# HENNY PENNY®
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SpaceSaver Plus Team & SpaceSaver Team
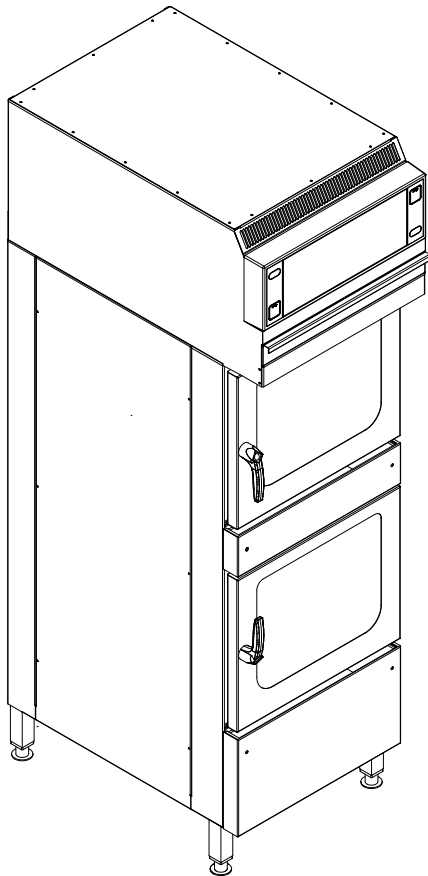
Model

FSD **610.610**
FSDH **610.610**

FM06-078B   en-US

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Directory of contents

Service-instructions

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 and have been trained to work on electrical units.

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.

FM06-078B

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.

Organizational measures

Risk of property damage and personal injury from lack of organizational measures

- Prior to starting the service work, notify any operator present about the procedure.

- Discuss how to respond to an emergency prior to starting the service work.

- Use equipment and protective gear suitable for the activity.

- Brace housing components to prevent them from falling over and dropping.

Electrical connection

Danger of electric shock from live components.

- Prior to working on the electrical system, switch off the unit, disconnect the electrical system from the mains and prevent power from being switched on again. Check to ensure the system is dead.

- Use only insulated tools.

Concluding activities

Risk of damage to property and personal injury from improper connections

- Reactivate all safety devices and check that they function properly.

4 Component overview

4.1 Installation compartment
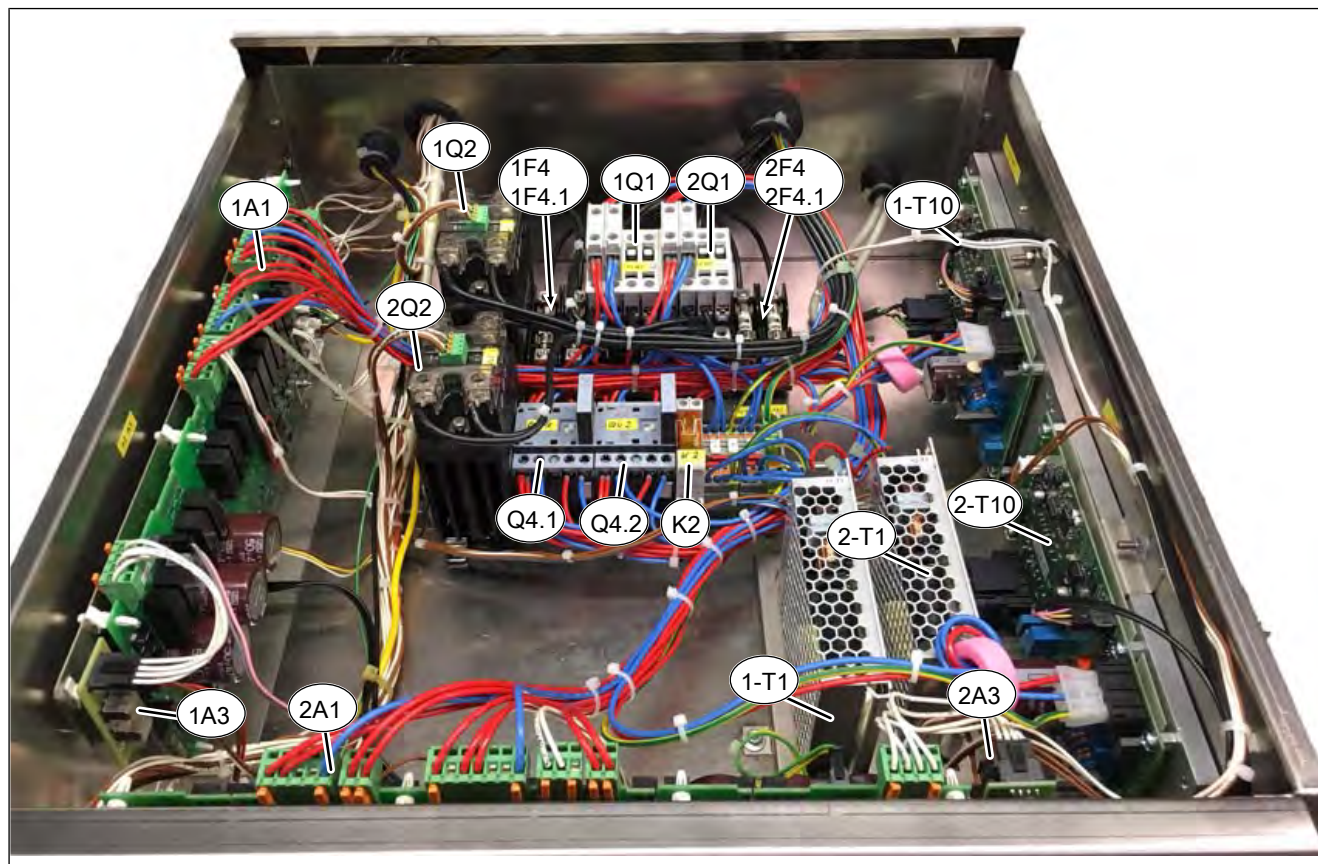
1- = Upper unit. 2-Lower = unit

A1	Control board	A3	Lighting circuit board
F4	Fuse 6.25 A, slow-blow	F4.1	Fuse 6.25 A, slow-blow
K2	Relay; 8 A; 230 V	Q1	Main contactor 32 A, 230 V
Q2	Solid-state relay (SSR), 50 A	Q4.1	Reversing contactor 18 A, 230 V
Q4.2	See Q.4.1	R1	Line filter
T1	Power pack	T10	Power board for motor

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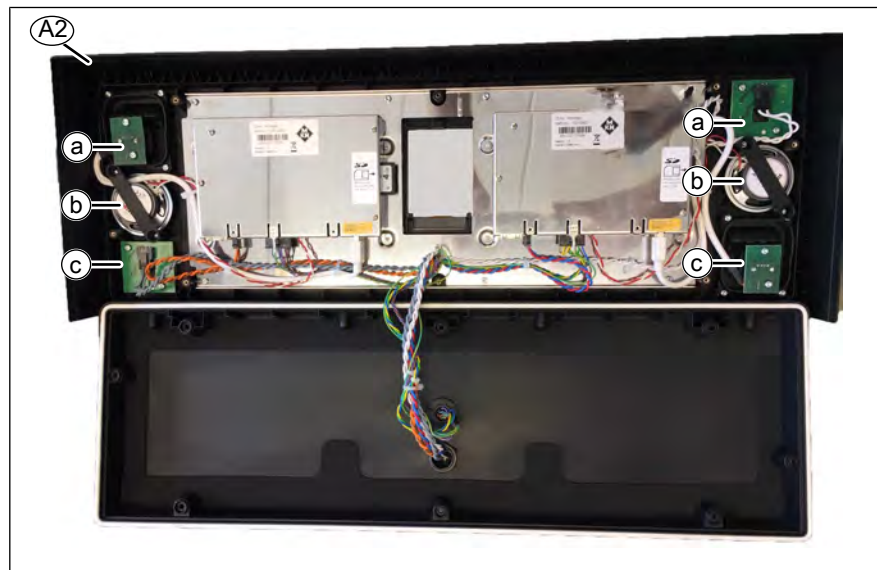
4.2 Operating panel

A2	Operating panel, complete with housing	a	On/Off switch (10020346)
b	Loudspeaker (10016690)	c	USB interface (10020348)

