

SpaceSaver Plus Team G2 & SpaceSaver Team G2



Serviceinstructions

Model

FSD 610.610 FSDH 610.610

Software 2.x

FM06-153



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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 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.



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 to life due to electric current
	\checkmark 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.
	Risk of fatal injury from gas
EL BAROER	\checkmark Disconnect the unit from gas supply prior to performing gas installation
	tasks.



4 Component overview

4.1 Electrical compartment



1- = Upper unit. 2-Lower = unit

- A1 Control board
- F Fuse 6.25 A inactive
- Q2 Solid-state relay (SSR), 50 A
- Q4.2 See Q.4.1
- T10 Power board for motor
- A4 NFC key
- Q1 Main contactor
- Q4.1 Turning contactor
 - T1 Power pack





4.2 Operating panel



A2 Operating panel, complete with housing

b Loudspeaker (10016690)

- a On/Off switch (10020346)
- c USB interface (10020348)



4.3 Right view



1- = Upper unit. 2-Lower = unit

- B1 Core temperature sensor
- B2 Cooking chamber sensors



4.4 Rear side

Upper unit with hood



1- = Upper unit. 2-Lower = unit

- B0 Thermal switch 85°C
- B11 Safety temperature limiter
- G16 Circulation pump
- M1 Fan
- M10 Fan motor

- B4 Vapor sensor
- E1 Heating element
- G24 Drain pump
- M8 Lift magnet



Lower unit



- 1- = Upper unit. 2-Lower = unit
 - B4 Vapor sensor
- B16 Steaming unit
- G1 Circulation pump
- 6
- K12 Valve steam extinguishment
- B11 Safety temperature limiter (STL)
- E1 Heating element
- G2 Drain pump
- 4 M1 Fan motor

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4.5 Rear for version without hood



Image: Version for units without hood - upper area

G7 Cooling fan M8 Lift magnet G8 Cooling fan



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.

5.1.1 Access to service area



INFORMATION

The password for the service menu is 1967

5.1.2 Service menu overview

- **Selecting a menu element** \rightarrow Display of the menu elements in the left area.
 - \rightarrow Page change by swiping upward/downward.
 - \rightarrow Select menu element by touching.





5.2 Device 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



- a Water pressure measured by the pressure sensor
- c Temperature of control board
- e Heat requirement in %
- g Solenoid valve water vapor elimination On/Off
- i WaveClean pump On/Off

- b Status of the electronic fuse
- d Engine speed
- f Status of safety temperature limiter
- h Siphon pump On/Off



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

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 \rightarrow Select a program by adjusting the roller.

Starting the program \rightarrow Touch the "START" field.

- **Evaluation** \rightarrow The test result appears on the touchscreen.
 - \hookrightarrow Entry in HACCP memory.

Description of the test steps

Step 1 (test door contact)

- 1. Open cooking chamber door and close again.
 - \rightarrow 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)

 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.
 - ightarrow Display switches to green = test successful.
 - ightarrow 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.
 - \hookrightarrow Display switches to green = test successful.
 - \rightarrow Display switches to red = test not successful.
- \hookrightarrow Ensure that water is being supplied on-site.
- → Check of DynaSteam steaming.
- \hookrightarrow Check of water supply pipe for calcification.

Step 5 (steam reduction)

- 1. Check of steam reduction (lift magnet).
 - → Display switches to green = test successful.
 - ightarrow 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.
 - ightarrow 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.
 - \rightarrow Display switches to green = test successful.
 - ightarrow Display switches to red = test not successful.
- \hookrightarrow 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.
 - \rightarrow Display switches to green = test successful.
 - ightarrow 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.
 - \rightarrow Display switches to green = test successful.
 - \rightarrow Display switches to red = test not successful.
- \hookrightarrow Check region around cooking chamber sensor for soiling.
- \hookrightarrow Check temperatures via calibration in the service menu.
- \rightarrow If necessary, replace cooking chamber sensor or control board.

