

FM800

EN

Contents



Order Number: 1H328796/0

Document Number: TD-104077/0



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2012-03-01	Preparation	HBD		0

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1. Safety
2. Commissioning
3. Maintenance
4. Troubleshooting
5. Decommissioning
6. Programming
7. Water flow diagram
8. Electrical diagrams
9. Checklists and certificates
10. Service Information

FM800

EN

Safety



Order Number: 1H328799/0

Document Number: TD-104080/0



Read the safety information chapter before working on the machines.

Change log

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2012-12-18	Preparation	HBD		0

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I. Explanation of symbols

 **DANGER**

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

 **WARNING**

WARNING indicates risk of injury.

 **CAUTION**

CAUTION directs your attention to a danger of minor injuries.

NOTICE

NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.)



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. Area of application



- The safety information applies to the entire conversion instructions.
- Read and understand the present information before performing any work on the machine.
- The present instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units. These tasks include commissioning, programming, maintenance work, troubleshooting and product quality settings.

1. In case of questions or problems



If you encounter questions or problems when working on the machines, contact our Service Hotline:

Phone hotline +41 62 787 37 37

E-mail hotline: hotline.coffeemachine@franke.com

III. Safety information

1. Dangers of careless work habits

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.
- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.

DANGER

Risk of death by electrocution and damage to machine from water!

The machine may release moisture while regulating excess pressure. Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Disconnect the water connection to the machine.
- ◆ Empty the machine before working on the boiler system.
- ◆ Check seals before recommissioning the machine.

2. Warnings - For your health

WARNING

Danger of injury and of damage to the machine from improper installation

A danger of injury exists with incorrect installation. The machines can be damaged.

- ◆ Evaluate structural conditions with respect to installation conditions.
- ◆ Observe local statutory requirements with respect to structural conditions.

If the customer is unable to fulfill the conditions for installation 100%, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

WARNING

Danger of injury and of damage to the machine

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

WARNING

Risk of injury, eye injury and damage to the machine

If objects find their way into the bean hopper or grinder, splinters may be ejected, leading to injury or damage to the machine.

- ◆ Never put any objects in the coffee bean hopper or grinder.

WARNING

Risk of burns and scalding!

During cleaning, hot water and steam are released repeatedly.

- ◆ Keep hands away from the outlets and nozzles during cleaning.

When drinks are dispensed, the products themselves pose a risk of scalding.

- ◆ Always be careful with hot drinks.

During initialization, hot water and steam are released.

- ◆ Pay attention and work carefully.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Do not reach into the machine while it is operating.
- ◆ Only collect grounds in the grounds container or with a coffee grounds chute.

⚠ WARNING

Danger of eye injury

Small parts could jump out of the machine due to spring tension and cause eye injuries while working on the machine's mechanical components.

- ◆ Wear protective goggles.

3. Caution - For your health

⚠ CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

⚠ CAUTION

Risk due to spoiled milk and coffee residue!

If the machine is not cleaned regularly, milk and coffee residue may accumulate in the machine, clog the outlets or find their way into drinks.

- ◆ Explain the daily cleaning procedure to the customer.

⚠ CAUTION

Illness due to bacteria build-up

Using a water filter for too long can lead to build-up of algae.

- ◆ Change the water filter in accordance with the maintenance plan.

⚠ CAUTION

Risk of contamination

When the machine is not in use for extended periods, residue may accumulate.

- ◆ Rinse the machine before its first use, after extended periods of disuse (more than 2 days) and after cleaning.

4. Notices of possible damage

NOTICE

Damage from water jets

The machine is not protected from water jets.

- ◆ Avoid using water jets for cleaning and do not use high-pressure cleaners.

NOTICE

Damage from electrostatic charge

Static charges can damage the sensitive electronics.

- ◆ Discharge any static electricity from the machine components and yourself before beginning work.

NOTICE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

NOTICE

Damage from improper transport

The machine and add-on units may be damaged and their function may be impaired.

- ◆ Always transport the machine and the add-on units in an upright position.
- ◆ Transport the machine and the add-on units in such a way that they are protected from the elements, such as rain and moisture.

NOTICE

Damage caused by insufficient clearances

If the clearances between the machine and the wall and above the machine are not maintained, heat may accumulate in the machine and lead to faults.

- ◆ Maintain the installation dimensions prescribed by Franke.

NOTICE

Damage to the coffee machine or add-on units from improper transport

The machine and add-on units may be damaged and their function may be impaired.

- ◆ Always transport the machine and the add-on units in an upright position.
- ◆ Load the machines and add-on units for safe transport in the vehicle.

FM800

EN

Commissioning

Document Number: TD-104083/0
Order Number: 1H328802/0

Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2013-01-18	Preparation	TBA		0

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I. Explanation of symbols

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Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. For your Safety

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DANGER

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- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
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WARNING

Danger of injury and of damage to the machine from improper installation

A danger of injury exists with incorrect installation. The machines can be damaged.

- ◆ Evaluate structural conditions with respect to installation conditions.
- ◆ Observe local statutory requirements with respect to structural conditions.

If the customer is unable to fulfill the conditions for installation 100%, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Do not reach into the machine while it is operating.
- ◆ Only collect grounds in the grounds container or with a coffee grounds chute.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

NOTICE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

NOTICE

Damage from improper transport

The machine and add-on units may be damaged and their function may be impaired.

- ◆ Always transport the machine and the add-on units in an upright position.
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NOTICE

Damage caused by insufficient clearances

If the clearances between the machine and the wall and above the machine are not maintained, heat may accumulate in the machine and lead to faults.

- ◆ Maintain the installation dimensions prescribed by Franke.

III. Scope of delivery

1. For the customer



FM800 Basic model



Cleaning solution (Option)
Item no.: 1L301219



Cleaning brush
Item no.: 1L301160



Microfiber cloth
Item no.: 1H325974



Key
-



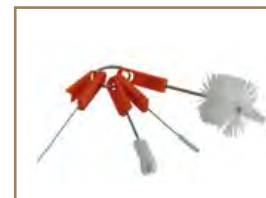
Operating instructions
Item no.: 1H328880



Measuring Cup
Item no.: 1H327369



Cleaning tablets
Item no.: BK328400



Cleaning brushes
Item no.: 1L301376

2. Additional scope of delivery



Grinder adjusting wrench
for machine with
coffee grinder
Item no.: 1H325344



Water connection seal
Item no.: 1L297307

IV. Checking installation conditions

⚠ WARNING

Danger of injury and of damage to the machine from improper installation

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- ◆ Observe local statutory requirements with respect to structural conditions.

If the customer is unable to fulfill the conditions for installation 100%, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

1. Dimensioned drawings

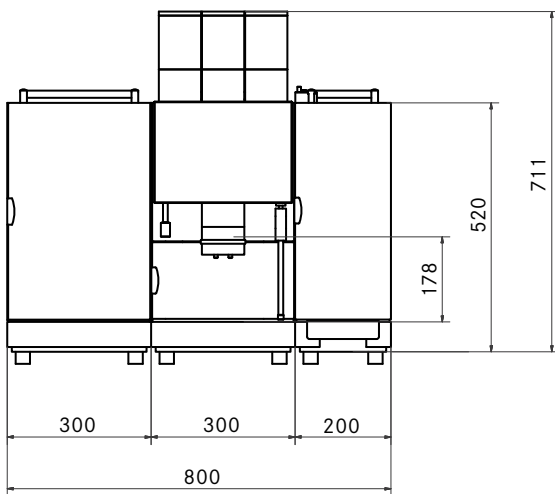


The dimensions apply for the FM800.

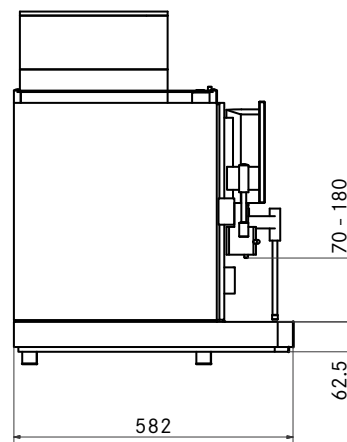
This dimensioned drawing of the buffet feed-through applies to the FM800 and its add-on units.

The add-on units are equipped with a drip tray and must be connected to the waste-water system.

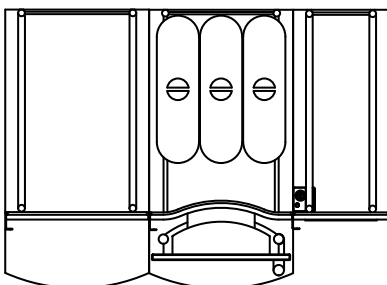
Front view



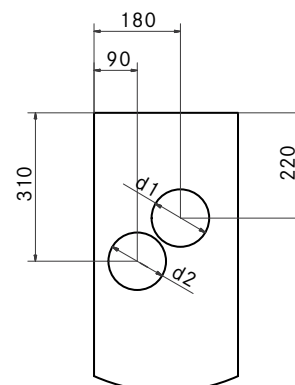
Side view



Top view



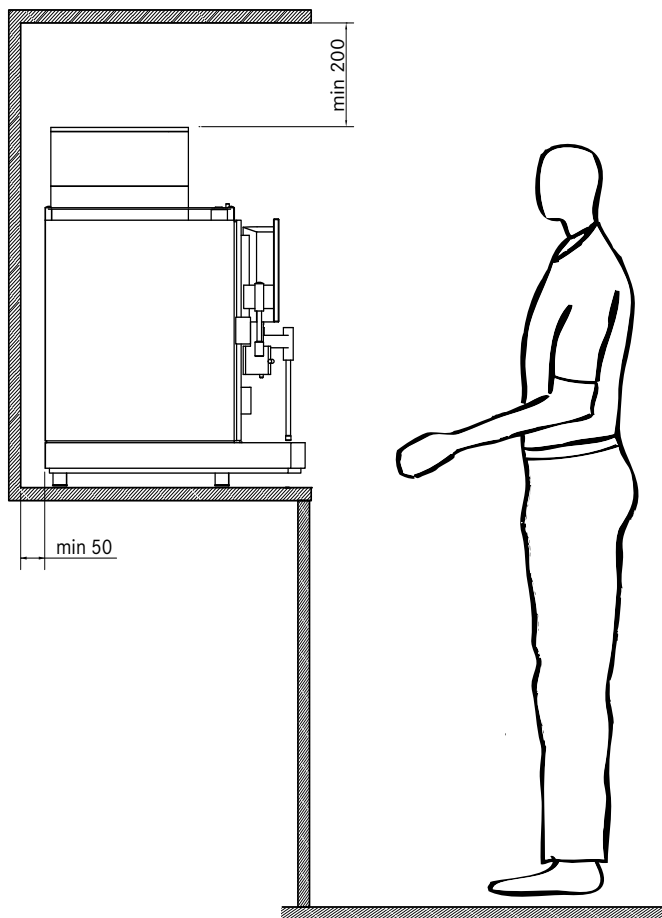
Cross-section from above (Buffet feed-through)



d1: Hole for cable and hoses

d2: Hole for coffee ground chute

2. Installation dimensions



- Stable, ergonomic surface (min. load capacity 150 kg or 330.70 lbs).
- The operator panel should be at eye level.
- Min. distance to wall: 50 mm (2").
- Clearance above machine: 200 mm (7 ¾").
- Adjustable feet (optional) can be used to compensate for unevenness or height differences.
- Add-on units are up to 300 mm wide.
- Observe connection requirements for add-on units.

Adjustable feet

40 mm	520 mm + 40 mm = 560 mm
70 mm	520 mm + 70 mm = 590 mm
100 mm	520 mm + 100 mm = 620 mm

3. Technical data

- Each terminal of the power supply must be able to be interrupted by a switch.
- Compare the type plate on the machine with the on-site installations.

Bean hopper	1.2 kg per grinder
Powder container	1.2 kg per container or 2 x 0.5 kg (optional dual powder dosing unit)
Grounds container	45 cakes (optional: coffee ground chute)
Boiler volume	Coffee 0.9 liters at 2.5 kW Hot water/steam 0.9 liters at 2.5 kW
Thermoblock	2 kW
Electrical connections	400 V 3 LNPE 7.5 kW 50/60 Hz Fuse: 16 A
	220-240 V 1 LNPE 4.5 kW-5.4 kW 50/60 Hz Fuse: 30 A (locked)
	200-240 V 3 LPE 2.6 kW-5.4 kW 50/60 Hz Fuse: 30 A (locked)
Electric cable	l = 1500 mm (59")
Supply line	Metal hose with union nut G3/8", l = 1500 mm (59")
Waste-water hose	d = 16 mm (3/4"), l = 2000 mm (78 3/4")
	Not permanently attached to the drain (vented)
Noise emission	< 70 dB(A)
Weight	Approx. 55 kg per machine
Cold water connection (option)	G3/8" external thread
Water pressure	80 - 800 kPa (0.8-8.0 bar)
Shut-off cock	With check valve and filter
Water hardness	Max. 70 mg CaO/l Water (7 dH, 13 °fH)
Ideal pH value	7
Funnel	d = 50 mm (2") with siphon
Drain pipe	d _{min} = 1 "
Ambient conditions	Humidity: max. 80%
	Ambient temperature: 5 - 35 °C

4. Add-on units for the FM800

- The figure below serves to identify the respective systems.
- Only one of the refrigeration units illustrated below can be present for each milk system.
- For information on dimensioned drawings, connection variants, connections and technical data of the add-on units see *service documentation for Add-on units, Section 2 - Commissioning* (Item no.: 1Y 320 850).



- 1 Refrigeration unit (KE)
- 2 Coffee machine FM800 (KM)
- 3 Flavour Station (FS)
- 4 Cup warmer (TW)
- 5 Base refrigeration unit (UKE)

5. Evaluating the situation

WARNING

Danger of injury and of damage to the machine from improper installation

If the customer is unable to fulfill the conditions for installation 100%, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

Requirement	Ful-filled	Deviation/measured value
Surface	<input type="checkbox"/>	
Safety clearances above (min. 200 mm or 7 ¾")	<input type="checkbox"/>	
Safety clearances behind (min. 50 mm or 2")	<input type="checkbox"/>	
Load (min. 150 kg or 330.70 lbs)	<input type="checkbox"/>	
Separator (ground fault circuit interrupter)	<input type="checkbox"/>	
Outlet available	<input type="checkbox"/>	
Outlet connected	<input type="checkbox"/>	
Fuse	<input type="checkbox"/>	
Position of electrical connections	<input type="checkbox"/>	
Position of water connections	<input type="checkbox"/>	
Water pressure	<input type="checkbox"/>	
Connection piece	<input type="checkbox"/>	
Position of waste-water connections	<input type="checkbox"/>	
Pipe cross-section	<input type="checkbox"/>	
Connection piece	<input type="checkbox"/>	
Shut-off cock	<input type="checkbox"/>	
Water filter	<input type="checkbox"/>	
Water hardness	<input type="checkbox"/>	
Chlorine content	<input type="checkbox"/>	
pH value	<input type="checkbox"/>	
Holes available for coffee ground chute (if required)	<input type="checkbox"/>	



All points fulfilled?

- The installation may proceed.

Are there any deviations?

- Inform the customer of any deviations.
- Propose solutions to resolve the problem(s).
- Postpone installation.
- Discuss the procedure with your supervisor, if necessary.

V. Connecting machines



- Open-ended wrench 19 mm

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.



- ▶ Check packaging for transport damage.
- ▶ Unpack machines.
- ▶ Check delivery for completeness (see scope of delivery and order).



- ▶ Attaching adjustable feet:
 - ▶ Screw the adjustable feet onto the bottoms of the machine and the add-on units.
- ▶ Place the machines at final location.
- ▶ Connect the coffee machine to any add-on units. For instructions, see *Service documentation for add-on units, Section 2 - Commissioning (Item no.: 1Y 320 850)*.



For new installations or recommissioning:

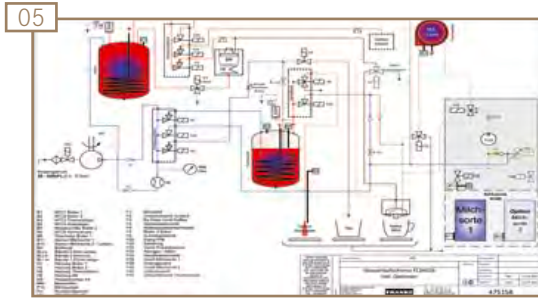
- Rinse the pressure hose and water supply line thoroughly.



- ▶ Connect the machines to the waste-water system.



- ▶ Turn off water at shut-off cock (if not already turned off).
- ▶ Connect the machines to the water system.



- ▶ Check the water hose for seal.
- ▶ Open the water shut-off cock.
- ▶ Visually inspect the supply line.
- ▶ Visually inspect inside of machine.
- Additional materials: Water circuit diagrams

⚠ DANGER

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- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.



- ▶ Ground the electrical circuit.
- ▶ Connect the electrical supply:
 - ▶ Connect each machine separately.
- ▶ Isolate the electrical circuit.



- ▶ Adjust the machines for level and connect them:
 - ▶ Correct the height with the adjustable feet.
 - ▶ Fasten machines with connection elements.

VI. Introduction

Equipment and configuration of the machine



- 1 Grinder 1
Powder dosing unit
Dual powder dosing unit
- 2 Grinder 2
- 3 Grinder 3
- 4 Flavour Station FS
- 5 Refrigeration unit KE

Structure of Control panel

The left column shows the various menu items of the current level.

Language (e.g.) indicates the menu item that can be edited.

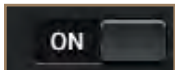
Configurable options.



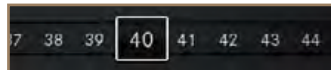
Back goes up one level.

Save saves changes made.

Input methods



Yes/No or On/Off can be changed by tipping. The visible value is active.



Parameters can be moved by dragging. The framed value is active.



Tip on arrow to display selection and to select.



Tip on keyboard to enter text or numbers.

VII. Commissioning



Fully connected coffee machine.



Make sure to confirm each of the entries and changes with **Save**.

Material checklist

Tools and additional materials	Completed
Service instructions	<input type="checkbox"/>
Laptop	<input type="checkbox"/>
Current software version (download from CSS)	<input type="checkbox"/>
Coffee machine type plate	<input type="checkbox"/>
Job/coffee machine order	<input type="checkbox"/>
Magnet	<input type="checkbox"/>
Open-ended wrench	<input type="checkbox"/>
Torx screwdriver, size 20	<input type="checkbox"/>
Scale (Item no. BK300494)	<input type="checkbox"/>
Grinder adjustment key (Item no.: BK310252)	<input type="checkbox"/>
Collection container	<input type="checkbox"/>
Coffee beans, milk, chocolate powder for automatic coffee machines, syrup	<input type="checkbox"/>
Measuring Cup	<input type="checkbox"/>
Customer product list	<input type="checkbox"/>
Customer's cups and glasses	<input type="checkbox"/>
Backup copy of the configuration for the customer	<input type="checkbox"/>
Handover report for the customer	<input type="checkbox"/>

Service Menu

- ▶ Tip on the Franke logo to switch to the maintenance level and select **Service Menu**.
- ▶ If a user is currently still logged on, tip twice on the Franke logo. You can then authenticate yourself with new user rights.



The PIN Code for the maintenance level is comprised of: (Day + Month) * Year * (Hour + Minute).

- ▶ Use the date and time information on the control panel (upper right corner).

Example: 28.09.2012; 11:26
 PIN Code: 37*2012*37

Service Menu



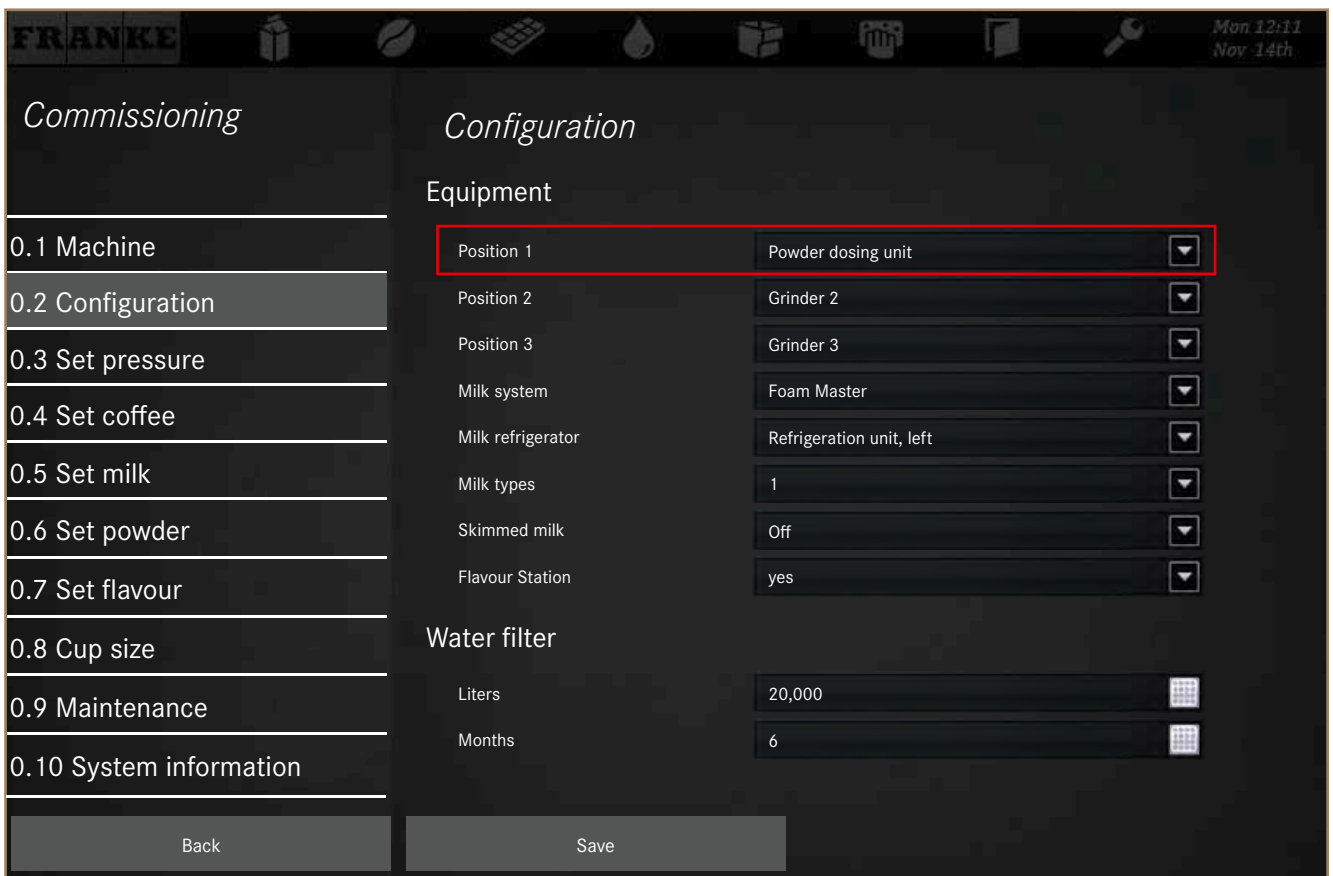
Menu item	Task	Completed
0 Commissioning	Configuring and calibrating the coffee machine	<input type="checkbox"/>
1 Set Machine	Set the behavior of the coffee machine	<input type="checkbox"/>
2. Set Drinks	Configuring drinks, creating new ones or clearing ones from the product portfolio	<input type="checkbox"/>
3 Date and Time	Configuring date, time and timers	<input type="checkbox"/>
4 Counters	Displaying and resetting counter readings	<input type="checkbox"/>
5. Test functions	Checking individual components and processes, e.g. during troubleshooting	<input type="checkbox"/>
6 Access rights	Assigning access rights and/or PIN codes for the various setting menus	<input type="checkbox"/>
7 Decommissioning	Emptying the system with the help of software	<input type="checkbox"/>
8 Update the software	Updating the software	<input type="checkbox"/>

0. Commissioning



Once the machine has been configured, only the relevant settings are displayed on the control panel.

Example



Position 1:

- Powder dosing unit
- Dual powder dosing unit
- Grinder 1

If a powder dosing unit is stored at Position 1, then **Grinder 1** will no longer appear with the following configuration tasks, e.g. under **0.4 Coffee**.

0 Commissioning



Menu item	Description	Completed
0.1 Machine	Enter machine data (taken primarily from type plate)	<input type="checkbox"/>
0.2 Configuration	Configure the coffee machine. Enter equipment features. The other menus are limited on the basis of this configuration	<input type="checkbox"/>
0.3 Set pressure	Setting the pump pressure	<input type="checkbox"/>
0.4 Set coffee	Calibrate water quantity, set grind coarseness and calibrate grinders	<input type="checkbox"/>
0.5 Set milk	Calibrate cleaning water for the milk system and set foam qualities for each milk type	<input type="checkbox"/>
0.6 Set powder	Calibrate water quantity and powder quantity per powder dosing unit	<input type="checkbox"/>
0.7 Set flavour	Calibrate syrup quantity	<input type="checkbox"/>
0.8 Cup sizes	Set cup sizes and scaling factors	<input type="checkbox"/>
0.9 Maintenance	Leave maintenance interval and Service number	<input type="checkbox"/>
0.10 System information	All software versions at a glance	<input type="checkbox"/>

0. Configuring the machine



Basic settings for drink preparation, presentation, operation, etc. are configured under the **Set machine** menu. The settings made can influence the later configuration tasks, as with **0 Commissioning**.