4.3 Right view
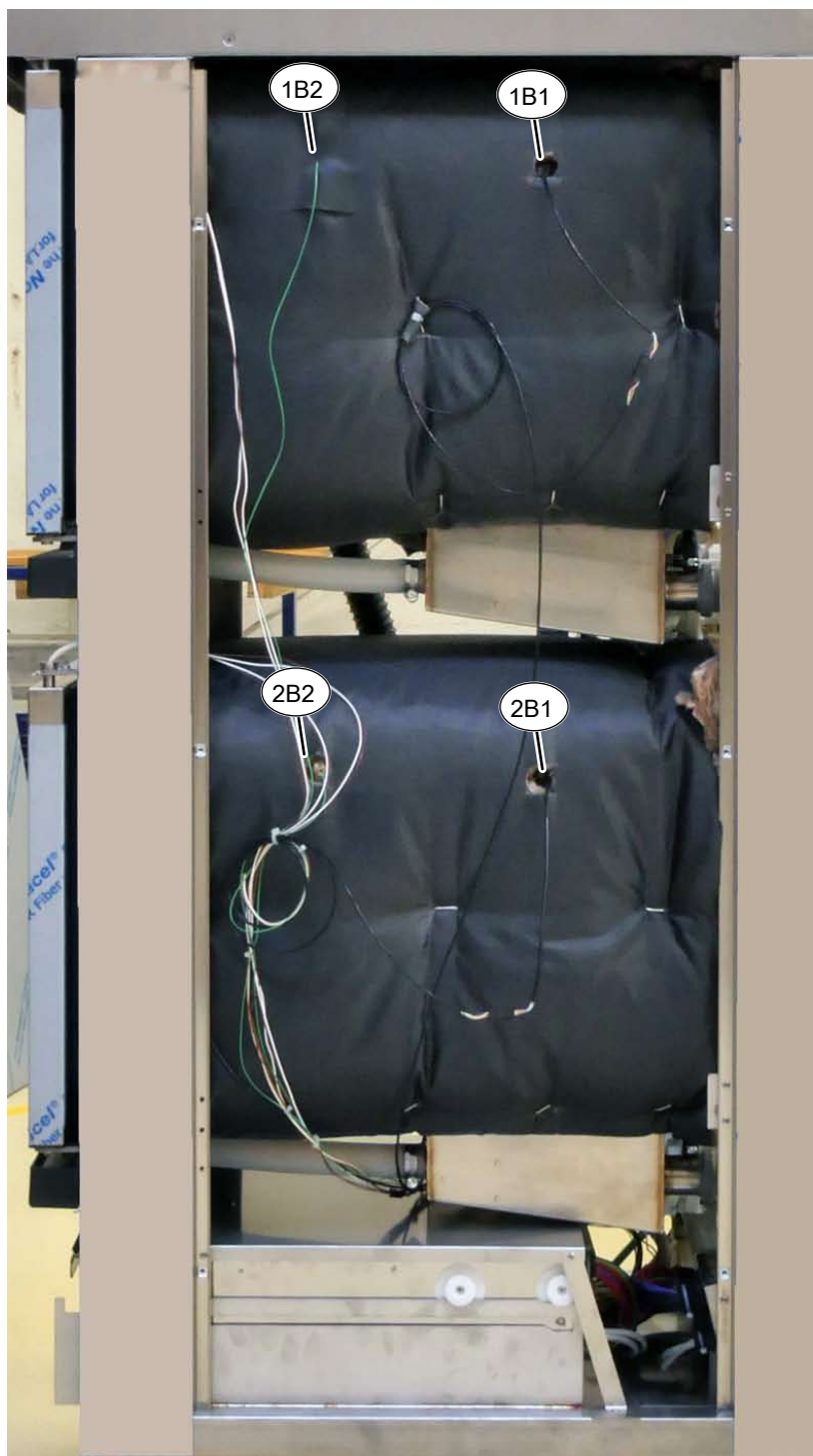
1- = Upper unit. 2-Lower = unit

B1   Core temperature sensor   B2   Cooking chamber sensors

FM06-078B

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4.4 Rear side

Upper unit
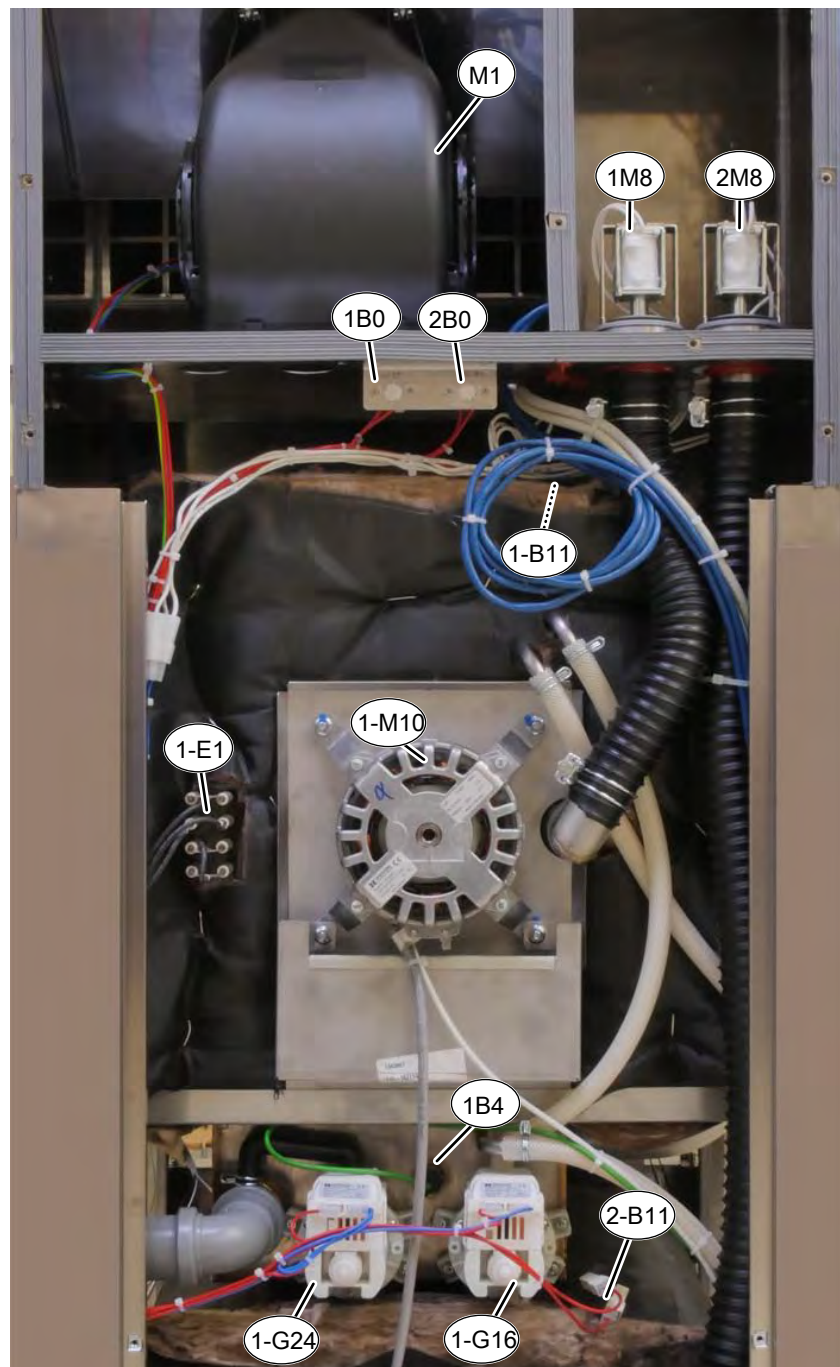
1- = Upper unit. 2-Lower = unit

B0	Thermal switch 85°C	B4	Vapor sensor
B11	Safety temperature limiter 330°C	E1	Heating element
G16	Circulation pump	G24	Drain pump
M1	Fan	M8	Lift magnet
M10	Fan motor		

Lower unit
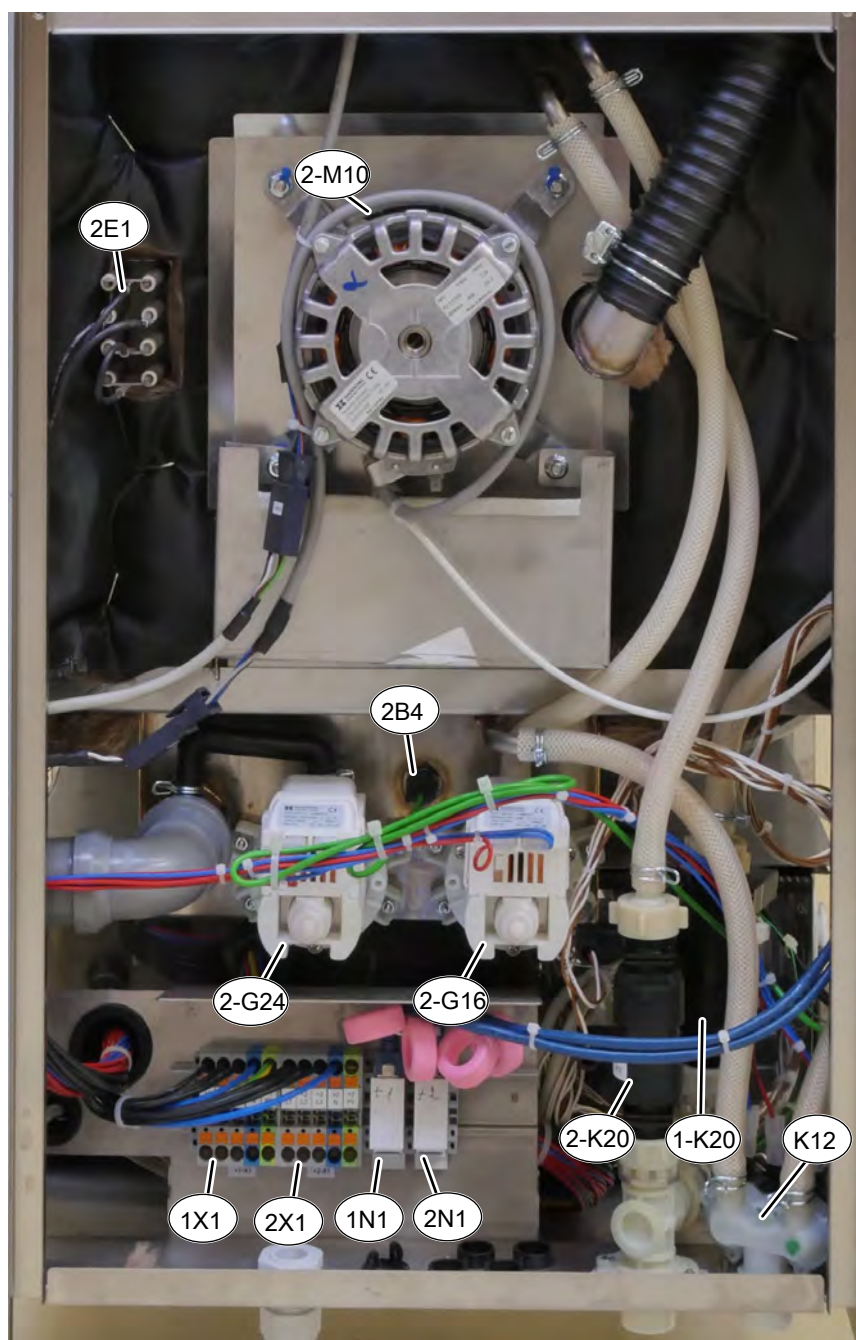
1- = Upper unit. 2-Lower = unit

B4	Vapor sensor	E1	Heating element
G16	Circulation pump	G24	Drain pump
K12	Magnetic valve water vapor elimination	K20	Steaming unit
M10	Fan motor	N1	Ethernet interface
X1	Power connection		

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5 Service menu - appliance test

5.1 Service menu

The service area permits functional testing of individual components, adjustment of basic settings and updating of the software.

Access to service area

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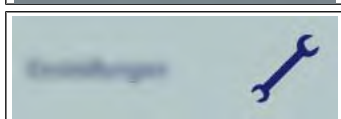
→ Tap the "Settings" field.
  ↳ Display of *PIN* window.

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

INFORMATION

The password for the service menu is 1967

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.

5.2 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.

5.3 Status overview

**Status 1
Heating circuit**

PWM: heat requirement in %.
POS: power optimization system (option).
Temperature sensors B1, B3, B5, B6, B7 are not present.

Status 2

Climate control system, fan

B14: Pressure switch on the DynaSteam unit
PWM: heat requirement in %.
Temperature sensors B3, B5 are not present.

Status 3

WaveClean (option)

K04: Magnetic valve for water vapor elimination & siphon filling
B15: Reed contact switch
B14: Pressure switch on the DynaSteam unit
Temperature sensors B3, B5 are not present.

Status 4

Miscellaneous

K3: Not in use
K10: Activation of the exhaust hood at high speed (option)
B15: Reed contact switch
K07, K13, K14: Not used
Temperature sensors B1, B3, B5, B6, B7 are not present.

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5.4 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.
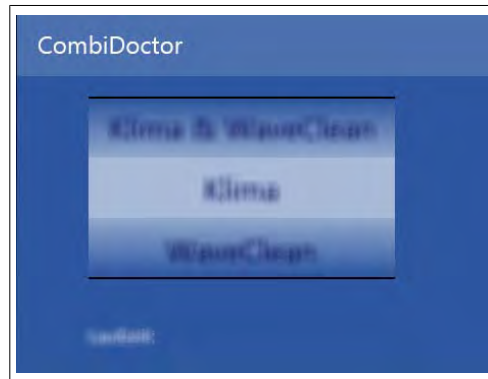
Image: Select CombiDoctor test

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.

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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 (lift magnet).

    ↳ Display switches to green = test successful.

    ↳ Display switches to red = test not successful.

↳ Check of lift magnet 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.

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 (284 °F) 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.

