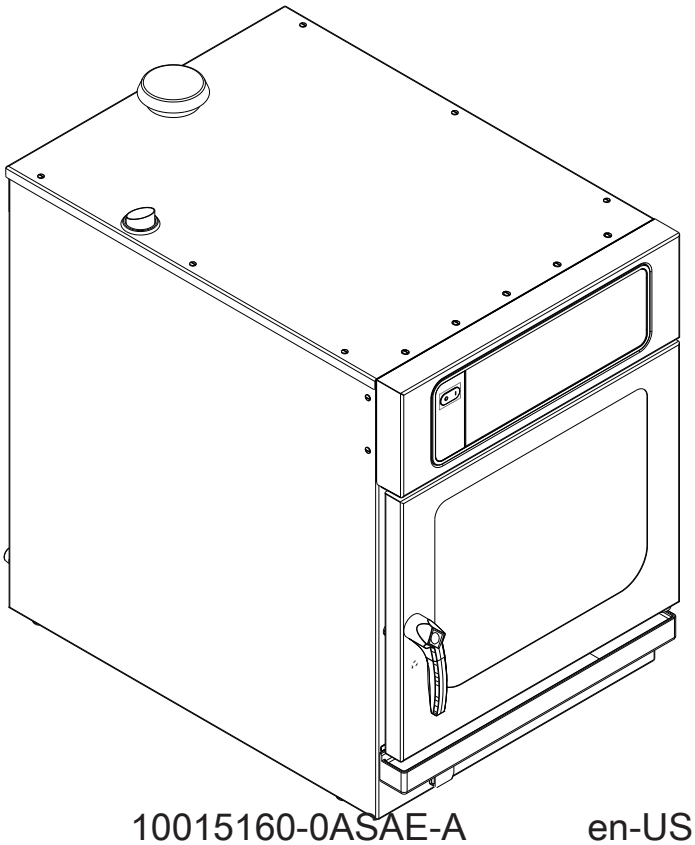


Service instructions

Combi Steamer

Unit	Model	Type of energy	Unit type
Space$afer Plus Platnium	6.10	Electric	Tabletop unit
Space$afer Platnium -- -	6.23	Electric	Tabletop unit



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Engineered to Last

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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
CO_2 gas calibration	999	Verification and calibration of exhaust emissions. Only for energy type - gas.	Installation instructions
Network settings	2100	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 trained specialists who are familiar with the technical functioning and operation of the unit.

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

2.2 Warranty

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

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

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3 Safety instructions

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

⚠ DANGER

Danger to life due to electric current

✓ Disconnect power prior to performing gas and electrical work.

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

⚠ DANGER

Risk of fatal injury from gas

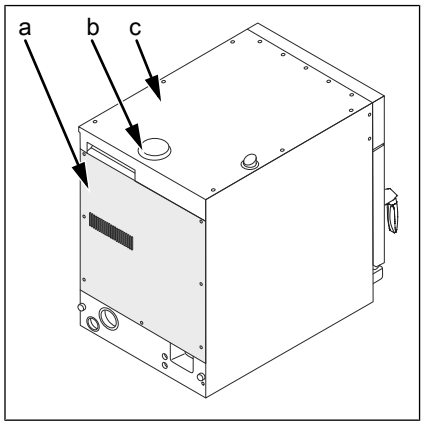
✓ Disconnect the unit from gas supply prior to performing gas installation tasks.

- Lock site gas supply and secure it against restart.

4 Opening the appliance

4.1 Unit cover and rear wall

Overview



a Rear panel
b Air inlet nozzle cover
c Unit cover

Remove unit cover

→ Remove cover from air inlet nozzles by turning it.
→ Remove the screws from the unit cover.
→ Remove the unit cover.

Remove the rear panel.

→ Remove screws from the rear panel.
→ Remove the rear panel.

Mounting Mounting is done in the reverse order.

5 Service menu - appliance test

5.1 Service menu

Description

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

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

5.1.1 Calling up the service level

Calling up the Service menu

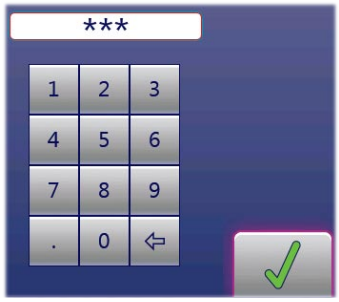
→ Switch the appliance on.

→ Touch the "Appliance functions" field.

↳ Display of *Appliance functions* menu.

→ Touch "Settings" field.

↳ Display of *PIN* window.



→ Enter password and touch *Confirmation* field.

↳ Display of menu *Appliance test (Service menu)*.

INFORMATION

The password for the service menu is 1967

5.1.2 Service menu overview

Selecting a menu element

→ Display of the menu elements in the left area.

→ Page change by swiping upward/downward.

→ Select menu element by touching.

5.2 Appliance information

Description

→ Display of the appliance-specific information
↳ Installed software
→ Appliance configuration
→ Cookbook version
→ Serial number
→ Contact data

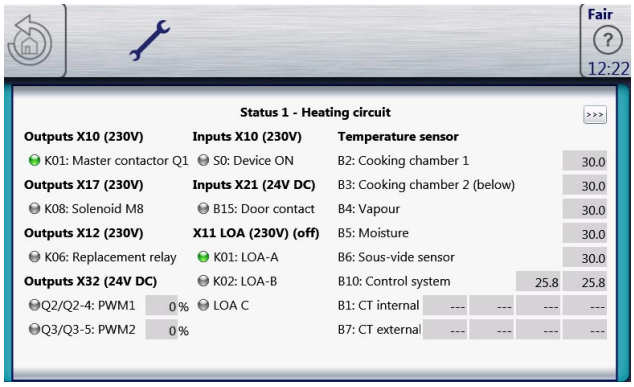
Overview

Exiting the appliance information

Touch the *Back* field.

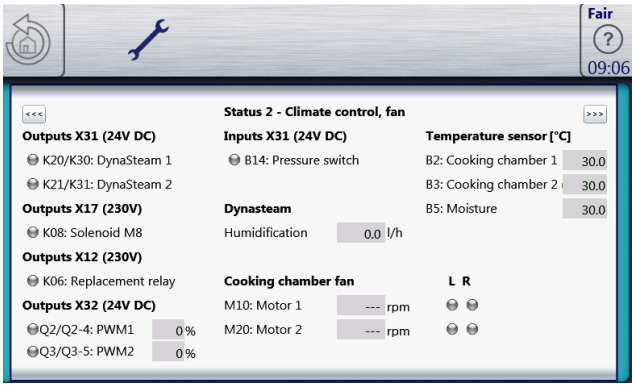
5.3 Status overview

Status 1
Heating circuit



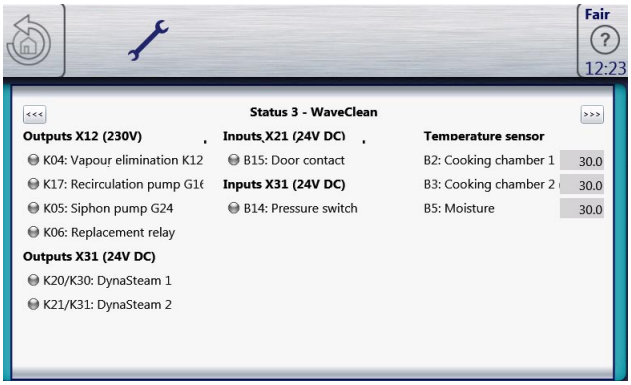
PWM: heat requirement in %.
POS: power optimization system (option).
Temperature sensors B1, B3, B6, B7 are not present.

Status 2
Climate control system, fan



B14: Pressure switch on the DynaSteam unit
PWM: heat requirement in %.
Temperature sensor B3 is not present.
No indicator of fan speed for unit size 6.23.