1 Configure machine

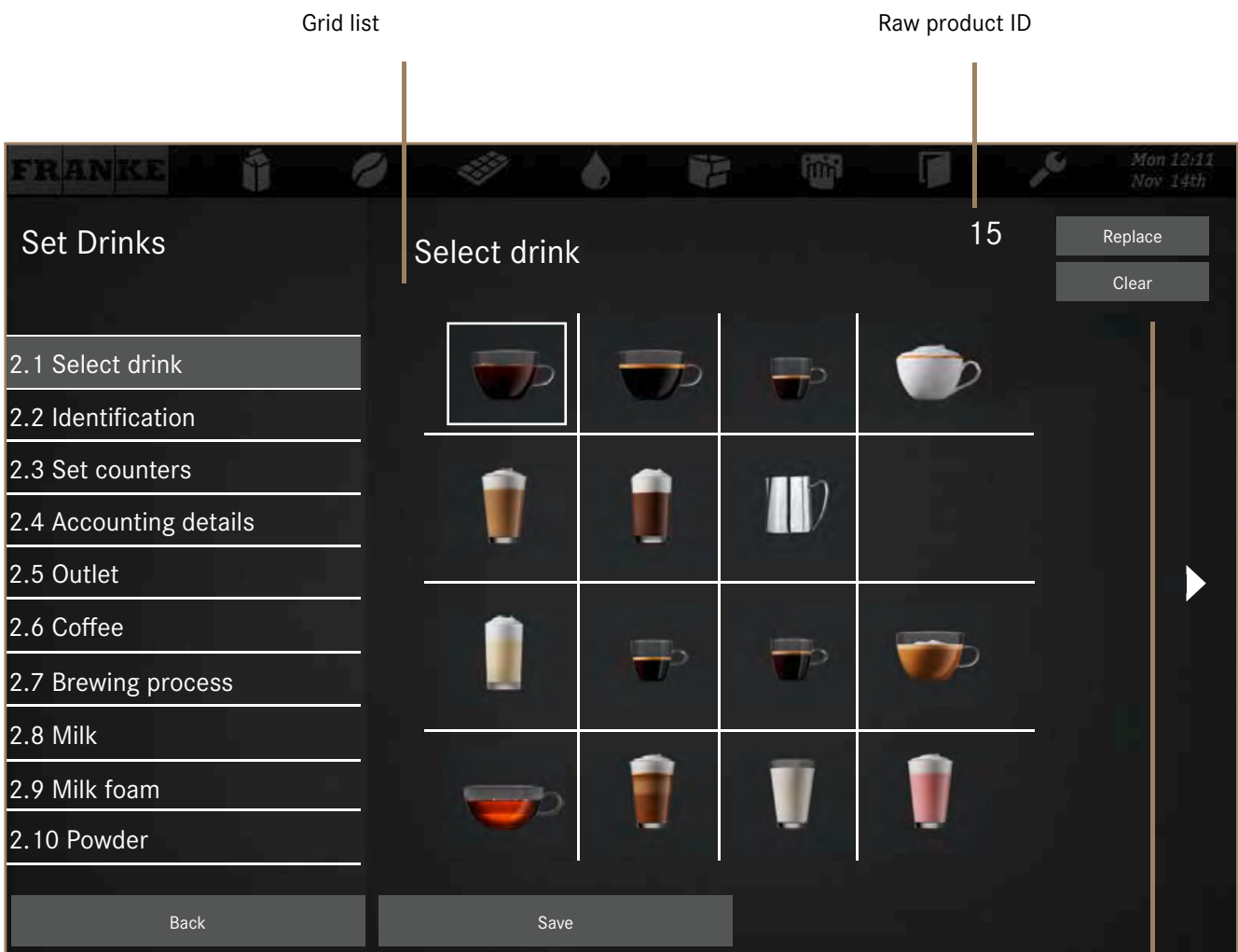


Menu item	Description	Completed
1.1 Language	Select desired language from list	<input type="checkbox"/>
1.2 Operating mode	Define desired operating mode for the coffee machine	<input type="checkbox"/>
1.3 Selection buttons	Eight selection buttons can be assigned various functions in accordance with customer preference	<input type="checkbox"/>
1.4 Cleaning	Set cleaning parameters	<input type="checkbox"/>
1.5 Rinsing	Set rinsing behavior	<input type="checkbox"/>
1.6 CAN bus	Define CAN IDs for coffee machine and add-on units	<input type="checkbox"/>
1.7 Temperatures	Set temperatures for coffee and hot water/steam and temperature levels	<input type="checkbox"/>
1.8 Outlet	Set the outlet height and the outlet delay	<input type="checkbox"/>
1.9 Coffee grounds	Set coffee ground chute option, quantity of cakes in the grounds container and dry-press time	<input type="checkbox"/>
1.10 Milk system	Set monitoring of milk system	<input type="checkbox"/>
1.11 Flavour	Activate Flavour Station and define syrup types	<input type="checkbox"/>
1.12 Accounting	Set accounting parameters	<input type="checkbox"/>
1.13 Sensors	Set Cup monitoring	<input type="checkbox"/>
1.14 Edge lighting	Setting the behavior of the edge lighting	<input type="checkbox"/>
1.15 Decaf	Permit utilization of decaffeinated coffee	<input type="checkbox"/>

1. Configuring Drinks



- Various drinks can be defined under the **Set drinks** menu on the basis of preset raw products.
- The necessary configuration tasks displayed under the individual menu points are dependent on the selection of the raw product under **2.1 Select drink**.



- **Replace** – replace available product.
- **Create new** (appears when an empty box has been selected) – defines a new drink on the basis of a raw product.
- **Clear** – delete available product.

2. Set Drinks



Menu item	Description	Completed
2.1 Select drink	Select drink or create new one	<input type="checkbox"/>
2.2 Identification	Name drink	<input type="checkbox"/>
2.3 Set counters	Setting counters	<input type="checkbox"/>
2.4 Accounting details	Configuring accounting details for the drink	<input type="checkbox"/>
2.5 Outlet	Configuring outlet height for the selected drink	<input type="checkbox"/>
2.6 Coffee	Configuring parameters for coffee	<input type="checkbox"/>
2.7 Brewing process	Configuring brewing process	<input type="checkbox"/>
2.8 Milk	Set Milk	<input type="checkbox"/>
2.9 Milk foam	Setting milk foam	<input type="checkbox"/>
2.10 Powder	Set Powder	<input type="checkbox"/>
2.11 Flavour	Set Flavour	<input type="checkbox"/>
2.12 Tea water quantity	Configuring water quantity for tea	<input type="checkbox"/>
2.13 Steam/Autosteam	Configuring Autosteam options	<input type="checkbox"/>
2.14 External resource	Integrate external resources	<input type="checkbox"/>
2.15 Product sequence	Define drink production sequence	<input type="checkbox"/>
2.16 Cup size	Scale product	<input type="checkbox"/>

2. Date and Time



The **Date and Time** menu is used to set date, time of day, the change between Daylight Savings Time and Standard Time and Timers if necessary.

3 Date and Time



Menu item	Description	Page
3.1 On/Off Machine	Configuring automatic on and off switching of coffee machine	83
3.2 Date and Time	Set date, time and change between Daylight Savings Time and Standard Time	84 ff.
3.3 Timer 1	Set timer 1	86 ff.
3.4 Timer 2	Set timer 2	86 ff.
3.5 Timer 3	Set timer 3	86 ff.
3.6 Timer 4	Set timer 4	86 ff.

VIII. Handover to customer

Task	Persons	Completed
Explain operation	Customer or other person responsible	<input type="checkbox"/>
Rights and PIN Codes	Customer	<input type="checkbox"/>
Discuss and carry out cleaning and rinsing	Customer (point out customer's responsibilities) and employees	<input type="checkbox"/>
Discuss ordering cleaning supplies	Customer or other person responsible	<input type="checkbox"/>
Hand over user documentation with the instruction that the documentation must be stored near the coffee machine	Customer	<input type="checkbox"/>
Discuss service	Customer or other person responsible	<input type="checkbox"/>
Discuss maintenance intervals and contract	Customer or other person responsible	<input type="checkbox"/>
Explain hotline and help desk	Customer or other person responsible	<input type="checkbox"/>
Affix sticker to the machine, or save number in software	Technician	<input type="checkbox"/>
Hand over the machine clean and ready to use	Customer or other person responsible	<input type="checkbox"/>
Remove the packaging materials	Technician	<input type="checkbox"/>
Fill out the handover report, discuss and sign	Customer and technician	<input type="checkbox"/>

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FM800

EN

► Maintenance overview

Semiannual maintenance – 6/18/30/.../ Months or 40,000/120,000/.../
product cycles

Annual maintenance/Three-year maintenance – 12/36 months or
80,000/240,000 product cycles

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compiled: 12.12



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2012-12-19	Preparation	HBD		0

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The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols



DANGER indicates potentially life-threatening danger or the danger of grave injuries.



WARNING indicates risk of injury.



CAUTION directs your attention to a danger of minor injuries.



NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. Area of application



- The safety information applies to the entire maintenance instructions.
- Read and understand the present information before performing any work on the machine.
- The present maintenance instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units.

III. For your safety

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.

WARNING

Danger of injury and of damage to the machine

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Be sure to read the safety information in the Service folder.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

NOTICE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

NOTICE

Damage from electrostatic charge

Static charges can damage the sensitive electronics.

- ◆ Discharge any static electricity from the machine components and yourself before beginning work.

NOTICE

Damage from insufficient or improper maintenance

Non-performance of maintenance causes operating malfunctions, repair costs and prolonged downtimes.

- ◆ Regular maintenance of the coffee machine and add-on units is essential.

IV. Semi-annual maintenance FM800



- The semiannual maintenance must be carried out after **40,000 product cycles** or no later than after **6 months** and then in accordance with the adjacent table.
- Semi-annual maintenance tasks take around 1 hour.

Utilization period in months	Maintenance counter
6	40,000
18	120,000
30	200,000
42	280,000
54	360,000
66	440,000



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 BK328738	Outlet, complete or Outlet, complete FM 800 with Flavour	Clean	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		O-ring	Replace	<input type="checkbox"/>
		<i>Dependent on outlet piston installed</i>		
	1T310382	For Espresso outlet pistons 43 mm		
	1L296241	For Espresso outlet pistons 50 mm		
	644706	For needle filter outlet pistons 50 mm		
1	1H325179	Grounds ejector	Clean	<input type="checkbox"/>
1	1H326869	Stripper plate	Clean	<input type="checkbox"/>
1	1H326807	Light barrier for Optek brewing unit	Clean	<input type="checkbox"/>
1	1H325177	Combo coffee grounds chute	Clean	<input type="checkbox"/>
1	1H325542	Manual fill chute	Clean	<input type="checkbox"/>

3. Powder system

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H326498	Coupling	Clean	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Clean	<input type="checkbox"/>
1	1H325269	Mixer compl.	Clean	<input type="checkbox"/>
1	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
1	BK325674	O-ring	Replace	<input type="checkbox"/>
1	BK326646	Fan, 24V with plug	Clean	<input type="checkbox"/>

Continued on next page

4. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
0.44	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
1	1H325280	Front door seal	Clean	<input type="checkbox"/>

5. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H3285585280	Manual fill funnel	Clean	<input type="checkbox"/>



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

V. Annual maintenance/Three-year maintenance FM800



- The annual maintenance must be carried out after **80,000 product cycles** or no later than after **12 months**.
- Three-year maintenance must be carried out after **240,000 product cycles** or no later than after **36 months** have passed.
- Annual/three-year maintenance takes around 2¹/₂ to 3 h.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 BK328738	Outlet, complete or Outlet, complete, with frother	Clean	<input type="checkbox"/>
1	1H328465	Frother FM800	Replace	<input type="checkbox"/>
1	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		Outlet piston, complete	Replace	<input type="checkbox"/>
		<i>Dependent on outlet piston installed</i>		
	1H325215	For Espresso outlet pistons 43 mm		
	1H328215	For Espresso outlet pistons 50 mm		
	1H325224	Needle filter outlet pistons 50 mm		
	1H325179	Grounds ejector	Clean	<input type="checkbox"/>
	1H326869	Stripper plate	Clean	<input type="checkbox"/>
	1H325236	Water inlet sieve	Replace	<input type="checkbox"/>
	1H325235	Ejection piston	Replace	<input type="checkbox"/>
	1H325234	O-ring 44, 12 x 2, 62	Replace	<input type="checkbox"/>
	1H328345	O-ring 9.19 x 2.62 Viton	Replace	<input type="checkbox"/>
	1T310422	Silicone O-ring 9.19 x 2.62	Replace	<input type="checkbox"/>
	1H326807	Light barrier for Optek brewing unit	Clean	<input type="checkbox"/>
	1H325177	Combo coffee grounds chute	Clean	<input type="checkbox"/>
	1H325542	Manual fill chute	Clean	<input type="checkbox"/>

3. Heating unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
HW/S boiler				
1	1N330359	Level sensor	Replace	<input type="checkbox"/>
1	1N330194	Pressure relief valve, 3 bar	Replace	<input type="checkbox"/>
2	1H328622	Check valve VNR-958-P340-4FF	Replace	<input type="checkbox"/>
1	1H325563	Orifice 1.65	Clean	<input type="checkbox"/>
1	BK328597	Regulating valve	Clean	<input type="checkbox"/>
1	1Y320409	Orifice 0.6 mm for hose 2 mm	Clean	<input type="checkbox"/>

Continued on next page

Quantity	Item number	Item designation	Maintenance tasks	Completed
Coffee part				
1	BK328598	Pressure relief valve, 12 bar	Replace	<input type="checkbox"/>

4. Waterway

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L301100	Waste-water hose	Clean	<input type="checkbox"/>
1	1T311095	Slim fan without guard	Clean	<input type="checkbox"/>

5. Grinder

Quantity	Item number	Item designation	Maintenance tasks	Completed
2	1H328454	Coffee bean hopper funnel	Clean	<input type="checkbox"/>

6. Powder system

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325374	Powder outlet tube	Clean	<input type="checkbox"/>
1	1H326184	Powder holder	Clean	<input type="checkbox"/>
1	1H326498	Coupling	Clean	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
1	1H325269	Mixer compl.	Clean	<input type="checkbox"/>
1	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
1	BK325674	O-ring	Replace	<input type="checkbox"/>
1	1N330264	Orifice 0.8 mm	Clean	<input type="checkbox"/>
1	BK326646	Fan, 24V with plug	Clean	<input type="checkbox"/>
1	1H327610	Single-chamber dosing unit	Clean	<input type="checkbox"/>
1	1H327612	Wire worm	Clean	<input type="checkbox"/>

7. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
0.44	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
	1H325280	Front door seal	Replace	<input type="checkbox"/>
	1H328625	Milk intake nozzle	Clean	<input type="checkbox"/>
	1H328624	Milk intake coupling	Clean	<input type="checkbox"/>
	1H327578	Combination probe	Clean	<input type="checkbox"/>
	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
	1H325373	Hinged armature valve	Clean	<input type="checkbox"/>
	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
	1H327979	Fan 230V 50/60	Clean	<input type="checkbox"/>

8. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H328558	Manual fill funnel	Clean	<input type="checkbox"/>

VI. Two-year maintenance FM800



- Two-year maintenance must be carried out after **160,000 product cycles** or no later than after **24 months** have passed.
- Two-year maintenance takes around 2¹/₂ to 3 h.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 or BK328737	Outlet, complete or Outlet, complete with Flavour	Replace	<input type="checkbox"/>
1	1H325010	Drive pinion	Replace	<input type="checkbox"/>
1	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		<i>Depending on the brewing unit installed</i>	Replace	<input type="checkbox"/>
	BK325225	Brewing unit 50 Espresso		
	BK325213	Brewing unit 43 Espresso		
	BK325220	Brewing unit 50 needle filter		
0.36	1H325406	Teflon hose, 4 x 2.5 mm	Replace	<input type="checkbox"/>
0.18	1H325406	Teflon hose, 4 x 2.5 mm	Replace	<input type="checkbox"/>

3. Heating unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
HW/S Boiler				
1	BK328755	HW/S Boiler compl.	Replace	<input type="checkbox"/>
2	1H328622	Check valve VNR-958-P340-4FF	Replace	<input type="checkbox"/>
1	1H325563	Orifice 1.65	Clean	<input type="checkbox"/>
1	BK328597	Regulating valve	Clean	<input type="checkbox"/>
1	1Y320409	Orifice 0.6 mm for hose 2 mm	Clean	<input type="checkbox"/>
Coffee part				
1	BK328756	Coffee boiler, compl.	Replace	<input type="checkbox"/>
1	BK328757	Brewing valve	Replace	<input type="checkbox"/>
Milk part				
1		Thermoblock	Replace	<input type="checkbox"/>

Continued on next page

4. Waterway

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L301100	Waste-water hose	Clean	<input type="checkbox"/>
1	1T311095	Slim fan without guard	Clean	<input type="checkbox"/>

5. Grinder

Quantity	Item number	Item designation	Maintenance tasks	Completed
2	1H328454	Coffee bean hopper funnel	Clean	<input type="checkbox"/>
1	1H328421	Collar	Replace	<input type="checkbox"/>

6. Powder system


Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325374	Powder outlet tube	Replace	<input type="checkbox"/>
1	1H326184	Powder holder	Replace	<input type="checkbox"/>
1	1H326498	Coupling	Replace	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
1	1H325269	Mixer compl.	Replace	<input type="checkbox"/>
1	1H327522	Adapter for Instant System	Clean	<input type="checkbox"/>
0.33	1H325406 or 1L296337	Teflon hose, 4 x 2.5 mm or Teflon hose, 4 x 2 mm	Replace	<input type="checkbox"/>
1	1N330264 or 1Y320409	Orifice 0.8 mm or Orifice 0.6 mm for hose 2 mm	Replace	<input type="checkbox"/>
1	BK326646	Fan, 24 V with plug	Replace	<input type="checkbox"/>
1	1H325438	Splicing sleeve	Replace	<input type="checkbox"/>
0.16	1Y320343	Hose, gray	Replace	<input type="checkbox"/>
1	1H328555	Suction funnel	Clean	<input type="checkbox"/>
1	1H327610	Single-chamber dosing unit	Clean	<input type="checkbox"/>
1	1H327612	Wire worm	Clean	<input type="checkbox"/>

7. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
0.44	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
1	1H325280	Front door seal	Replace	<input type="checkbox"/>
1	1H328625	Milk intake nozzle	Clean	<input type="checkbox"/>
1	1H328624	Milk intake coupling	Clean	<input type="checkbox"/>
1	1H327578	Combination probe	Clean	<input type="checkbox"/>
1	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
1	1H325373	3/2-way hinged armature valve	Clean	<input type="checkbox"/>
1	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
1	1H327979	Fan 230 V 50/60	Clean	<input type="checkbox"/>

8. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H328558	Manual fill funnel	Clean	<input type="checkbox"/>
6	1H326383	Hinge	Replace	<input type="checkbox"/>

 **Confirm that the maintenance has been performed.** To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

VII. Four-year maintenance FM800



- Four-year maintenance must be carried out after **320,000 product cycles** or no later than after **48 months** have passed.
- Four-year maintenance takes around 2½ to 3 h.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 or BK328738	Outlet, complete or Outlet, complete with Flavour	Replace	<input type="checkbox"/>
1	1H32503	Motor, 24 V DC incl. 90-RPM drive	Replace	<input type="checkbox"/>
1	1H325010	Drive pinion	Replace	<input type="checkbox"/>
1	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		Brewing unit, complete	Replace	<input type="checkbox"/>
	<i>Depending on the brewing unit installed</i>			
	BK325225	Brewing unit 50 Espresso		
	BK325213	Brewing unit 43 Espresso		
	BK325220	Brewing unit 50 needle filter		
0.36	1H325406	Teflon hose, 4 x 2.5 mm	Replace	<input type="checkbox"/>
0.18	1H325406	Teflon hose, 4 x 2.5 mm	Replace	<input type="checkbox"/>

3. Heating unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	BK328728	Heating unit module FM800	Replace	<input type="checkbox"/>

4. Waterway

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L297184	Reinforced hose	Replace	<input type="checkbox"/>
1	1N330372	Solenoid valve, 24 V 1-way	Replace	<input type="checkbox"/>
1	1T310028	Valve filter	Replace	<input type="checkbox"/>
3	1L297307	Sealing ring 3/8	Replace	<input type="checkbox"/>
1	1H325313 or	Reinforced hose or	Replace	<input type="checkbox"/>
0.275	1H326003	Teflon hose D8x6mm		
1	1H326125	Double-bearing pump model	Replace	<input type="checkbox"/>
1	1L301100	Waste-water hose	Replace	<input type="checkbox"/>
1	1T311095	Slim fan	Clean	<input type="checkbox"/>

Continued on next page

5. Grinder

Quantity	Item number	Item designation	Maintenance tasks	Completed
2	1H328454	Coffee bean hopper funnel	Clean	<input type="checkbox"/>
1	BK325971	Ceramic knife set	Replace	<input type="checkbox"/>
1	BK326008	14 µF capacitor	Replace	<input type="checkbox"/>
1	1H328421	Collar	Replace	<input type="checkbox"/>

6. Powder system

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325374	Powder outlet tube	Replace	<input type="checkbox"/>
1	1H326184	Powder holder	Replace	<input type="checkbox"/>
1	1H326498	Coupling	Replace	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
1	1H325269	Mixer compl.	Replace	<input type="checkbox"/>
1	1H327522	Adapter for Instant System	Replace	<input type="checkbox"/>
0.33	1H325406 or 1L296337	Teflon hose, 4 x 2.5 mm or Teflon hose, 4 x 2 mm	Replace	<input type="checkbox"/>
1	1N330264 or 1Y320409	Orifice 0.8 mm or Orifice 0.6 mm for hose 2 mm	Replace	<input type="checkbox"/>
1	BK326646	Fan, 24 V with plug	Replace	<input type="checkbox"/>
1	1H325438	Splicing sleeve	Replace	<input type="checkbox"/>
0.16	1Y320343	Hose, gray	Replace	<input type="checkbox"/>
1	1H328555	Suction funnel	Clean	<input type="checkbox"/>
1	1H327610	Single-chamber dosing unit	Replace	<input type="checkbox"/>
1	1H327612	Wire worm, compl.	Replace	<input type="checkbox"/>
1	1H325036	Motor, 24 V DC incl. 90-RPM drive	Replace	<input type="checkbox"/>
1	1H325290	Dosing unit motor drive pinion	Replace	<input type="checkbox"/>

7. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
0.44	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
1	1H325280	Front door seal	Replace	<input type="checkbox"/>
1	1H328625	Milk intake nozzle	Clean	<input type="checkbox"/>
1	1H328624	Milk intake coupling	Clean	<input type="checkbox"/>
1	1H327578	Combination probe	Clean	<input type="checkbox"/>
1	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
1	1H325373	Hinged armature valve	Replace	<input type="checkbox"/>
1	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
1	10301813	Capacitive proximity switch	Replace	<input type="checkbox"/>
1	1H327979	Fan 230 V 50/60	Clean	<input type="checkbox"/>

 Continued on next page

8. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L296255	Lever cylinder with key	Replace	<input type="checkbox"/>
6	1H32638	Hinge	Replace	<input type="checkbox"/>
1	1H328558	Manual fill funnel	Replace	<input type="checkbox"/>



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

VIII. Five-year maintenance FM800



- Five-year maintenance must be carried out after **400,000 product cycles** or no later than after **60 months** have passed.
- Five-year maintenance tasks take around $2\frac{1}{2}$ - 3 h.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 BK328738	Outlet, complete or Outlet, complete with Flavour	Clean	<input type="checkbox"/>
1	1H328465	Frother FM800	Replace	<input type="checkbox"/>
1	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		Outlet piston, complete	Replace	<input type="checkbox"/>
	<i>Dependent on outlet piston installed</i>			
	1H325215	For Espresso outlet pistons 43 mm		
	1H328215	For Espresso outlet pistons 50 mm		
	1H325224	Needle filter outlet pistons 50 mm		
	1H325179	Grounds ejector	Clean	<input type="checkbox"/>
	1H326869	Stripper plate	Clean	<input type="checkbox"/>
	1H325236	Water inlet sieve	Replace	<input type="checkbox"/>
	1H325235	Ejection piston	Replace	<input type="checkbox"/>
	1H325234	O-ring 44, 12 x 2, 62	Replace	<input type="checkbox"/>
	1H328345	O-ring 9.19 x 2.62 Viton	Replace	<input type="checkbox"/>
	1T310422	Silicone O-ring 9.19 x 2.62	Replace	<input type="checkbox"/>
	1H326807	Light barrier for Optek brewing unit	Clean	<input type="checkbox"/>
	1H325177	Combo coffee grounds chute	Clean	<input type="checkbox"/>
	1H325542	Manual fill chute	Clean	<input type="checkbox"/>

3. Heating unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
HW/S boiler				
1	1N330359	Level sensor	Replace	<input type="checkbox"/>
1	1N330194	Pressure relief valve, 3 bar compl.	Replace	<input type="checkbox"/>
1	1H328622	Check valve VNR-958-P340-4FF	Replace	<input type="checkbox"/>
1	1H325563	Orifice 1.65	Clean	<input type="checkbox"/>
1	BK328597	Regulating valve	Clean	<input type="checkbox"/>
1	1Y320409	Orifice 0.6 mm for hose 2 mm	Clean	<input type="checkbox"/>

Continued on next page

Quantity	Item number	Item designation	Maintenance tasks	Completed
Coffee part				
1		Coffee boiler, compl.	Replace	<input type="checkbox"/>
1		Brewing valve	Replace	<input type="checkbox"/>
1	1N330264	Milk pump orifice 0.8 mm	Clean	<input type="checkbox"/>

4. Waterway

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L301100	Waste-water hose	Clean	<input type="checkbox"/>
1	1T311095	Slim fan without guard	Clean	<input type="checkbox"/>

5. Grinder

Quantity	Item number	Item designation	Maintenance tasks	Completed
2	1H328454	Coffee bean hopper funnel	Clean	<input type="checkbox"/>

6. Powder system


Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325374	Powder outlet tube	Clean	<input type="checkbox"/>
1	1H326184	Powder holder	Clean	<input type="checkbox"/>
1	1H326498	Coupling	Clean	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
1	1H325269	Mixer compl.	Clean	<input type="checkbox"/>
1	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
1	BK325674	O-ring	Replace	<input type="checkbox"/>
1	1N330264	Orifice 0.8 mm	Clean	<input type="checkbox"/>
1	BK326646	Dosing unit fan, complete	Clean	<input type="checkbox"/>
1	1H327610	Single-chamber dosing unit	Clean	<input type="checkbox"/>
1	1H327612	Wire worm	Clean	<input type="checkbox"/>

7. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
0.44	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
1	1H325280	Front door seal	Replace	<input type="checkbox"/>
1	1H328625	Milk intake nozzle	Clean	<input type="checkbox"/>
1	1H328624	Milk intake coupling	Clean	<input type="checkbox"/>
1	1H327578	Combination probe	Clean	<input type="checkbox"/>
1	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
1	1H325373	3/2-way hinged armature valve	Clean	<input type="checkbox"/>
1	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
1	1H327979	Fan 230V 50/60	Clean	<input type="checkbox"/>

8. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H328558	Manual fill funnel	Clean	<input type="checkbox"/>

 **Confirm that the maintenance has been performed.** To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

IX. Six-year maintenance FM800



- Six-year maintenance must be carried out after **480,000** product cycles or no later than after **72 months** have passed.
- Six-year maintenance takes around 3¹/₂ h.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.