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5.5 Relay test

Overview

Overview
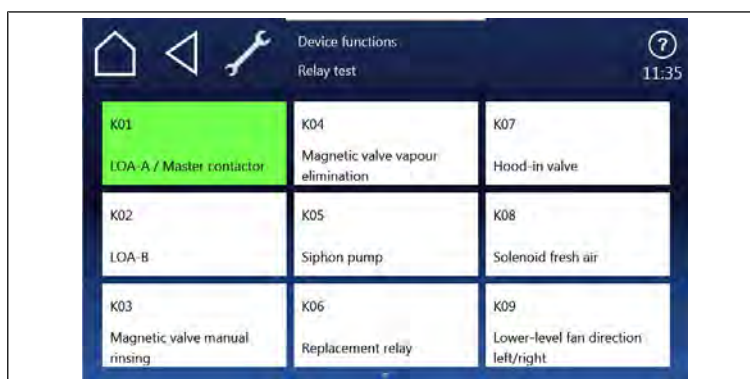
Image: Relay test page 1

Image: Relay test page 2

Relay overview

Relay	Connector	No.	Description	Info
K1	X10	2	Main contactor Q1	208V AC
K1	X11	1	POS A	208V AC
K2	X11	2	POS B	208V AC
K3		2	*Not in use*	208V AC
K4	X12	3	Magnetic valve for water vapor elimination K12	208V AC
K5	X12	4	Siphon pump G24	208V AC
K6	X12	5	Backup relay K6	208V AC
K7			*Not in use*	
K8	X17	1	Lift magnet fresh air M8	208V AC
K9	X16	1-3	Siphon pump "ON" message on upper or lower unit	+24V DC
K10	X13	1/2	Switching the exhaust hood to high speed (if available)	Potential-free
K11			*Not in use*	
K13			*Not in use*	

Relay	Connector	No.	Description	Info
K14			*Not in use*	
K15	X1	2	Cooking chamber light	24V DC
K16	X9	1/2	Supply for control panel (MMI)	24V DC
K17	X12	1	Circulating pump G16	208V AC
K18	X31	1 -4	Steaming unit (switched directly, not via relay)	24V DC

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.

INFORMATION   Several functions can be activated simultaneously.

5.6 WaveClean test

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 (158 °F).

FM06-078B

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→ 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 (131 °F).

→ 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.

5.7 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. |
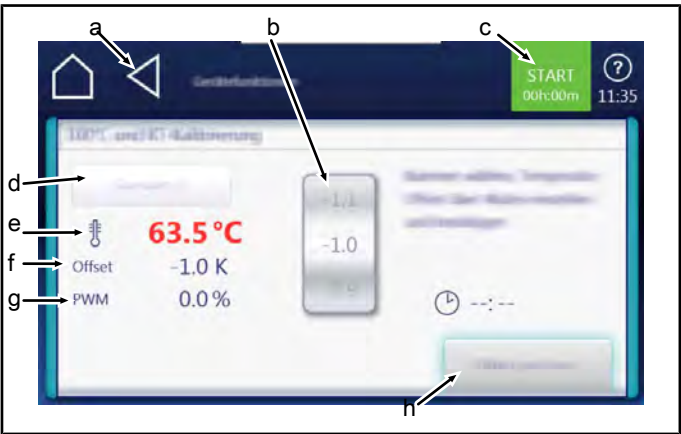
Image: Overview

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

Service-instructions

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Check calibration

Prerequisite	Calibrated digital temperature measurement device.

The temperature in the cooking chamber is < 100 °C (212 °F).

→ 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 (212 °F).

↪ Display of the current temperature on the touch screen.

→ Wait until the cooking chamber temperature on the touch screen indicates 100 °C (212 °F) (± 1°C).

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

↪ The external measurement device must display a temperature between 99 °C (210,2 °F) – 99,5 °C (211,1 °F).

→ 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 26).

Calibrate cooking chamber sensor

Prerequisite → Execute *Check calibration* and do not switch appliance off.

↪ Temperature display on the touch screen indicates 100 °C (212 °F).

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 (210,2 °F) – 99,5 °C (211,1 °F).

→ 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.

FM06-078B

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5.8 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.
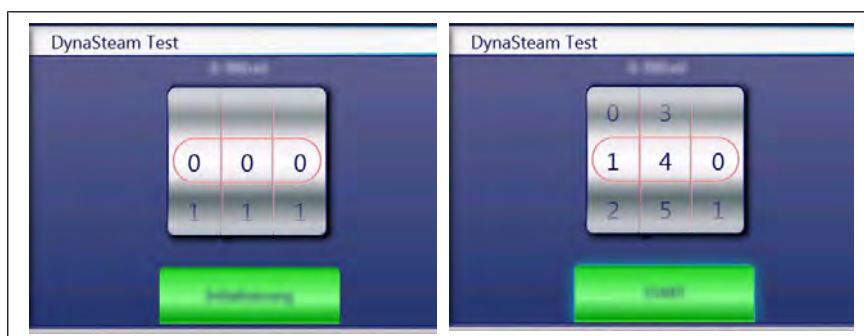
Image: Overview of DynaSteam test

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.

5.9 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.
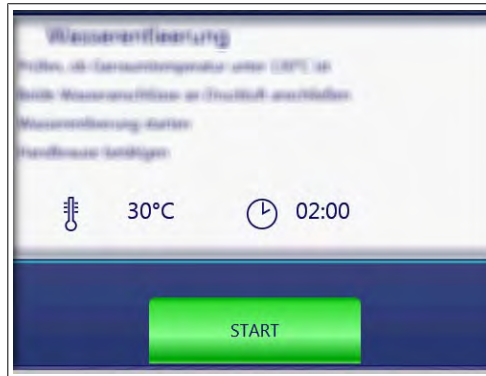
Image: Overview

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.

5.10 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.

5.11 Audio settings
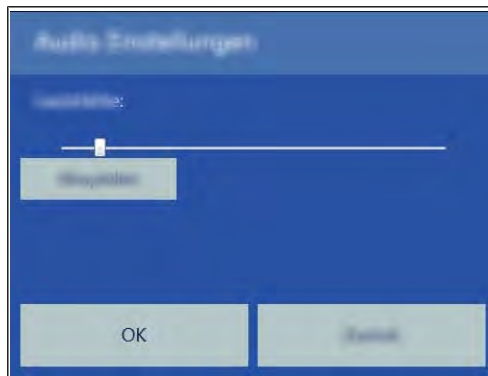
Image: Overview

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

Canceling the selection → Tap the "Back" field.

5.12 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.

5.13 POS activation

Description Software activation for the optional connection to a customer-supplied performance optimization system.

INFORMATION An additional modification of the appliance is required. With activation without retrofitting, the heating circuit will not be activated.

Overview
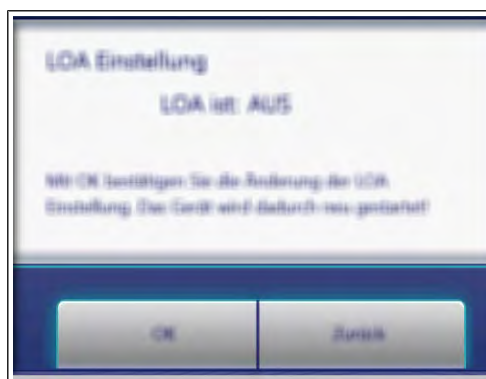
Changing the setting	→ Touch the "OK" field.
	↳ Change saved.
	↳ Automatic restart of the software.
Canceling the selection	→ Touch the "Back" field.

5.14 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.

FM06-078B

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5.15 Software update

Description

$\rightarrow$ 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

$\rightarrow$ Perform according to instructions on the touchscreen and software description.
$\rightarrow$ Tap the "OK" field.
  $\hookrightarrow$ Update begins.
$\rightarrow$ A confirmation then appears on the touchscreen.

5.16 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

Import of the additional contents via the USB interface. See also chapter *Importing additional content*.

5.17 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
$\rightarrow$ Press the "Restore data" button.
$\rightarrow$ Press the *Confirm* button.
  $\hookrightarrow$ Restore data from the SD card.
  $\hookrightarrow$ A confirmation then appears on the touchscreen.
$\rightarrow$ Tap the "OK" button.

5.18 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.

5.19 Water filter maintenance

Description This function is available, but cannot be used on this unit.

5.20 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.

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5.21 Setting units

Overview
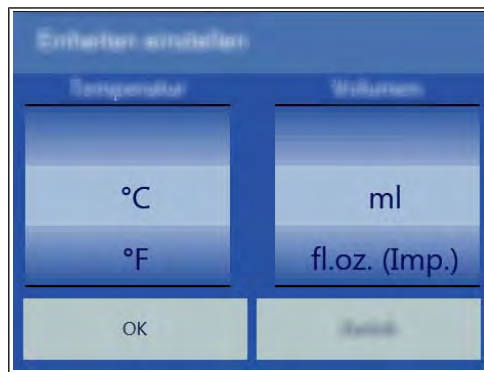
Changing values

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

5.22 Backup relay

Description The control board has a spare relay, which allows alternative use in case of a relay failure. This is only possible with the listed relays.

Locate defective relay → Call relay test in the service menu.

↪ Perform relay test. Locate defective relay by examining the output voltage at the corresponding outputs on the control circuit board.

Occupying the spare relay → Do rewiring according to the table.

Example: When using it for K8 (lift magnet M8), rewire line from connector X17.1 to X12.5.

INFORMATION In case of changes to the wiring, label or deposit note in the unit.

Overview

Assigning the backup relay → Select the defective relay by means of the roller.

→ Touch the "OK" field.

↪ Changes saved.

Canceling the selection Touch the "Back" field.
Relay overview

Relay	Connect or	No.	Description	Instruction
K1	X10	2	Main contactor Q1	Reconnect the line from X10.2 to X12.5 and to assign a reserve relay to it.
K1	X11	1	POS A	Reconnect the line from X11.1 to X12.5 and to assign a reserve relay to it.
K2	X11	2	POS B	Reconnect the line from X11.2 to X12.5 and to assign a reserve relay to it.
K4	X12	3	Magnetic valve for water vapor elimination K12	Reconnect the line from X12.3 to X12.5 and to assign a reserve relay to it.
K5	X12	4	Siphon pump G24	Reconnect the line from X12.4 to X12.5 and to assign a reserve relay to it.
K6	X12	5	Backup relay K6	Reconnect the line from X12.5 to X12.5 and to assign a reserve relay to it.
K8	X17	1	Lift magnet fresh air M8	Reconnect the line from X17.1 to X12.5 and to assign a reserve relay to it.
K17	X12	1	Circulating pump G16	Reconnect the line from X12.1 to X12.5 and to assign a reserve relay to it.

Dismantling and re-programming After changing the control board the original state is restored. Thus, the backup relay is not used unnecessarily.

→ Establish the original condition of the wiring (from X12. 5 to Xx).

→ Calling up the "Backup relay" in the Service menu.

→ Select "OFF" using the roller.

↪ The backup relay is deactivated.

→ Touch the "OK" field.

↪ Changes saved.

5.23 Settings parameters

Description

→ Querying and setting additional parameters.

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Selecting parameters

→ Selecting parameters by adjusting the caster.
→ 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 worth	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.
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	With value "0" Ready2Cook is permanently deactivated.

No.	Basic setting	Standard worth	Adjustment range	Explanation
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 reaching the Ready2Cook temperature
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 autostart 1= Direct favorites 2=Always	Automatic start of a cooking program after selection from AutoChef / Favorite
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	
726	Cleaning reminder	1800	0 = Off 1800 = On	Activation / deactivation of the WaveClean cleaning reminder

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5.24 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.

5.25 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.

5.26 Background lighting

Changing the brightness of the touchscreen
1. Select the desired brightness.
2. Tap the "OK" field.

5.27 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.