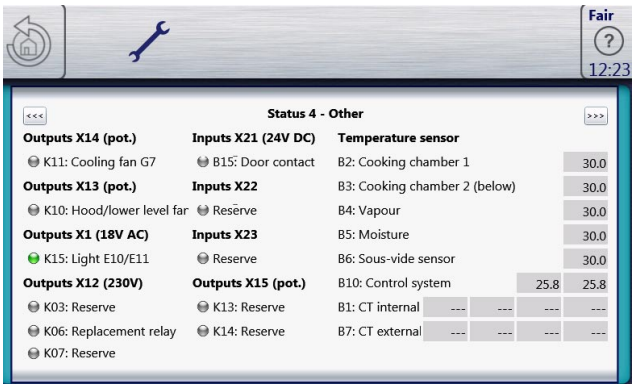
Status 3
WaveClean (option)



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

Status 4

Miscellaneous

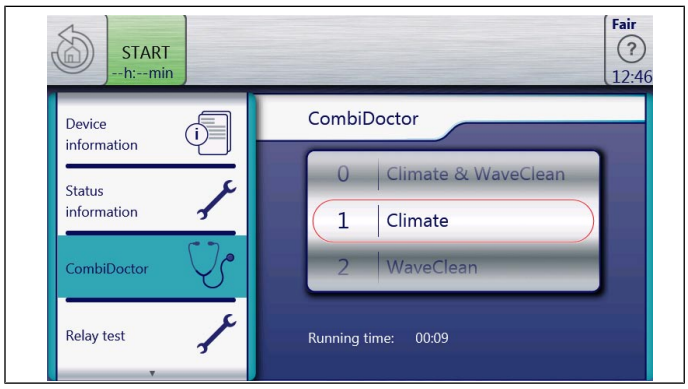


K3: Manual rinse
K10: Motor M1 On/Off. Only for unit size 6.23.
B15: Reed contact switch
K07, K13, K14: Not used
Temperature sensors B1, B3, B6, B7 are not present.

5.4 CombiDoctor

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

Overview



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

Program description **1 Climate**

Automatic checking of the following areas/components

- Heating circuit
  - Heating body, failure of a phase (only for energy type electric)
  - Semiconductor relay SSR (only for energy type electric)
  - Gas system (only for energy type gas)
  - Temperature control
  - DynaSteam steaming unit
  - Air inlet flap

2 WaveClean

- Automatic checking of the WaveClean cleaning
  - WaveClean pump (circulation pump)
  - Siphon pump (drainage pump)
  - Magnetic valve for water vapor elimination & siphon filling
  - Reed contact switch of the cooking chamber door

Starting the program → Touch the "START" field.

Evaluation → The test result appears on the touch screen.

↳ Entry in HACCP memory.

5.5 Relay test

Description

→ Separate control of the relay.

↳ Testing the relay.

↳ Testing the connected components.

INFORMATION

Relays K1 and K16 are switched on permanently.

A plurality of relays are switched on simultaneously.

Overview

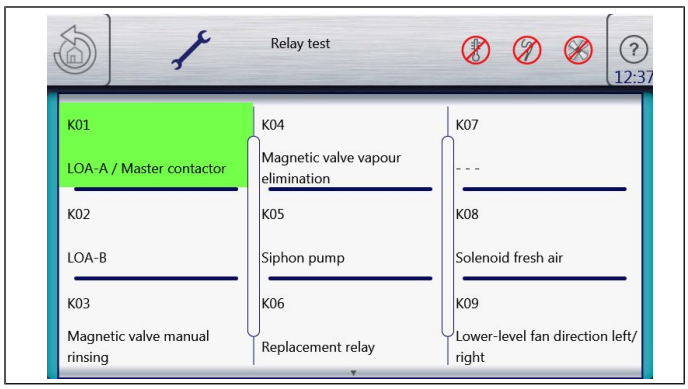


Image: Relay test page 1

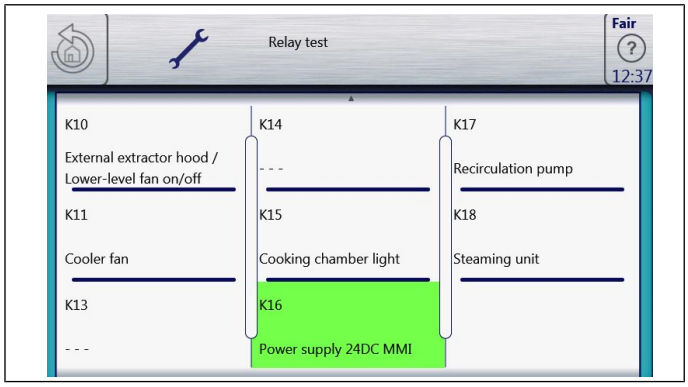


Image: Relay test page 2

Activating relay test

→ Touch field of relay to be tested.

↳ The relay is active.

↳ Field of the active relay is highlighted in green.

Deactivating relay

→ Touch field to be deactivated that is highlighted in green.

↳ The relay is inactive.

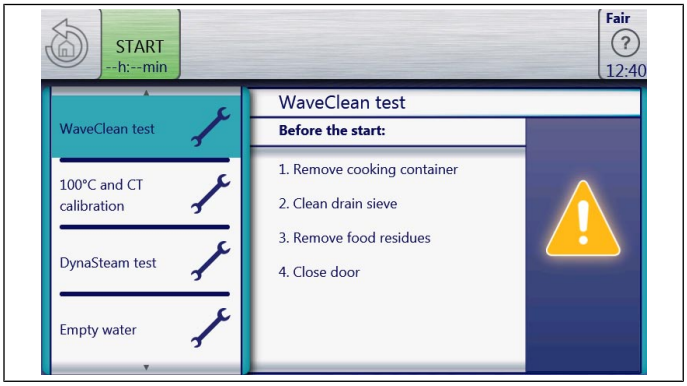
↳ Field is highlighted in gray.

Relay overview

Relay	Connector	No.	Description	Information
K1	X10	2	Main contactor Q1	230V AC
K1	X11	1	POS A	230V AC
K2	X11	2	POS B	230V AC
K3	X12	2	Magnetic valve K23 for manual rinse	230V AC
K4	X12	3	Magnetic valve for water vapor elimination K12	230V AC
K5	X12	4	Siphon pump G24	230V AC
K6	X12	5	Backup relay K6	230V AC
K7			*Not in use*	
K8	X17	1	Solenoid fresh air M8	230V AC
K9	X16	1-3	Only for unit size 6.23: fan direction left/right	Potential-free
K10	X13	1/2	Only for unit size 6.23: fan on/off	Potential-free
K11	X14	2	Cooling fan G7	230V AC
K13			*Not in use*	
K14			*Not in use*	
K15	X1	2	Cooking chamber light	230V AC
K16	X9	1/2	Supply for control panel (MMI)	24V DC
K17	X12	1	Circulating pump G16	230V AC
K18	X31	1 -4	Steaming unit (switched directly, not via relay)	24V DC

5.6 WaveClean test (option)

Overview



Description

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

INFORMATION

Follow the instructions on the touch screen.
The test is used exclusively for functional testing and not to clean the cooking chamber.

Starting the test

→ Touch the "START" field.
↳ 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
↳ DynaSteam steaming unit is switched on.
↳ Another water change from the siphon.

After 30 minutes, the WaveCleanTest ends.

Canceling the test

An abortion is possible at any time.
→ Touch the "STOPP" field.
↳ Automatic rinsing of the siphon and test cancellation.

5.7 100°C + core temperature calibration

Description

→ Calibration for cooking chamber sensor and core temperature sensor.

↳ Testing the calibration.

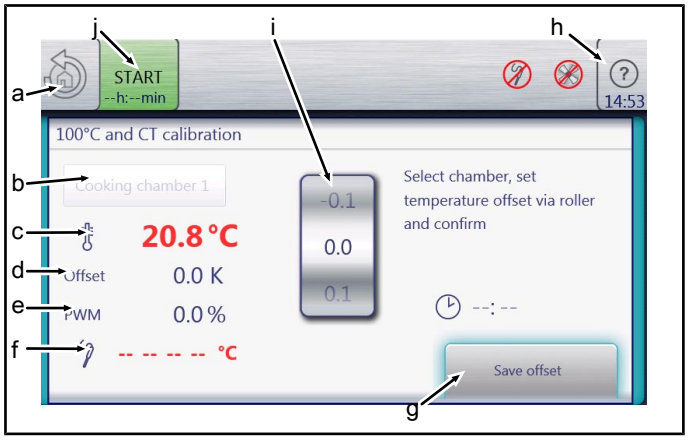
↳ Performing the calibration.