1. Front/outlet

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
1	BK328737 or BK328737	Outlet, complete or Outlet, complete with Flavour	Replace	<input type="checkbox"/>
1	1H328465	Frother FM800	Replace	<input type="checkbox"/>
1	1H325036	Motor, 24V DC incl. 90-RPM drive	Replace	<input type="checkbox"/>
1	1H325010	Drive pinion	Replace	<input type="checkbox"/>
1	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>

2. Brewing unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1		Brewing unit, complete	Replace	<input type="checkbox"/>
	<i>Depending on the brewing unit installed</i>			
	BK325225	Brewing unit 50 Espresso		
	BK325213	Brewing unit 43 Espresso		
	BK325220	Brewing unit 50 needle filter		
0.36	1H325406	Teflon hose 4 x 2.5 mm	Replace	<input type="checkbox"/>
0.18	1H325406	Teflon hose 4 x 2.5 mm	Replace	<input type="checkbox"/>

3. Heating unit

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1N330359	Heating unit module FM800	Replace	<input type="checkbox"/>

4. Waterway

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L297184	Reinforced hose	Replace	<input type="checkbox"/>
1	1N330372	Solenoid valve, 24 V 1-way	Replace	<input type="checkbox"/>
1	1T310028	Valve filter	Replace	<input type="checkbox"/>
3	1L297307	Sealing ring 3/8	Replace	<input type="checkbox"/>
1	1H325313	Reinforced hose	Replace	<input type="checkbox"/>
1	1H326125	Double-bearing pump model	Replace	<input type="checkbox"/>
1	1L301100	Waste-water hose	Replace	<input type="checkbox"/>
1	1T311095	Slim fan	Replace	<input type="checkbox"/>

Continued on next page

5. Grinder


Quantity	Item number	Item designation	Maintenance tasks	Completed
2	1H328454	Coffee bean hopper funnel	Replace	<input type="checkbox"/>
1	BK325971	Ceramic knife set	Replace	<input type="checkbox"/>
1	BK326008	14 µF capacitor	Replace	<input type="checkbox"/>
1	1H328421	Collar	Replace	<input type="checkbox"/>

6. Powder system

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1H325374	Powder outlet tube	Replace	<input type="checkbox"/>
1	1H326184	Powder holder	Replace	<input type="checkbox"/>
1	1H326498	Coupling	Replace	<input type="checkbox"/>
0.175	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
1	1H325269	Mixer compl.	Replace	<input type="checkbox"/>
1	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
1	BK325674	O-ring	Replace	<input type="checkbox"/>
1	1H327522	Adapter for Instant System	Replace	<input type="checkbox"/>
0.33	1H325406	Teflon hose, 4 x 2.5 mm	Replace	<input type="checkbox"/>
1	1N330264	Milk pump orifice 0.8 mm	Replace	<input type="checkbox"/>
1	BK326646	Fan, 24 V with plug	Replace	
1	1H325438	Splicing sleeve	Replace	<input type="checkbox"/>
0.16	1Y320343	Hose, gray	Replace	<input type="checkbox"/>
1	1H328555	Suction funnel	Replace	<input type="checkbox"/>
1	1H327610	Single-chamber dosing unit	Replace	<input type="checkbox"/>
1	1H327612	Wire worm, compl.	Replace	<input type="checkbox"/>
1	1H325036	Motor, 24 V DC incl. 90-RPM drive	Replace	<input type="checkbox"/>
1	1H325290	Dosing unit motor drive pinion	Replace	<input type="checkbox"/>

7. Milk system

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
1	1H325280	Front door seal	Replace	<input type="checkbox"/>
1	1H328625	Milk intake nozzle	Replace	<input type="checkbox"/>
1	1H328624	Milk intake coupling	Replace	<input type="checkbox"/>
1	1H327578	Combination probe	Replace	<input type="checkbox"/>
1	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
1	1H325373	Hinged armature valve	Replace	<input type="checkbox"/>
1	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
1	10301813	Capacitive proximity switch	Replace	<input type="checkbox"/>
1	1H327979	Fan 230 V 50/60	Replace	<input type="checkbox"/>

 Continued on next page

8. Miscellaneous

Quantity	Item number	Item designation	Maintenance tasks	Completed
1	1L296255	Lever cylinder with key	Replace	<input type="checkbox"/>
6	1H32638	Hinge	Replace	<input type="checkbox"/>
1	1H328558	Manual fill funnel	Replace	<input type="checkbox"/>



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

X. Displaying or clearing counter readings



- Reset the maintenance counter after each maintenance.

1. Show counters



- Go to the Service menu, to the menu item **4 Counters**. Here you can call up the individual counter readings.

2. Clear counters



- To accomplish this, go to the Service menu, to the menu item **4 Counters/4.13 Maintenance**.
- Reset the maintenance counters by pressing **Confirm maintenance**.

FM800

EN

Maintenance overview

► **Semiannual maintenance – 6/18/30/.../ Months or 40,000/120,000/.../ product cycles**

Annual maintenance/Three-year maintenance – 12/36 months or 80,000/240,000 product cycles



Read the safety information chapter before working on the machines.

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Change log

Date	Changes	Author	No.	ID
2012-11-02	Preparation	TBA, HBD		0

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The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols

DANGER

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

WARNING

WARNING indicates risk of injury.

CAUTION

CAUTION directs your attention to a danger of minor injuries.

NOTICE

NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. Area of application



- The safety information applies to the entire maintenance instructions.
- Read and understand the present information before performing any work on the machine.
- The present maintenance instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units.

III. For your safety

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.

WARNING

Danger of injury and of damage to the machine!

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Be sure to read the safety information in the Service folder.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

NOTICE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

NOTICE

Damage from electrostatic charge

Static charges can damage the sensitive electronics.

- ◆ Discharge any static electricity from the machine components and yourself before beginning work.

IV. Maintenance intervals

	Utilization period in months	Maintenance counter
Semiannual maintenance	6/18/30/42/54/66	40,000/120,000/200,000/280,000/.../
Annual maintenance	12	80,000
Two-year maintenance	24	160,000
Three-year maintenance	36	240,000
Four-year maintenance	48	320,000
Five-year maintenance	60	400,000

The maintenance tasks are to be performed when the number of products has been reached, although no later than after the specified machine utilization periods have passed.

V. Semiannual maintenance – Overview

1. Maintenance plan

- The semiannual maintenance must be carried out after **40,000 product cycles** or no later than after **6 months** and then in accordance with the adjacent table.
- Semi-annual maintenance tasks take around 1 hour.

Utilization period in months	Maintenance counter
6	40,000
18	120,000
30	200,000
42	280,000
54	360,000
66	440,000



- Torx screwdriver 20
- Hose pliers
- Socket wrench 7 mm
- Scribing iron
- Cleaning brush (1L 301 160)
- Cleaning brushes (1L 301 376)
- Brush (805610)
- Microfiber cloth (1H 325 974)
- Lubricant: Klübersynth UH1 64-2403 (1L 296804)

2. Spare parts

Quantity	Item number	Item designation
1	1H 325 364	Y-plug connection (coffee, bypass)
1	<i>O-ring</i>	
	<i>Dependent on outlet piston installed</i>	
	1T 310 382	O-ring silicone 36.09 x 3.53 mm (E43, Espresso outlet pistons 43 mm)
	1L 296 241	O-ring 38 x 5 mm (E50, Espresso outlet pistons 50 mm)
	644 706	O-ring 40 x 5 mm, EPDM (N50, needle filter outlet pistons 50 mm)
0.44	1L 300 136	Silicone hose ID 4 x 2 mm
1	1H 327 599	Motor shaft seal
1	BK 325 674	O-ring

3. Checklist

Module	Item number	Item designation	Maintenance tasks	Completed
Front/outlet				
	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
	BK328737	Outlet, complete	Clean	<input type="checkbox"/>
Brewing unit				
1	O-ring		Replace	<input type="checkbox"/>
	<i>Dependent on outlet piston installed</i>			
	1T310382	O-ring silicone 36.09 x 3.53 mm (E43, Espresso outlet pistons 43 mm)		
	1L296241	O-ring 38 x 5 mm (E50, Espresso outlet pistons 50 mm)		
	644706	O-ring 40 x 5 mm, EPDM (N50, needle filter outlet pistons 50 mm)		
	1H325179	Grounds ejector	Clean	<input type="checkbox"/>
	1H326869	Stripper plate	Clean	<input type="checkbox"/>
	1H326807	Light barrier for Optek brewing unit	Clean	<input type="checkbox"/>
	1H325177	Combo coffee grounds chute	Clean	<input type="checkbox"/>
	1H325542	Manual fill chute	Clean	<input type="checkbox"/>
Milk system				
	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
	1H325280	Front door seal	Clean	<input type="checkbox"/>
Powder system				
	1H326498	Coupling	Clean	<input type="checkbox"/>
	1H326677	Silicone hose Ø 12/8	Clean	<input type="checkbox"/>
	1H325269	Mixer compl.	Clean	<input type="checkbox"/>
	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
	BK325674	O-ring	Replace	<input type="checkbox"/>
	BK326646	Dosing unit fan, complete	Clean	<input type="checkbox"/>
Miscellaneous				
	1H328558	Manual fill funnel	Clean	<input type="checkbox"/>



Unless noted otherwise, a Torx 20 screwdriver is required for all screws.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

VI. Performing semiannual maintenance

1. Front and outlet



Replace:

- Y-plug connection (coffee/bypass) (1H325364)

Clean:

- Orifice 0.8 mm
- Outlet, complete

01



- ▶ Remove the lower part of the outlet.

02



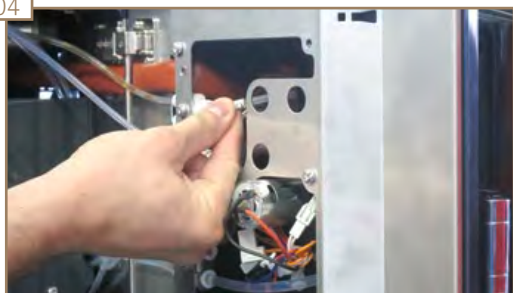
- ▶ Remove frother from the lower part of the outlet.
- ▶ Use a brush to clean the lower part of the outlet and the frother under cold running water. In the event of severe contamination, place the frother in cleaning solution.

03



- ▶ Open the coffee machine front door.
- ▶ Unscrew the cover on the interior side of the door.

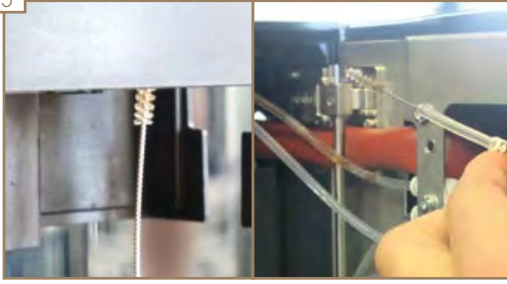
04



- ▶ Undo all hoses on the upper Y-plug connection (coffee).
- ▶ Undo the outlet-side hose on the lower Y-plug connection (milk).

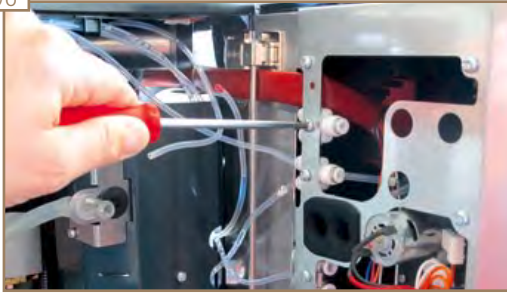
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05



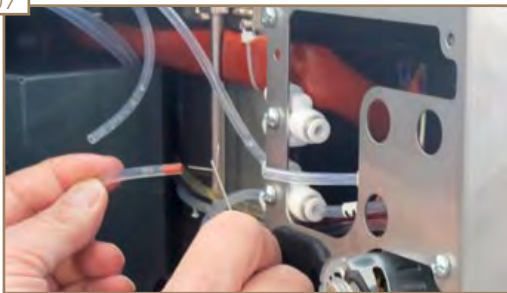
- ▶ Use a long, thin brush (805610) to clean the hoses thoroughly. To accomplish this, insert the brush from below and push it all the way through the hoses.

06



- ▶ Unscrew the upper Y-plug connection.
- ▶ Screw on the new Y-plug connection.

07



- ▶ Clean orifice 0.8 mm (bypass) (orifice brush).
- ▶ Attach the outlet hose to the Y-plug connections.

08



- ▶ Place the frother in the lower part of the outlet and press all the way in.

The lettering "fm" is to be found on the FM800 frother. While it is possible to attach a different frother (Spectra) if necessary, the function will however be limited.

09



- ▶ Screw on the cover.

2. Brewing unit



Replace:

- O-ring (diameter dependent on the brewing piston)
(1T310382, 1L296241 or 644706)

Clean:

- Grounds ejector
- Stripper plate
- Light barrier for Optek brewing unit
- Combo coffee grounds chute
- Manual fill chute
- Manual fill funnel

01



- ▶ Undo refrigeration unit hoses at the rapid-release coupling.

02



- ▶ Pull out manual fill funnel and clean it with the brush.

03



- ▶ Undo piston fastening (socket wrench 7 mm).

04



- ▶ Do not undo coffee hose on brewing piston!
- ▶ Remove piston from the holder.
- ▶ Pull O-ring off piston.
- ▶ Clean groove.

Continued on next page

05



- ▶ Attach new O-ring and check seat. The O-ring may not be skewed.
- ▶ Lubricate O-ring (lubricant Klübersynth UH1 64-2403).
- ▶ Insert piston and screw tightly.

3. Powder system and interior of machine



Replace:

- O-ring (BK325674)
- Motor shaft seal (1H327599)

Clean:

- Coupling
- Silicone hose
- Single-chamber dosing unit
- Bellows

01



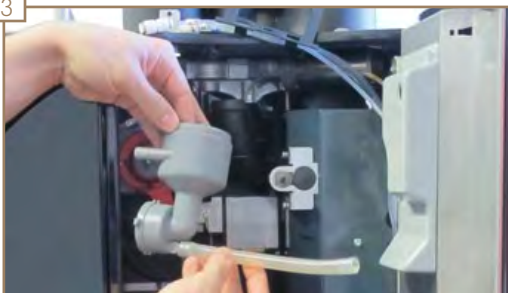
- ▶ Remove powder container.

02



- ▶ Use a brush to clean powder chute and covering.

03



- ▶ Remove mixer chamber with hose.

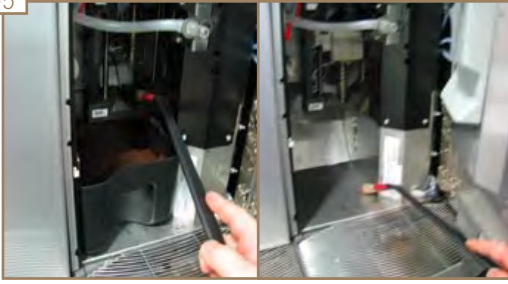
04



- ▶ In the Service menu, call up the **Test functions/Brewing unit** menu item and use the **down ...** button to move the brewing unit into the lowest position.
- ▶ Open door. Pivot the powder chute to the side and clean the coffee grinder chute with a brush.
- ▶ Move the grounds ejector forwards.
- ▶ Clean the brewing chamber stripper plate with a brush.

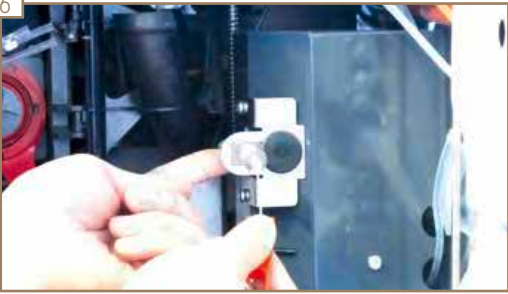
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05



- ▶ In the Service menu, call up the **Test functions/Brewing unit** menu item and use the **up ...** button to move the brewing unit into the highest position.
- ▶ Clean the lower part of the brewing unit with a brush.
- ▶ Remove, empty and clean the grounds container.
- ▶ Clean the interior with a brush and a damp cloth.
- ▶ Replace the grounds container and close the front door.

06



- ▶ Use a brush to clean the silicone hose under hot running water.
- ▶ Clean coupling with a brush.

07



- ▶ Unscrew mixer.
- ▶ Undo cable and take out mixer.

08



- ▶ Pull off mixer blades.

09



- ▶ Rotate and pull off mixer flange.

10



- ▶ Remove O-ring (red) and motor shaft seal (green).

11



- ▶ Insert new O-ring
 - ▶ Insert new motor shaft seal.
- i** Note marking on the motor shaft seal.

- ▶ Lubricate O-ring and motor shaft seal (lubricant Klübersynth UH1 64-2403).

12



- ▶ Dismantle the mixer chamber.
- ▶ Clean mixer chamber components thoroughly under running water.

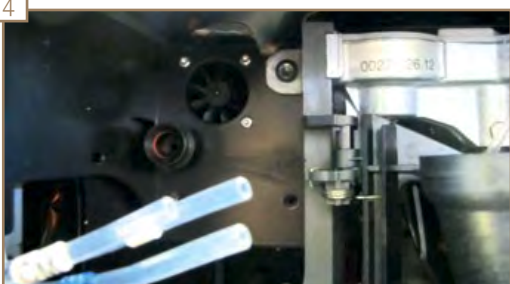


13



- ▶ Use a brush to clean the motor flange.

14



- ▶ Use a brush to clean the fan.

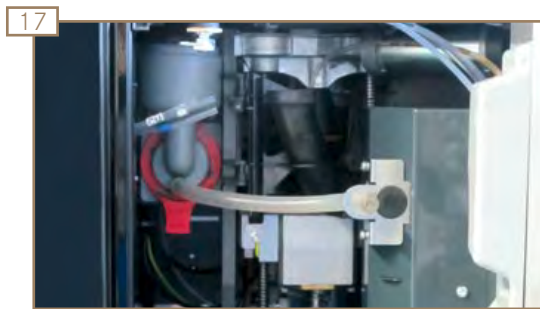
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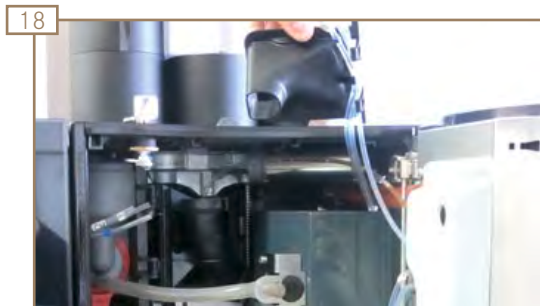
- ▶ Use a brush to clean the fan.



- ▶ Place mixer flange on motor flange and rotate blade downward.
- ▶ Insert mixer blade on motor shaft.
- i** The arrow on the mixer blade must point towards the milled surface. Slide mixer blade onto the shaft until it engages.
- ▶ Screw mixer tightly.



- ▶ Install mixer chamber with hose and attach hose.



- ▶ Attach manual fill funnel.
- ▶ Connecting the refrigeration unit hoses

4. Milk system



Replace:

- Silicone hose (1L300136)

Clean:

- Front door seal

01



- ▶ Pull the milk container out of the refrigeration unit.

02



- ▶ Pull off milk hose.

03



- ▶ Clean the interior of the refrigeration unit (cloth with cleaning solution).



04



- ▶ Fasten new milk hose.
- ▶ Insert the milk container.
- ▶ Guide hose into milk container.

Continued on next page

NOTICE

Damage to the door seal

The door seal could tear if it is pulled out with too much force.

- ◆ Pull seal out carefully.



- ▶ Pull out seal.



- ▶ Clean seal on all sides under cold running water.



- ▶ Allow seal to dry.



- ▶ Clean door reveal with a cloth or brush.
- ▶ Insert dried seal.



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

FM800 – MAINTENANCE

EN

Maintenance overview

Semiannual maintenance – 6/18/30/.../ Months or 40,000/120,000/.../
product cycles

- ▶ **Annual maintenance/Three-year maintenance – 12/36 months or 80,000/240,000 product cycles**



Read the safety information chapter before working on the machines.

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Change log

Date	Changes	Author	No.	ID
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Issued November 2012. Subject to change without notice.

The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols

 **DANGER**

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

 **WARNING**

WARNING indicates risk of injury.

 **CAUTION**

CAUTION directs your attention to a danger of minor injuries.

NOTICE

NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. Area of application



- The safety information applies to the entire maintenance instructions.
- Read and understand the present information before performing any work on the machine.
- The present maintenance instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units.

III. For your safety

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.

WARNING

Danger of injury and of damage to the machine!

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Be sure to read the safety information in the Service folder.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

NOTICE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

NOTICE

Damage from electrostatic charge

Static charges can damage the sensitive electronics.

- ◆ Discharge any static electricity from the machine components and yourself before beginning work.



IV. Maintenance intervals

	Mon.	Maintenance counter
Semiannual maintenance	6/18/30/42/.../	40,000/120,000/200,000/280,000/.../
Annual maintenance	12	80,000
Two-year maintenance	24	160,000
Three-year maintenance	36	240,000
Four-year maintenance	48	320,000
Five-year maintenance	60	400,000

The maintenance tasks are to be performed when the number of product cycles has been reached, although no later than after the specified machine utilization periods have passed.

V. Annual maintenance – Overview

1. Maintenance plan



- The annual maintenance must be carried out after **80,000** product cycles, although no later than after **12 months** have passed.
- The annual maintenance takes approximately 2 1/2 - 3 hours.



- Torx screwdrivers, sizes 10, 20 and 30
- Flathead screwdriver
- Hose pliers
- Exterior hexagon head screwdriver size 7 mm
- Exterior hexagon head screwdriver size 8 mm
- Hexagon socket screw key 3 mm
- Open-ended wrench 13 mm
- Open-ended wrench 14 mm
- Side-cutting pliers
- Scribing iron
- Cleaning brush (1L301160)
- Cleaning brushes (1L301376)
- Brush (805610)
- Microfiber cloth (1H325974)
- Cleaning container
- Cleaning solution (1L302219)
- Lubricant: Klübersynth UH1 64-2403 (1L 296804)
- Lubricant: Klüber MICROLUBE (BK301313)

2. Spare parts

Quantity	Item number	Item designation
1	1H325364	Y-plug connection 982V-4F-S11 (coffee, bypass)
0,44	1L300136	Silicone hose ID 4 x 2 mm
1	1H327599	Motor shaft seal
1	BK325674	O-ring
1	1N330359	Level sensor
1	1N330194	Pressure relief valve, 3 bar
2	1H328622	Check valve VNR-958-P340-4FF
1	BK328598	Pressure relief valve, 12 bar
1		Outlet piston, complete
		<i>Dependent on outlet piston installed</i>
	1H325215	Outlet piston 43 mm E complete
	1H328215	Outlet piston 50 mm E complete
	1H325224	Outlet piston 50 mm N complete
1	1H325236	Water inlet sieve
1	1H325235	Ejection piston
1	1H325234	O-ring 44, 12 x 2, 62
1	1H328345	O-ring 9.19 x 2.62 Viton
	1T310422	Silicone O-ring 9.19 x 2.62
1	1H328565	Valve 2/2
1	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)
1	1H325280	Front door seal
0,175	1H326677	Silicone hose Ø 12/8
1	1H328465	Frother FM800
1	1H327861	Neoperl aerator M16.5 x 1

3. Checklist

Module	Item number	Item designation	Maintenance tasks	Completed
Front/outlet				
	1N330264	Orifice 0.8 mm (bypass)	Clean	<input type="checkbox"/>
	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
	BK328737	Outlet, complete	Clean	<input type="checkbox"/>
	1H328465	Frother FM800	Replace	<input type="checkbox"/>
	1H327861	Neoperl aerator M16.5 x 1	Replace	<input type="checkbox"/>
Brewing unit				
1	Outlet piston, complete		Replace	<input type="checkbox"/>
	<i>Dependent on outlet piston installed</i>			
	1H325215	Outlet piston 43 mm E complete		
	1H328215	Outlet piston 50 mm E complete		
	1H325224	Outlet piston 50 mm N complete		
	1H325179	Grounds ejector	Clean	<input type="checkbox"/>
	1H326869	Stripper plate	Clean	<input type="checkbox"/>
	1H325236	Water inlet sieve	Replace	<input type="checkbox"/>
	1H325235	Ejection piston	Replace	<input type="checkbox"/>
	1H325234	O-ring 44, 12 x 2, 62	Replace	<input type="checkbox"/>
	1H328345	O-ring 9.19 x 2.62 Viton	Replace	<input type="checkbox"/>
	1T310422	Silicone O-ring 9.19 x 2.62	Replace	<input type="checkbox"/>
	1H326807	Light barrier for Optek brewing unit	Clean	<input type="checkbox"/>
	1H325177	Combo coffee grounds chute	Clean	<input type="checkbox"/>
	1H325542	Manual fill chute	Clean	<input type="checkbox"/>
Heating unit				
	1N330359	Level sensor	Replace	<input type="checkbox"/>
	1N330194	Pressure relief valve, 3 bar compl.	Replace	<input type="checkbox"/>
	1H328622	Check valve VNR-958-P340-4FF	Replace	<input type="checkbox"/>
	1H325563	Orifice 1.65	Clean	<input type="checkbox"/>
	BK328597	Regulating valve	Clean	<input type="checkbox"/>
	1Y320409	Orifice 0.6 mm for hose 2 mm	Clean	<input type="checkbox"/>
	1N330264 or 1Y320409	Orifice 0.8 mm or Orifice 0.6 mm	Clean	<input type="checkbox"/>
	BK328598	Pressure relief valve, 12 bar	Replace	<input type="checkbox"/>
	1H325364	Y-plug connection 982V-4F-S11	Replace	<input type="checkbox"/>
Waterway				
	1L301100	Waste-water hose	Clean	<input type="checkbox"/>
	1T311095	Slim fan	Clean	<input type="checkbox"/>
Milk system				
	1L300136	Silicone hose ID 4 x 2 mm	Replace	<input type="checkbox"/>
	1H325280	Front door seal	Replace	<input type="checkbox"/>
	1H328625	Milk intake nozzle	Clean	<input type="checkbox"/>
	1H328624	Milk intake coupling	Clean	<input type="checkbox"/>
	1H327578	Combination probe	Clean	<input type="checkbox"/>

Module	Item number	Item designation	Maintenance tasks	Completed
	1H328565	Valve 2/2	Replace	<input type="checkbox"/>
	1H325373	3/2-way hinged armature valve	Clean	<input type="checkbox"/>
	BK328892, BK328893 or BK328894	Hose kit (1C1M) Hose kit (2C1M, machine, right) Hose kit (2C1M, machine, left)	Replace	<input type="checkbox"/>
	1H327979	Fan 230 V 50/60	Clean	<input type="checkbox"/>
Powder system				
	1H325374	Powder outlet tube	Clean	<input type="checkbox"/>
	1H326184	Powder holder	Clean	<input type="checkbox"/>
	1H326498	Coupling	Clean	<input type="checkbox"/>
	1H326677	Silicone hose Ø 12/8	Replace	<input type="checkbox"/>
	1H325269	Mixer compl.	Clean	<input type="checkbox"/>
	1H327599	Motor shaft seal	Replace	<input type="checkbox"/>
	BK325674	O-ring	Replace	<input type="checkbox"/>
	BK326646	Dosing unit fan, complete	Clean	<input type="checkbox"/>
	1H327610	Single-chamber dosing unit	Clean	<input type="checkbox"/>
	1H327612	Wire worm, compl.	Clean	<input type="checkbox"/>
Miscellaneous				
	1H328558	Manual fill funnel	Clean	<input type="checkbox"/>
	1H328454	Coffee bean hopper funnel	Clean	<input type="checkbox"/>



Unless noted otherwise, a Torx 20 screwdriver is required for all screws.