6 Status overview direct access

6.1 Description

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

INFORMATION The status overview is intended only for the service technician.

Overview
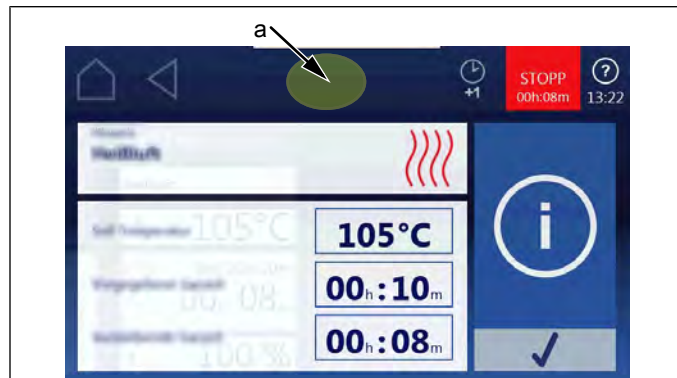
a Hidden field for access to status overview

6.2 Opening the status overview

→ Tap the invisible field three times quickly.

↳ This changes the display to the status overview.

6.3 Exiting the status overview

→ Tap the *Back* button.

↳ Change to the display of the cooking process.

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7 Software

7.1 Overview
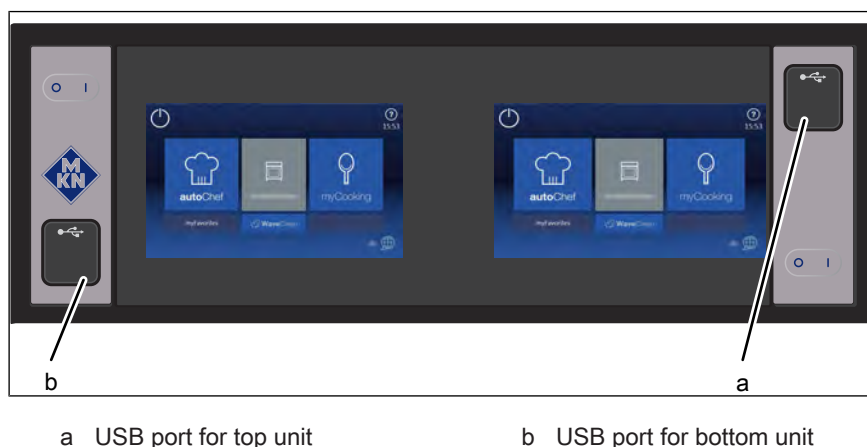
| a | USB port for top unit | b | USB port for bottom unit |

7.2 Software update

| **INFORMATION** | Update each of the two units separately. Two independent controls are involved. |

Preparing the USB stick

Prerequisite USB stick.

Maximum size 64 GB. Formatting FAT (default).

The disk should be empty if possible.

Current software update. The update is provided as packed ZIP file.

1. Open and download Zip file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.
2. Copy unzipped folder "MMIUpdate" to the USB stick.
   ↪ The folder contains the update files
   ↪ The files have the extensions ".tke, .tken and .tkes
   ↪ For example "030319.tke", "030319.tken" and "030319.tkes" (software update V3.3).
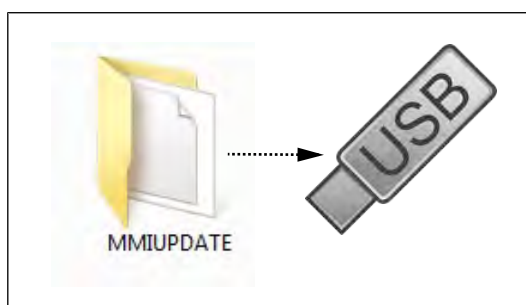
Updating the software

1. Insert the USB stick
2. Switch the appliance on.
3. Tap the "Unit functions" field.

   ↪ Display menu *Unit functions*.
4. Tap the "Unit settings" field.

   ↪ Display window *PIN*.
5. Enter password "**1967**" and tap field *Confirm*.

↪ Display from service area
6. Select the "Software update" field in the left menu area by swiping.
7. Tap the "Software Update" field.
8. Tap the "OK" field.

   ↪ The update begins.

   ↪ Finally, a confirmation appears on the touchscreen.
9. Tap the "OK" field.

   ↪ The software restarts automatically.

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

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.

INFORMATION	Sounds, cookbooks, help texts and videos are not part of the software update. For this purpose, the additional content must be imported.

FM06-078B

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7.3 Importing additional content

Description

Description The additional content includes the following files:

- Pictures for AutoChef

- Help information

- Sound files

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

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

Preparing the USB stick

Prerequisite USB stick.

Maximum size 64 GB. Formatting FAT (default).

The disk should be empty if possible.

Current additional content. The update is provided as packed ZIP file.

1. Open and download Zip file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.
2. Copy the unzipped folder "Content_CODG2" to the USB stick.

    ↪ In the folder there are other subfolders. This may not be changed.

Content_CODG2
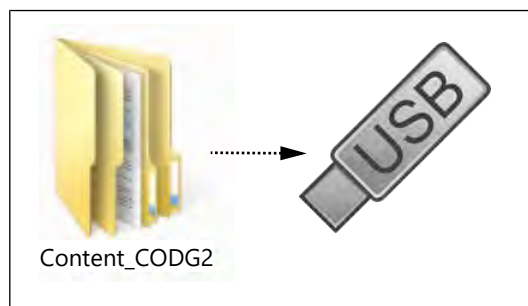
Importing additional content

1. Insert the USB stick
2. Switch the appliance on.
3. Tap the "Unit functions" field.

    ↪ Display menu *Unit functions*.
4. Tap the "Unit settings" field.

    ↪ Display window *PIN*.
5. Enter password "**1967**" and tap field *Confirm*.

↪ Display from service area
6. Select the "Import additional content" field in the left menu area by swiping.

7. Tap the "Import additional contents" field.
8. Tap the "OK" field.

 ↳ The data is imported.

 ↳ Finally, a confirmation appears on the touchscreen.

9. Tap the "OK" field.

7.4 Importing the manufacturer's cookbook

Preparing the USB stick

→ 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."
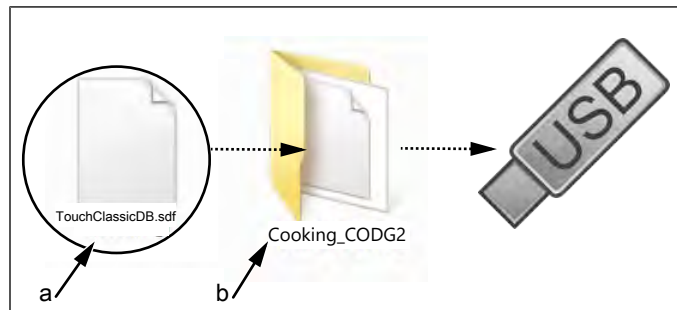
| a | Update file | b | Cooking_CODG2 folder |

Importing a cookbook

→ Insert USB stick

→ Tap the "Import manufacturer cookbook" field.

→ Tap the "OK" field.

 ↳ The data is imported.

 ↳ Finally, a confirmation appears on the touchscreen.

→ Tap the "OK" field.

→ Perform unit restart via key *On Off*.

8 Trade show mode

8.1 Description

Trade show mode allows appliance operation for demonstration purposes.

8.2 Opening the unit functions

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

8.3 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.
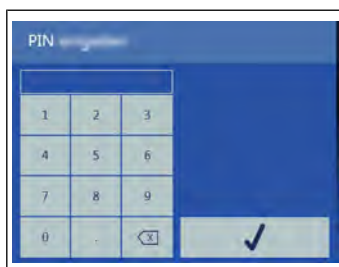
→ Enter password **888** and tap the *Confirm* button.
    ↳ Display of *Trade show* menu.

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.

9 Electronics

9.1 Block diagram for the control
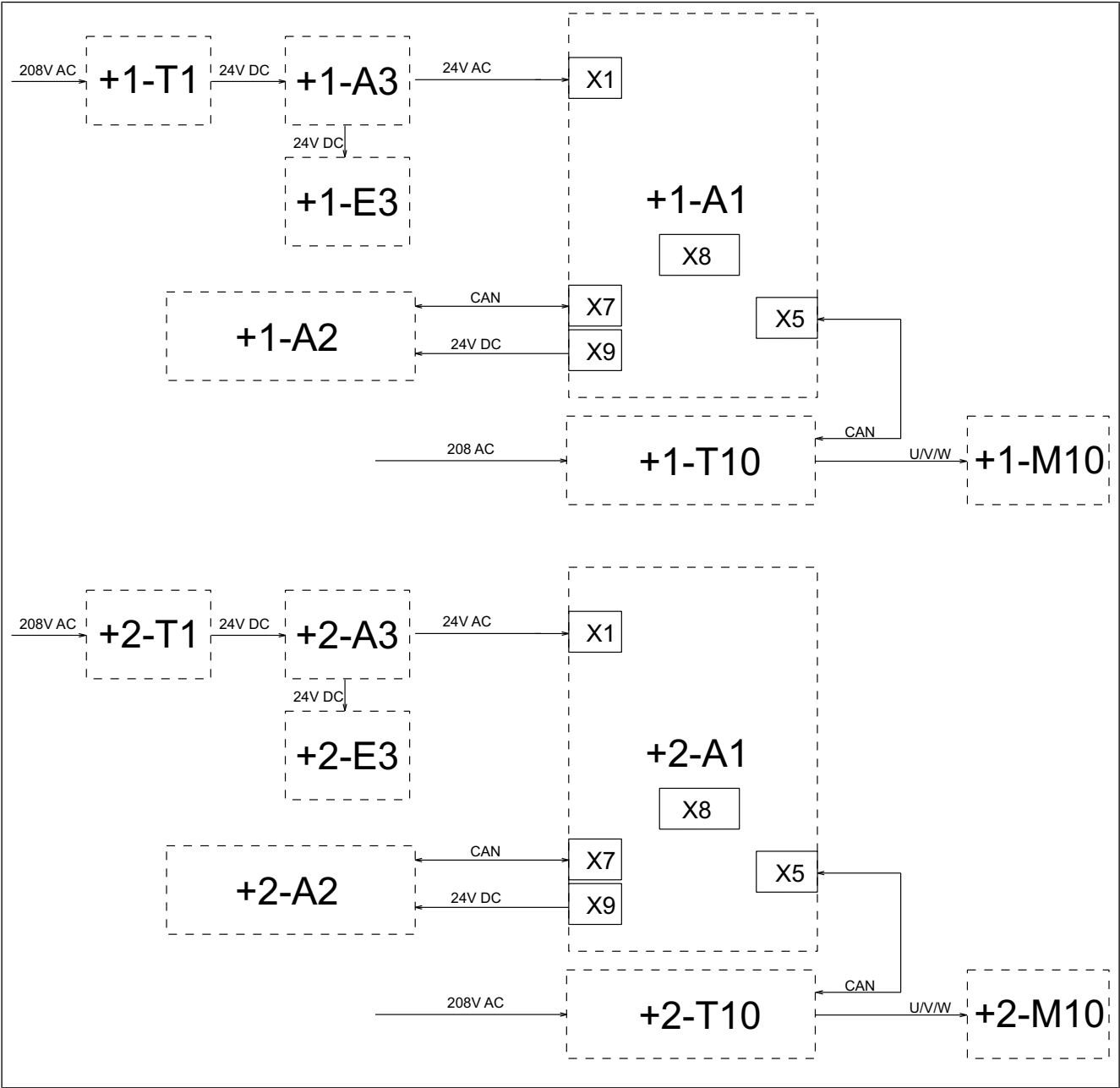
Legend	A1	Control board		A2	Operating panel
	A3	Lighting circuit board		E3	LED illumination
	M10	Fan motor		T1	Power pack
	T10	Power board for motor			