The cooking chamber sensor and core temperature sensor calibration is performed in one step.

INFORMATION

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

Overview



a Back to the unit test
b Not used
c Cooking chamber temperature
d Saved offset
e Average heat requirement
f Core temperature measurement values
g Save changed offset
h Help function (not used)
i Offset setting
j "Start/Stopp" field

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

5.7.1 Check calibration

Prerequisite

Calibrated digital temperature measurement device.

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

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

↳ Use a grill rack for this.

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

Checking the calibration

→ Touch the "START" field.

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

↳ Display of the current temperature on the touch screen.

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

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

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

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

↳ Touch the "STOP" field.

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

↳ Continue with calibration (see „5.7.2 Calibrate cooking chamber sensor", Page 19).

5.7.2 Calibrate cooking chamber sensor

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

→ (see „5.7.1 Check calibration", Page 18)

↳ Temperature display on the touch screen indicates 100°C.

Calibration

→ Adjust offset value by adjusting the roller.

↳ Let 10 minutes adjustment time elapse.

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

→ If necessary, adjust offset value again.

↳ Let 10 minutes adjustment time elapse.

→ If the value is within the range, save calibration.

Saving the calibration

→ Touch "Save offset" field.

↳ Saving of set value.

↳ Automatic calibration of core temperature sensor.

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 (see „5.18 Backing up data", Page 26).

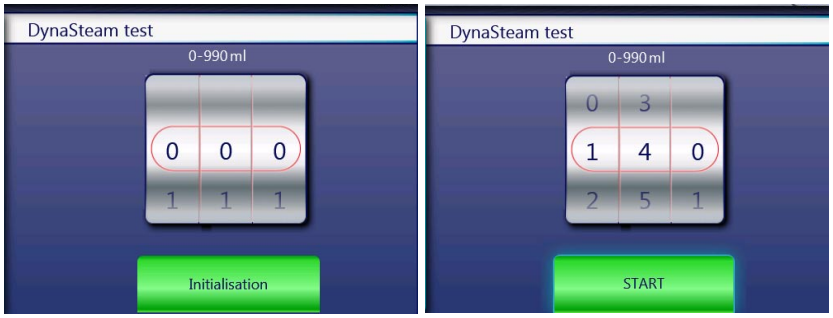
5.8 DynaSteam test

Description The DynaSteam test allows the function test of the DynaSteam steaming unit.
Calibration of the steaming unit 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.

Overview



Starting the test

→ Touch "Initialization" field.
↳ Automatic pre-rinse.
↳ Field changes to "START".
→ Set water quantity using the rollers.
→ Touch the "START" field.
↳ Activation of the DynaSteam steaming unit.
↳ 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, the steaming unit 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.

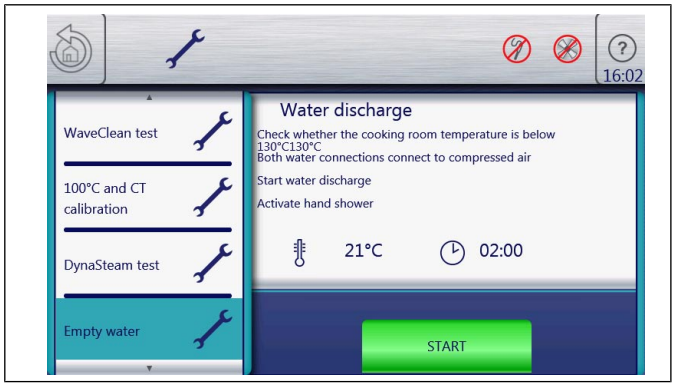
Requirement

→ Both water connections are connected to compressed air.

↳ The pressure may not exceed 6 bar.

→ The cooking chamber temperature is < 130°C.

Overview



Starting to drain the 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 "STOP" field.

5.10 Setting the set-up height

Overview

Setting the set-up height

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

→ Touch the "OK" field.

↳ Changes saved.

Canceling the selection

→ Touch the "Back" field.

5.11 Audio settings

Overview

Setting the volume

→ Set the desired volume using the sliders.

→ Touch the "OK" field.

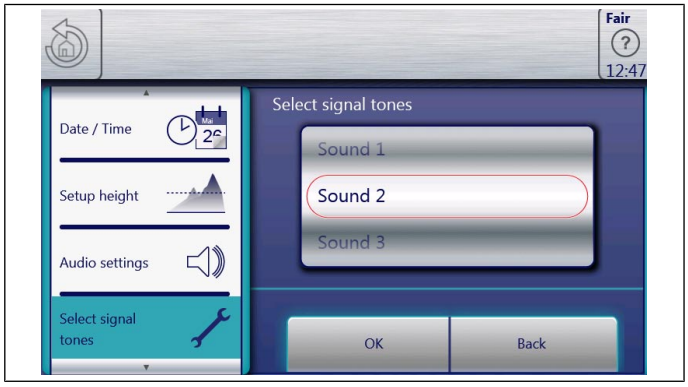
↳ Changes saved.

Canceling the selection

→ Touch the "Back" field.

5.12 Select signal tones

Overview



Set signal tones

→ Set the signal tone by adjusting the rollers.

→ Touch the "OK" field.

↳ Changes saved.

Canceling the selection

→ Touch 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.

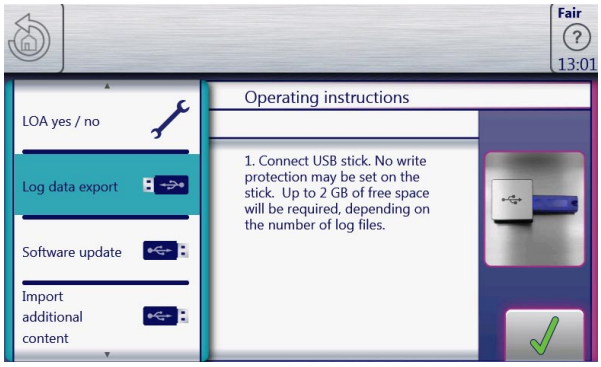
Canceling the selection

→ Touch the "Back" field.

5.14 Log data export

Description Log data export on an external USB stick. The function is only required after consultation.

Overview



Exporting log data

→ Perform according to instructions on the touch screen.

→ Touch the *Confirmation* field.

↳ Log data export begins.

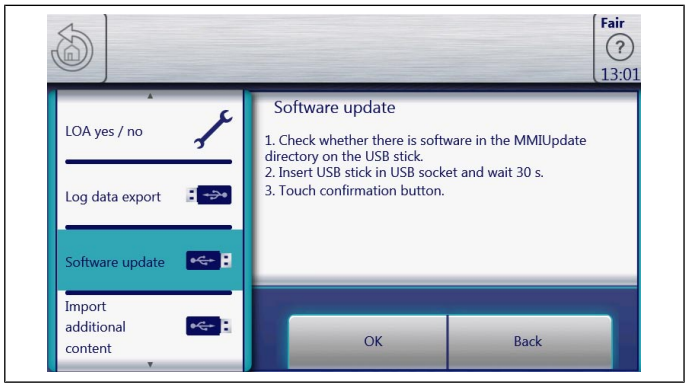
5.15 Software update

Description

→ Update of the software via the USB interface.

↳ Additional content (help texts, cookbooks, videos) will not be updated.

Overview



Performing the update

→ Perform according to instructions on the touch screen and description .

→ Touch the "OK" field.

↳ Update begins.

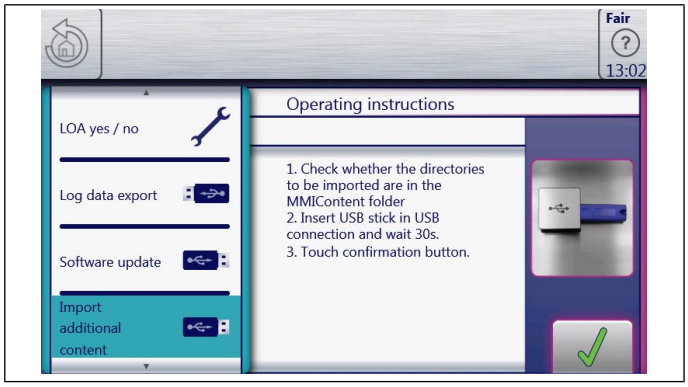
→ Then a confirmation appears on the touch screen.