Check all of the components of the machine that need to be cleaned (according to the maintenance plan) for damage and proper functioning. Replace the components if necessary.



Reset the counter readings after the maintenance. Go to the Service menu, to the menu item *Show/Clear counters*.

VI. Performing annual maintenance

0. Preparations

- ▶ In the Service menu, call up the menu item **7 Decommissioning/7.1 System/Empty system**.
- ▶ Skip Steps 1 to 3 and click on **Continue**.

The machine is cooled down by rinsing with cold water.

- ▶ Close the water spigot.
- ▶ Switch off the machine and disconnect it from the power supply.

1. Front and outlet



Replace:

- Y-plug connection (coffee/bypass) (1H325364)
- Frother FM800 (1H328465)
- Neoperl aerator M16.5 x 1 (1H327861)

Clean:

- Orifice 0.8 mm,
- Outlet, complete

01



- ▶ Remove the lower part of the outlet.

02

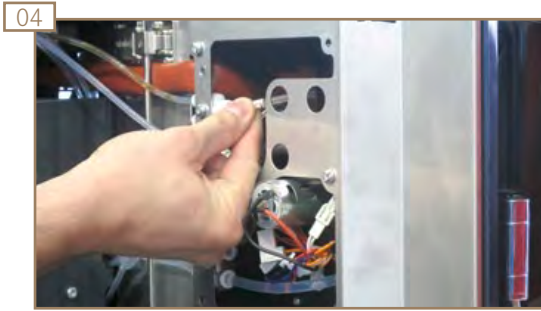


- ▶ Remove frother from the lower part of the outlet.
- ▶ Use a brush to clean the lower part of the outlet under cold running water.

03



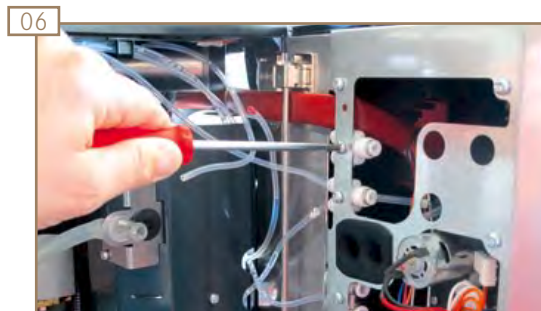
- ▶ Open the coffee machine front door.
- ▶ Unscrew the cover on the interior side of the door.



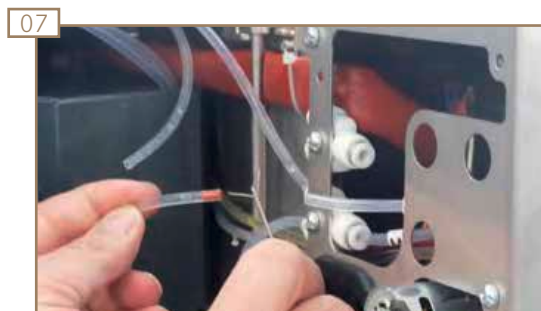
- ▶ Undo all hoses on the upper Y-plug connection (coffee/ bypass).
- ▶ Undo the outlet-side hose on the lower Y-plug connection (milk).



- ▶ Use a long, thin brush (Item no. 805610) to clean the hoses thoroughly. To accomplish this, insert the brush from below and push it all the way through the hoses.



- ▶ Unscrew the upper Y-plug connection (coffee/bypass).
- ▶ Screw on the new Y-plug connection.



- ▶ Clean orifice 0.8 mm (bypass) (orifice brush).
- ▶ Attach the outlet hose to the Y-plug connections.



- ▶ Place the new frother in the lower part of the outlet and press all the way in.
The lettering "fm" is to be found on the FM800 frother. While it is possible to attach a different frother (Spectra) if necessary, the function will however be limited.

09



- ▶ Install the lower part of the outlet.

10



- ▶ Fasten covering.

11



- ▶ Unscrew Neoperl aerator M16.5 x 1
- ▶ Screw on new aerator

2. Powder system



Replace:

- Silicone hose Ø 12/8 (1H326677)
- Motor shaft seal (1H327599)
- O-ring (BK325674)

Clean:

- Powder outlet tube
- Powder holder
- Coupling
- Mixer compl.
- Orifice 0.8 mm
- Single-chamber dosing unit
- Wire worm, complete

NOTICE

Damage from voltage peaks

The panel can be destroyed by a voltage peak during unplugging.

- ◆ Disconnect the machine from the power supply before you remove the panel.

Clean powder outlet tube, powder holder and coupling

01



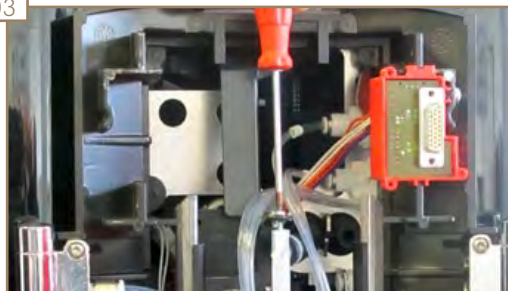
- ▶ Disconnect the machine from the power supply.
- ▶ Remove screw covers.

02



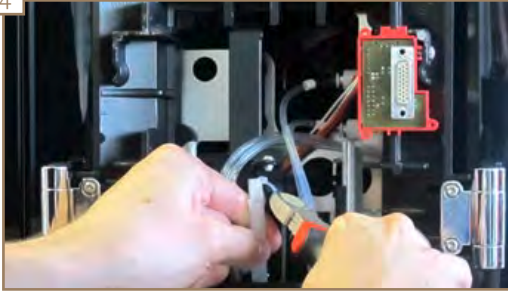
- ▶ Unscrew panel.
- ▶ Shut down the outlet completely.

03



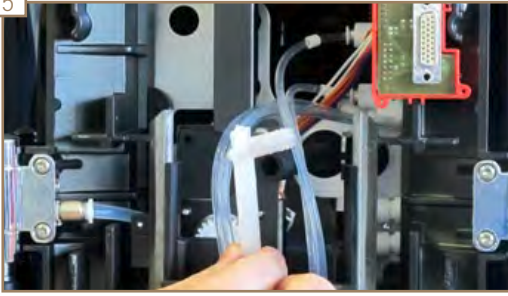
- ▶ Undo powder outlet tube screw (Torx 10).

04



- ▶ Cut through cable connector.

05

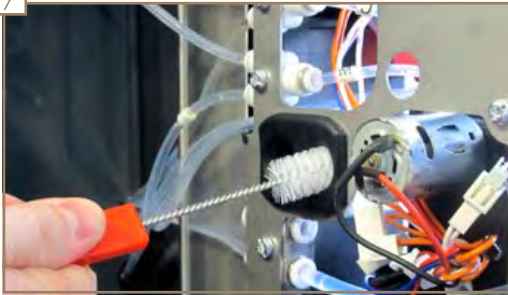


- ▶ Pull out outlet tube.

06

- ▶ Use a brush to clean the outlet tube under hot water.

07



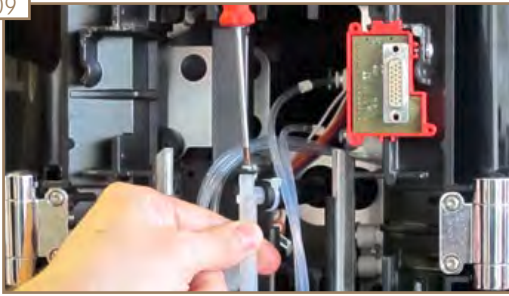
- ▶ Use a brush to clean powder holder.

08



- ▶ Reattach outlet tube.
- ▶ Fasten outlet tube with cable binder to powder holder.

09



- ▶ Tighten screw firmly on outlet tube.

10



- ▶ Attach panel and screw it in place.
- ▶ Attach screw covers and press them inwards.

Clean coupling, single-chamber dosing unit and bellows, replace silicone hose, O-ring and motor shaft seal

01



- ▶ Remove powder container.

02



- ▶ Use a brush to clean powder chute and covering.

03



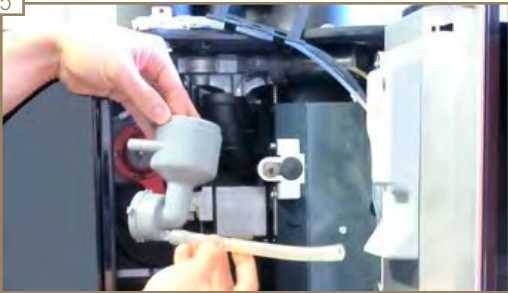
- ▶ Undo refrigeration unit hoses at the rapid-release coupling.

04



- ▶ Pull out manual fill funnel and clean it with the brush.

05



- ▶ Remove mixer chamber with hose.

06



- ▶ Unscrew mixer.
- ▶ Undo cable and take out mixer.

07



- ▶ Pull off mixer blades.

08



- ▶ Rotate and pull off mixer flange.

09



- ▶ Remove O-ring (red) and motor shaft seal (green).
- ▶ Clean mixer flange under running water and allow to dry.

10



- ▶ Dismantle the mixer chamber.
- ▶ Clean individual mixer chamber parts thoroughly under running water and allow to dry.

11



- ▶ Clean coupling with a brush.

12



- ▶ Use a brush to clean the motor flange.



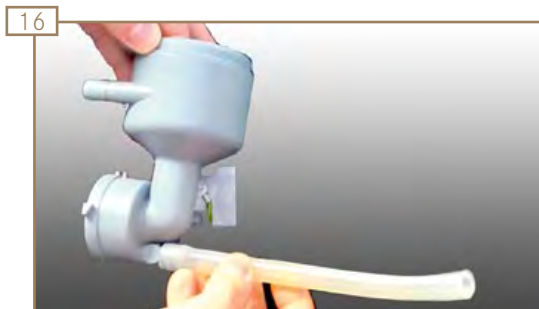
- ▶ Use a brush to clean the fan.



- ▶ Insert new O-ring
- ▶ Insert new motor shaft seal.
- i** Note marking on the motor shaft seal.
- ▶ Lubricate O-ring and motor shaft seal (lubricant Klübersynth UH1 64-2403, 1L 296804).



- ▶ Place mixer flange on motor flange and rotate blade downward.
- ▶ Insert mixer blade on motor shaft.
- i** The arrow on the mixer blade must point towards the milled surface. Slide mixer blade onto the shaft until it engages.



- ▶ Attach new silicone hose.
- ▶ Set mixer and mixer chamber to one side.

Cleaning single-chamber dosing unit and wire worm

01



- ▶ Undo knurled nuts on the underside of the powder container.

02



- ▶ Raise the lower part of the powder container.

03



- ▶ Unscrew union nuts on the shaft of the powder dosing unit.

04



- ▶ Remove guides, wire worm and worm wheel. To accomplish this, press the housing apart.
- ▶ Clean parts under running water.

05



- ▶ Clean outlet under running water.
- ▶ Allow all parts to dry.

06



- ▶ Install worm wheel and insert springs. Observe the installation position of the worm wheel.
- ▶ Install wire worm.
- ▶ Attach the lower part of the powder container and screw it tightly.

07



- ▶ Remove and clean the coffee bean hopper.

3. Brewing unit



Replace:

- Outlet pistons (1T310382, 1L296241, or 644706)
- Water inlet sieve (1H325236)
- Ejection piston (1H325235)
- O-ring 44, 12 x 2, 62 (1H325234)
- O-ring 9.19 x 2.62 Viton (1H328345)
- Silicone O-ring 9.19 x 2.42 (1T310422)

Clean:

- Grounds ejector
- Stripper plate
- Light barrier for Optek brewing unit
- Combo ground coffee chute
- Manual fill chute
- Manual fill funnel

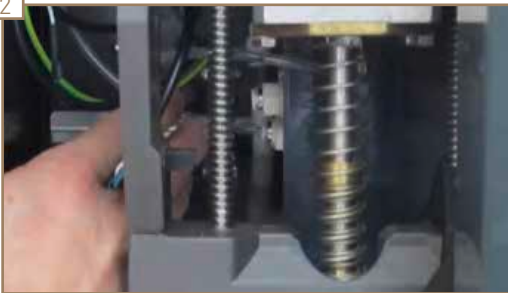
First of all, remove the entire brewing unit

01



- ▶ Undo power supply to brewing head (heater and light barrier brewing unit).

02



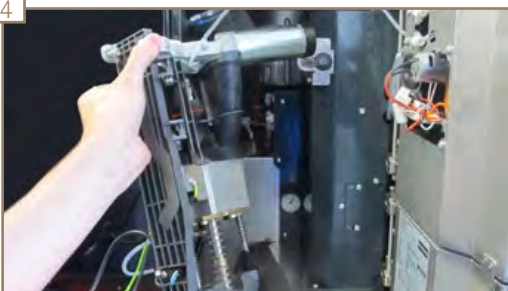
- ▶ Undo brewing unit hoses

03



- ▶ Undo fastening screw (Torx 30).

04

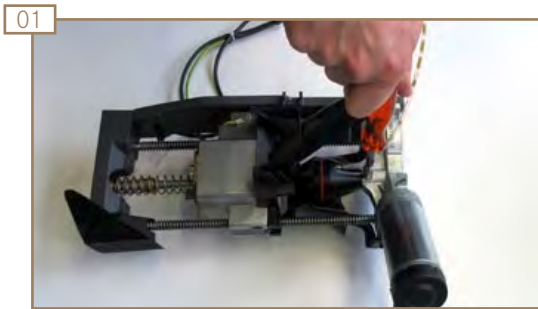


- ▶ Lift out brewing unit

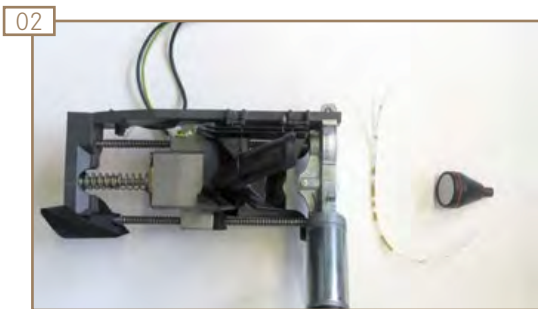


- ▶ Undo the brewing unit motor cable.

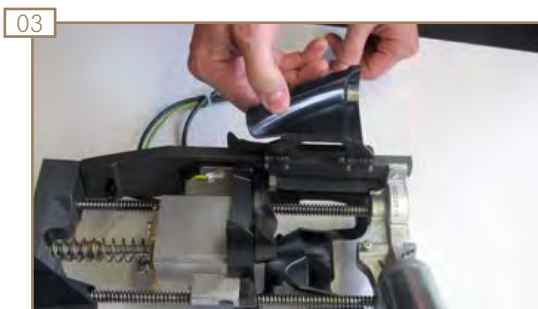
Working on the brewing unit



- ▶ Undo piston screw, remove piston (Exterior hexagon head, 7 mm).




- ▶ Remove Teflon hose.



- ▶ Remove manual fill chute and clean with water.



- ▶ Screw out threaded pins on both sides of the powder chute.

 Continued on next page

⚠ WARNING

Risk of injury

The spring could jump out.

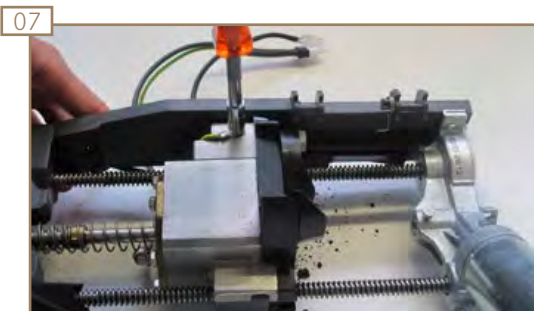
- ◆ Wear protective goggles.



- ▶ Undo spring.



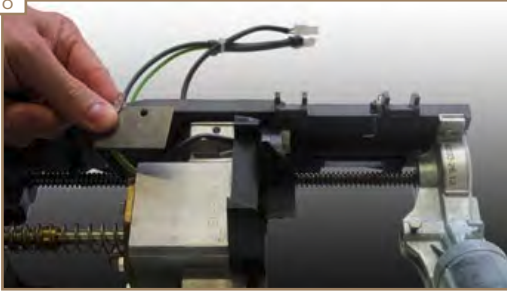
- ▶ Pull out powder chute and clean under running water.



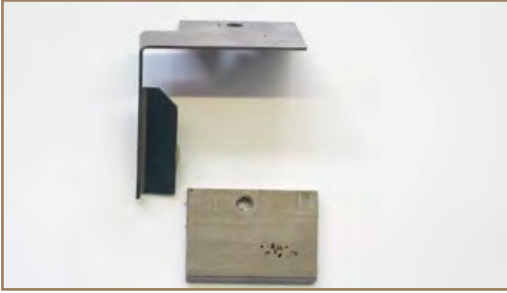
Removing brewing unit

- ▶ Undo ground cable.

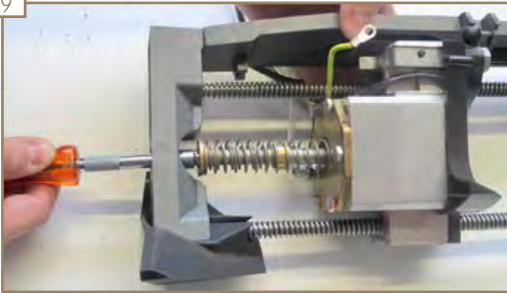
08



- ▶ Undo fixing plate and cable guide.

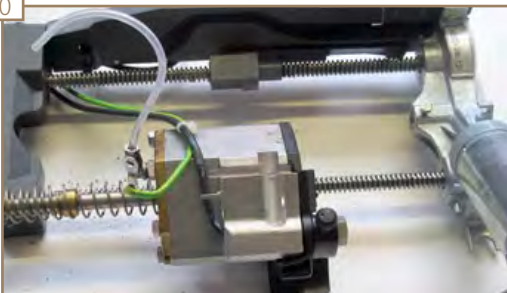


09



- ▶ Press piston rod out from below.

10



- ▶ Unscrew brewing head and lift out.

11



Remove ejection piston

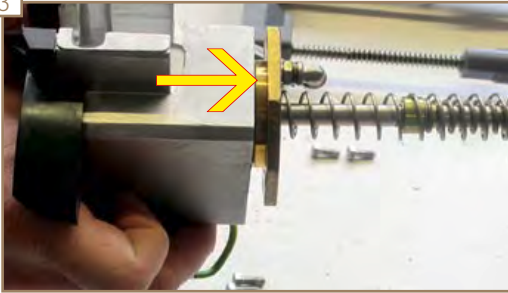
- ▶ Undo screws on brewing head cover (exterior hexagon head 8 mm)

12



- ▶ Unscrew and clean grounds ejector (exterior hexagon head 13 mm)
- ▶ Remount grounds ejector.

13



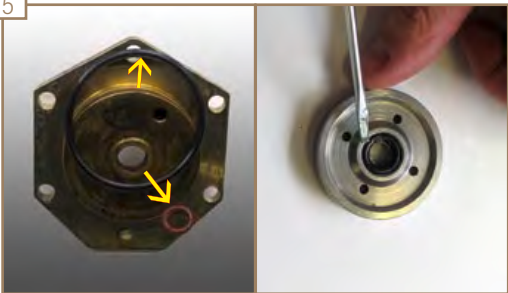
- ▶ Press out brewing head cover.

14



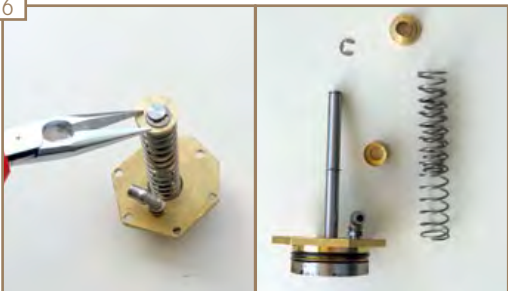
- ▶ Screw out screw on water inlet strainer, remove strainer and ejector piston (flathead screwdriver).

15

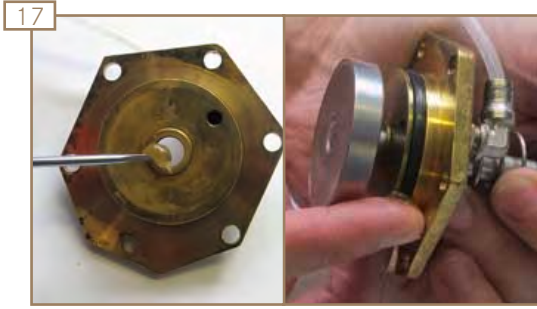


- ▶ Remove O-rings on brewing head cover.
- ▶ Remove O-ring on ejector piston.

16



- ▶ Remove retaining ring on shaft end.
- ▶ Pull off springs.
- ▶ Clean shaft.
- ▶ Attach springs.
- ▶ Put retaining ring back in place.




- ▶ Install and lubricate new O-rings (Klübersynth UH1 64-2403, 1L 296804).

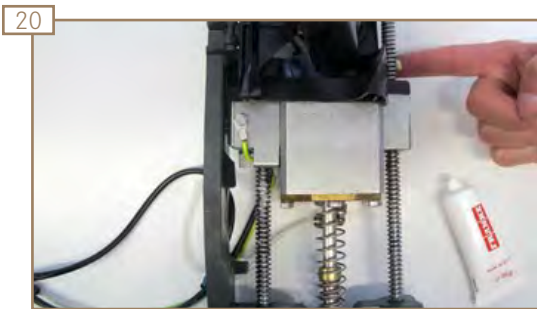


- ▶ Screw on new strainer and new piston.



- ▶ Attach brewing head lid and screw firmly in place.

 Observe alignment




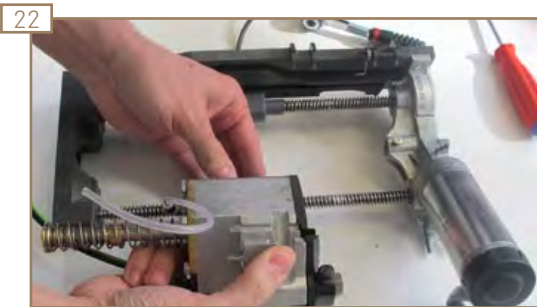
- ▶ Clean brewing unit frame.
- ▶ Lubricate spindle (Klüber MICROLUBE, BK301313).



Insert brewing head.

- ▶ Rotate spindle nuts to approx. 110 mm, measured from above.

 The spindle nuts must be at the same height.



- ▶ Attach brewing head to the spindle nuts of the spindle on the motor side.
- ▶ Rotate the flat side of the second spindle nut outwards.



- ▶ Lower the brewing head onto the other spindle nut, while at the same time pressing the piston rod upwards and, if necessary, raising the ejector.



- ▶ Tightly screw in place the cover plate, cable guide and ground cable (hexagon head, 7 mm).

i Observe cable placement!

WARNING

Risk of injury

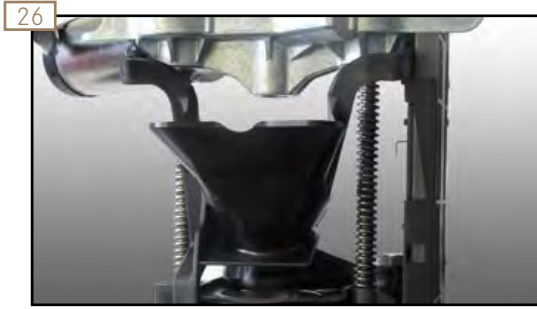
The spring could jump out.

- ◆ Wear protective goggles.



Mounting manual fill chute.

- ▶ Attach manual fill chute.
- ▶ Insert spring.

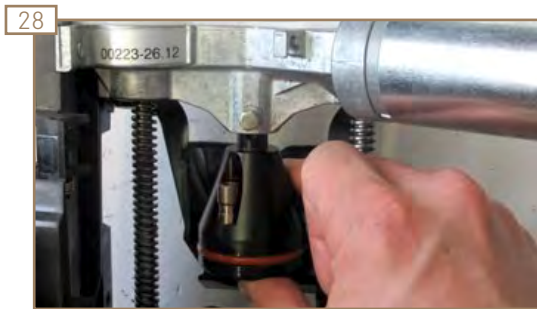


Mount powder chute.

- ▶ Attach powder chute.
- ▶ Insert spring.
- ▶ Screw tightly in place on both sides.



- ▶ Lubricate brewing piston O-ring (Klübersynth UH1 64-2403, 1L 296804).



- ▶ Attach new brewing piston and screw it in place. Align the brewing piston while doing so in such a way that the screw meets the bore hole.
- ▶ Set the brewing unit to one side.

4. Heating unit



Replace:

- Level sensor (1N330359)
- Pressure relief valve, 3 bar compl. (1N330194)
- Check valve VNR-958-P340-4FF (1H328622)
- Pressure relief valve, 12 bar (BK328598)

Clean:

- Orifice 1.65
- Regulating valve
- Orifice 0.8

First of all, remove the entire heating unit

01



- ▶ Undo and remove cover plate.

02



- ▶ Undo powder hose, drainage hose and main water inlet.
- ▶ Undo outlet hoses.