"+1" = Upper unit
"+2" = Lower unit

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9.2 Control board

Layout
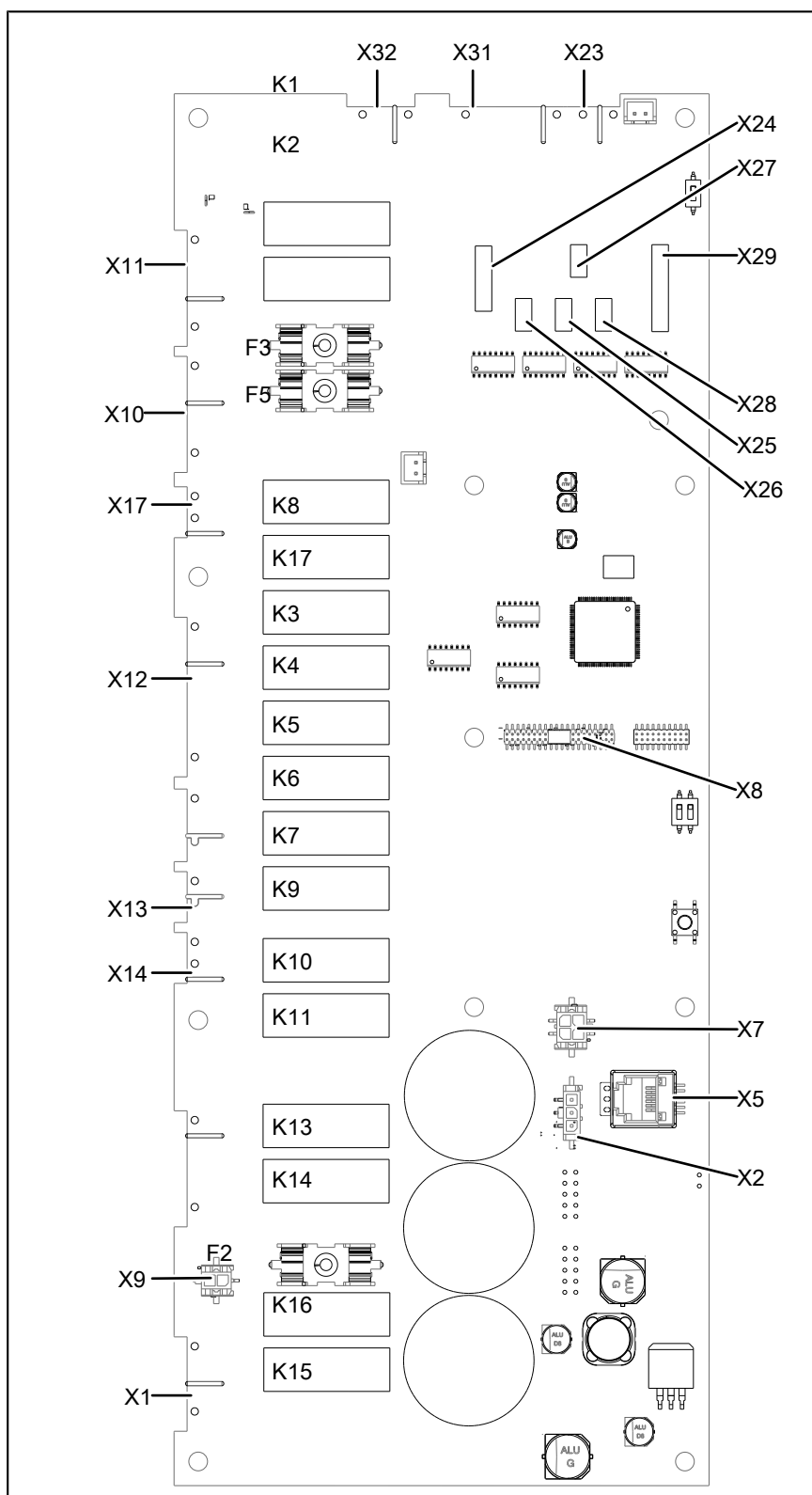
Configuration

Connector X1

No.	Description
1	Input 24 V DC for lighting
2	Output 24 V DC for lighting
3/4	Control board I/O voltage supply (24 V AC)

Connector X5 CAN bus line to the motor M10

Connector X7 MMI communication

Connector X8 Digital key contains device-specific information.

Connector X9 (24V DC)

No.	Description
1/2	24 V DC supply for operating panel (MMI)

Connector X10 (208V AC)

No.	Description
1	208 V input voltage for components
2	Output K1, main contactor Q1 (via thermal switch and safety temperature limiter)
3/4	-
5	N

Connector X11 (208V AC) optional

No.	Description
1	Output K1, POS A
2	Output K2, POS B
3	Input 208V, POS C
4	-
5	N

Connector X12 (208V AC)

No.	Description
1	Output K17, WaveClean pump G16
2	-
3	Output K4, solenoid valve K12
4	Output K5, siphon pump G24
5	Output K6, backup relay
6	-
7	N

Connector X13 (potential-free)

No.	Description
1	Input K10, 208 V AC
2	Output K10, 208 V AC (switching hood to high-speed)

Connector X14 Not assigned

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Connector X17 (208V AC)

No.	Description
1	Output K8, lift magnet M8
2	N for lift magnet M8

Connector X23

No.	Description
1	Output to upper or lower unit. "Unit On" message , 24 V DC
2	Input from upper or lower unit. "Unit On" feedback, 24 V DC

Connector X24 B1 core temperature sensor

Connector X25 B2 cooking chamber sensor

Connector X26 Not assigned

Connector X27 B4 Vapor sensor

Connector X28 Not assigned

Connector X29 Not assigned

Connector X31 (24V DC)

No.	Description
1	Output +, steaming unit valve 1
2	Output -, steaming unit valve 1
3	Output +, steaming unit valve 2
4	Output -, steaming unit valve 2
5	Output +, pressure switch B14
6	Input +, from pressure switch B14
7	0 V

Connector X32 (24V DC)

No.	Description
1/2	Output, SSR Q2

Connector X35 Not assigned

Button The buttons have no function and are intended for internal use.

9.3 Safety overview
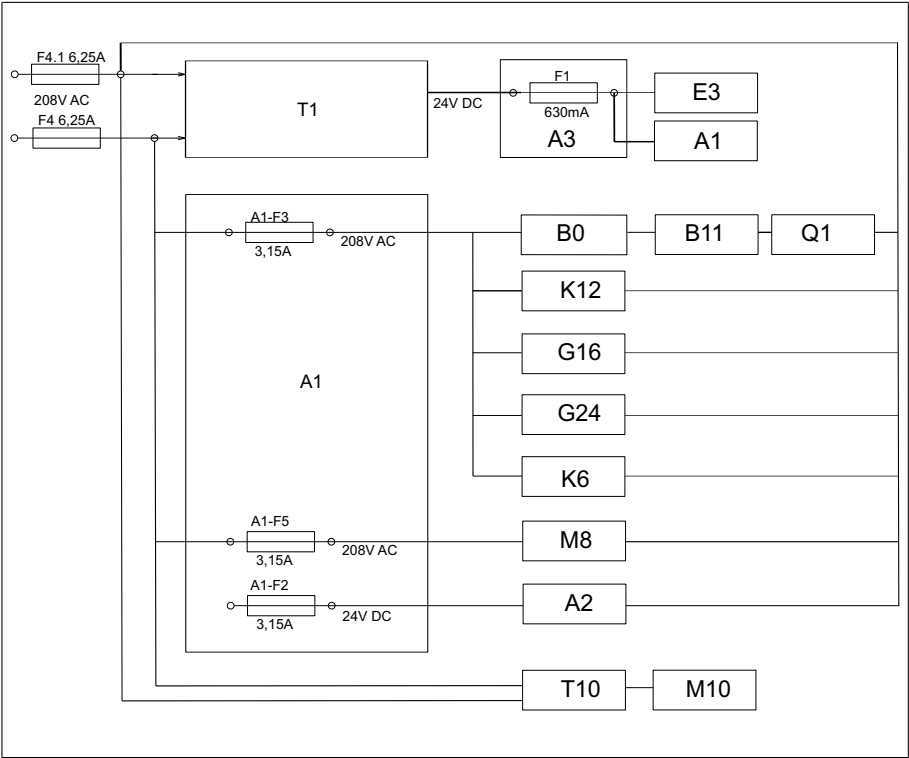
Legend	A1	Control board	A2	Operating panel
	A3	Lighting circuit board	B0	Thermal switch 85°C (185 °F)
	B11	Cooking chamber STL	E3	LED illumination
	G16	WaveClean pump	G24	Siphon pump
	K6	Backup relay	K12	Magnetic valve extinguishing
	M8	Lift magnet	M10	Fan motor
	Q1	Main contactor	T1	Power pack
	T10	Power board		

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10 Error messages

10.1 Symbols for errors

For some errors, an additional symbol appears in the title bar.

If the exact error is not known, switch the unit off and then back on. In the event of an error, the exact error will appear in the display.

Display on the left touchscreen	Description
	Cooking sensor defective. Unit in emergency mode Emergency operation.
	Core temperature sensor defective,
	Fan fault. Operation no longer possible. Switch the unit off and then back on.

10.2 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.

FM06-078B

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10.3 Temperature sensor area

Cooking chamber sensor defective (694, 695)

```
┌─────────────────────────────────────────────────────────────────────────┐
│ Check contacting from cooking chamber sensor to control board A1 X25. Error eliminated? │
└─────────────────────────────────────────────────────────────────────────┘
                                      │
                                      ▼
┌─────────────────────────────────────────────────────────────────────────┐
│ Remove existing cooking chamber sensor from the control board A1 X25 and plug in new cooking │
│ chamber sensor. Error eliminated? │
└─────────────────────────────────────────────────────────────────────────┘
```

No   Yes

| Replace control board. | | Replace cooking chamber sensor. |
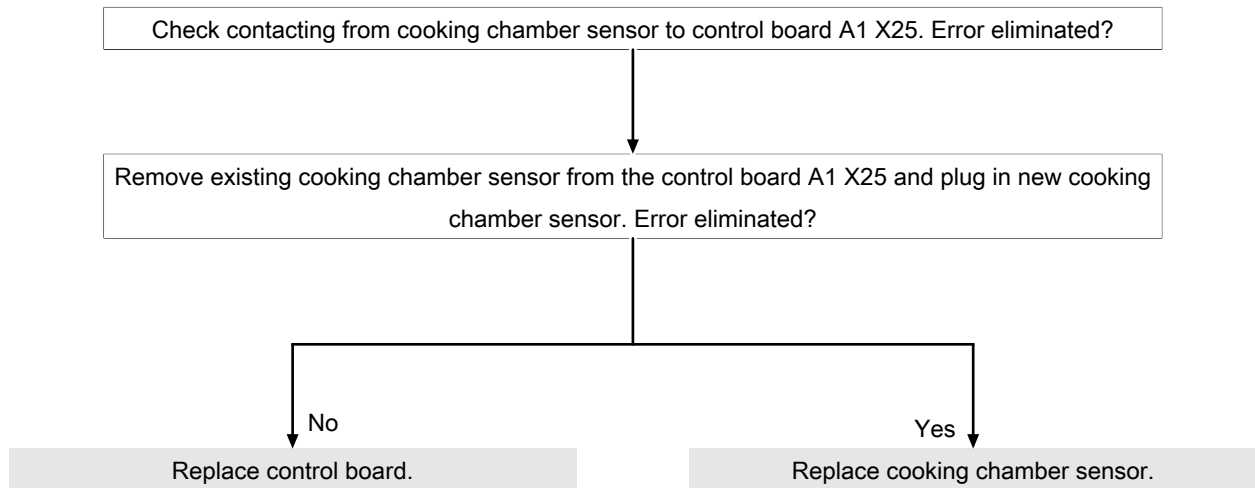
Function check   The measurement values can be called up in the status overview.