5.5 Relay test

Overview

$\land \land \checkmark$	Device functions Relay test	Den (? 12:10
X6 Lift magnet fresh air	X29-G7 Cooling fan	X3 Cabinet light
X4/K10- K12 Valve steam extinguishment	X23/K5- G24 Siphon pump	X10 Steaming unit
X4/K9- K13 HoodIn solenoid valve	X23/ K17-G16 Circulation pump	

The cooking chamber door must be closed to control the G16 circulation pump and the humidification unit. Use *DynaSteam Test* to check the steam generation.

Relay	Connector	No.	Description	Info
	X3	1-4	Cooking chamber light E3	24 V DC
	X6	1/2	Lift magnet M8	24 V DC
	X10	6/7	Solenoid valve for steaming K9	24 V DC
K5	X23	1/2	Siphon pump G24	208V AC
G7	X29		Not used	
K10	X4	1/2	Magnetic valve for water vapor elimination K12	208V AC
K13	X29		Not present	
K17	X23	3/4	Circulation pump G16 (only when cooking cabinet door is closed)	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	\rightarrow Press the button for the area to test.
	\hookrightarrow The function is active.
	\hookrightarrow The button for the selected function is highlighted in green.
Deactivating a function	\rightarrow Press the button highlighted in green to deactivate the selection.
	ightarrow 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. → 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.
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

- \rightarrow Calibration function for the cooking chamber sensor.
 - \hookrightarrow Testing the calibration.
 - \rightarrow Performing the calibration.

INFORMATION

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





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.
 - \rightarrow Use a grill rack for this.
 - → Point the sensor tip upward in order to prevent measurement errors.

Checking the calibration \rightarrow Touch the "START" field.

- \rightarrow The cooking chamber is heated up to 100 °C.
- ightarrow 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.
 - Solution → The external measurement device must display a temperature between 99 °C 99,5 °C.
- \rightarrow If the value is within the range, end checking.
 - \hookrightarrow Touch the "STOP" field.
- \rightarrow If the value is outside of the range, calibration must be done.
- → Continue with calibration (see ", Calibrate cooking chamber sensor", Page 25).

Calibrate cooking chamber sensor

Prerequisite	\rightarrow Execute <i>Check calibration</i> and do not switch appliance off.
Calibration	 → Temperature display on the touch screen indicates 100 °C. → 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.
	ightarrow If necessary, adjust offset value again.
	→ Let 10 minutes adjustment time elapse.
	\rightarrow If the value is within the range, save calibration.
Saving the calibration	\rightarrow Touch "Save offset" field.
Canceling the calibration	 → Saving of set value. → Touch the "STOP" field. → The calibration ends.
Exiting the calibration Storing the calibration on SD card	Touch the <i>Back</i> field. \rightarrow Also save data on internal SD card.



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.

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

a more	8 Mint
	0 3
0 0 0	1 4 0
1 1 1	2 5 1
Intelligence of the local division of the lo	tine (

Image: Overview of DynaSteam test

Starting the test

- \rightarrow Touch "Initialization" field.
 - \hookrightarrow Automatic pre-rinse.
 - \hookrightarrow Field changes to "START".
- \rightarrow Set water quantity using the rollers.
- \rightarrow Touch the "START" field.
 - \rightarrow Energize solenoid value 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.

- \rightarrow 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** \rightarrow Both water connections are connected to compressed air.
 - \rightarrow The pressure may not exceed 6 bar.
 - \rightarrow The cooking chamber temperature is < 130°C.



Image: Overview

Running a program

Start drain water	\rightarrow Touch the "START" field.
	\hookrightarrow Start of the automatic water drainage.
	Display of the cooking chamber temperature and remaining time.
Canceling the water drainage	\rightarrow Touch the "STOPP" field.

5.10 Setting the set-up height



Image: Overview

Setting the set-up height \rightarrow Set the set-up height by adjusting the rollers.

