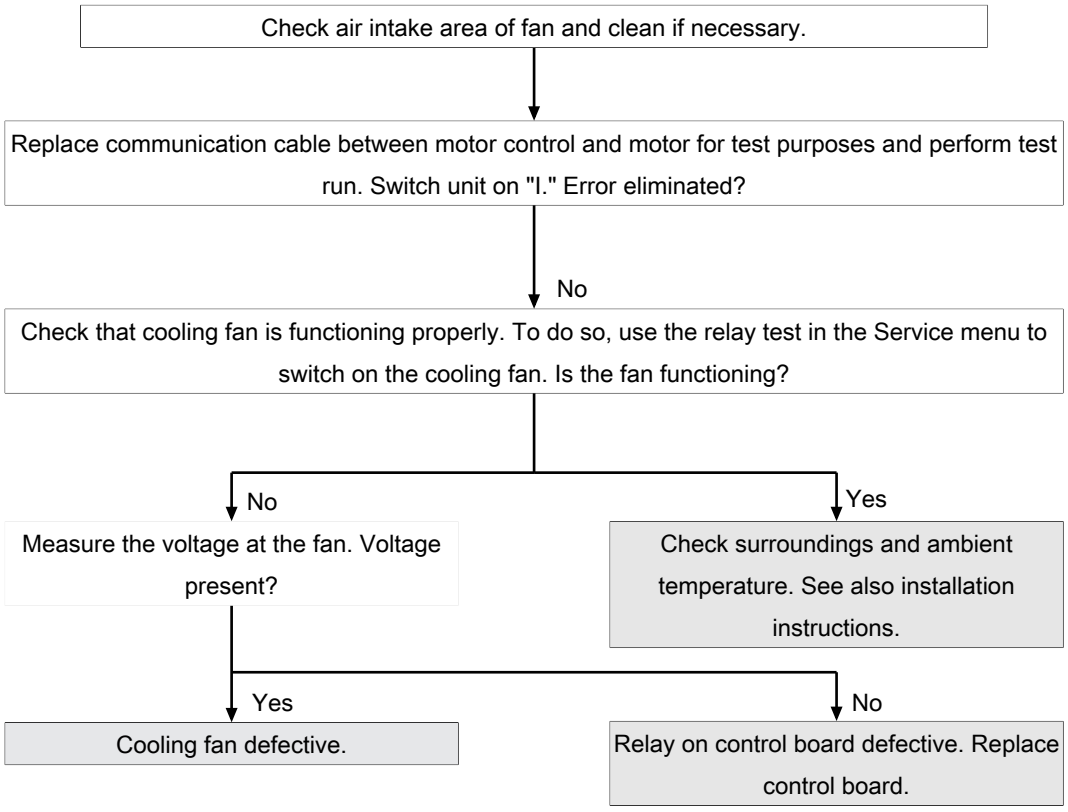
11.6 Electronics / control area

Overtemperature control (TMP_ID2)

Description

The temperature sensor on the control board is measuring a temperature of >75°C (167°F). The unit is no longer operational until it cools down.

Troubleshooting



FM06-117A

The NFC tag is not present (1520)

Description

It is not possible to access the digital key (NFC tag).

Troubleshooting

→ Unplug digital key and then reinsert. De-energize unit beforehand.
→ Change digital key.
→ Replace control board.

The operating unit battery is empty (1478)

Description

The date and time are lost after the unit is switched on or they reset.
HACCP and log data are no longer saved in a form that can be evaluated.
Replacement requires disassembly of the operating unit.

Troubleshooting

INFORMATION

Battery type

Required battery: Button cell CR1220 3 V.

Changing the battery

→ De-energizing the unit
→ Removing the control unit
→ Detaching lines to the operating unit
→ Remove rear cover from touchscreen. This requires removing the four fastening screws.
→ Change the battery.
→ Reassembly is carried out in reverse order.