Core temperature sensor defective (699, 700)
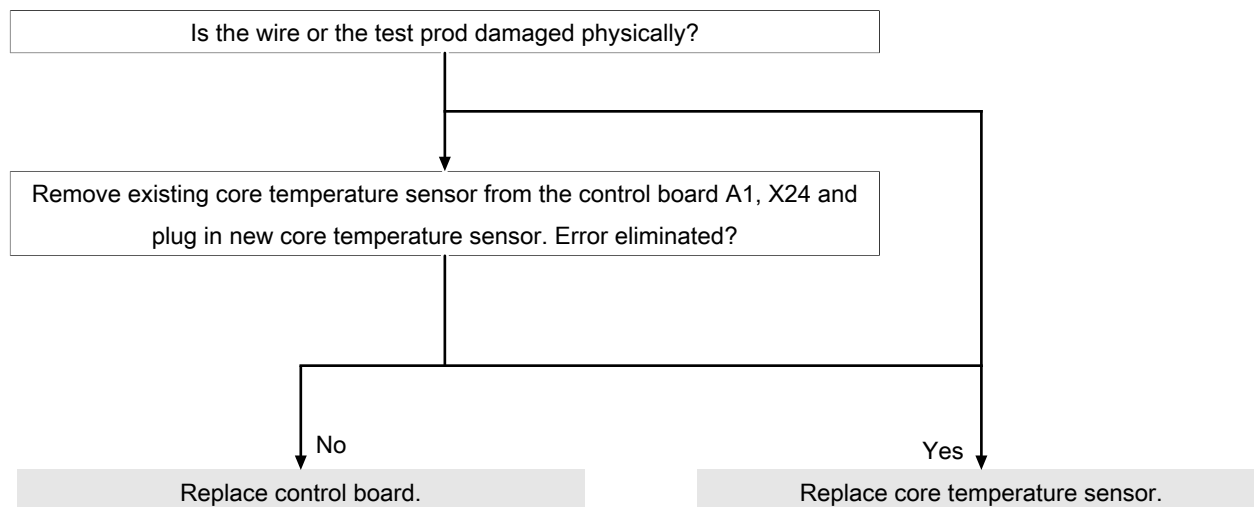
```
┌─────────────────────────────────────────────────────────────┐
│        Is the wire or the test prod damaged physically?      │
└─────────────────────────────────────────────────────────────┘

┌─────────────────────────────────────────────────────────────┐
│ Remove existing core temperature sensor from the control     │
│ board A1, X24 and                                            │
│ plug in new core temperature sensor. Error eliminated?       │
└─────────────────────────────────────────────────────────────┘
```

No   Yes

| Replace control board. | Replace core temperature sensor. |

Function check   The measurement values can be called up in the status overview.

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Water vapor sensor defective (710)

Description	Switching to emergency operation takes place automatically. The software controls steam elimination. This results in higher water consumption.
Naming on the circuit diagram	B4
Troubleshooting	Unlatch and open the operating panel.

→ Check contacting on control board A1, X27.

→ Remove existing water vapor sensor from the control board A1, X27 and plug in new water vapor sensor.

↳ The fault message disappears. Replace water vapor sensor. To do this, remove the left side wall.

↳ The fault message is still displayed. Replace control board.

Risk of frost (TMP_ID72)

$\rightarrow$ Increase the room temperature and switch on unit again.

$\rightarrow$ Change location of the unit.

Service-instructions

FM06-078B

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Excess temperature in the cooking chamber (ID18, ID73)

Description The measured temperature in the cooking chamber is outside the allowable range of more than 320°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.

Prerequisite Troubleshooting • No display of fault messages from the temperature sensor.

Ensure that there are no fault messages from defective temperature sensors.

- Switch on unit (do not start any cooking program)

- Measure the voltage/current draw on the load side of the solid-state relay (SSR).

Can the voltage or current be measured (present)?

Yes

Solid-state relay is defective.

Replace component and check that fan impeller is balanced.

No

Measure the control voltage on the input side of the solid-state relay.

Is voltage present and does the LED light up on at least one of the solid-state relays?

Control board A1 defective.

Replace component.

Function check The measurement values can be called up in the status overview.

10.4 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
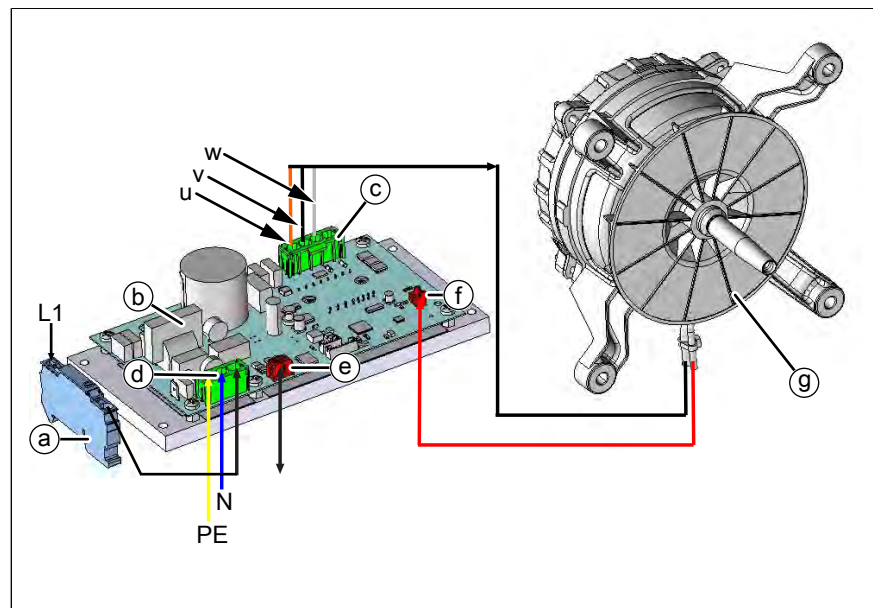
a Fuse F1 6.3 A

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 or temperature limiter triggered (702)

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

INFORMATION

Nature and source of the hazard

Perform software update. The installed version should be 3.3.17 or higher.

From this version on, the software contains an optimized motor control and

new error messages.

Does the fault message appear only after a longer period of operation or at high temperatures?

No

Switch unit on and measure voltage at main contactor Q1, terminals A1 and A2. Is voltage present at the main contactor (switched on)?

Yes

Via the thermal switch B0 the unit switches off the main contactor Q1 at 85 C° (185°F) in the rear area. The fault message appears. The reason may be a non-functioning hood motor. Test hood operation.

No

No voltage present. There is a fault in the STB circuit.

Yes

Voltage present. There is an error in the fan area.

Has the safety temperature limiter tripped?

Continued on next page

No

Check thermal switch B0 for proper operation. Is the contact closed when cold?

Yes

Reset the safety temperature limiter. Check solid-state relay and replace if necessary.

No

Thermal switch defective.

Yes

Check fuse F3 on control board A1. Has the fuse blown?

Yes

Check the following components in this order for a short-circuit:

- Main contactor Q1
- Solenoid valve K12
- WaveClean pump G16
-Siphon pump G24
-Control board

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Continued from previous page

Does the error appear only sporadically?

No

Measure input voltage to motor control. Are 208 V present and the green LED on the motor control unit lit?

Yes

Replace motor control unit. Check whether the fault still appears.

Yes

Replace fan motor. Check whether the fault still appears.

Yes

Replace communication line between motor control and control board. If the error persists, the control board must be replaced.

No

Yes

- Replace motor control
- Fan motor defective
- Replace control board

Check fuse F4 / F4.1. Is one defective?

No

Yes

Check contactor Q1 (load side) for proper operation. Is voltage present on the output side?

Replace motor control and fuse F1. Does the error still exist?

No

Contactor Q1 defective.

Yes

Contactor Q4 defective.

FM06-078B

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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 power board T10.

Troubleshooting

FAN_ID6: Motor overtemperature

Description

The error message was introduced with software version 3.3.17.

The temperature from the motor is monitored via an integrated thermal switch (bimetal). In faultless condition this is closed (passage). In the event of an error, the contact opens and the error message FAN_ID6: Motor overtemperature appears. After cooling down, the thermoswitch resets itself automatically.

Troubleshooting

```
┌─────────────────────────────────────────────┐
│  Does the error message appear sporadically? │
└─────────────────────────────────────────────┘
```

Yes / No

Does the error message appear sporadically?

Yes

Make sure that there is no heat source (e.g. deep fryer, stove) next to the unit. All details are included in the installation instructions.

No

Disconnect the cable from the motor at connection S501 on the motor control unit. Perform continuity (resistance) test on the wire from the motor. The motor must not be hot during this process.is there continuity (approx. 0 Ohm)?

Check supply air (hoses, solenoid for leaks). Replace damaged hoses. Check whether the fault still appears.

Yes

Yes

No

Replace motor control unit. Check whether the fault still appears.

Yes

Replace motor.

FM06-078B

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FAN_ID23: Fan error: Attempt to restart

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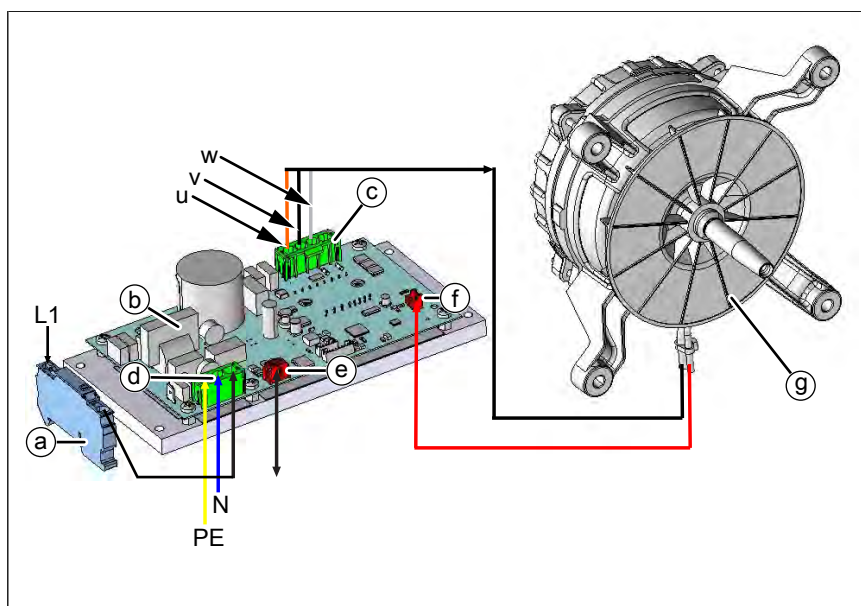
a	Fuse F1 6.3 A	b	Power board
c	Connector S300. Motor power supply	d	Connector S100. Power supply circuit board
e	Connector S500. CAN connection to control circuit board	f	Connector S501. Input for temperature switch from motor

Description

The control board A1 does not receive any response regarding speed from fan motor M10. There is either a problem with the 320 V voltage supply from the power board or a fault in the fan.