5.16 Importing additional content

Description

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

Overview



Importing content

→ Perform according to instructions on the touch screen.

→ Touch the *Confirmation* field.

↳ Import the content.

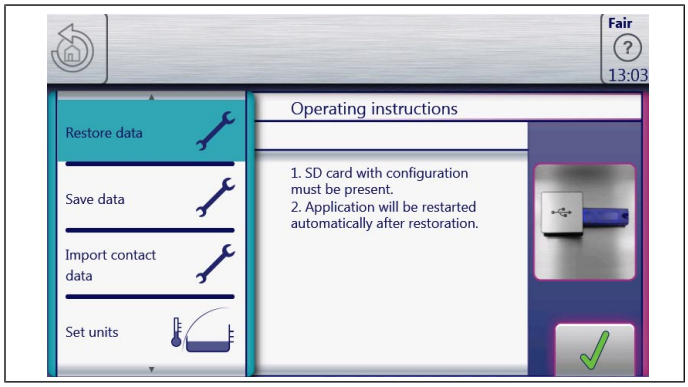
↳ Then a confirmation appears on the touch screen.

→ Touch the "OK" field.

5.17 Restoring data

Description Import function of parameters stored on the SD card. Required after change of control board or control panel.

Overview



Restoring data

→ Touch the *Confirmation* field.

↳ Restoring of the data from the SD card.

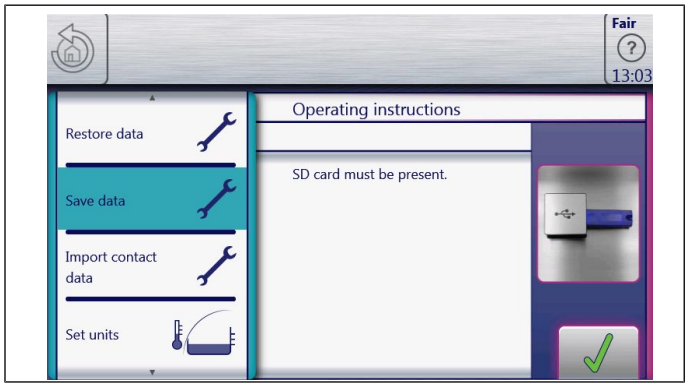
→ Touch the "OK" field.

↳ Automatic restart of the software.

5.18 Backing up data

Description Export function of the parameters (for example, calibration values). Storage of the data on the internal SD card or USB stick (if present).

Overview



Backing up data

→ Tap the *Confirmation* field.

↳ Back-up of the data.

↳ Then a confirmation appears on the touchscreen.

→ Tap the "OK" field.

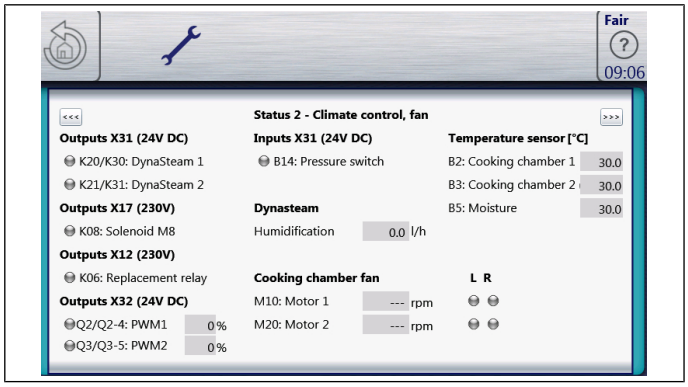
5.19 Water filter maintenance

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

Prerequisite

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

Overview



Setting the capacity

→ Use the number block to set the desired values by tapping.
→ Tap the "OK" field.
↳ Changes saved.

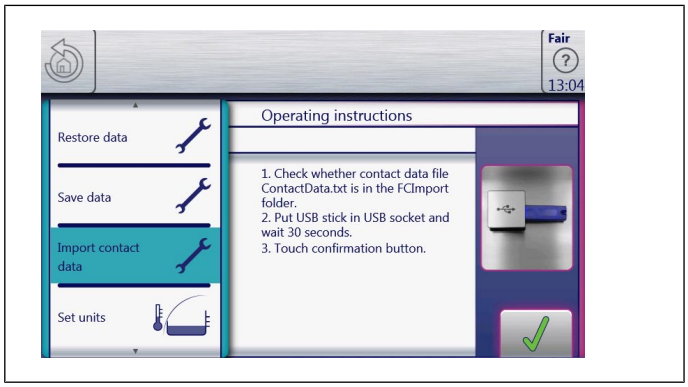
Canceling the selection

→ Tap the "Back" field.

5.20 Importing contact data

Description Import of service contact data. These are available under "unit information" for the operators.

Overview



Preparing the data

→ 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 stick.
↳ The file must be stored in the folder "FCImport".

Importing data

→ Perform according to instructions on the touchscreen.

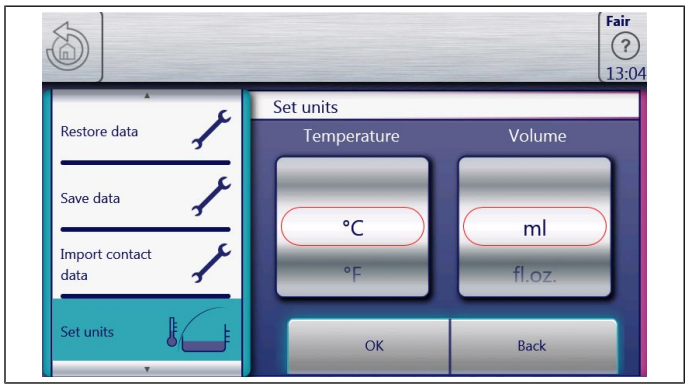
→ Touch the *Confirmation* field.

↳ Import the created contact data.

↳ Then a confirmation appears on the touchscreen.

5.21 Setting units

Overview



To convert the units

1. Select the desired temperature and volume.
2. Touch the "OK" field.

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 (solenoid 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.

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→ Touch the "OK" field.

↳ Changes saved.

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

Relay	Connector	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.
K3	X12	2	Magnetic valve manual rinse	Reconnect the line from X12. 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	Solenoid 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 reprogramming 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.

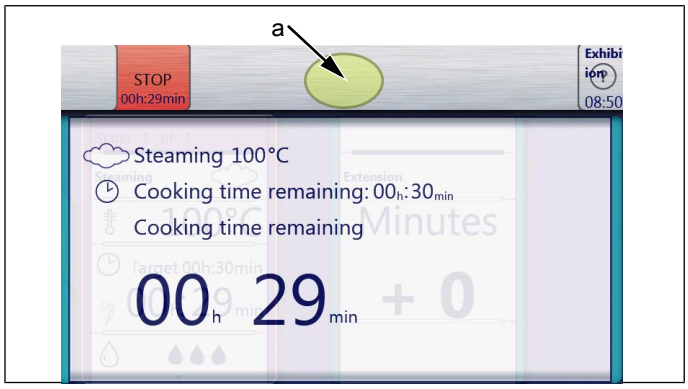
↳ Changes saved.

5.23 Status overview direct access

Description → Direct access in the status overview.

↳ Display of all processes and temperature in ongoing operation.

Overview



Calling up status overview

→ Touch the invisible field three times quickly.

↳ Change of the display to the multi-page status overview .

Exiting the status overview

→ Touch the *Back* field.

↳ Change to the display of the cooking process.

INFORMATION

The status overview is intended only for the service technician.