- \rightarrow Tap the "OK" field.
 - \hookrightarrow Changes saved.



Canceling the selection \rightarrow Tap the "Back" field.

5.11 Audio settings



Image: Overview

Setting the volume	\rightarrow Use the slider to set the desired volume.
	\rightarrow Tap the "OK" field.
	\hookrightarrow Changes saved.
Canceling the selection	\rightarrow Tap the "Back" field.

5.12 Select signal tones

Set signal tones	\rightarrow Set the profile by adjusting the rollers.
	\rightarrow Tap the "OK" field.
	\hookrightarrow Changes saved.
anceling the selection	\rightarrow Tap the "Back" field.

5.13 Log data export

Description

C

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

Exporting log data

- \rightarrow Perform according to instructions on the touchscreen.
- \rightarrow Press the *Confirm* button.
 - \hookrightarrow Log data export begins.

5.14 Software update

Description

 \rightarrow Update of the software via the USB interface. Sounds, cookbooks, help texts and videos are not part of the software update. INFORMATION 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. \rightarrow Update begins. \rightarrow A confirmation then appears on the touchscreen. 5.15 Importing additional content Description Import of additional content (sounds, videos, graphics, help texts). Import is absolutely essential after the operating panel has been replaced. INFORMATION Importing content Import of the additional contents via the USB interface. See also chapter Importing additional content. 5.16 Restoring data Description Import function of parameters stored on the SD card. Importing is required after the operating panel or control board have been re-**INFORMATION** placed. Importing data Prerequisite Service menu is displayed → Press the "Restore data" button. \rightarrow Press the *Confirm* button. \rightarrow Restore data from the SD card. \rightarrow A confirmation then appears on the touchscreen. \rightarrow Tap the "OK" button.

5.17 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

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

5.18 Water filter maintenance

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

5.19 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.
- \rightarrow 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".
 - \hookrightarrow The file must be saved in the folder "Cooking_CODG2".

Importing data

- \rightarrow Perform according to instructions on the touchscreen.
- \rightarrow Press the *Confirm* button.
 - ightarrow Import the created contact data.
 - \hookrightarrow A confirmation then appears on the touchscreen.

5.20 Setting units

Overview



Changing values

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

5.21 Settings parameters

Description

 \rightarrow Querying and setting additional parameters.



Selecting parameters

- \rightarrow Selecting parameters by adjusting the caster.
- \rightarrow Tap the "Read" button.
 - \hookrightarrow Display of set parameters.

Changing parameters

- \rightarrow Use the number block to set the desired value.
- \rightarrow Tap the "Write" button.
 - \hookrightarrow 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.	
21	Core temperature offset, sensor 1		-9.9 - +9.9°K	The calibration function in the Service menu is used for calibration!	
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		
92	Flashing of the cooking chamber light at the end of the program	1	0 = Off 1= On		
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 the value "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 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.	

No.	Basic setting	Standard value	Adjustment range	Explanation
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



5.22 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.

 \rightarrow Tap the *OK* button.

 \hookrightarrow Back-up of the data.

 \hookrightarrow A confirmation then appears on the touchscreen.

 \rightarrow Tap the *OK* button.

5.23 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.
 - ightarrow Restoring of the data from the SD card.
- \rightarrow Tap the "OK" button.
 - \hookrightarrow Automatic restart of the software.

5.24 Background lighting

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

5.25 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.



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

- \rightarrow Tap the invisible field three times quickly.
 - \hookrightarrow This changes the display to the status overview.

6.3 Exiting the status overview

- \rightarrow Tap the *Back* button.
 - \hookrightarrow Change to the display of the cooking process.



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 in- volved.
Prerequisite	
	→ USB stick.
	\rightarrow Formatting FAT (standard).
	 → The disk should be empty if possible. → Current software update. → The update is provided as packed ZIP file.
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.
	 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 folder contains the update files → The files have the extensions ".sw2, .sw2n and .sw2s → For example "020327.sw2", "020327.sw2n" and "020327.sw2s" (software update V2.03).