Troubleshooting

⚠ **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!

Switch off unit and restart. Is the fault still present?

↓ Yes

Replace communication cable between power board and control board for test purposes and perform test run. Switch unit on "I." Error eliminated?

↓ No

Measure output voltages at connector S300. Is a voltage of approx. 320 V DC present?

No ↓   Yes ↓

No voltage present. Replace power board for motor.   Voltage present. Replace fan motor.

FM06-078B

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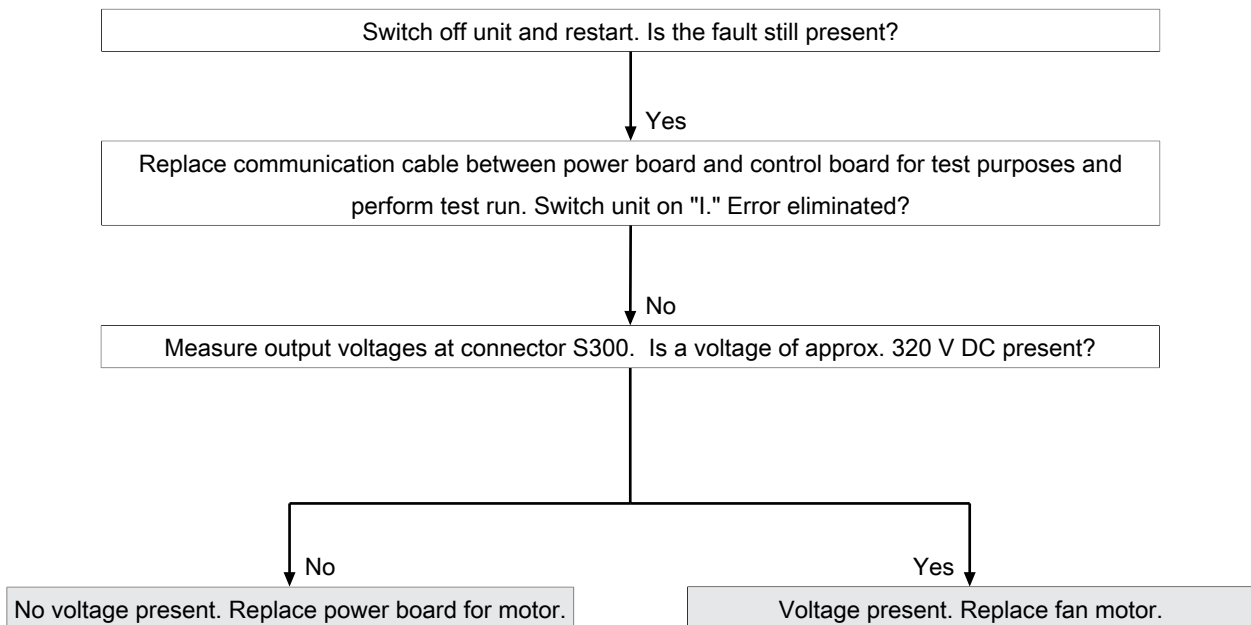
FAN_ID27: Motor system error

Description

The error message is generated when the control board receives a too low or no speed from the motor control. After unit restart via "ON/ OFF" the error is reset. A new query is made at the start of the cooking program.

Troubleshooting

Does the error message appear sporadically?

Yes | No

Make sure that the fan wheel is not blocked and moves freely (no grinding noise)		Is the green LED on the motor control unit lit (unit must be switched on)?

Yes

No

Replace engine control unit		- ensure 208V power supply to the component. - Replace motor control unit if necessary.

Replace motor

Replace control board

Replace CAN cable between control board and engine control unit

10.5 Water area

Water pressure too low (709)

Overview
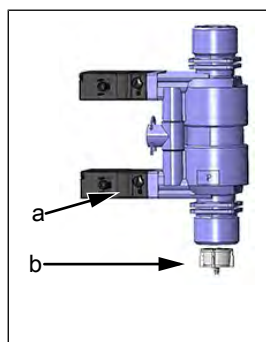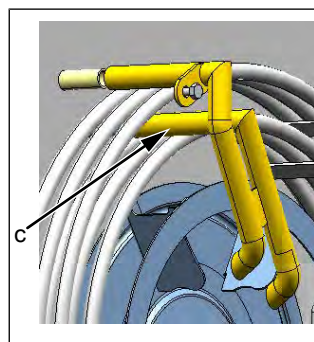
a Pressure switch	c Water supply pipe in the cooking chamber
b Sieve	

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 for calcification.
	Ensure that the hose between the steaming unit and supply pipe is not clogged.

Perform DynaSteam test again and check water quantity with measurement container.
Does the water quantity correspond to the set quantity (± 10 %)?

Replace steaming unit.

Yes	No
Replace pressure switch.	Ensure that the supply pipe is not clogged. Check whether the fault still appears.

Yes

Replace steaming unit.

Water pressure during WaveClean too low

Description

This fault message is displayed if the pressure switch registered a water pressure that is too low 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.

10.6 Electronics / control area

Failure to access external EEPROM (SOF_ID12)

Description

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

Troubleshooting

→ Make sure that the digital key is oriented correctly and inserted fully. The side with the hole must point to the sensor connections.
→ Control board defective.
→ Digital key defective.

Faulty CAN connection

Description

There is a communication fault between the operating panel and control panel. In addition, temperature sensor and fan fault messages appear on the touchscreen.

Troubleshooting

→ Replace communication cable between operating panel and control panel circuit board.
→ Replace control board.
→ Replace operating panel.

5007: Not enough storage space for software update

Description

The internal memory is full. The current version will be restarted. The cause can be faulty data import (additional content).

Troubleshooting

→ Replace operating panel. Alternatively, continue to operate with the current software.
→ Send the operating pane to the manufacturer for repair.

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5008: No new version found

Description

The following causes generate the message:

USB stick not recognized or not present

Required content not present on the USB stick or saved incorrectly.

The software version on the unit is newer than that on the USB stick.

Troubleshooting

→ Check content and structure of the USB stick.

→ Ensure that the USB interface is functioning properly.

  ↳ On USB sticks with an LED, the LED must be on.

  ↳ Check communication, e.g. by exporting HACCP data

→ Use a different USB stick

If the message appears after a software update, confirm by pressing "OK". In individual cases, this may be required several times.

5009: The application could not be started. Application is restarting.

Description

The software does not boot. There is a fault in the communication or the software is damaged.

Troubleshooting

→ Confirm the message with "*OK*".

  ↳ The software is restarted.

→ The error may appear twice. Repeat the procedure. If the error still appears, proceed according to troubleshooting. With software version 1.78 (10/2018) or higher, a restore is possible by means of a rescue tool. Contact the manufacturer in this regard.

Troubleshooting takes place by disconnecting individual CAN bus connections. Other error messages are generated in the process. The decisive factor is that the original message "5009 or 5010" is no longer displayed.

Disconnect CAN bus cable between control board and motor. Then restart the unit. Does the error still appear?	

Yes — Disconnect the communication line between the operating unit and the control board. Check whether the fault still appears.

No — Replace CAN bus cable. Check whether the fault still appears.

Yes → Replace motor.

No — Replace communication line. Check whether the fault still appears.

Yes → Restore software with USB backup tool

Yes — Replace control board

Replace operating unit

5010: The application could not be started. Restore configuration backup?

Description

Starting the software is not possible because of an error. The system will attempt to restore the configuration.

Troubleshooting
→ Confirm message. An automatic restore starts.
→ Next, update the software.
→ If the error continues to appear, the operating panel needs to be replaced. With software version 1.78 (10/2018) or higher, a restore is possible by means of a rescue tool. Contact the manufacturer in this regard.

5013: Application could not be restored! Restore to factory settings with OK.

Description

Starting the software is not possible because of an error. The system will attempt to restore the configuration.

FM06-078B

Troubleshooting

→ Confirm message. An automatic restore starts.

→ Next, update the software.

→ If the error continues to appear, the operating panel needs to be replaced. With software version 1.78 (10/2018) or higher, a restore is possible by means of a rescue tool. Contact the manufacturer in this regard.

5027: The application could not be started. Perform a software update

Description

The software does not boot. There is a software error.

Troubleshooting

Perform a software update.

→ Switch off the unit

→ Insert prepared USB stick.

→ Switch on the unit.

→ Follow the instructions on the screen. Confirm this with OK.

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.

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.

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Door is open - cooking program was stopped

Description

During fault-free operation, this message appears if the cooking chamber door is opened during an active cooking program. If the message is displayed with a closed cooking chamber door, there is an error on the reed contact switch or door magnet.

Overview

Troubleshooting

The operating state of the reed contact switch can be checked in the status overview.

1. Open cooking chamber door. Check reed contact switch operation with external magnet.
   ↪ The magnet is not detected. Check reed contact switch and replace if necessary.
   ↪ The magnet is detected. Check magnet in cooking chamber door for correct position and replace if necessary.

Overtemperature control (TMP_ID2)

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

Troubleshooting Contact manufacturer.