03



- ▶ Pull cover cap off towards the top.
- ▶ Unplug cable.

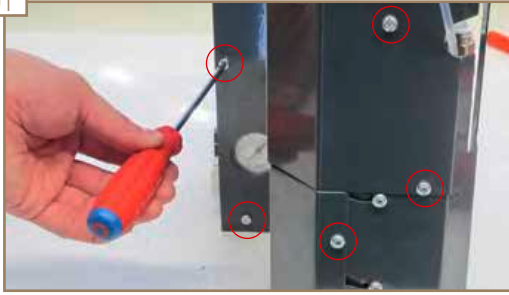
04



- ▶ Undo fastening screw at front left.
- ▶ Lift out heating unit.

Working on the heating unit

01



- ▶ Undo cladding at the front and left.

WARNING

Risk of scalding!

Hot water and hot steam could escape from the boiler.

- ◆ Empty the system prior to maintenance

02



- ▶ Push down white clamping ring on level sensor with open-ended wrench 8 mm or similar and pull out sensor.
- ▶ Insert new sensor and press until it engages.

03




- ▶ Undo check valve.
- ▶ Connect new check valve.

04



- ▶ Clean regulating valve:
- ▶ Dismantle regulating valve.

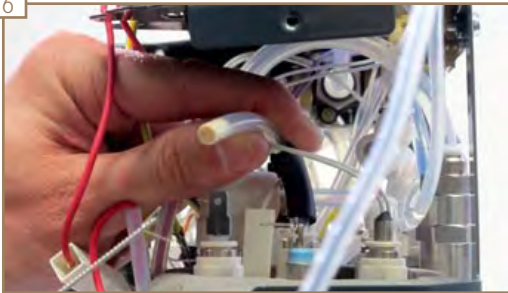
 Continued on next page

05



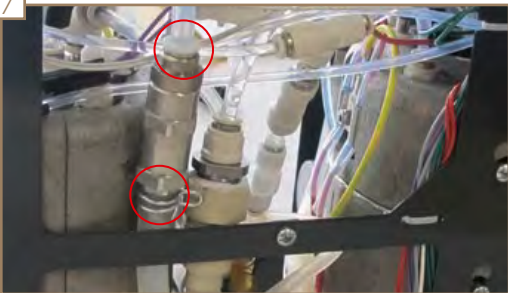
- ▶ Unscrew the regulating valve apart and clean the bore hole.
- ▶ Adjust regulating valve (screw together completely and then screw open again by approx. 3 1/2 rotations).
- ▶ Reinstall the regulating valve.
- ▶ Fix the setting of the regulating valve in place with adhesive tape if necessary.

06



- ▶ Pull off hot water hose on the hot water/steam boiler.
- ▶ Use nozzle brush to clean 1.65 mm hot water dispenser orifice.

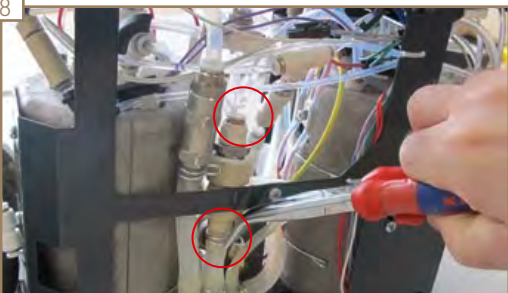
07



Replace pressure relief valve, 3 bar:

- ▶ Press open the hose clamp on the inlet and pull out the pressure relief valve.
- ▶ Undo upper hose.
- ▶ Connect new pressure relief valve, 3 bar.

08



Replace pressure relief valve, 12 bar:

- ▶ Press open the hose clamp on the inlet and pull out the pressure relief valve.
- ▶ Undo upper hose.
- ▶ Connect new pressure relief valve, 12 bar.

09



- ▶ Clean orifice 0.8 mm (red) or 0.6 mm (white).
- ▶ Screw cladding back on.
- ▶ Set the heating unit to one side.

5. Waterway



Replace:

- -

Clean:

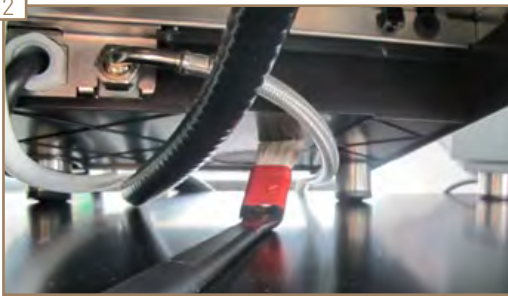
- Waste-water hose
- Slim fan

01



- ▶ Lift machine up at the front by approx. 10-12 cm and place supports under it.
- ▶ Undo and pull off waste-water hose.
- ▶ Rinse out waste-water hose.

02



- ▶ Use a brush to clean the slim fan.

6. Assembling the machine



- ▶ Position heating unit and screw tightly in place.



- ▶ Connect cable.
- ▶ Attach cable covering from above.



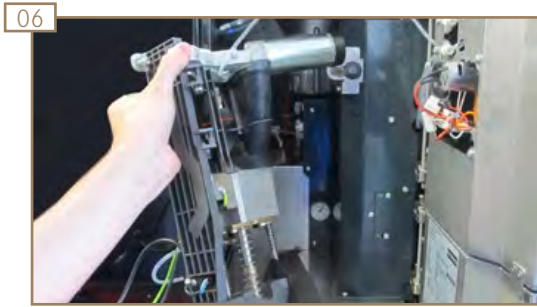
- ▶ Connect powder hose, drainage hose and main water inlet.
- ▶ Connect outlet hoses.



- ▶ Screw on cover plate.



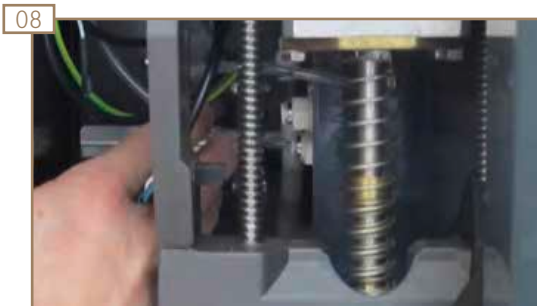
▶ Connect the brewing unit motor cable.



▶ Position the brewing unit.



▶ Tighten fastening screw (Torx 30).



▶ Connect brewing unit hoses.



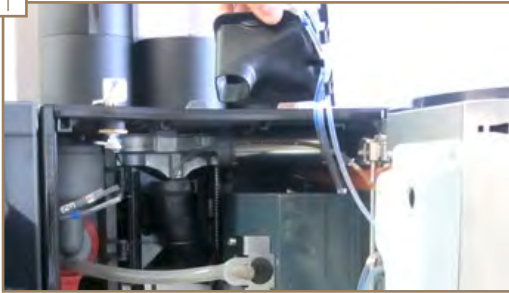
▶ Connect brewing head cable.

10



- ▶ Install mixer chamber with hose and attach hose to coupling.

11



- ▶ Slide manual fill funnel in.

7. Milk system



Replace:

- Silicone hose (1L300136)
- Front door seal (1H325280)
- Valve 2/2 (1H328565)
- Hose kit (BK328892, BK328893 or BK328894)
- Milk intake nozzle
- Milk intake coupling
- Combination probe
- Fan 230V 50/60
- 3/2-way hinged armature valve

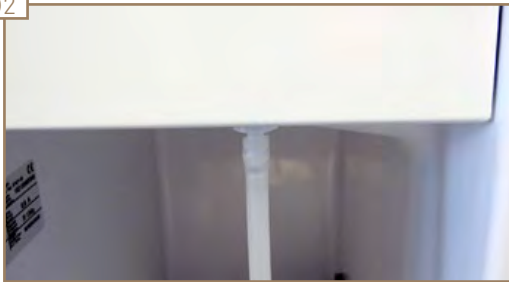
Clean:

01



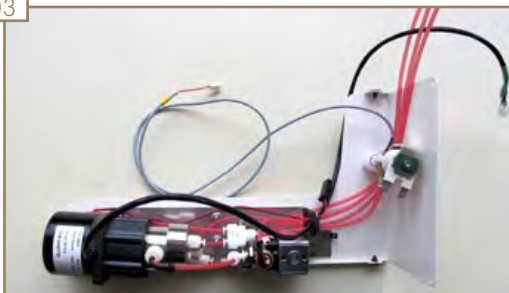
- ▶ Pull the milk container out of the refrigeration unit.

02



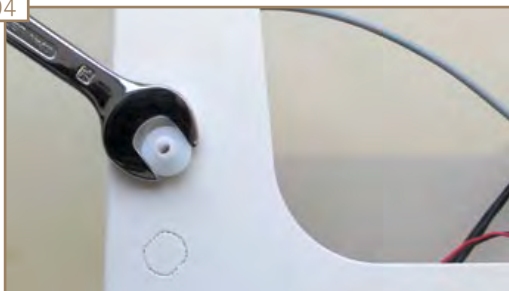
- ▶ Pull off silicone hose.

03



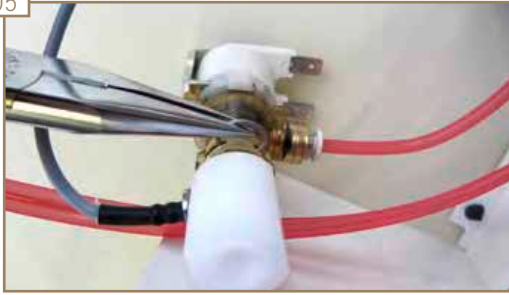
- ▶ Unscrew lid and right-hand side panel of the refrigeration unit.
- ▶ Unscrew refrigeration unit insert module and pull it out somewhat.
- ▶ Undo cable and hoses.
- ▶ Take out insert module.

04



- ▶ Unscrew milk intake nozzle (open-ended wrench 14 mm)

05



- ▶ Undo milk intake coupling from valve 2/2.

06



- ▶ Use a screwdriver to detach combination probe from the milk intake coupling.

07



- ▶ Clean combination probe and milk intake coupling with cleaning solution.
- ▶ Insert combination probe back into milk intake coupling and press it in.

08



- ▶ Undo hoses on hinged armature valve.
- ▶ Screw off hinged armature valve (Torx 10).

09



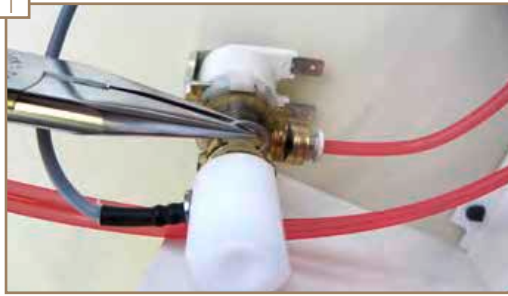
- ▶ Use a hexagon head 3 mm to screw apart the hinged armature valve
- ▶ Clean all parts thoroughly (cleaning solution).
- ▶ Assemble and screw on the hinged armature valve.

10



- ▶ Use a brush to clean the fan on the side of the insert module.

11



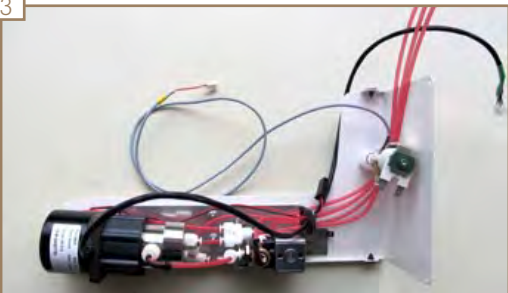
- ▶ Connect valve 2/2 to milk intake coupling.

12



- ▶ Insert milk intake coupling into the bore hole and screw on.

13



- ▶ Undo all hoses.
- ▶ Connect new hose kit.

i The BK3288292 hose kit must be used for the 1C1M version.

The 2C1M version requires two hose kits (1 each for the machine at the left and right; BK3288293, BK3288294).

Hose lengths are designed for UT320 and may need to be shortened for KE300.

14



- ▶ Connect refrigeration unit insert module cable.
- ▶ Guide hoses outwards through the opening in the side panel.
- ▶ Position insert module and screw tightly in place.
- ▶ Screw on side panel and lid.
- ▶ Clean the interior of the refrigeration unit (cloth with cleaning solution).

15



- ▶ Attach silicone hose.

Replace door seal

01



- ▶ Pull out seal.

03



- ▶ Clean door reveal with a cloth or brush.
- ▶ Insert new seal.

12



- ▶ Connect refrigeration unit hoses to the rapid-release coupling.



Confirm that the maintenance has been performed. To accomplish this, go to the Service menu, to the menu item 4 Counters/4.13 Maintenance and press the confirm button.

FM800

EN

Troubleshooting

Document Number: TD-104089/0 Order Number: 1H328808/0 compiled: 04.13



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
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The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols

DANGER

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

WARNING

WARNING indicates risk of injury.

CAUTION

CAUTION directs your attention to a danger of minor injuries.

NOTICE

NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. For your safety

This documentation has been created exclusively for FRANKE service technicians and authorized partners. It will enable service technicians to perform their tasks on the coffee machine and its add-on units.

These tasks include start-up, programming, maintenance work, troubleshooting and product quality settings.

WARNING

Danger of injury and of damage to the machine

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Be sure to read the safety information in the Service folder.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

III. Machine error codes



- If an error occurs when the machine is in operation, error messages are displayed on the display.
- The error code list provides solutions.
- Individual components (heating, brewing unit valves, etc.) can be checked using the respective test menu.
- As a matter of course, always restart the system first.
- An event message is not displayed, but rather only recorded in the error history.

1. Significant and unusual errors

Error code	Error text	Error description	Notes on troubleshooting
2	Door open	The grounds container door is open. Please close door. The current product is canceled. The grounds cake counter is reset to zero after 5 s.	<ul style="list-style-type: none"> ▪ Empty grounds container and close door. The grounds cake counter is reset to zero if the door is open for more than 5 s. ▪ Use the Test menu to check the function of the solenoid switch. ▪ Use the Test menu to test the coil of the main water valve (Y33).
3	Communication LP	A connection could not be established with the power PCB within 1.5 s during start-up. Please restart system.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the ribbon cable connection between the power PCB (X24) and the CPU (X2),
6	LP software out of date	The power PCB software is outdated. Please upload the required software to the system. The required software version is displayed on the display.	<ul style="list-style-type: none"> ▪ Upload the required software to the system.
7	SW eFlash	The external memory software is outdated. Please upload the required software to the system.	<ul style="list-style-type: none"> ▪ Upload the required software to the system.
8	Internal CAN	Internal communication error on the CAN bus. Please restart system. Signal transmission is taking longer than 800 ms (normal transmission time: 20 - 40 ms).	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the ribbon cable connection between the power PCB (X24) and the CPU (X2),
9	Power PCB restart	Due to an error, the power PCB has been reset. An entry in the error log occurs.	<ul style="list-style-type: none"> ▪ The system restarts automatically.

2. Boiler heating errors

Error code	Error text	Error description	Notes on troubleshooting
14	Temperature sensor	The temperature sensor (NTC X15) has a short circuit. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X15) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
15	Temperature sensor	The temperature sensor (NTC X15) is not present or has been interrupted. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X15) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
16	Temperature difference	No temperature increase of at least 2°C was detected on the NTC X15 of heater 2 within 60 s during heating. Please restart system.	<ul style="list-style-type: none"> ▪ Check the electrical circuit. ▪ Check the temperature sensor (NTC X15). ▪ Check heater 2/3. ▪ Check the connections. ▪ Restart system.
17	Over temperature	The temperature of boiler 2 (steam) has increased to more than 150°C or is 25° higher than the nominal value. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor. ▪ Check the heater. ▪ Check the connections. ▪ Restart system.
18	Temperature sensor	The temperature sensor (NTC X16) for heater 1 (K1) has a short circuit. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X16) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
19	Temperature sensor	The temperature sensor (NTC X16) for heater 1 (K1) is not present or has been interrupted. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X16) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
20	Temperature difference	No temperature increase of at least 2°C was detected on the NTC X16 of heater 1 within 60 s during heating. Please restart system.	<ul style="list-style-type: none"> ▪ Check the electrical circuit. ▪ Check the temperature sensor (NTC X16). ▪ Check heater 1. ▪ Check the connections. ▪ Restart system.
21	Over temperature	The temperature of boiler 1 (coffee) has increased to more than 150°C or is 25° higher than the nominal value. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor. ▪ Check the heater. ▪ Check the connections. ▪ Restart system.
22	Heater timeout	Heater 2 (Relay K2) was switched on longer than the max. timeout. Please restart system.	<ul style="list-style-type: none"> ▪ Check the power connection. ▪ Check the electrical circuit. ▪ Check the temperature sensor. ▪ Check heater 2. ▪ Replace heater 2 if necessary. ▪ Restart system.

Error code	Error text	Error description	Notes on troubleshooting
23	Heater timeout	Heater 3 (Relay K3) was switched on longer than the max. timeout. Please restart system.	<ul style="list-style-type: none"> ▪ Check the power connection. ▪ Check the electrical circuit. ▪ Check the temperature sensor. ▪ Check heater 3. ▪ Replace heater 3 if necessary. ▪ Restart system.
24	Heater timeout	Heater 1 (Relay K1) was switched on longer than the max. timeout. Please restart system.	<ul style="list-style-type: none"> ▪ Check the power connection. ▪ Check the electrical circuit. ▪ Check the temperature sensor. ▪ Check heater 1. ▪ Replace heater 1 if necessary. ▪ Restart system.
25	Temperature sensor	A short circuit has been detected on the NTC for Autosteam (CPU X1) during the drawing of steam. Please select the product once again.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (CPU X1) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system. ▪ Reselect the product.
26	Temperature sensor	The temperature sensor for Autosteam (NTC CPU X1) has been interrupted. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (CPU X1) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system. ▪ Reselect the product.
27	Temperature sensor	A short circuit was detected on the temperature sensor (NTC X17) for the Thermoblock. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X17) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
28	Temperature sensor	The temperature sensor for the Thermoblock (NTC X17) has been interrupted. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor (NTC X17) and replace it, if necessary. ▪ Check the connection cable and connection plug of the temperature sensor. ▪ Restart system.
30	Coffee post-heating	The boiler at heater 1 has not reached the nominal temperature. The products are blocked until the nominal value is reached. Please wait.	<ul style="list-style-type: none"> ▪ The error will be canceled once the target temperature is reached.
31	HW/S post-heating	The boiler at heater 2 has not reached the nominal temperature. The products are blocked until the nominal value is reached. Please wait.	<ul style="list-style-type: none"> ▪ The error will be canceled once the target temperature is reached.

Error code	Error text	Error description	Notes on troubleshooting
32	Thermoblock post-heating	The Thermoblock at heater 3 has not reached the nominal temperature. The products are blocked until the nominal value is reached. Please wait.	<ul style="list-style-type: none"> ▪ The error will be canceled once the target temperature is reached.
33	Over temperature	The temperature has increased to 15° higher than the nominal value. Please restart system.	<ul style="list-style-type: none"> ▪ Check the temperature sensor. ▪ Check the heater. ▪ Check the connections. ▪ Restart system.

3. Boiler supply errors

Error code	Error text	Error description	Notes on troubleshooting
36	Fill Boiler 1	The boiler on heater 1 could not be filled. Please restart system. The message is displayed when the filling procedure takes longer than 4 min.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check pump pressure (commissioning, set pressure). ▪ Check Boiler 1 (coffee) pressure-relief valve for seal (water flows into drip tray). ▪ Check water supply (seal and supply).
37	Fill Boiler 2	The boiler on heater 2 could not be filled. The heater will be switched off. Please restart the system. The message is displayed when the filling procedure takes longer than 4 min.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check Boiler 2 (hot water/steam) pressure-relief valve for seal (water flows into drip tray). ▪ Check water supply (seal and supply). ▪ Use the Test menu to check the level sensor.
38	Fill Boiler 2	The boiler on heater 2 could not be filled. The heater will be switched off. Please restart the system. The message is displayed when the filling procedure takes longer than 3 min.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check Boiler 2 (hot water/steam) pressure-relief valve for seal (water flows into drip tray). ▪ Check water supply (seal and supply). ▪ Use the Test menu to check the level sensor.

4. Brewing unit errors

Error code	Error text	Error description	Notes on troubleshooting
40	Motor timeout	Minimum feedback (10 increments within 3 s) from increment transmitter in the brewing unit motor was not achieved. Please restart system.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Clean the brewing unit with a brush.
41	Motor timeout	<p>The number of increments registered while the brewing chamber was moving upward from the return position (increment 110) to the grind position (increment 730) is too small.</p> <p>Minimum value: 550 increments within 3 s. Please restart the system.</p> <p>This message is displayed after the second occurrence during the same movement.</p>	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Check the mechanical function of the brewing unit. ▪ Use the Test menu to check the brewing unit.
42	Motor timeout	<p>The number of increments registered while the brewing chamber was moving upward from the grind position (increment 730) to the brew position (minimum increment 1240) is too small.</p> <p>Minimum value: 440 increments within 7 s. Please restart the system.</p> <p>This message is displayed after the second occurrence during the same movement.</p>	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Check the mechanical function of the brewing unit. ▪ Use the Test menu to check the brewing unit.
43	Motor timeout	<p>The number of increments registered while the brewing chamber was moving upward from the powder fill position (increment 610) to the brew position (minimum increment 1240) is too small.</p> <p>Minimum value: 550 increments within 8 s. Please restart the system.</p> <p>This message is displayed after the second occurrence during the same movement.</p>	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Check the mechanical function of the brewing unit. ▪ Use the Test menu to check the brewing unit.
44	Motor timeout	<p>The number of increments registered while the brewing chamber was moving upward from the brew position to the eject position (increment 110) is too small.</p> <p>Minimum value: 900 increments within 10 s. Please restart the system.</p> <p>This message is displayed after the second occurrence during the same movement.</p>	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Check the mechanical function of the brewing unit. ▪ Use the Test menu to check the brewing unit.

Error code	Error text	Error description	Notes on troubleshooting
45	Increment transmitter	More than one negative increment was registered. The brewing chamber is moving in the wrong direction. Please check the wiring of the increment transmitter.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace if necessary. ▪ Check the motor. ▪ Check the mechanical function of the brewing unit. ▪ Use the Test menu to check the brewing unit.
46	Motor timeout	A motor timeout occurred during cleaning.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Repeat cleaning cycle.
47	Light barrier for brewing unit	The brewing unit light barrier cannot be determined during recalibration. Please clean the light barrier or replace it if defective. If the error occurs more than 20 times per week, than an entry will be made in the error log.	<ul style="list-style-type: none"> ▪ Clean and check the brewing unit light barrier and replace it, if necessary. ▪ The error will be canceled once the light barrier is functional again.
48	Light barrier for brewing unit	Brewing unit calibration after mechanical strike (electricity) when light barrier is recognized when at the same time an increment position above the valid range is transmitted. (Maximum valid increment value: 500.)	<ul style="list-style-type: none"> ▪ Increment is automatically corrected to 100. ▪ Clean the brewing unit with a brush. ▪ Check the position of the brewing unit motor lines. The supply lines must be twisted and laid separately from the signal cables.
49	Light barrier for brewing unit	An increment value of 10 was achieved during the brewing unit recalibration.	<ul style="list-style-type: none"> ▪ Increment is automatically corrected to 100. ▪ Clean the brewing unit with a brush. ▪ Check the position of the brewing unit motor lines. The supply lines must be twisted and laid separately from the signal cables. ▪ If the error occurs repeatedly: check the motor drive shaft and replace the motor, if necessary.

5. Process errors

Error code	Error text	Error description	Notes on troubleshooting
70	Initializing water line	No 100 ml could be dosed through the brewing valve and the bypass valve within 25 s during initialization. Initialization has been canceled. Please check the water supply and restart the system.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check water supply. ▪ Check water circuit for leaks.
71	Initializing steam boiler level	During initialization, the steam boiler level could not be achieved within 25 s; attempt again. This event message is usually on hand with the first filling of an empty boiler. Error 37 will appear after 4 minutes. Please check the water supply and the level sensor.	<ul style="list-style-type: none"> ▪ Wait at least 4 min in order to be certain of identifying the error correctly. ▪ Check the level sensor and replace it, if necessary. ▪ Check water supply. ▪ Check water circuit for leaks.
72	Initializing brewing unit	During initialization, an error occurred when the brewing unit was being recalibrated. Error: Motor timeout brewing unit appears.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the position switch of the brewing unit (increment transmitter) and replace it, if necessary. ▪ Check the motor. ▪ Clean the brewing unit with a brush.
90	Maintenance necessary	Maintenance must be carried out in accordance with the maintenance schedule.	<ul style="list-style-type: none"> ▪ Perform maintenance according to maintenance plan. ▪ Reset the maintenance counter after maintenance is completed.
91	System calcified	A mean value of more than 554 has been measured during the measurement of the A/D water hardness of the steam boiler level sensor. The threat of lime deposits exists on the sensor or the boiler, respectively.	<ul style="list-style-type: none"> ▪ Perform maintenance. ▪ Check water hardness and adjust water filter settings if necessary.
99	Water filter	The water filter is used up and must be replaced.	<ul style="list-style-type: none"> ▪ Replace water filter and reset counter.
100	Grounds container is full.	The programmed amount of grounds cakes has been reached. Please empty grounds container.	<ul style="list-style-type: none"> ▪ Remove, empty and clean the grounds container. ▪ The grounds container door must be open for at least 5 s, even on machines with coffee ground chute.
101	Empty grounds container	The grounds container is full. 10 drinks left. Please empty grounds container.	<ul style="list-style-type: none"> ▪ Remove, empty and clean the grounds container. ▪ The grounds container door must be open for at least 5 s, even on machines with coffee ground chute.