Updating the software

opdating the contrare	
	 Insert the USB stick Switch the appliance on. Tap the "Unit functions" field.
	4. Tap the "Unit settings" field.
	 → Display window <i>PIN</i>. 5. Enter password "1967" and tap field <i>Confirm</i>.
	 → 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.
	\rightarrow 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.



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.



Importing additional content

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

 \hookrightarrow Display menu *Unit functions*.

4. Tap the "Unit settings" field.

- \mapsto Display window *PIN*.
- 5. Enter password "1967" and tap field *Confirm*.
- \hookrightarrow Display from service area
- Select the "Import additional content" field in the left menu area by swiping.

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- 7. Tap the "Import additional contents" field.
- 8. Tap the "OK" field.
 - \hookrightarrow The data is imported.
 - \rightarrow Finally, a confirmation appears on the touchscreen.
- 9. Tap the "OK" field.

7.4 Importing the manufacturer's cookbook

Preparing the USB stick

- \rightarrow Create the folder "Cooking_CODG2" on the USB stick.
- \rightarrow Copy the update file to the "Cooking_CODG2" folder.
 - \hookrightarrow 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
- \rightarrow Tap the "Import manufacturer cookbook" field.
- \rightarrow Tap the "OK" field.
 - \rightarrow The data is imported.
 - \hookrightarrow Finally, a confirmation appears on the touchscreen.
- \rightarrow 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

- \rightarrow Connecting the unit
- \rightarrow Tap the "Unit functions" field.
 - → Display of *Appliance functions* menu.

8.3 Switching the trade show mode on/off

on

mode

Description Trade show mode allows appliance operation for demonstration purposes.

Prerequisite Menu Unit functions opened

 \rightarrow Tap the "Unit settings" field.

→ Display window PIN.

PIN	×	6	
1	2	3	
4	5	6	
7	8	9	
Ó	e		1

- → Enter the password 888 and tap the *confirmation* button.
 - \rightarrow Display of menu *Trade show mode*.
- Switching trade show mode
 - \rightarrow Touch the "Trade show mode is off" field.
 - \hookrightarrow Restart the unit with the switch *On/Off*.
 - \hookrightarrow Unit is in trade show mode
 - ightarrow The active trade show mode is indicated on the screen.
 - Switching off trade show
 - → Call up the menu *Trade show mode*.
 → Tap the "Trade show mode is on" field.
 - \rightarrow Restart the unit with the switch *On/Off*.
 - \hookrightarrow Appliance is normal operation.