11 Circuit diagram 3PE AC 208-240V

Service-instructions

+2-XE1:1 | /3.2
+2-Q2:A1 | /3.2
+2-Q2:B1 | /3.2

CAN +2-M10 /7.6 | +2-A1:X5

/5.3 | +2-A1:X10:1
/2.3 | -XL2-PE:PE

+2 -Q1 /5.3

/3.6 | -Q4.2:3
/3.5 | -Q4.2:1

+2 -T10
S500   S100   S501   S300
+2-M10-X1
+2-M10
M 3~
Garraum unten
lower Chamber
+2-M10-X2

PK GY YE GN BN WH
CAN_L D_L CAN_H D_H GND_IN 5V_EN
PE N L1
Temp switch
PE
W V U

/5.8/ +2-A3:X2:1
/8.3 | -X30:5

24V DC
AC 230V
+24V

+2 -T1

+2 -F4   6,25AT

/5.1 | +2-A1:X10:5
/5.1 | +2-Q1:A2

+2 -XL2.1

+2 -F4.1   6,25AT

+2 -Q1 /5.3

+1-XE1:1 | /3.0
+1-Q2:A1 | /3.0
+1-Q2:B1 | /3.0
+2-T10:3 | /2.8

CAN+1-M10 /6.6 | +1-A1:X5

/4.3/ +1-A1:X10:1

+1 -Q1 /4.3

/3.4 | -Q4.1:3
/3.4 | -Q4.1:1

+1 -T10
S500   S100   S501   S300
+1-M10-X1
+1-M10
M 3~
Garraum oben
upper Chamber
+1-M10-X2

PK GY YE GN BN WH
CAN_L D_L CAN_H D_H GND_IN 5V_EN
PE N L1
Temp switch
PE
W V U

/4.8/ +1-A3:X2:1
/8.3 | -X30:3

24V DC
AC 230V
+24V

+1 -T1

+1 -F4   6,25AT

/4.1 | +1-Q1:A2
/4.1 | +1-A1:X10:5

+1 -XL2.1

+1 -F4.1   6,25AT

-XL2-PE

+1 -Q1 /4.3

+1 -X1
L1 L2 L3 PE

only TKECOD610O

Kühllüfter
Cooling Fan

-G8

-K2

-XM1

-G7

-XM1

only TKECOD610T

Motor Ablufthaube
Hood fan

-K2
/3.4

-XM1

fast

-M1 slow

-XM1

/2.7 | +2-Q1:24

/2.7 | +2-Q1:14

-Q4.1
/3.4

-Q4.2

/5.6 | +2-A1:x13:1

/5.6 | +2-A1:x13:2

+2-A1-K10

/2.3 | +1-Q1:24

/2.3 | +1-Q1:14

-Q4.2
/3.5

-Q4.1

/4.6 | +1-A1:x13:1

+1-A1-K10

/4.6 | +1-A1:x13:2

-K2

/5.1 | +2-A1:X32:4

/5.1 | +2-A1:X32:3

/5.1 | +2-A1:X32:2

/5.1 | +2-A1:X32:1

+2 -Q2

+2 -XE1

+2 -E1

Garraum unten
lower Cabinet

/2.8 | +2-Q1:2

/2.8 | +2-Q1:4

/2.8 | +2-Q1:6

/4.1 | +1-A1:X32:4

/4.1 | +1-A1:X32:3

/4.1 | +1-A1:X32:2

/4.1 | +1-A1:X32:1

+1 -Q2

+1 -XE1

+1 -E1

Garraum oben
upper Cabinet

/2.3 | +1-Q1:2

/2.3 | +1-Q1:4

/2.3 | +1-Q1:6

TK E-COMBIDAEMPFER 6.10

Benennung
Wiring Diagram TKECOD610 3PE AC 208-240V
Zeichnungsnummer
10019565-0PS03WA

Maßst.

	Datum	Name		
Gez.	10.10.18	WOY		
Gepr.				
	Frei.			

Norm: DIN 81346

Ers. d.:
Ers. f.:

| A | G7/G8 hinzu | 18.02.19 | woy | |
| In. | Änderung | Datum | Name | |

STEUERPLATINE
CONTROL PCB

24VDC
+ −

K15

X1

X2
X3

-A3
+1

F1:630mA slow

/8.3 | -X30:4
/2.2 | +1-T1:−

-E3
+1
X1
24VDC

Garraumbeleuchtung
Cabinet light

K11
X14

K10
X13

/3.4 | -K2:A1
/3.4 | -Q4.1:2

K9
X16

/7.1 | +2-A1:X23:2
/7.1 | +2-A1:X23:1

K17 K3 K4 K5 K6 K7
X12

-G24
+1

-K12
+1

-G16
+1

Siphon Pumpe
Siphon Pump

Wrasenventil
Drain cooling Valve

WaveClean Pumpe
WaveClean Pump

F5
K8
X17

-M8
+1

Hubmagnet
Lift Magnet

F3
K1
X10

/2.3 | +1-F4:2

-B0
+1

Thermoschalter Platine
Thermo Switch PCB

-B11
+1

STB Garraum
STL Cabinet

-Q1
+1

Hauptschütz
Main Contactor

A1   A2

K2
X11

-A1
+1
X31

-B14
+1
Druck
Pressure

X32

/3.1 | +1-Q2:A+
/3.1 | +1-Q2:A−
/3.2 | +1-Q2:B+
/3.2 | +1-Q2:B−

-K20
+1
PHI

-K21
+1

/2.1 | +1-XL2.1:3
/2.1 | +1-XL2.1:2

TK E-COMBIDAEMPFER 6.10

Benennung
Wiring Diagram TKECOD610 3PE AC 208-240V
Zeichnungsnummer
10019565-0PS04WA

Datum   Name
Gez. 10.10.18 WOY
Gepr.
Frei.

Norm: DIN 81346

Ers. d.:
Ers. f.:

Malst.   Seite/n
           4 /9

A   G7/G8 hinzu   18.02.19 woy
In.   Änderung   Datum   Name

STEUERPLATINE
CONTROL PCB

+2
-A1

X31 -1 -2 -3 -4 -5 -6 -7

+2
-B14 [P] Druck
Pressure

X32 -1 -2 -3 -4

+2 PHI
-K20

+2
-K21

/3.3 | +2-Q2:A+
/3.3 | +2-Q2:A-
/3.3 | +2-Q2:B+
/3.3 | +2-Q2:B-

K15

X1 1 2 3 4

24VDC
+ -
3 4

K11
X14 1 2

K10
X13 1 2 3
/4.5 | +1-A1:x13:2
/3.5 | -Q4.1:2

K9
X16 1 2 3
/6.1 | +1-A1:X23:2
/6.1 | +1-A1:X23:1

K17K3K4K5K6K7
X12 1 2 3 4 5 6 7

+2
-G24   Siphon Pumpe
        Siphon Pump

+2
-K12   Wrasenventil
        Drain cooling Valve

+2
-G16   WaveClean Pumpe
        WaveClean Pump

F5
K8
X17 1 2

+2
-M8   Hubmagnet
       Lift Magnet

F3
K1
X10 1 2 3 4 5
/2.8 | +2-F4:2

+2
-B0   Thermoschalter Platine
       Thermo Switch PCB

+2
-B11   STB Garraum
       STL Cabinet

+2
-Q1   Hauptschütz
       Main Contactor

A1 A2

K2
X11 1 2 3 4 5

/2.5 | +2-XL2.1:2
/2.5 | +2-XL2.1:3

+2
-A3

X2 1 2 3
X3 1 2 3

F1:630mA slow

/8.3 | -X30:6
/2.7 | +2-T1:-

+2
-E3   X1 - + 24VDC
       Garraumbeleuchtung
       Cabinet light

STEUERPLATINE
CONTROL PCB

CAN BUS
X7
yellow /8.5 | -x31:3
brown /8.4 | -x31:2
white /8.4 | -x31:1

24VDC
F2 3,15AT
K16
X9
white /8.2 | -x30:1
brown /8.3 | -x30:2

CAN BUS
Motor
X5
CAN+1-M10 /2.4

X21
+2 -XB15
+1 -B15
Tür
Door

X28

X27
BK
WH
Wrasen
Drain Probe
+1 -B4

X26

X25
BK
WH
Garraum 1
Cabinet Probe 1
+1 -B2

X29

X24
GN
YE
BL
RD
WH
Kerntemp. 1
Coretemp. Probe 1
+1 -XB1
+1 -B1

X23
-1 +24VDC
-2 DIN
-3 GND

+1 -A1

/5.5 | +2-A1:x16:2
/5.5 | +2-A1:x16:1

STEUERPLATINE
CONTROL PCB

CAN BUS
X7

green /8.5 | -X31:7
pink /8.5 | -X31:6
grey /8.5 | -X31:5

24VDC
3,15AT
F2
K16
X9
+
-
white /8.3 | -X30:7
brown /8.3 | -X30:8

CAN BUS
Motor
X5
CAN +2-M10 /2.8

X21
+2
-XB15
+2
-B15
Tür
Door

X28

X27
Wrasen Drain Probe
+2
-B4
BK
WH

X26

X25
Garraum 1 Cabinet Probe 1
+2
-B2
BK
WH

X29

X24
Kerntemp. 1 Coretemp. Probe 1
+2
-XB1
+2
-B1
GN
YE
BL
RD
WH

X23
+2
-A1
+24VDC
DIN
GND

/4.5 | +1-A1:X16:2
/4.5 | +1-A1:X16:1

TK E-COMBIDAEMPFER 6.10

Benennung
10019565 TKECOD610 3PE AC 208-240V
Zeichnungsnummer
10019565-0PS0 WA

Maßst. Seite/n
7 /9

Datum Name
Gez. 10.10.18 WOY
Gepr.
Frei.

Ers. f.: Ers. d.:

Norm: DIN 81346

A G7/G8 hinzu 18.02.19 woy
In. Änderung Datum Name

Right (lower Unit)

Left (upper Unit)

+1
-A2

+2
-A2

Benennung Denomination	MKN Nr. MKN no.	Bezeichnung	Description	Sicherung auf Platine Fuse on board	Bemerkung Comment
A1	10013404	Steuerplatine	Control pcb		
A2	10019401	Bedienpanel	Operation panel	A1-F2	
A3	10018484	Platine Beleuchtung	Lighting pcb		
B0	10010554	Thermoschalter 85°C aus	Thermoswitch 85°C off		
B1	10019993	Kerntemperaturfühler	Core temperature probe		
B2	10013520	Garraumfühler	Cabinet probe		
B4	10019901	Wrasen-Temperaturfühler	Drain probe		
B11	202807	Sicherheitstemperaturbegrenzer 330 °C	Safety limit switch 330 °C		
B14	202601	Druckschalter 2 A	Pressure switch 2 A		
B15	10013771	Reedkontaktschalter	Reed contact switch		
E1	10019578	Rohrheizkörper 9,6 kW; 240V Steckverb.	Heating element 9,6 kW; 240V with plug		
E3	10018561	LED Garraum	LED Cabinet	A3-F1	
F4/F4.1	10016452	Sicherung Fein 6,25A Träge	Fuse Fine 6,25A Slow		
A1-F2/F3/F5	203742	Sicherung 3,15 A Träge; 20 x 5 mm	Fuse 3,15 A ; 20 x 5 mm		
A3-F1	202776	Sicherung 630mA Träge	Fuse 630mA Slow		
G7/G8	203819	Kühllüfter 230V, 119x119mm	Cooling fan 230V, 119x119mm		only TKECOD610O
G16/G24	203825	Pumpe 230 V; 50 Hz	Pump 230 V; 50 Hz	A1-F3	
	203826	Pumpe 230 V; 60 Hz	Pump 230 V; 60 Hz	A1-F3	
K2	202801	Relais 8A 250V	Relais 8A 250V		
K12	10018361	Magnetventil	Solenoid valve	A1-F3	
K20/K21	10018744	Beschwadungseinheit mit Druckschalter	Water steaming unit with pressure switch		
M1	10019597	Ventilator Radial 355W 230V UL	Ventilator Radial 355W 230V UL		only TKECOD610T
M8	10013772	Hubmagnet 230 V AC	Lift magnet 230 V AC	A1-F5	
M10	10018537	Motor	Motor		
Q1	10013970	Schütz 32 A, 230 V	Contactor 32 A, 230 V	A1-F3	
Q2	10011591	Halbleiterrelais Dual 50 A; 4 - 32 V	Solid state relay dual (SSR) 50 A; 4 - 32 V		
Q4.1/Q4.2	10019529	Wendeschütz 18 A, 230V	Contactor 18 A, 230 V		
RC1	10013671	Schütz RC-Kombination	Contactor RC-Combination		
S0	10020346	Schalter Ein/Aus	Switch On/Off		
T1	10018991	Netzteil 24V 100W	Power Supply 24V 100W		
T10	10018463	Leistungsplatine für Motor	Power pcb for motor		

FM06-078B

Henny Penny Corp., Eaton, Ohio 45320, Revised 9/6/2023