Error code	Error text	Error description	Notes on troubleshooting
110	Flowmeter error 1	Water flow is disrupted. Flowmeter receives too few or no impulses. Please restart the system or try a different product.	<ul style="list-style-type: none"> ▪ Check grind coarseness (too fine?). ▪ Check product settings. ▪ Select another product. ▪ Check flowmeter. ▪ Open the water spigot. ▪ Check water circuits (clogged?). ▪ Clean water circuits and replace them, if necessary. ▪ Replace the flowmeter.
112	Clean agitator	Water flow of the powder system is disrupted. Please clean coffee machine. Restart system if necessary.	<ul style="list-style-type: none"> ▪ Check powder system water circuit. ▪ Clean mixer chamber (clean coffee machine with cleaning program).
119	Powder dosing unit 2	The right chamber of the double powder dosing unit is empty. Please fill with powder for automatic coffee makers.	
120	No ground coffee	The brewing chamber is recognized as being empty (it was able to be closed up to increment 1540). Please add coffee beans or ground coffee. Check the correct placement of the bean hopper if necessary.	<ul style="list-style-type: none"> ▪ Check powder chute and clean with a brush. ▪ Check the light barrier of the coffee bean monitor. ▪ Add ground coffee and/or coffee beans. ▪ Restart product preparation.
121	Fill left container (Position 1).	Left container is empty (Position 1). Depending on the machine configuration, please fill with powder for automatic coffee makers or with coffee beans.	
122	Fill center bean hopper (Position 2).	Bean hopper center is empty (Position 2). Please add coffee beans.	
123	Fill right bean hopper (Position 3)	Bean hopper right is empty (Position 3). Please add coffee beans.	
125	Powder lid open	The powder lid is required for cleaning and for the use of ground coffee. Please close the powder lid.	
126	Brewing chamber open	The brewing process has been canceled because the brewing chamber was able to be opened up to increment 1245. Please select a new product or restart the system. The brewing unit is thus recalibrated.	<ul style="list-style-type: none"> ▪ Restart product preparation. ▪ Use the Test menu to check the values of the brewing unit.
127	Brewing chamber open	The brewing chamber could not be closed. Please check the grind quantity and select a new product.	<ul style="list-style-type: none"> ▪ Restart product preparation. ▪ Check the grind quantity. ▪ Calibrate grinders.
130	Add cold milk	The milk is used up. All milk products are blocked. Please add milk.	<ul style="list-style-type: none"> ▪ Check milk suction hose. ▪ Check foam portion of all cold foam products.
131	Milk empty	The milk is practically used up. Please refill milk.	

Error code	Error text	Error description	Notes on troubleshooting
132	Add cold milk to Tank 2	The milk is used up. All milk products are blocked. Please add milk to Tank 2.	<ul style="list-style-type: none"> ▪ Check milk suction hose. ▪ Check foam portion of all cold foam products.
133	Milk container 2 empty	The milk is practically used up. Please refill milk.	
135	Milk temperature	The temperature of the milk is higher than 8°C.	
160	Battery low	The voltage of the battery on the CPU PCB is less than 2.5 V or not present at all. Please replace the battery. Battery type required: CR2032, 3 V.	<ul style="list-style-type: none"> ▪ Back up the data. ▪ Switch off machine. ▪ Replace battery (Battery type required: CR2032, 3 V). ▪ Switch on machine. ▪ Load data backup.
170	Check water tank	The fresh water tank is empty or the wastewater tank is full. Please check the connected tanks.	<ul style="list-style-type: none"> ▪ Check wiring. ▪ Fill fresh water tank. ▪ Empty wastewater tank. ▪ Check position of the sensors.
200	Accounting CS	The connected accounting device did not answer within 0.2 s to a query from the coffee machine. Please check whether the accounting device is switched on.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the cable connections. ▪ Switch the devices on.
201	Accounting CS	Data timeout. No data was sent for 5 s after the query. Please check the accounting device.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the cable connections. ▪ Switch the devices on.
202	Accounting CS	The checksum of a data packet is faulty.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the cable connections. ▪ Switch the devices on.
203	Accounting CS	The accounting device has sent 5 error messages (NAK). Please restart the system and the accounting device.	<ul style="list-style-type: none"> ▪ Restart system. ▪ Check the cable connections. ▪ Switch the devices on.
210	Accounting CAN bus	The accounting device has sent no status reports within 16 s. Please check the accounting device and restart the system.	<ul style="list-style-type: none"> ▪ Restart system.
211	Accounting CAN bus	A communication error has occurred at the accounting device (interface). Please check the accounting device and restart the system.	<ul style="list-style-type: none"> ▪ Check connections and power supply of the accounting communication.
221	Communication Flavour Station	Timeout CAN bus 10 s. The Flavour controller did not respond within 10 s. Please check the connections to the Flavour Station and the CAN ID.	<ul style="list-style-type: none"> ▪ Check the connection cable. ▪ Check connection with other CAN nodes (Test menu CAN bus).
222	Communication Foam Master	Timeout CAN bus 10 s. The milk controller did not respond within 10 s. Please check the connections to the Foam Master and the CAN ID.	<ul style="list-style-type: none"> ▪ Check the connection cable. ▪ Check connection with other CAN nodes (Test menu CAN bus).

Error code	Error text	Error description	Notes on troubleshooting
223	Communication Foam Master	10 s CAN bus timeout during a cleaning. The milk controller did not respond within 10 s. The milk cleaning is canceled and the machine switches to energy saver mode. Please check the connections to the Foam Master and the CAN ID.	<ul style="list-style-type: none"> ▪ Check the connection cable. ▪ Check connection with other CAN nodes (Test menu CAN bus).
226	Cleaning necessary	Your coffee machine ought to be cleaned. Please clean your coffee machine.	
227	Cleaning required	Your coffee machine must be cleaned. Please clean your coffee machine.	
228	Clean Flavour Station	Your Flavour Station ought to be cleaned. Please clean your Flavour Station.	<ul style="list-style-type: none"> ▪ Appears 7 days after last cleaning.
229	Clean Flavour Station	Your Flavour Station must be cleaned. Please clean your Flavour Station.	<ul style="list-style-type: none"> ▪ Appears 9 days after last cleaning.
230	Preparing Flavour System	Your Flavour Station ought to be cleaned. Please clean your Flavour Station.	
231	Preparing milk system	The milk system must be prepared.	
245	Coffee machine switched on	The coffee machine has been switched on. Causes of the event: 0 = On/Off button, 1 = power failure, 2 = timer.	
246	Coffee machine switched on	Coffee machine has been switched off. Causes of the event: 0 = On/Off button, 2 = timer.	
249	Coffee machine on power supply	Coffee machine has been connected to the power supply.	
250	Cleaning started	Cleaning has been started.	
251	Cleaning ended	Cleaning has been ended.	
252	Cleaning canceled	Cleaning has been canceled.	
254	Cleaning canceled	The cleaning was canceled because the grounds door was not kept open long enough (less than 5 s).	
255	Cleaning canceled	The cleaning was canceled because the grounds door was not opened within 20 s.	
256	Cleaning canceled	The cleaning has been canceled by the user.	
260	Grounds door closed	The grounds door has been closed.	
261	Flavour Station cleaning started	The cleaning of the Flavour Station has been started.	
262	Flavour Station cleaning ended	The cleaning of the Flavour Station has been ended.	

Error code	Error text	Error description	Notes on troubleshooting
263	Flavour Station cleaning canceled	The cleaning of the Flavour Station has been canceled because the grounds door was opened on the coffee machine.	
264	Flavour Station cleaning canceled	The cleaning of the Flavour Station has been canceled because the CAN communication was interrupted.	
265	Flavour Station cleaning canceled	The cleaning of the Flavour Station has been canceled because the coffee machine was switched off.	
270	Steam Boiler A/D value	Water hardness A/D steam boiler	
280	Control voltage	The actual voltage at the control is greater than 31.0 V DC	
281	Daylight Saving Time/Standard Time	Daylight Saving Time/Standard Time change	

FM800

EN

Decommissioning

Document Number: TD-104092/0 Order Number: 1H328811/0 compiled: 04.13



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2012-12-11	Preparation	HBD		0

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The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols

 **DANGER**

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

 **WARNING**

WARNING indicates risk of injury.

 **CAUTION**

CAUTION directs your attention to a danger of minor injuries.

NOTICE

NOTICE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information.



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. For your Safety

This documentation has been created exclusively for Franke service technicians and authorized partners. It will enable service technicians to perform their tasks on the coffee machine and its add-on units.

These tasks include commissioning, programming, maintenance work, troubleshooting and product quality settings.

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.
- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.

WARNING

Danger of injury and damage to the machine from improper utilization.

- ◆ Be sure to read the safety information in the Service folder.
- ◆ Programming and settings may only be undertaken by authorized service technicians.
- ◆ Modifications and repairs may only be undertaken by authorized service technicians.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

III. Decommissioning



Unless otherwise expressly stated, the tasks and actions described below apply to all FM800 coffee machine models.

1. Recommended procedure

Action	Tools/additional materials	Completed	
Preparations	Backing up data	USB stick	<input type="checkbox"/>
	Cleaning the grinder, coffee bean hopper and powder container.	Brush (1L301160) Microfiber cloth (1H325974) Section 6 - Programming	<input type="checkbox"/>
	Cleaning the brewing piston	Socket wrench 7 mm Brush (1L301160) Microfiber cloth (1H325974)	<input type="checkbox"/>
	Clean powder system outlet tube and coupling	Screwdriver (short) No. 4 Brush set (1L301376).	<input type="checkbox"/>
	Cleaning the coffee system	Cleaning instructions for machine Brush set (1L301376) Cleaning tablets (BK300935) Brush (1L301160) Microfiber cloth (1H325974) Cleaning solution (BK301732) (only for coffee systems with fresh milk and/or Flavour Station)	<input type="checkbox"/>
	Emptying the water system	<i>FM800: Service Menu 7. Decommissioning, 7.1 Emptying system,</i> <i>Service documentation: see Section 6 Programming, Chapter 7 Decommissioning</i>	<input type="checkbox"/>
Dismantling	Disconnecting the power supply		<input type="checkbox"/>
	Disconnecting the water lines		<input type="checkbox"/>
	Disconnecting add-on units from the machine	Service documentation for add-on units (1Y320925)	<input type="checkbox"/>
	Packing the machines and add-on units	Packaging materials	<input type="checkbox"/>

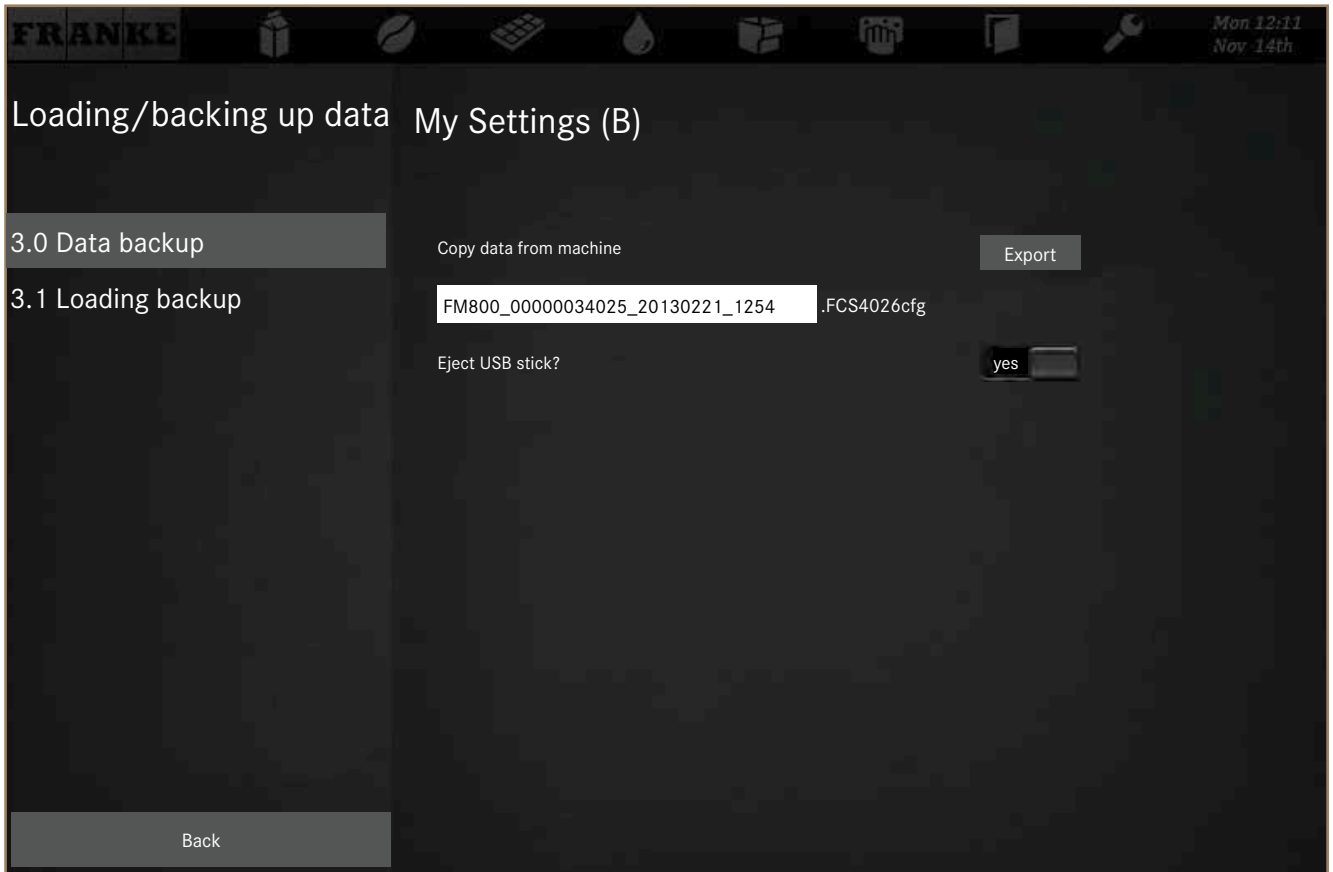
2. Preparations



Before the machine and any add-on units can be dismantled, the following preparations must be made:

- Backing up data
- Cleaning the machine
- Emptying the water system

2.1 Data backup



Copy data from machine:

- Export

- ▶ In the Service menu, under *Individualization and data transfer* call up the menu item *Loading/backing up data*.
- ▶ Select **Loading/backing up data**
- ▶ Connect USB stick and select **Export**.

The machine data and the configuration are backed up on the USB stick.

Eject USB stick?:

- Yes
- No

- Yes: Eject USB stick after the data backup.

2.2 Cleaning the machine

WARNING

Risk of injury, eye injury and damage to the machine

If objects find their way into the bean hopper or grinder, splinters may be ejected, leading to injury or damage to the machine.

- ◆ Never put any objects in the coffee bean hopper or grinder.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.

Cleaning the grinder, coffee bean hopper and powder container



- Machine is ready for operation



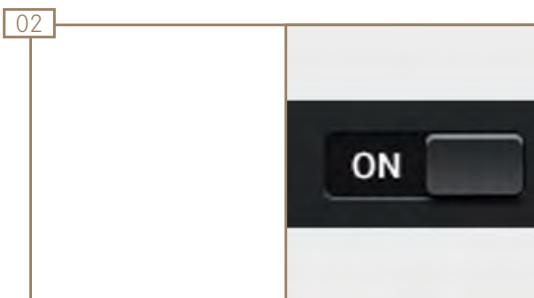
- For instructions on the use of the test functions, see *Section 6 - Programming, IV. The Service menu, 5, Test functions, p. 105*



- Brush
- Damp cloth



- ▶ Unlock the coffee bean hopper with the safety slide.



- ▶ Log on in the Service menu as Technician.
- ▶ Call up the **Test functions/Individual outputs** menu item
- ▶ Move the Grinder 2 X2 slider to **ON** and thus start the procedure.
- ▶ Cancel the process when the grinder is empty.
- ▶ Repeat these steps for all other grinders.



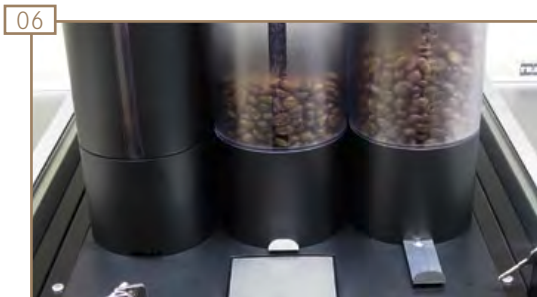
- ▶ In the Service menu, call up the **Test functions/Brewing unit** menu item and use the **down ...** button to move the brewing unit into the lowest position.
- ▶ Open door. Pivot the powder chute to the side and clean the coffee grinder chute with a brush.
- ▶ Move the grounds ejector forwards.
- ▶ Clean the brewing chamber stripper plate with a brush.



- ▶ In the Service menu, call up the **Test functions/Brewing unit** menu item and use the **up ...** button to move the brewing unit into the highest position.
- ▶ Clean the lower part of the brewing unit with a brush.
- ▶ Remove, empty and clean the grounds container.
- ▶ Clean the interior with a brush and a damp cloth.
- ▶ Replace the grounds container and close the front door.



- ▶ Remove and empty coffee bean hopper.
- ▶ Clean the coffee bean hopper with a mild detergent.

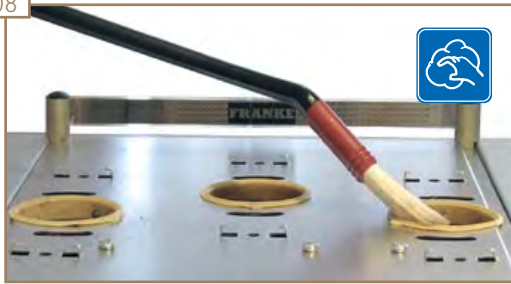


- ▶ Slide the powder container forward to limit stop (2 cm).



- ▶ Remove and empty the powder container.
- ▶ Clean the powder container with a mild detergent.

08



- ▶ Vacuum the bean hopper and powder container intakes and the grinder; brush clean.

09



- ▶ Clean the bean hopper and powder container intakes and the grinder with a damp cloth.

10



- ▶ Fit the bean hopper and powder container and lock them.

Cleaning the brewing piston



- Machine is ready for operation



- Socket wrench 7 mm
- Brush
- Damp cloth

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

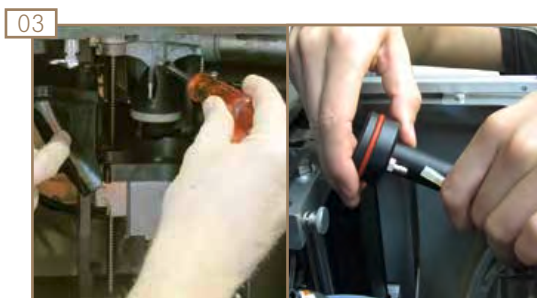
- ◆ Exercise care and caution when working in an open coffee machine.



- ▶ Open door.



- ▶ Pivot the powder chute to the side.
- ▶ Remove the manual fill funnel towards the front.



- ▶ Undo the brewing piston screw (socket wrench 7 mm).
- ▶ Remove brewing piston from brewing unit.
- ▶ Remove the hose.

04



- ▶ Disassemble the brewing piston down into its individual components.
- ▶ Clean individual parts with a mild detergent.

05



- ▶ Assembling the brewing piston:
 - ▶ Place the strainer in center position on the brewing piston.
 - ▶ Attach clamping ring and screw on lightly.
 - ▶ Screw the clamping ring on tightly with pressure and rotation.
 - ▶ Attach O-ring.

06



- ▶ Attach the hose to the brewing piston.
- ▶ Screw brewing piston to brewing unit (socket wrench 7 mm).

07



- ▶ Pivot the powder chute to the side.
- ▶ Attach manual fill funnel.

Cleaning the silicone hose and powder system coupling



- Machine is ready for operation



- Screwdriver (short) No. 4
- Brush set

WARNING

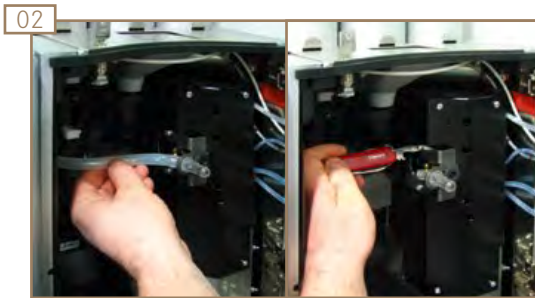
Risk of injury!

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.



- ▶ Open door.

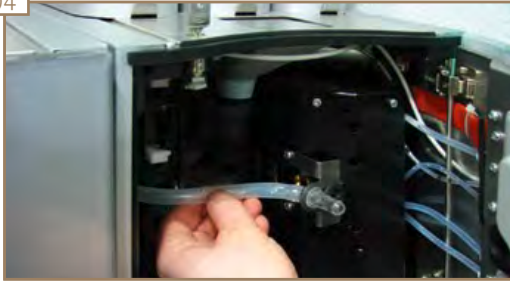


- ▶ Remove silicone hose.



- ▶ Use a brush to clean the silicone hose under hot running water.
- ▶ Clean coupling with a brush.

04



- ▶ Attach silicone hose at both connection pieces.

05



- ▶ Close the front door.

Cleaning the coffee system



- Clean the coffee machine and add-on units according to the cleaning instructions.



- Cleaning instructions for machine
- Brush set
- Cleaning tablets
- Brush
- Microfiber cloth
- Cleaning solution (only for coffee systems with fresh milk and Flavour Station)

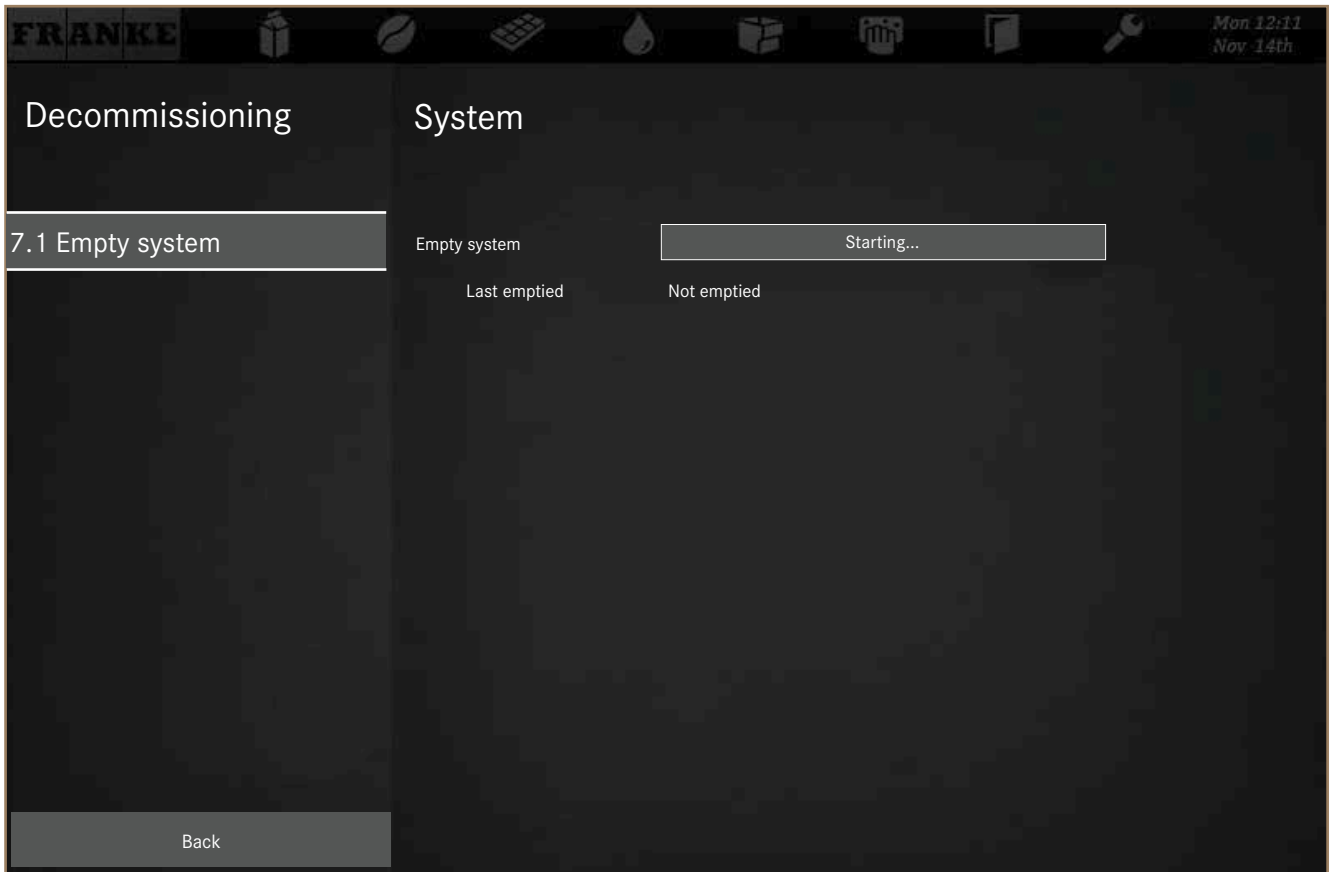
2.3 Emptying the system

⚠ DANGER

Risk of electrocution and damage to machine from water!

The steam system is pressurized.

- ◆ Disconnect the water connection to the machine.
- ◆ Empty the machine before working on the boiler system.



Empty system:

- Starting...

▶ Start Empty system.

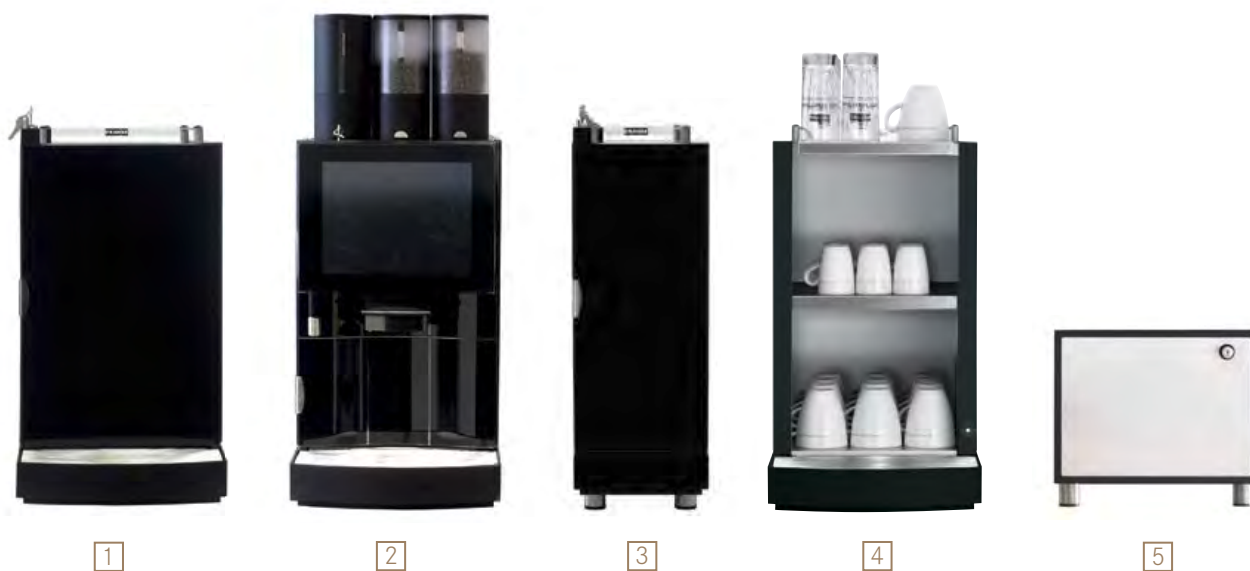
- The coffee machine performs the emptying of the system.