9 Electronics

9.1 Block diagram for the control



"1" = Upper unit

"2" = Lower unit



9.2 Control board

Layout



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 lighting
Connector X_{4} (208V/AC)		Decembration
Connector X4 (200V AC)	NO.	Description
	1/2	
Connector X6 (24V DC)	No.	Description
	4/5	Lift magnet 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 VO		
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
Connector X10 (24 V DC)	No. 1-3	Description Steaming unit with pressure sensor (B16/K20)
Connector X10 (24 V DC)	No. 1-3 6/7	Description Steaming unit with pressure sensor (B16/K20)
Connector X10 (24 V DC) Connector X19 (208V AC)	No. 1-3 6/7 No.	Description Steaming unit with pressure sensor (B16/K20) Description
Connector X10 (24 V DC) Connector X19 (208V AC)	No. 1-3 6/7 No. 1/2	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1
Connector X10 (24 V DC) Connector X19 (208V AC)	No. 1-3 6/7 No. 1/2 No.	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC)	No. 1-3 6/7 No. 1/2 No. 1	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC)	No. 1-3 6/7 No. 1/2 No. 1 2	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral)
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC)	No. 1-3 6/7 No. 1/2 No. 1 2 No.	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Description
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Description Siphon pump G24
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2 No. 1/2 3/4	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Siphon pump G24 WaveClean pump G16
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21 Connector X23 (208V AC)	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2 No. 1/2 No. 1/2 Side 1/2 Side B1 co	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Siphon pump G24 WaveClean pump G16 re temperature sensor
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21 Connector X23 (208V AC) Connector X30	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2 No. 1/2 Solution 1/2 Solution 1/2 Solution B1 coo B2 coo	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Description Siphon pump G24 WaveClean pump G16 re temperature sensor oking chamber sensor
Connector X10 (24 V DC) Connector X19 (208V AC) Connector X20 (208V AC) Connector X21 Connector X23 (208V AC) Connector X30 Connector X31 Connector X33	No. 1-3 6/7 No. 1/2 No. 1 2 No. 1/2 No. 1/2 Solution 1/2 No. 1/2 Solution 1/2 Solution 1/2 Solution 1/2 Solution Solution	Description Steaming unit with pressure sensor (B16/K20) Description Main contactor Q1 Description Input voltage 208 V AC Input voltage N (neutral) Description Safety temperature limiter B11 (input) and thermal switch B0 Description Siphon pump G24 WaveClean pump G16 re temperature sensor oking chamber sensor apor sensor

Connector X36 Reed contact switch for cooking chamber door B15

Connector X42 CAN communication to motor power board T10

Connector X48 Digital key



9.3 Safety overview



Fuses 6.25A inertia, 20 x 5mm, order number 10016452 3.15 A inertia, 20 x 5mm, order number 203742





10 Fault messages & troubleshooting

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.
$\langle \! \mathcal{D} \!$	Core temperature sensor defective,
\bigotimes	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.

Overview



10.3 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.





Core temperature sensor defective (699, 700)

Description

The core temperature function is no longer available.





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.

Check contacting from cooking chamber	ensor to control board A1 X33. Error elim	nated?
Remove connector of existing vapor sens	♦ from control board A1 X33 and plug in ne	ew vapor
sensor.	rror eliminated?	
No	Yes	
Replace control board	Replace vapor se	nsor



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 $<0^{\circ}$ C.

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





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 F4, F4.1 6,25A
- c Connector S300. Power supply motor
- e Connector S500. CAN connection to control circuit board
- b Power board
- d Connector S100. Power supply circuit board
- f Connector S501. Input for temperature switch from motor



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
- B1 Safety temperature limiter
 - 1

- B0 Thermal switch 85°C (185°F)
- Q1 Main contactor







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

Restart the unit. Troubleshoot the displayed error message.

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.









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 57)



FAN_ID6: Motor overtemperature

Description

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.







FAN_ID23: Fan error: Attempt to restart

Description

The control board A1 does not receive any speed feedback from the power board T10. There is a fault in the power supply from the power board or a fault on the fan.

Troubleshooting

Marning: 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!





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.





10.5 Water area

Overview



Description

The water pressure measured by the pressure sensor is below 1 bar (15 psi). This is a notification that does not result in interruption of the cooking program.

INFORMATION	The minimum pressure (dynamic pressure) required according to the installa- tion instructions is 2 bar (29 psi). To reduce sensitivity in the event of short-
	term pressure fluctuations, the error message only appears below 1 bar (15 psi).



Troubleshooting



Water pressure during WaveClean too low

Description

The error message appears if the pressure sensor registers 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.

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10.6 Electronics / control area

SOF_ID22: E-fuse has tripped

Description

All components supplied with 24V DC are protected by an electronic fuse on the control board, which triggers in the event of a short circuit. The reset is carried out via a button on the control board. The device must be switched on. The component causing the problem must then be localized.



Image: Position Reset button of the fuse







Increased temperature of the electronics (MMI_ID53, MMI_ID54)

Description

MMI_ID53:

The temperature sensor on the control board is measuring a temperature of >65°C (149°F). The current cooking program is continued.