Setting the date/time

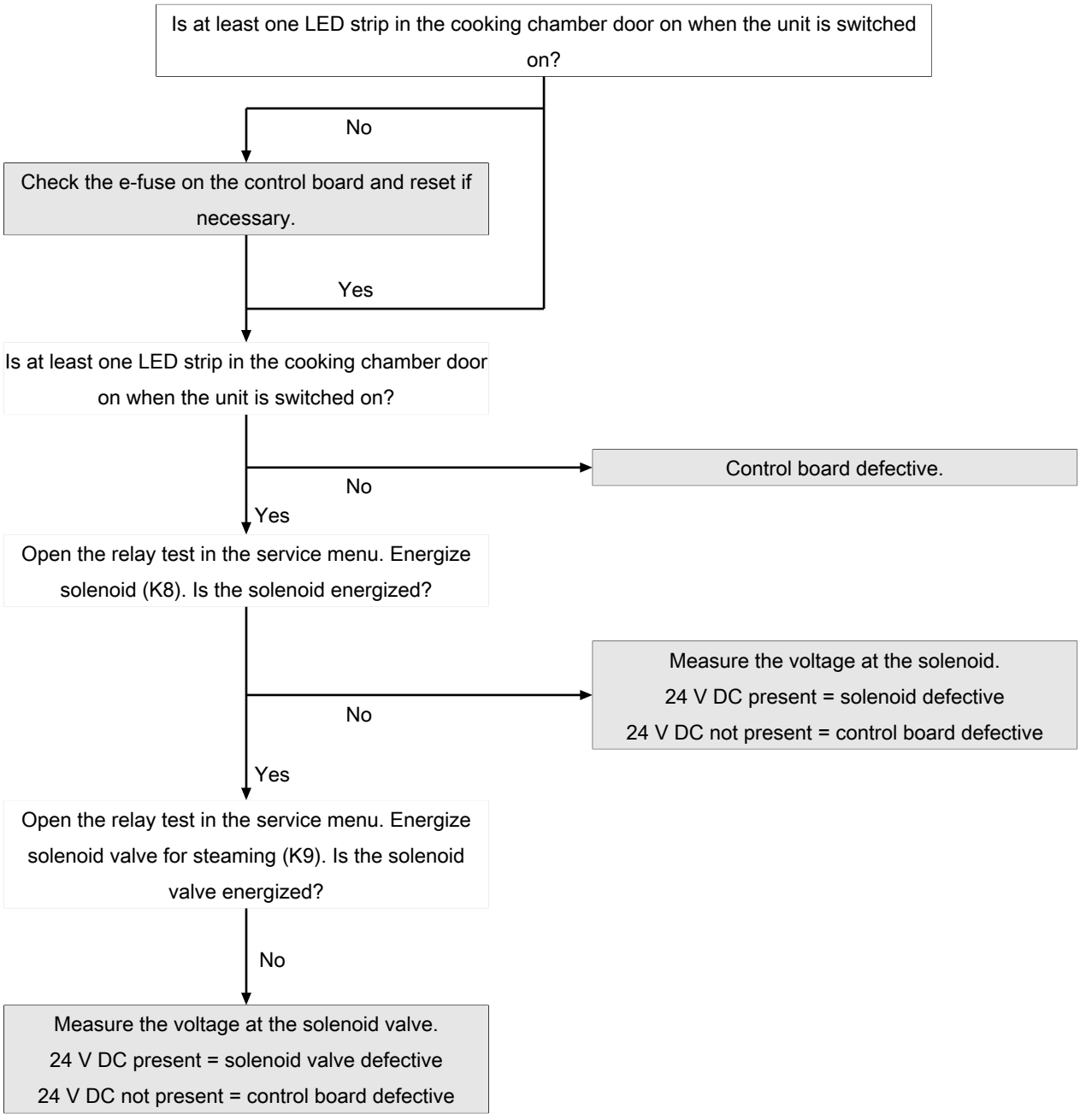
→ Restoring the power supply
→ Set the date and time in the basic settings or service menu.

Fault in moisture removal control. Limited operation

Description

The control board monitors, among other things, the power consumption of the solenoid. In the event of a fault, the fault message appears and the e-fuse may trip.

Troubleshooting



FM06-117A

Unit was restarted after power failure

Description

The message appears after an interruption of the supply voltage during an active cooking program.

Troubleshooting

→ Make sure that the unit was not switched off by means of the "On/Off“ switch during an active cooking program. In this case, the control is disconnected from power, which is interpreted by the software as a power failure. Stop the cooking program before switching the unit off.

→ Make sure that the customer's supply voltage is reliable.

→ Check that the "On/Off" switch functions properly and is in the correct position.

↳ The switch must be fastened securely.

↳ The switch is available separately.

→ Check the electrical connections and screw connections in the area of the mains connection terminal, transformer and power line to the control board.

→ Replace control board. It supplies voltage to the operating panel.

→ Replace transformer.

→ Replace operating panel.

Manufacturer
Copyright by MKN Maschinenfabrik
Kurt Neubauer GmbH & Co. KG
Halberstaedter Strasse 2a
D-38300 Wolfenbuettel
Telephone 0 53 31 / 89-0
Telefax 0 53 31 / 89-280

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