The coffee machine switches off after the system has been emptied.

2.4 Disconnecting add-on units from the machine



- Only one of the refrigeration units illustrated below can be present for each milk system.
- For instructions on disconnecting connections to the coffee machine and add-on units, see *Service documentation for add-on units, Section 5 - Decommissioning*.



- 1 Refrigeration unit FM800 (KE)
- 2 Coffee machine FM800
- 3 Flavour Station (FS)
- 4 Cup warmer (TW)
- 5 Base refrigeration unit (UKE)

2.5 Packing the machines and add-on units



- Take sufficient packaging material to the customer site.



- ▶ Pack machines and accessories for safe transport.
- ▶ Label the packaging (owner of the machine and machine information).

IV. Storage

1. Transport

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

NOTICE

Damage to the coffee machine or add-on units from improper transport!

The machine and add-on units may be damaged and their function may be impaired.

- ◆ Always transport the machine and the add-on units in an upright position.
- ◆ Load the machines and add-on units for safe transport in the vehicle.

2. Ambient conditions

NOTICE

Damage to the coffee machine or add-on units from improper storage

The machine and add-on units may be damaged and their function may be impaired.

- ◆ The storage temperature must be a minimum of +10 °C and may not exceed a maximum of +35 °C.
- ◆ Relative humidity may not exceed 80 %.

V. Recommissioning



In addition to general commissioning, the following components must be replaced and/or checked (depending on machine model) before the machine is recommissioned:

- Milk hoses
- Flavour hoses
- Brewing piston O-ring
- Silicone hose and coupling of the powder system (check and replace if necessary)
- Powder system intake
- Frother head

Information:

- For instructions on commissioning the coffee machine, see *Section 2 - Commissioning*.

1. Recommended procedure

Action	Tools/additional materials	Completed
Replacing components	Service documentation for add-on units (1Y320925) Milk hoses Syrup hoses Brewing piston O-ring Outlet tube and coupling of the powder system (check and replace if necessary) Powder system intake Frother head Socket wrench 7 mm Torx screwdrivers, sizes 10 and 20. Long-nosed pliers	<input type="checkbox"/>
Commissioning the coffee machine and add-on units	Section 2 - Commissioning Service documentation for add-on units (1Y320925)	<input type="checkbox"/>
Cleaning and rinsing the coffee system	Cleaning instructions for machine Brush set (1L301376) Cleaning tablets (BK300935) Brush (1L301160) Microfiber cloth (1H325974). Cleaning solution (BK301732) (only for coffee systems with fresh milk and syrup)	<input type="checkbox"/>

2. Replacing components

2.1 Replacing milk hoses



- For instructions on replacing the milk hoses, see *the Service documentation, Section 3 - Maintenance, Chapter 7 Milk system, p. 35 (1H328835)*.

2.2 Replacing flavour hoses



- For instructions on replacing the syrup hoses, see *the Service documentation for add-on units, Section 5 - De-commissioning (Item no.: (1Y320853))*.

2.3 Replacing brewing piston O-ring



- For instructions on removing or attaching the brewing piston, see *p. 9 ff.*



- Brewing piston O-ring (1T310382/1L296241/644706)
- Socket wrench 7 mm



- ▶ Replace O-ring.

2.4 Replacing the silicone hose and powder system coupling



- Silicone hose and coupling are soiled and must be replaced.



- For instructions on removing or attaching the silicone hose and coupling, see *page <?> ff.*



- Silicone hose (1H326677)
- Coupling (1H326498)
- Screwdriver (short) No. 4

01



► Replacing the silicone hose and coupling.

2.5 Replacing the powder system intake



- Powder holder (1H326184)
- Powder outlet tube (1H325374)
- Torx screwdrivers, sizes 10 and 20.
- Long-nosed pliers

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.

NOTICE

Damage from voltage peaks

The panel can be destroyed by a voltage peak during unplugging.

- ◆ Disconnect the machine from the power supply before you remove the panel.

01



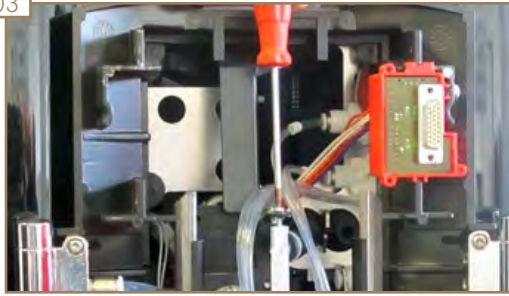
► Remove screw covers

02



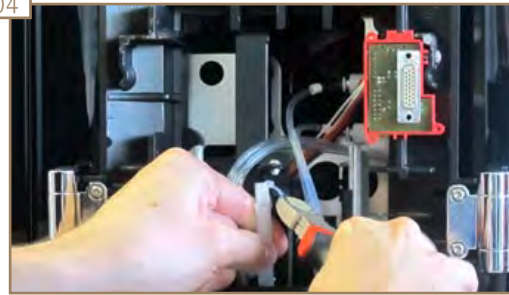
- ▶ Unscrew panel.
- ▶ Shut down the outlet completely.

03



- ▶ Undo powder outlet tube screw (Torx 10).
- ▶ Remove outlet tube towards the top.

04



- ▶ Cut through cable connector.

05



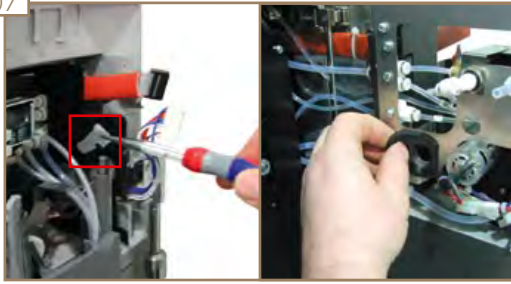
- ▶ Pull out outlet tube.

06

- ▶ Use a brush to clean the outlet tube under hot water.



07



- ▶ Remove the powder system intake latch (long-nosed pliers).
- ▶ Open door.
- ▶ Remove the powder system intake.

08



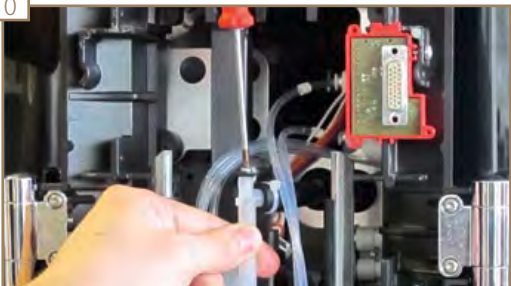
- ▶ Insert the powder system intake.
- ▶ Insert the powder system intake latch (long-nosed pliers).
- ▶ Close the front door.

09



- ▶ Reattach outlet tube.
- ▶ Fasten outlet tube with cable binder to powder holder.

10



- ▶ Tighten screw firmly on outlet tube.

11



- ▶ Attach panel and screw it in place.
- ▶ Attach screw covers and press them inwards.

2.6 Replacing the frother



- Frother (1H328465)



- ▶ Remove the lower part of the outlet.



- ▶ Remove frother from the lower part of the outlet.
- ▶ Insert the new FM800 frother.



- ▶ Place the new frother in the lower part of the outlet and press all the way in.
The lettering "fm" is to be found on the FM800 frother. While it is possible to attach a different frother (Spectra) if necessary, the function will however be limited.



- ▶ Attach outlet lower part with frother and slide upwards until it engages.

3. Commissioning the coffee machine and add-on units



- For instructions on commissioning the coffee machine, see *Section 2 - Commissioning*.

4. Cleaning and rinsing the coffee system



- Before commissioning the machine and add-on units, clean and rinse them according to the cleaning instructions.

VI. Disposal



- The machine and add-on units must be recycled and disposed of in an environmentally appropriate manner.
- Observe local disposal regulations in order to preserve the environment and resources.

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FM800

EN

Programming

Document Number: TD-104095/0
Order Number: 1H328814/0



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
18.01.2013	Preparation	TBA		0

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Issued April 2013. Subject to change without notice.

The present instructions reflect the state of the technology as of the date of issue.

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I. Explanation of symbols



DANGER indicates potentially life-threatening danger or the danger of grave injuries.



WARNING indicates risk of injury.



CAUTION directs your attention to a danger of minor injuries.



NOTE directs your attention to the risk of damage to machinery.



Tips, shortcuts and additional information



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.).



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. For your safety



- The safety information applies to the entire instructions.
- Read and understand the present information before performing any work on the machine.
- The present instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units. These tasks include commissioning, programming, maintenance work, troubleshooting and product quality settings.

DANGER

Risk of death by electrocution!

Working on the open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.
- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.

WARNING

Danger of injury and of damage to the machine from improper installation

A danger of injury exists with incorrect installation. The machines can be damaged.

- ◆ Evaluate structural conditions with respect to installation conditions.
- ◆ Observe local statutory requirements with respect to structural conditions.

If the customer is unable to fulfill the conditions for installation 100%, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Do not reach into the machine while it is operating.
- ◆ Only collect grounds in the grounds container or with a coffee ground chute.

NOTE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render them unusable.

- ◆ Use the tools recommended by Franke.

III. Introduction

The *6-Programming* section presents you with all of the options available for adjusting the FM800 to meet customer requirements and the prevailing conditions, starting with the commissioning and initial configuration of the machine, through the setting of the drinks and all the way to the options for structuring the depiction of the products individually on the monitor. Additional important points are the counters that offer points of departure regarding the utilization and maintenance requirements of the machine and the test functions that support the Service technician with troubleshooting. You will also find information on the loading and backing up of data and on the updating of the software in the present tab.

- ▶ Switch over to the Maintenance level by tipping on the Franke logo in the upper left-hand corner of the monitor and then entering the PIN code. Select the **Service Menu**.



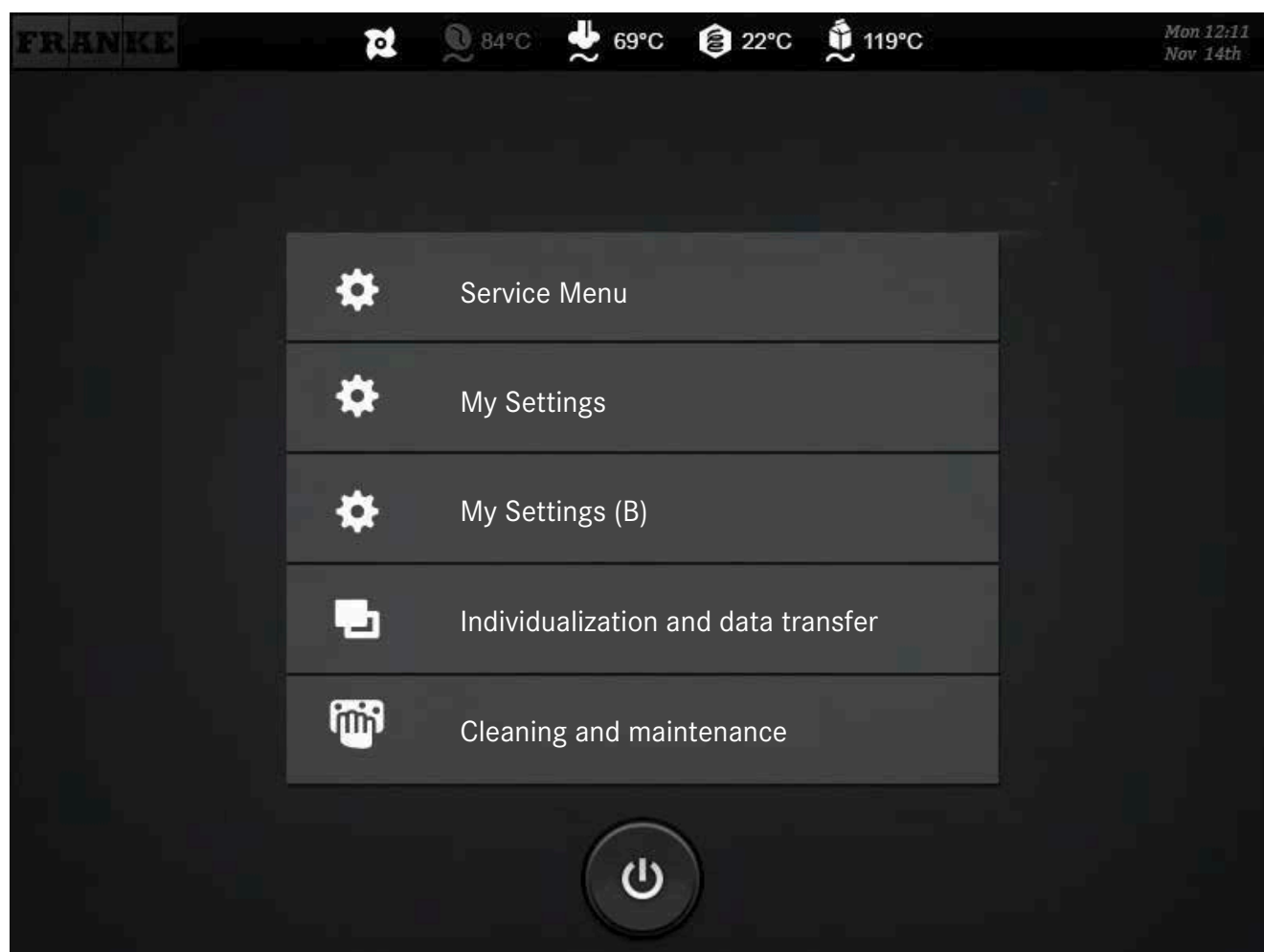
The PIN code for the maintenance level is comprised of: (Day + Month) * Year * (Hour + Minute).

- ▶ Use the date and time information on the operator panel (upper right corner).

Example: 28.09.2012; 11:36

PIN code: 37*2012*47

- ▶ If a user is currently still logged on, tip twice on the Franke logo. You can then authenticate yourself with a new user right.

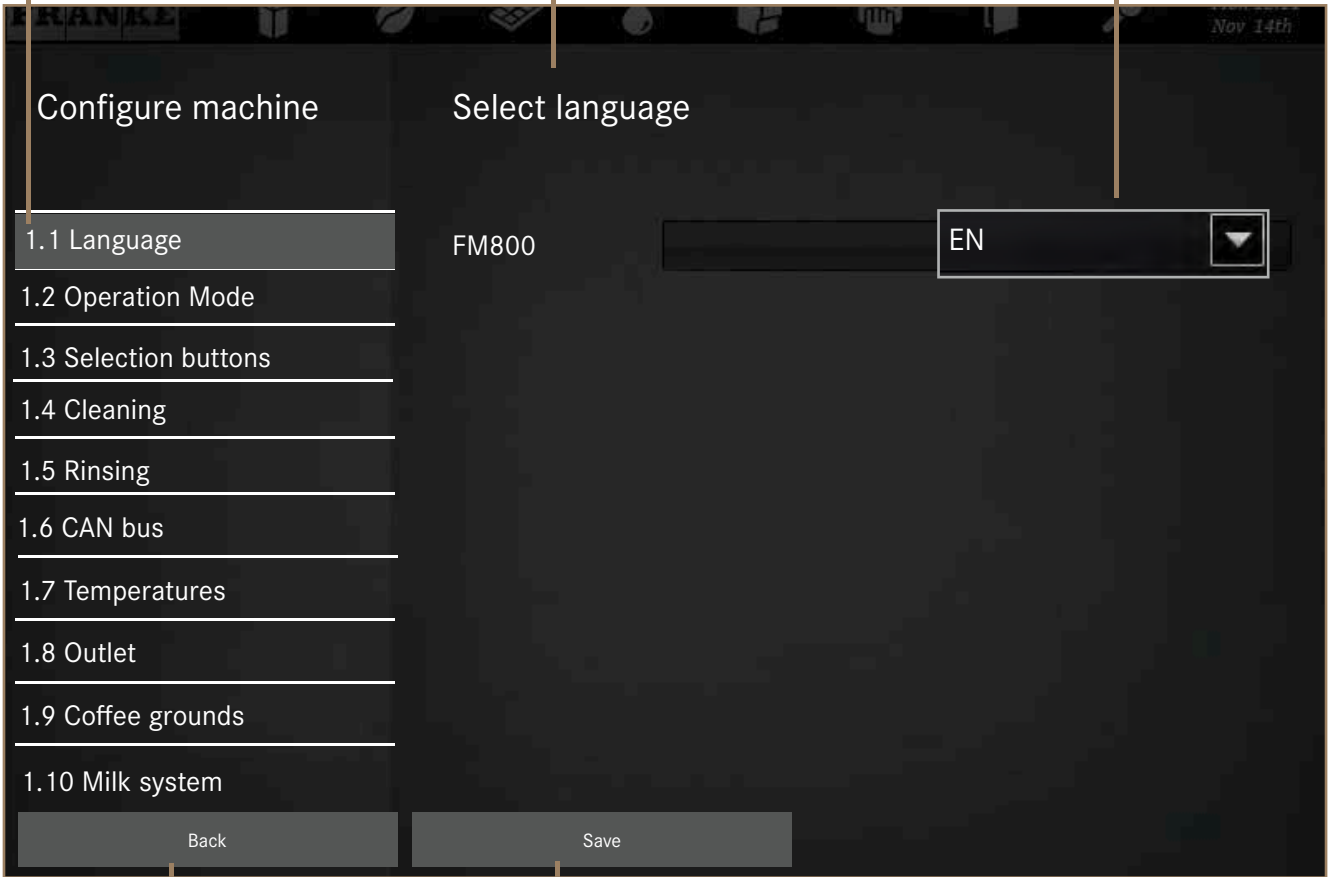


Operator panel construction

Menu items of the current level

Active menu item

Configurable options.



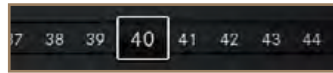
Jump back one level

Saves changes made

Input methods



Tip on the switch to switch over to Yes/No or On/Off. The visible value is activated.



Drag on the scale in order to set parameters. The framed value is activated.



Tip on arrow to display selection and to select option.



Tip on keyboard to enter text or numbers.

IV. The Service Menu

- ▶ Switch over to the Maintenance level by tipping on the Franke logo in the upper left-hand corner of the monitor and then entering the PIN code. Select the **Service Menu**.



The PIN code for the maintenance level is comprised of: (Day + Month) * Year * (Hour + Minute).

- ▶ Use the date and time information on the operator panel (upper right corner).

Example: 28.09.2012; 11:36

PIN code: 37*2012*47

Service Menu



Menu item	Task	Page
0 Commissioning	Configuring and calibrating the coffee machine	10
1 Configure machine	Setting the behavior of the coffee machine	24
2 Set drinks	Configuring drinks, creating new ones or clearing ones from the product portfolio	51
3 Date and time	Configure date, time and timers	76
4 Counters	Displaying and resetting counter readings	82
5 Test functions	Checking individual components and processes, e.g. during troubleshooting.	98
6 Access rights	Assigning access rights and/or PIN codes for the various configuration menus	117
7 Decommissioning	Emptying the system with the help of software	118
8 Updating the software	Updating the software	119


0. Commissioning

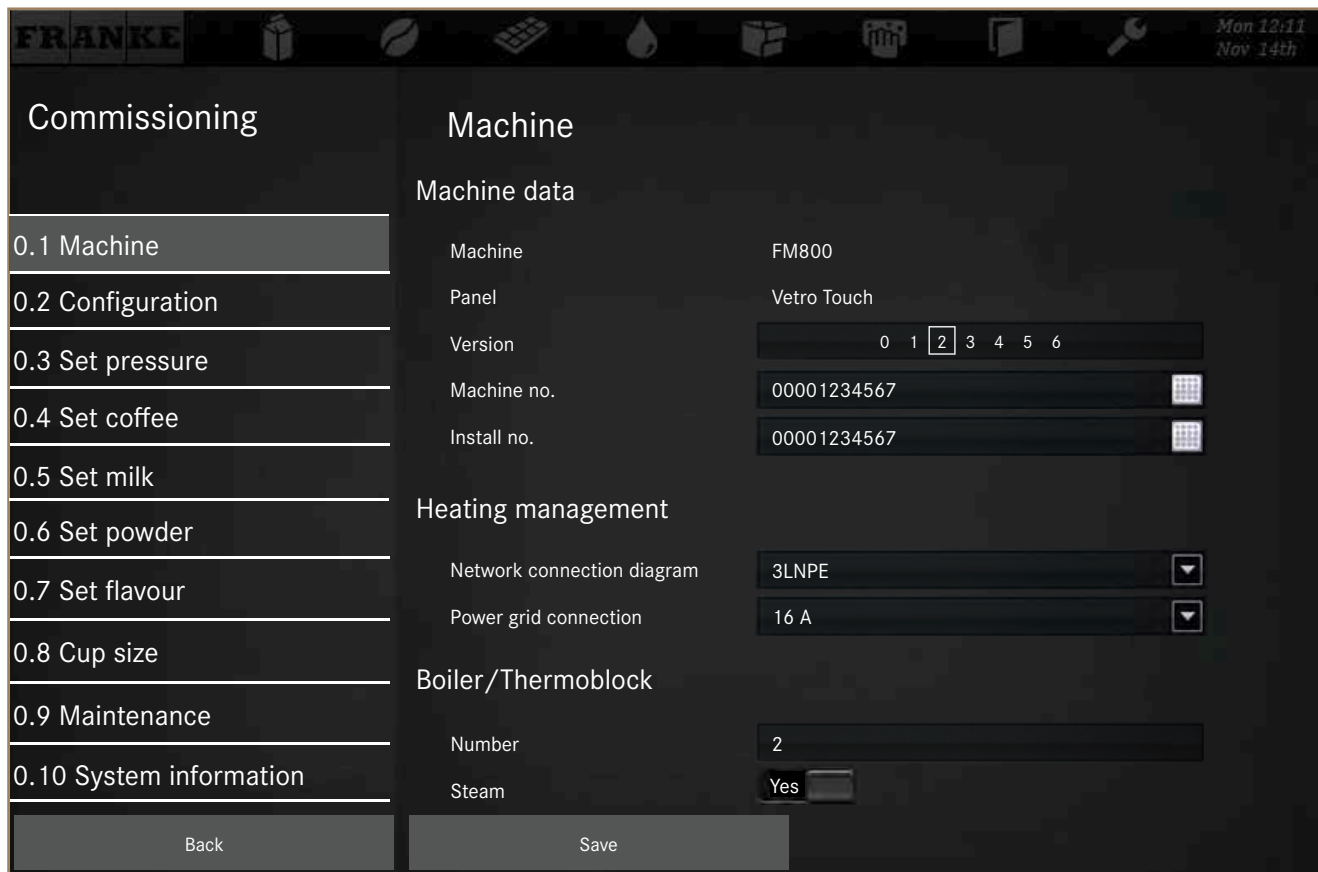
0 Commissioning



Menu item	Description	Page
0.1 Machine	Enter machine data (taken from type plate)	11
0.2 Configuration	Configure the coffee machine. Enter equipment requirements. The other menus are limited on the basis of this configuration	13
0.3 Set pressure	Set pump pressure	15
0.4 Set coffee	Calibrate water quantity, set grind coarseness and calibrate grinders	16
0.5 Set milk	Calibrate cleaning water for the milk system and set foam qualities for each milk type	17
0.6 Set powder	Calibrate water quantity and powder quantity per powder dosing unit	19
0.7 Set flavour	Calibrate syrup quantity	20
0.8 Cup sizes	Set cup sizes and scaling factors	21
0.9 Maintenance	Leave maintenance interval and service number	22
0.10 System information	All software versions at a glance	23

0.1 Machine

 Information for the settings under **01. Machine** are to be entered on the type plate of the machine. This is located on the inside of the grounds door.



The screenshot shows the 'Machine' settings screen in the Franke programming interface. The left sidebar contains a menu with options: 0.1 Machine, 0.2 Configuration, 0.3 Set pressure, 0.4 Set coffee, 0.5 Set milk, 0.6 Set powder, 0.7 Set flavour, 0.8 Cup size, 0.9 Maintenance, and 0.10 System information. The main area is titled 'Machine' and contains the following settings:

- Machine data**
 - Machine: FM800
 - Panel: Vetro Touch
 - Version: 0 1 **2** 3 4 5 6
 - Machine no.: 00001234567
 - Install no.: 00001234567
- Heating management**
 - Network connection diagram: 3LNPE
 - Power grid connection: 16 A
- Boiler/Thermoblock**
 - Number: 2
 - Steam: Yes

At the bottom of the screen are 'Back' and 'Save' buttons.

Machine data

Basic information regarding the identification of the coffee machine is entered under **Machine data**.

Machine: FM800

The machine is permanently stored: FM800

Operator panel: Vetro Touch

The operator panel is permanently stored: Vetro Touch

Version: 0 - 8

- 0: invalid value, value must be adjusted after software update.
- Default: 1

Machine no.: Max. 11 digits

- The Machine no. corresponds to the Serial number on the type plate.
- Default: 00000000000

Install no.: Max. 11 digits

- The Install no. is normally identical with the Machine no., although it can also deviate from it.
- The Install no. serves as the identification code.
- The last eight digits are checked. If the last eight digits are 00000000, the number is not checked.
- Default: 00000000000

Heating management

The heating management controls the locking mechanism of the heaters for the purpose of ensuring optimal operation and preventing overloads.

Network connection diagram:

- 1LNPE
- 3LNPE
- 2LPE
- 3LPE

Default: 3LNPE

Power grid connection:

- 16 A
- 30 A

Default: 16 A

Boiler/Thermoblock

This data is permanently stored as only this configuration is available to the machine.

Number:

- 1
- 2

Default: 2 (two boilers present)

Steam:

- Yes
- No

Default: Yes (hot water/steam boiler present)

Thermoblock:

- Yes
- No

Default: Yes (Thermoblock available)

0.2 Configuration



If the machine is configured, then only the options relevant to this configuration will be displayed.

Example: If a powder dosing unit is stored at Position 1, then **Grinder 1** will no longer appear under **0.4 Coffee**.