MMI_ID54:

The temperature sensor on the control board is measuring a temperature of >78°C (172°F). The current cooking program is continued.

Troubleshooting

Replace defective control board.

Excessive temperature of the electronics (MMI_ID50)

Description

The temperature sensor on the control board is measuring a temperature of >80°C (176°F). The unit is no longer operational until it cools down.

Troubleshooting

Replace defective control board.

The NFC tag is not present (1520)

Description

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

- \rightarrow Unplug digital key and then reinsert. De-energize unit beforehand.
- \rightarrow Change digital key.
- \rightarrow 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	After replacing the battery, it is mandatory to set the date/time. Otherwise, the error message will continue to appear when the device is switched on.
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.

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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.
- \rightarrow Replace control board.
- \rightarrow 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.
- \rightarrow Send the operating pane to the manufacturer for repair.

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

- \rightarrow Check content and structure of the USB stick.
- \rightarrow Ensure that the USB interface is functioning properly.
 - \hookrightarrow On USB sticks with an LED, the LED must be on.
 - \hookrightarrow 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

- \rightarrow Confirm the message with "*OK*".
 - \rightarrow The software is restarted.
- → The error may appear twice. Repeat the procedure. If the error continues to appear, proceed as described in the troubleshooting guide.

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.



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

- \rightarrow Confirm message. An automatic restore starts.
- \rightarrow Next, update the software.
- → If the error continues to appear, the operating panel needs to be replaced.

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.

Troubleshooting

- \rightarrow Confirm message. An automatic restore starts.
- \rightarrow 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
- \rightarrow Insert prepared USB stick.
- \rightarrow Switch on the unit.
- \rightarrow 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

- → Ensure that the appliance has not been switched off using the "On/Off" switch when the cooking program is active. 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.
- \rightarrow Make sure that the customer's supply voltage is reliable.
- → Check that the "On/Off" switch functions properly and is in the correct position.
 - \rightarrow 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.
- \rightarrow Replace control board. It supplies voltage to the operating panel.
- \rightarrow Replace transformer.
- \rightarrow Replace operating panel.

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.

Troubleshooting



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10.7 Recirculation hood / fan

Overview



Image: A = Version with recirculation hood, B = Version without recirculation hood

1 Upper cooking chamber control

M1 Fan recirculation hood

G7 Fan

- 2 Lower cooking chamber controlG8 Fan
- Q4 Turning contactor

Description of operation

- 1. Control for upper and/or lower cooking chamber (unit) is switched on
 - \hookrightarrow Contactor Q4 is activated
- ightarrow Fan recirculation hood or cooling fan switched on via contactor Q4

INFORMATION

When the unit is switched on, the fan is switched on continuously



Troubleshooting Version with hood





Troubleshooting Version without hood





11 Check components

11.1 Solenoid valve for steaming

Overview



Switch on solenoid valve/ function check

When the solenoid valve is switched on, water runs into the cooking chamber via the water inlet pipe. This is used for dam production.

Prerequisite

The unit does not display any error messages. If error messages are displayed, carry out troubleshooting in advance. These have priority. Ensure that water is being supplied on-site.

- \rightarrow In the service menu -> Select DynSteam Test and switch it on.
 - → Solenoid valve K20 is activated. In a fault-free state, the set amount of water runs into the cooking chamber.



Troubleshooting





11.2 Lift magnet

Overview



- A1 Control board
- A Voltage measurement
- M8 Lift magnet B Resistance measurement

Switch on lift magnet/ function check

Prerequisite

The unit does not display any error messages. If error messages are displayed, carry out troubleshooting in advance. These have priority.

- 1. In the service menu -> Activate relay test lift magnet relay K8.
 - \hookrightarrow Lift magnet is activated.



Troubleshooting



11.3 WaveClean circulation pump

Overview



- A1 Control board
- A Voltage measurement
- G1 WaveClean circulation pump 6
- B Resistance measurement



Switch on pump/ function check

INFORMATION	The cooking chamber door must be closed to control the G16 circulation
	pump.