6 Software

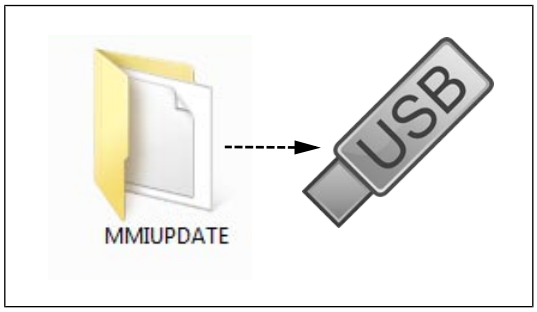
6.1 Software update

Prerequisite

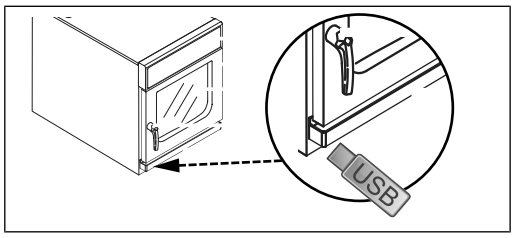
→ USB stick.
  ↳ Maximum size 32 GB.
  ↳ FAT formatting (default).
  ↳ The disk should be empty if possible.
→ Current software update.
  ↳ The update is provided as packed ZIP file.

Preparing the USB stick

→ Open and download the .ZIP file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.
→ Copy unzipped folder "MMIUpdate" to the USB stick.
  ↳ The update file is in the folder.
  ↳ The file has the extension ".ugl".
  ↳ For example, "012200.ugl" (software update V1.22).



Inserting the USB stick



The USB interface is behind the cover on the bottom left of the housing.

Performing the update

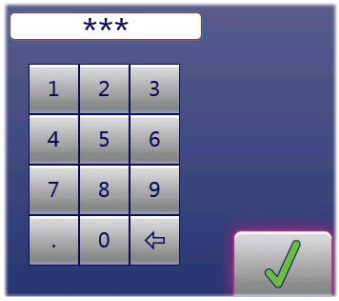
→ Switch the unit on.

→ Tap the "Appliance functions" field.

↳ Display of *Appliance functions* menu.

→ Tap "Settings" field.

↳ Display of "*PIN*" window.



→ Enter password and tap the *Confirmation* field.

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

→ Select the "Software update" field on the left area of the menu by swiping.

→ Tap the "Software update" field.

→ Tap the "OK" field.

↳ The update begins.

INFORMATION

The update can take up to 20 minutes. The software is restarted several times.

Do not switch the unit off.

↳ Then a confirmation appears on the touchscreen.

→ Tap the "OK" field.

↳ The software restarts automatically.

6.2 Importing additional content

Description

Import function for manufacturer contents:

- Cookbook graphics
- Help information
- Sound files

Prerequisite

→ USB stick.

↳ Maximum size 32 GB.

↳ FAT formatting (default).

↳ The disk should be empty if possible.

→ Current additional content.

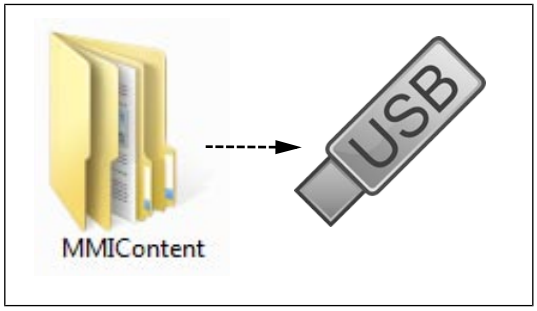
↳ Additional contents are provided as packed .ZIP file.

Preparing the USB stick

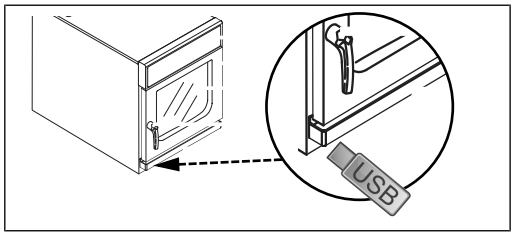
→ Open and download the .ZIP file and unzip. In general, the unzipped folder is in the same directory as the previously compressed one.

→ Copy the unzipped folder "MMIContent" to the USB stick.

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



Inserting the USB stick



The USB interface is behind the cover on the bottom left of the housing.

Importing additional content

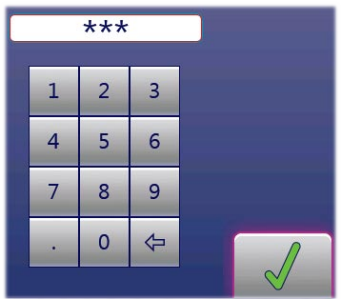
→ Switch the unit on.

→ Tap the "Appliance functions" field.

↳ Display of *Appliance functions* menu.

→ Tap "Settings" field.

↳ Display of "*PIN*" window.



→ Enter password and tap the *Confirmation* field.

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

→ Select the field "Import additional contents" on the left area of the menu by swiping.

→ Tap the "Import additional contents" field.

→ Tap the "OK" field.

↳ The data is imported.

→ Then a confirmation appears on the touchscreen.

→ Tap the "OK" field.

6.3 Importing the manufacturer's cookbook

Prerequisite

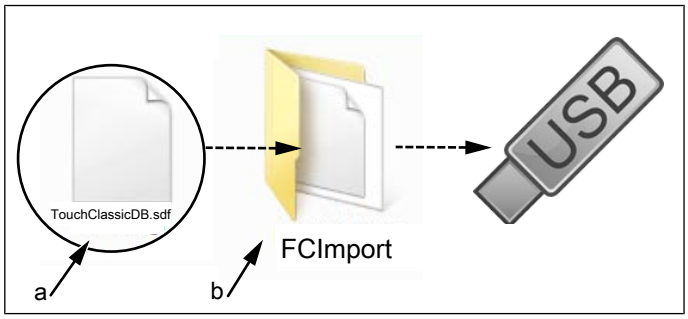
→ USB stick.

→ On the unit, the software version 1.29 (from 04/2014) or higher is installed.

↳ Check of the software version in the unit's information (see „5.2 Appliance information", Page 10).

↳ If necessary, perform software update .

Preparing the USB stick



a Update file b FCImport folder

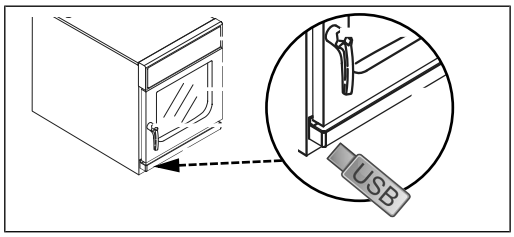
→ Create "FCImport" folder on the USB stick.

→ Copy update file to the "FCImport" folder.

↳ The update consists of one file.

↳ The file has the wording "TouchClassicDB.sdf".

Inserting the USB stick



The USB interface is behind the cover on the bottom left of the housing.

Importing the MKN cookbook

→ Switch on unit "I".

→ Tap the "Appliance functions" field.

↳ Display of *Appliance functions* menu.

→ Tap "Settings" field.

↳ Display of *PIN* window.

→ With the keyboard, enter password "111".

↳ Display of menu "*Settings*".

→ Select the field "Import MKN cookbook" on the left area of the menu by swiping.

→ Tap the "Import MKN cookbook" field.

→ Tap the *Confirmation* field.
↳ Import begins.
↳ Then a confirmation appears on the touchscreen.

Exiting selection

→ Tap the *Back* field.

7 Trade show mode

Description Trade show mode allows appliance operation for demonstration purposes.

Prerequisite A single-phase power supply is required for operation.

→ Unit is connected to L3 and N.

↳ See also installation instructions.

Calling up the selection

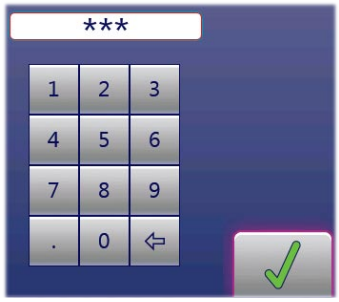
→ Switch unit to "I"

→ Tap the "Unit functions" field.

↳ Display of *Unit functions* menu.

→ Tap the "Settings" field.

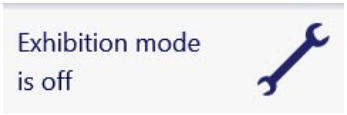
↳ Display of *PIN* window.