Prerequisite

The unit does not display any error messages. If error messages are displayed, carry out troubleshooting in advance. These have priority. The siphon is filled with water. If necessary, add approx. 2 liters (0.5 gal) of water to the cooking space.

Cooking chamber door closed or door contact switch bridged with magnet.

- 1. In the service menu -> Activate relay test pump relay K17-G16.
 - → Pump G16 is activated. Water is pumped into the cooking cabinet when it is in perfect condition.

Troubleshooting





11.4 WaveClean siphon pump

Overview



A Voltage measurement

B Resistance measurement

Switch on pump/ function check

Prerequisite

The unit does not display any error messages. If error messages are displayed, carry out troubleshooting in advance. These have priority. The siphon is filled with water. If necessary, add approx. 2 liters (0.5 gal) of water to the cooking space.

- 1. In the service menu -> Activate relay test pump relay K5-G24.
 - → Pump G24 is activated. In a fault-free state, water is pumped from the siphon into the drain.





Troubleshooting



11.5 Solenoid valve for vapor quenching/ filling siphon

Overview





Switch on solenoid valve/ function check

The solenoid valve has two functions:

- \rightarrow Cooling down of the water in the siphon box (vapor removal).
- → Filling the siphon to provide clean water for automatic cleaning. To do this, the water in the siphon is pumped out in advance using the G24 siphon pump.

Prerequisite

The unit does not display any error messages. If error messages are displayed, carry out troubleshooting in advance. These have priority. Ensure that water is being supplied on-site.

- \rightarrow In the service menu -> Activate relay test solenoid valve K12.
 - Solenoid valve K12 is activated. The siphon box is filled with water when it is in perfect condition. After filling, water runs out of the drain.

Troubleshooting

If water flows through the solenoid valve even when the relay is switched off, it is defective. Ensure that the appliance is connected to cold water.





12 Circuit diagram 3PE 208V AC

















Benennung	MKN Nr. MKN	Bezeichnung	Description	Sicherung auf Platine	Bemerkung Comment
Denomination	no.			Fuse on board	
A1	10019108	Steuerplatine	Control pcb		
A2	10036170	Bedienpanel OEM	Operation panel OEM		
A4	10023032	Modul Speichertag NFC	Modul Speichertag NFC		
BO	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		
B15	10013771	Reedkontaktschalter	Reed contact switch		
B16/K20	10020226	Beschwadungseinheit mit Drucktransmitter	Water steaming unit with pressure transmitter		
E1	10019578	Rohrheizkörper 9,6 kW; 240V Steckverb.	Heating element 9,6 kW; 240V with plug		
E3	10018561	LED Garraum	LED Cabinet		
F4/F4.1	10016452	Sicherung Fein 6,25A Träge	Fuse Fine 6,25A Slow		
A1-F500	203742	Sicherung 3,15 A Träge; 20 x 5 mm	Fuse 3,15 A ; 20 x 5 mm		
G7/G8	203819	Kühllüfter 230V, 119x119mm	Cooling fan 230V, 119x119mm	A1-F500	only TKECOD6100
Cleicon	203825	Pumpe 230 V; 50 Hz	Pump 230 V; 50 Hz	A1-F500	
+70/010	203826	Pumpe 230 V; 60 Hz	Pump 230 V; 60 Hz	A1-F500	
K12	10018361	Magnetventil	Solenoid valve	A1-F500	
M1	10019597	Ventilator Radial 355W 230V UL	Ventilator Radial 355W 230V UL		only TKECOD610T
M8	10022051	Hubmagnet 24VDC	Lift magnet 24VDC		
M10	10018537	Motor	Motor		
a1	10013970	Schütz 32 A, 230 V	Contactor 32 A, 230 V	A1-F500	
Q2	10033027	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		

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				Gepr.		Zeichnungsnummer	Maßst. Seite	te/n
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