→ Enter password **888** and tap the *Confirm* field.

↳ Display of *Trade show* menu.

Switching trade show mode on



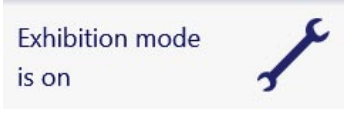
→ Tap the "Trade show mode is off" field.

↳ 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.

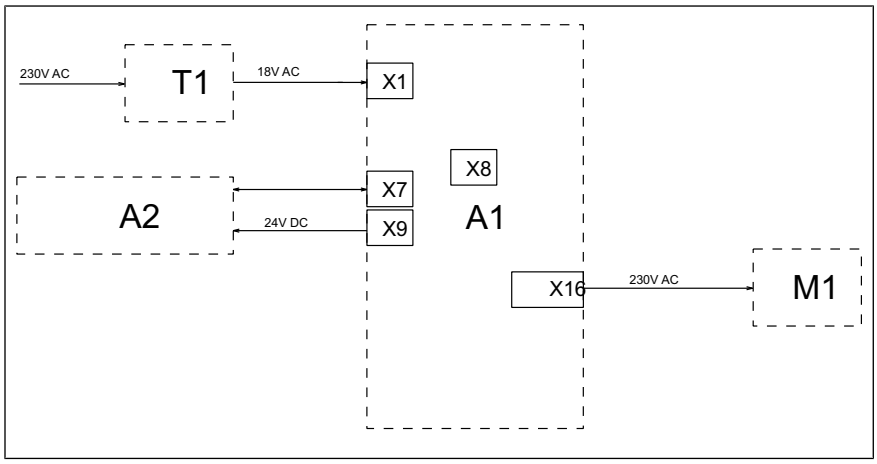
↳ Automatic restart of the software.

↳ Unit is in normal operation.

8 Electronics

8.1 Block diagram for the control

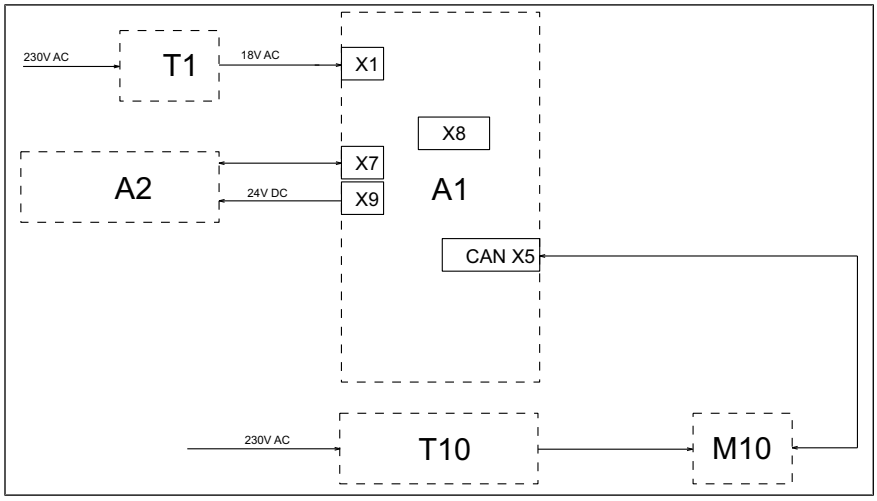
8.1.1 Unit size 6.23



Legend

A1	Control board	T1	Transformer
A2	Control panel	X8	Digital key
M1	Fan motor		

8.1.2 Unit size 6.1

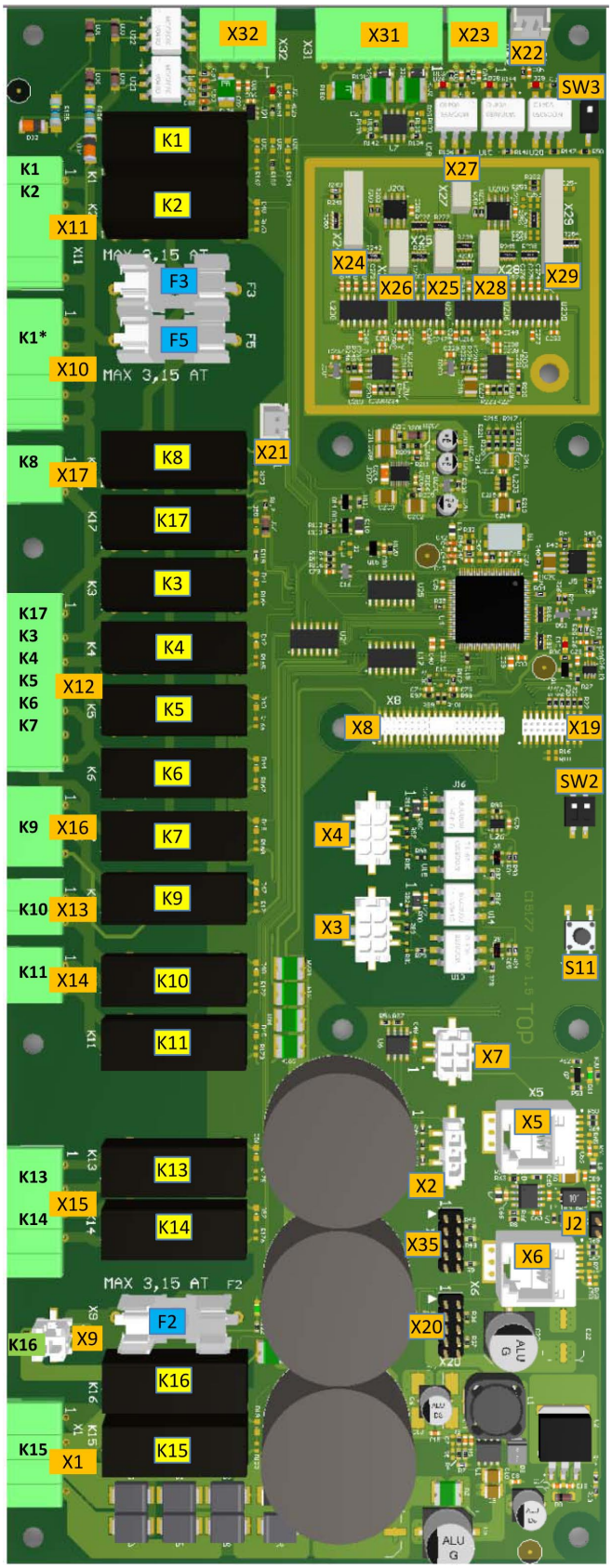


Legend

A1	Control board	T1	Transformer
A2	Control panel	T10	Power board
M10	Fan motor	X8	Digital key

8.2 Control board

8.2.1 Layout



8.2.2 Configuration

Connector X1

No.	Description	Conductor number
1	Input 10.7 V AC for lighting	
2		
3/4	Power supply I/O board 18V AC	

Connector X2, X3, X4 Not assigned

Connector X5 CAN bus line to motor M10 (only for unit size 6.1)

Connector X6 Not assigned

Connector X7 MMI communication

Connector X8 Digital key contains device-specific information.

Connector X9 (24V DC)

No.	Description	Conductor number
1/2	Supply for control panel (MMI)	

Connector X10 (230V AC)

No.	Description	Conductor number
1	Supply voltage for relay	
2	Output K1, main contactor Q1	
3	-	
4/5	N	

Connector X11 (230V AC) optional

No.	Description	Conductor number
1	Output K1, POS A	
2	Output K2, POS B	
3	Input 230V, POS C	
4	-	
5	N	

Connector X12 (230V AC)

No.	Description	Conductor number
1	Output K17, WaveClean pump G16	
2	Output K3, magnetic valve K23	
3	Output K4, magnetic valve K12	
4	Output K5, siphon pump G24	
5	Output K6, backup relay	
6	-	
7	N	

Connector X13 (potential-free) Only assigned for unit size 6.23.

No.	Description	Conductor number
1	Supply voltage fan motor M1	
2	Output K10, fan motor on/off	

Connector X14 (potential-free)

No.	Description	Conductor number
1	Input K11, cooling fan G7 (230V AC)	
2	Output K11, cooling fan G7 (230V AC)	

Connector X15 Not assigned

Connector X16 (potential-free) Only assigned for unit size 6.23.

No.	Description	Conductor number
1	Supply voltage of connector X13	
2	Output K9, fan motor M1	
3	Output K9, fan motor M1	

Connector X17 (230V AC)

No.	Description	Conductor number
1	Output K8, solenoid M8	
2	N for solenoid M8	

Connector X19 / X20 Not assigned

Connector X21 Reed contact switch for cooking chamber door B15

Connector X22 / X23 Not assigned

Connector X24 B1 core temperature sensor 1

Connector X25 B2 cooking chamber sensor 1

Connector X26 Not assigned

Connector X27 B4 Vapor sensor

Connector X28 B5 moisture sensor

Connector X29 Not assigned

Connector X31 (24V DC)

No.	Description	Conductor number
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)

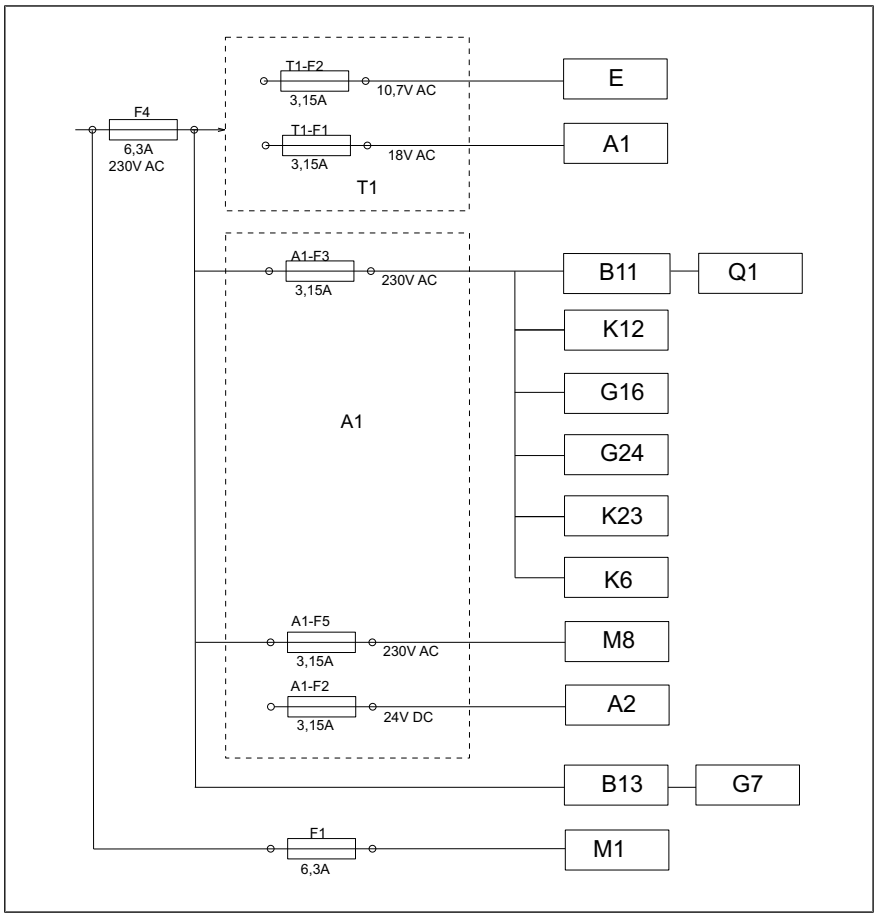
No.	Description	Conductor number
1/2	Output, SSR Q2, Q3	

Connector X35 Not assigned

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

8.3 Safety overview

8.3.1 Unit size 6.23

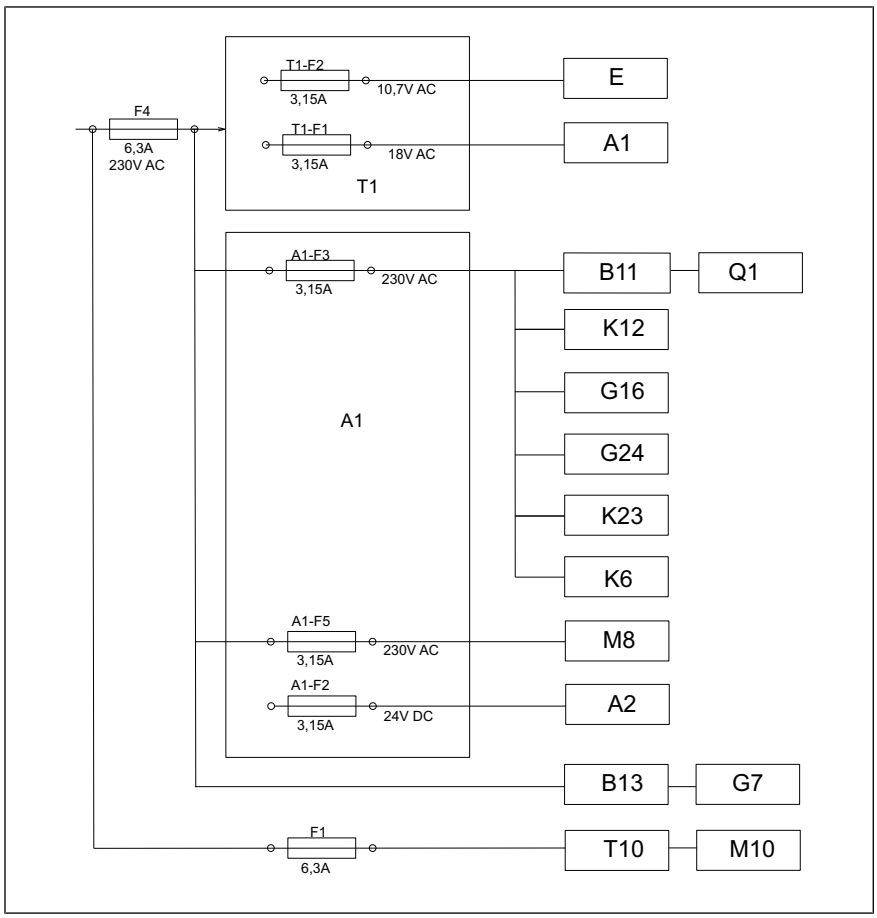


Legend

A1	Control board	K6	Backup relay
A2	Control panel	K12	Magnetic valve extinguishing
B11	Cooking chamber STL	K23	Magnetic valve manual rinse
B13	Thermal switch	M8	Solenoid
E	Cooking chamber light	M1	Fan motor
F	Fuse	Q1	Main contactor
G7	Cooling fan	T1	Transformer
G16	WaveClean pump*		
G24	Siphon pump*		

* = only for models with automatic WaveClean cleaning system.

8.3.2 Unit size 6.1



Legend

A1	Control board	K6	Backup relay
A2	Control panel	K12	Magnetic valve extinguishing
B11	Cooking chamber STL	K23	Magnetic valve manual rinse
B13	Thermal switch	M8	Solenoid
E	Cooking chamber light	M10	Fan motor
F	Fuse	Q1	Main contactor
G7	Cooling fan	T1	Transformer
G16	WaveClean pump*	T10	Power board
G24	Siphon pump*		

* = only for models with automatic WaveClean cleaning system.

9 Error messages

9.1 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

Error message displayed	Description
Chamber sensor faulty.	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.

9.2 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.

Location The cooking chamber sensor is in the top right of the cooking chamber.

Naming on the circuit diagram B2

Troubleshooting Dismount unit cover.

→ Check contacting on control board A1, X25.

→ Remove existing cooking chamber sensor from the control board A1, X25 and plug in new cooking chamber sensor.

↳ The fault message disappears. Replace cooking chamber sensor.

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

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

9.3 Core temperature sensor defective (699, 700)

Description The core temperature sensor in the cooking chamber is deactivated.

Location The core temperature sensor is in the front area of the cooking chamber.

Naming on the circuit diagram B1

Troubleshooting Dismount unit cover.

→ Check contacting on control board A X24.

→ Remove existing core temperature sensor from the control board A1 X24 and plug in new core temperature sensor.

↳ The fault message disappears. Replace core temperature sensor.

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

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

9.4 Water vapor sensor defective (710)

Description The temperature sensor on the control board is measuring a temperature of >70°C. The unit is no longer operational until it cools down.

Troubleshooting

→ Check air intake area of fan.

↳ Clean dirty air intake area.

→ Check that cooling fan is functioning properly. To do so, use the relay test in the Service menu to switch on the cooling fan.

↳ The cooling fan does not start. Measure the voltage at the fan. Voltage present = Cooling fan defective. Voltage not present = Relay on the control board defective. Replace control board.

→ The cooling fan starts. Check surroundings and ambient temperature. See also installation instructions.

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

9.5 Excess temperature in the cooking chamber (ID73)

Description The measured temperature in the cooking chamber is outside the allowable range (electric power supply > 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.

Prerequisite
- No display of fault messages from the temperature sensor.

Troubleshooting Dismount unit cover.

Switch unit to "I"

→ Measure the voltage / current consumption on the load side of the semi-conductor relay.

↳ Voltage / current is present and the LED on at least one of the semi-conductor relays if off.

↳ Semi-conductor relay is defective. Replace component and check that fan impeller is balanced.

→ Measure the control voltage on the input side of the semi-conductor relay.

↳ Voltage is present and the LED on at least one of the semi-conductor relays if on.

↳ Control board A1 defective. Replace component.

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

9.6 Overtemperature control (TMP_ID2)

Description The temperature sensor on the control board is measuring a temperature of >70°C. The unit is no longer operational until it cools down.

Troubleshooting

→ Check air intake area of fan.

↳ Clean dirty air intake area.

→ Check that cooling fan is functioning properly. To do so, use the relay test in the Service menu to switch on the cooling fan.

↳ The cooling fan does not start. Measure the voltage at the fan. Voltage present = Cooling fan defective. Voltage not present = Relay on the control board defective. Replace control board.

→ The cooling fan starts. Check surroundings and ambient temperature. See also installation instructions.

9.7 Risk of frost (TMP_ID72)

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

Troubleshooting

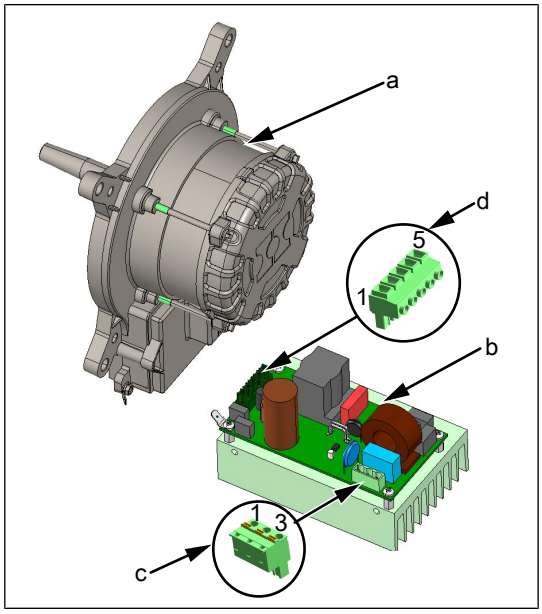
→ Increase the room temperature and switch on unit again.

→ Change location of the unit.

9.8 Fan defective or temperature limiter triggered (702) only for Compact

Description The control board A1 does not receive any response via the CAN bus cable from fan motor M10. There is an error in the safety circuit or fan area.

Overview



a Fan motor M10
b Power board T10 for fan motor
c Power supply X1
d Connection for fan motor X2

Plug assignment power board

Connector X1 (c)			Connector X2 (d)	
1	L1 230V		1	320V DC+
2	N		2	Ground
3	PE		3	15V DC+
			4	-
			5	PFC

⚠ 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!

Locating errors → Location of whether there is an error in the STL circuit (STL = safety temperature limiter) or in the fan area.

→ Switch unit on and measure voltage at main contactor Q1, terminals A1 and A2. The main contactor must be energized.

↳ No voltage present. There is an error in the STL circuit. Troubleshooting according to "Troubleshooting safety circuit".

↳ Voltage present. There is an fault in the fan area. Troubleshoot according to "Troubleshooting the fan".

Troubleshooting the safety circuit

→ The safety temperature limiter has tripped.

↳ Reset the safety temperature limiter. Check semiconductor relay and replace if necessary.

→ The safety temperature limiter has not tripped.

↳ Check fuse F3 on control board A1. Replace if necessary. Check main contactor Q1 and control board A1.

↳ Check relay K1 on the control board. If necessary, use backup relay or replace control board.

Troubleshooting the fan motor

Switch unit on "I".

→ Check voltage supply at connector X1.

↳ No voltage present. Fuse F1 blown. Replace power board for motor.

↳ No voltage present. Fuse F1 is not blown. Check main contactor Q1 and control board A1.

→ Check output voltage at connector X2.

↳ No voltage present. Replace power board for motor.

↳ Voltage present. Replace fan motor.

Function check

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

9.9 Fan defective. Cooking program was cancelled (701)

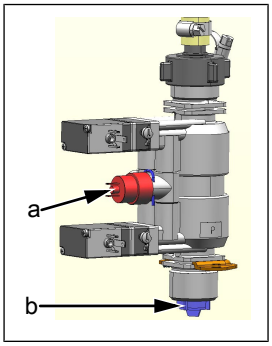
Description The control board A1 does not receive any response via the CAN bus cable from fan motor M10.

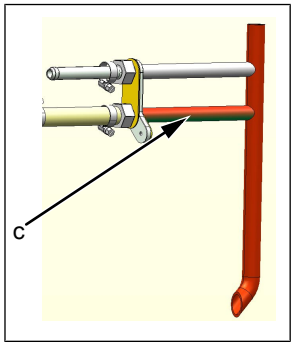
Troubleshooting (see „9.8 Fan defective or temperature limiter triggered (702) only for Compact", Page 51)

9.10 Water pressure too low (709)

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

Location The pressure switch is on the DynaSteam steaming unit.





a Pressure switch

b Sieve

c Water supply pipe in the cooking chamber

→

INFORMATION 20.x pedestal units have two steaming units.

Naming on the circuit diagram B14

Troubleshooting Ensure on-site water supply to soft water connection of unit.

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

→ Check sieve on the water connection for soiling. To do this, remove the on-site water connection to the unit.

For additional troubleshooting, swing out the air diverter in the cooking chamber.

→ Perform the DynaSteam test in the Service menu.

↳ Water runs through the water supply pipe into the cooking chamber.

→ Perform DynaSteam test again and check water quantity with measurement container.

↳ The water quantity corresponds to the set quantity (±10%). Replace pressure switch.

↳ The water quantity does not correspond to the set quantity (±10%). Ensure that the supply pipe is not clogged. Replace steaming unit.

→ Perform the DynaSteam test in the Service menu.

↳ No water runs through the water supply pipe into the cooking chamber.

→ Check water supply pipe for calcification.

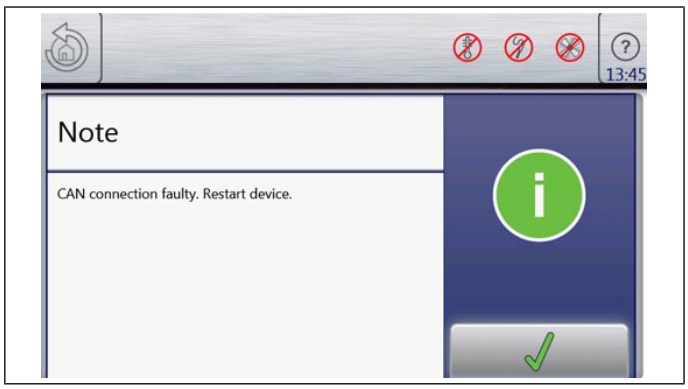
→ Ensure that the hose between the steaming unit and supply pipe is not clogged.

→ Replace steaming unit.

9.11 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.

Fault message displayed



Troubleshooting

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

→ Replace control board.

→ Replace operating panel.

Manufacturer

Kurt Neubauer GmbH & Co. KG
Halberstaedter Strasse 2a
D-38300 Wolfenbuettel
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