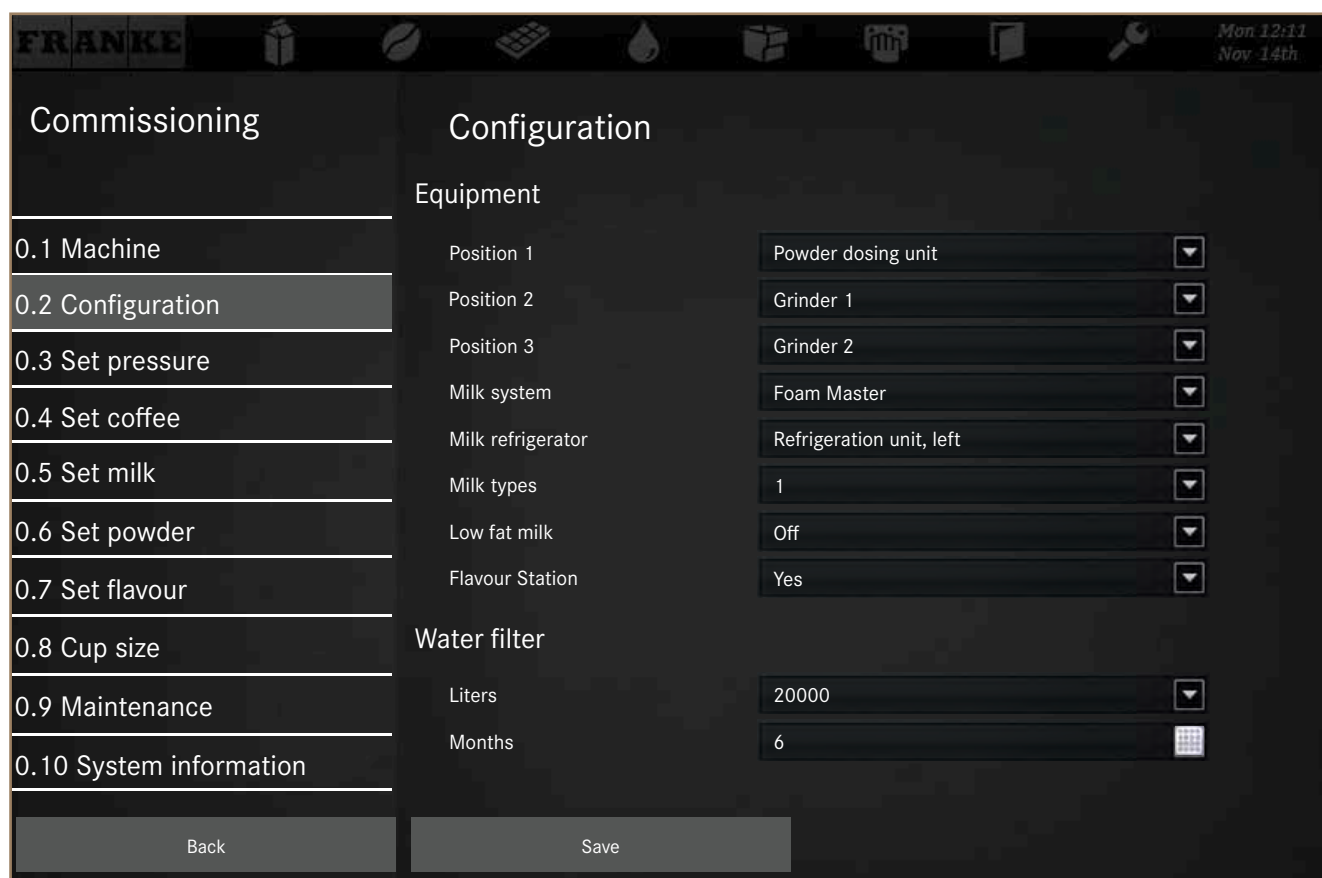
Information from customer:

- Milk types

Job/Order

- Coffee machine equipment

Water filter data sheet



Equipment

The FM800 coffee machine software needs the information regarding the equipment (grinders and powder dosing units, in addition to add-on units) for the correct allocation of the add-on units and resource containers.

Position 1, 2, 3:

- Powder
- Grinder 1, 2, or 3

- Default: Position 1: None; Position 2: Grinder; Position 3: None
- Powder dosing unit and dual powder dispenser are available only at Position 1.

Milk system:

- None
- Foam Master

Default: None

Milk refrigerator:

- Refrigeration unit, left
- Refrigeration unit, right
- Base refrigeration unit
- Under-counter refrigeration unit

Default: Refrigeration unit, left

Milk types:

- 1
- 2

Default: 1

Low fat milk:

- Off
- Type 2

- **Type 2:** Low fat milk can be offered in systems that have two milk types.
- **Default: Off:** No low fat milk is available.

Flavour Station:

- Yes
- No

Default: No

Water filter

- The water filter of the FM800 coffee machine must be replaced regularly in order to ensure uniform product quality.
- The request for the replacement of the water filter is displayed as soon as either the water quantity or the utilization time has reached the set value.
- The counter must be reset after the water filter has been replaced. *See Chapter IV. The Service Menu, 4. Counters, 4.3 Water filter p. 85.*

Liters: 0 - 25 000

- Water quantity in **liters**, for which the water filter must be replaced when it is reached.
- **Default: 2 500 l**

Months: 6 - 12

- Utilization period in **months**, after which time the water filter must be replaced.
- Each month is counted as having 28 days to avoid rounding.
- **Default: 0** (switched off)

Additional settings

The FM800 coffee machine can be operated with an optional water tank. In addition, an Autosteam function is available.

Tank:

- Yes
- No

Default: No

Autosteam:

- Yes
- No

Default: No

0.3 Set pressure



Set pressure



- The coffee machine guides the Service technician through the pressure setting process.
- The brewing unit closes, the main water valve opens and pump can be heard to run. The brewing valve opens for 0.2 seconds every 5 seconds for depressurization. The function ends automatically after 60 cycles.
- The coffee machine provides the Service technician with information regarding the manual pressure setting:
 - Read the pump pressure on the pressure gauge.
 - Set the pressure with the help of the set screw on the pump.
- Default: 8 bar
- Date and time of the last calibration are displayed.

0.4 Set coffee



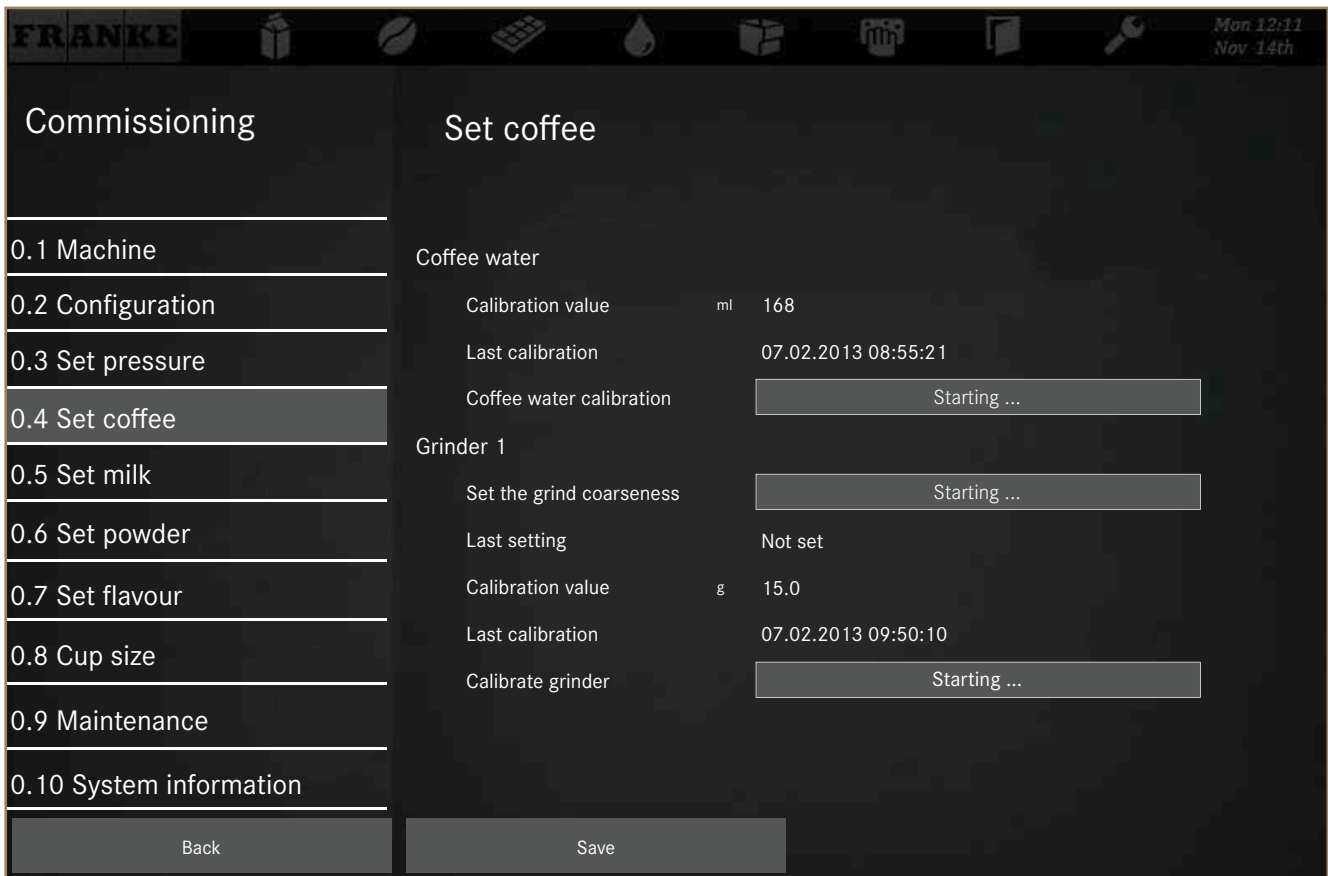
Material:

- Coffee beans
- Scale
- White paper
- Container for grist or beans



Observe the sequence.

Recalibration has to be carried out if the grind coarseness is changed.



Set coffee


Coffee water calibration: Start

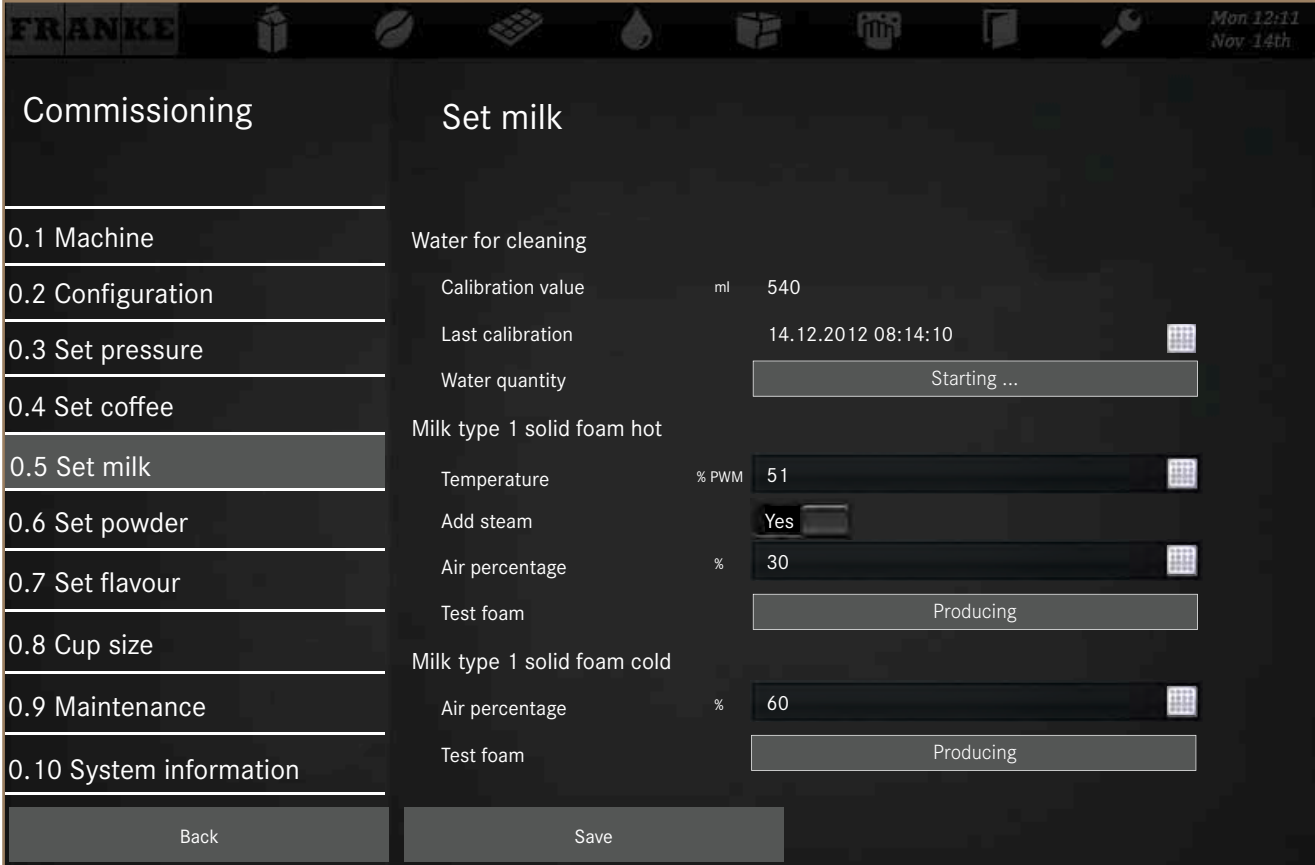
- The coffee machine sets the water quantity per second.
- The set water quantity is displayed.
- Date and time of the last calibration are displayed.

Grinder 1, 2, 3: Start

- The coffee machine guides the Service technician through the setting of the grinders. The calibration ensures that the amount of coffee remains constant.
- The Service technician is prompted to weigh the grind quantity and to enter the measured value.
- The set water quantity is displayed.
- Date and time of the last calibration are displayed.

0.5 Set milk


-  The fat content of the milk has the following effect on the product quality:
 - The higher the fat content in the milk, the more buttery the taste will be.
 - Recommendation: Utilization of low fat milk



The screenshot shows the 'Set milk' configuration screen. On the left is a 'Commissioning' menu with options 0.1 to 0.10. The 'Set milk' section is divided into 'Water for cleaning' and two milk types. The 'Water for cleaning' section shows a calibration value of 540 ml, the last calibration date and time (14.12.2012 08:14:10), and a 'Water quantity' field currently displaying 'Starting ...'. The 'Milk type 1 solid foam hot' section shows a temperature of 51 % PWM, 'Add steam' set to 'Yes', and an air percentage of 30%. The 'Milk type 1 solid foam cold' section shows an air percentage of 60%. 'Test foam' buttons are present for both milk types, with the hot one showing 'Producing'. 'Back' and 'Save' buttons are at the bottom.

Water for cleaning

In order to prevent water from running over or the pump from drawing in air during the cleaning, the water quantity must be calibrated for the cleaning.

-  The new water quantity for cleaning has been set at 540 ml.

Water quantity: Start

- The coffee machine guides the Service technician through the process.
- The set water quantity is displayed.
- Date and time of the last calibration are displayed.
- Default value: 700 ml

Milk type 1 solid/liquid foam warm

The parameters for milk foam are set under Milk type 1 (optional 2) solid/liquid foam warm.

Temperature: 40 - 90% PWM

- Determines the temperature of the foam.
- Default: 50% PWM

Add steam:

- Yes
- No

- **No:** Milk foam is heated only in the Thermoblock.
- **Yes:** The addition of steam is required for output temperatures greater than or equal to 60°C.
- Default: **No**

Air percentage: 1 - 100%

- Determines the percentage of air that is added to the milk.
 - The more air that is introduced, the more solid the foam will be.
 - The less air that is introduced, the creamier the foam becomes.
- Default stiff foam hot: **40%**
- Default liquid foam hot: **10%**

Test foam: Producing

The coffee machine produces one portion of foam.

Milk type 1 solid/liquid foam cold

Air percentage: 1 - 100%

- Determines the percentage of air that is added to the milk.
 - The more air that is introduced, the more solid the foam will be.
 - The less air that is introduced, the creamier the foam becomes.
- Default solid foam cold: **40%**
- Default liquid foam cold: **20%**

Test foam: Producing

The coffee machine produces one portion of foam.

Milk type 2 solid/liquid foam warm and cold

The setting options for milk type 2 are set up analogously to those of milk type 1.

0.6 Set powder



Information from customer:

- Use of powder products

Water for powder

Water quantity: Start

- The coffee machine guides the Service technician through the setting of the water quantity for powder.
- The set water quantity is displayed.
- Date and time of the last calibration are displayed.

Water pre-add with product: 5-24 ml

- The mixer is moistened by the water pre-add. This prevents the powder from clumping.
- Default: 5 ml

Water post-add with product: 5-24 ml

- The water post-add rinses the remaining powder out of the mixer.
- Default: 10 ml

Powder dosing unit 1/2

Calibrate powder quantity: Start

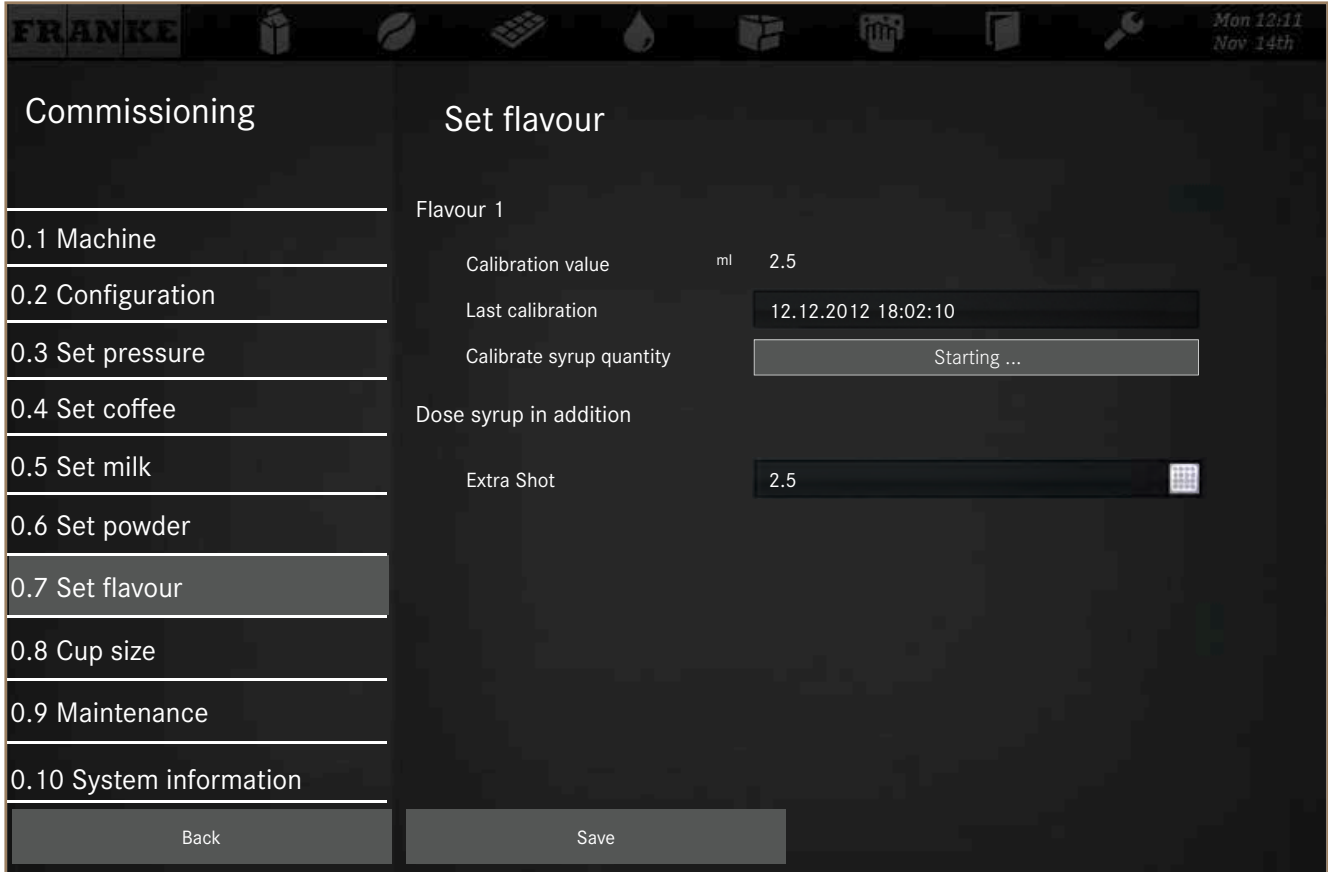
- The coffee machine calibrates the powder quantity.
- The set powder quantity is displayed.
- Date and time of the last calibration are displayed.

0.7 Set flavour

OK?

From customer:

- Syrup types



Flavour 1/2/3

Calibrate syrup quantity: Start

The coffee machine calibrates the quantities of the three possible syrup types.

Dose syrup in addition

Extra Shot: 1.0-5.5

The **Extra Shot** function offers the possibility of enhancing a drink with an additional portion of syrup. The set syrup quantity is multiplied by the set factor. The function must be made available as a selection button (*1.3 Selection buttons, p. 29*).

0.8 Cup sizes

OK?

Information from customer:

- Cup sizes for Small, Medium, Large, 2 x

Commissioning

0.1 Machine

0.2 Configuration

0.3 Set pressure

0.4 Set coffee

0.5 Set milk

0.6 Set powder

0.7 Set flavour

0.8 Cup size

0.9 Maintenance

0.10 System information

Cup sizes

Small	150 ml	
Medium	200 ml	
Large	250 ml	
2 x	300 ml	

Factors for medium

Coffee water	1.2	
Grind quantity grinder 2	1.2	
Grind quantity grinder 3	1.2	
Milk quantity, hot	1.2	
Milk quantity, cold	1.2	

Back Save

Cup sizes

Small, Medium, Large, 2x: 10-2000 ml

Entering the fill levels for the cup sizes Small, Medium, Large and 2x.

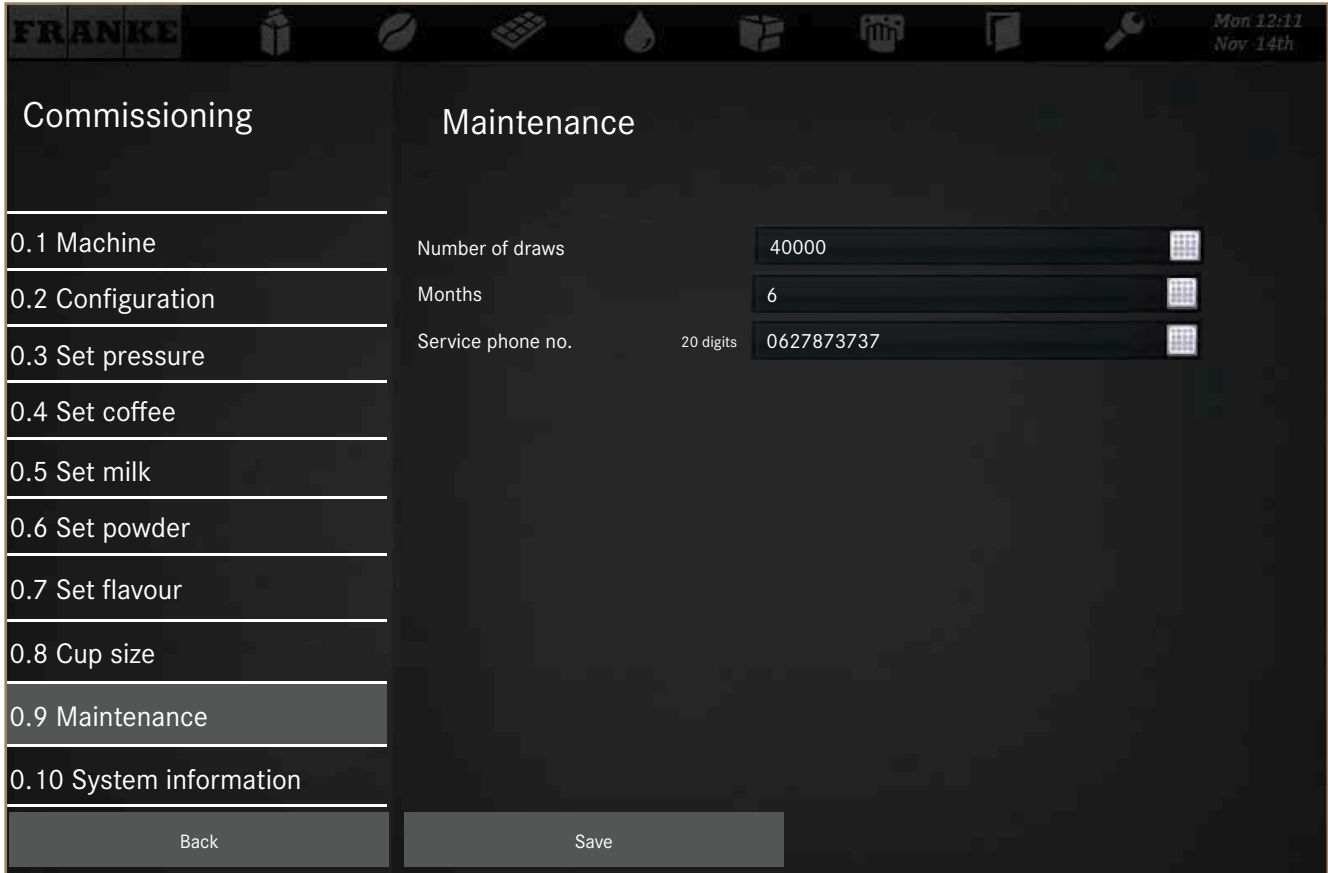
Factors Medium, Large and 2x

The coffee machine calculates the respective fill levels for the various cup sizes on the basis of the factors entered.

All options: Input factor

- Medium: 1.2
- Large: 1.7
- 2x: 2.1

0.9 Maintenance



Maintenance

- The FM800 coffee machine must be given maintenance at regular intervals in order to ensure uniform product quality and a long service life.
- The value that is reached first (number of dispensings/utilization time) triggers the prompt for maintenance.

Number of draws: 0-200 000

- Number of drink preparations after which maintenance must be performed.
- Default: 0000 (switched off, maintenance cycles not dependent on dispensing).

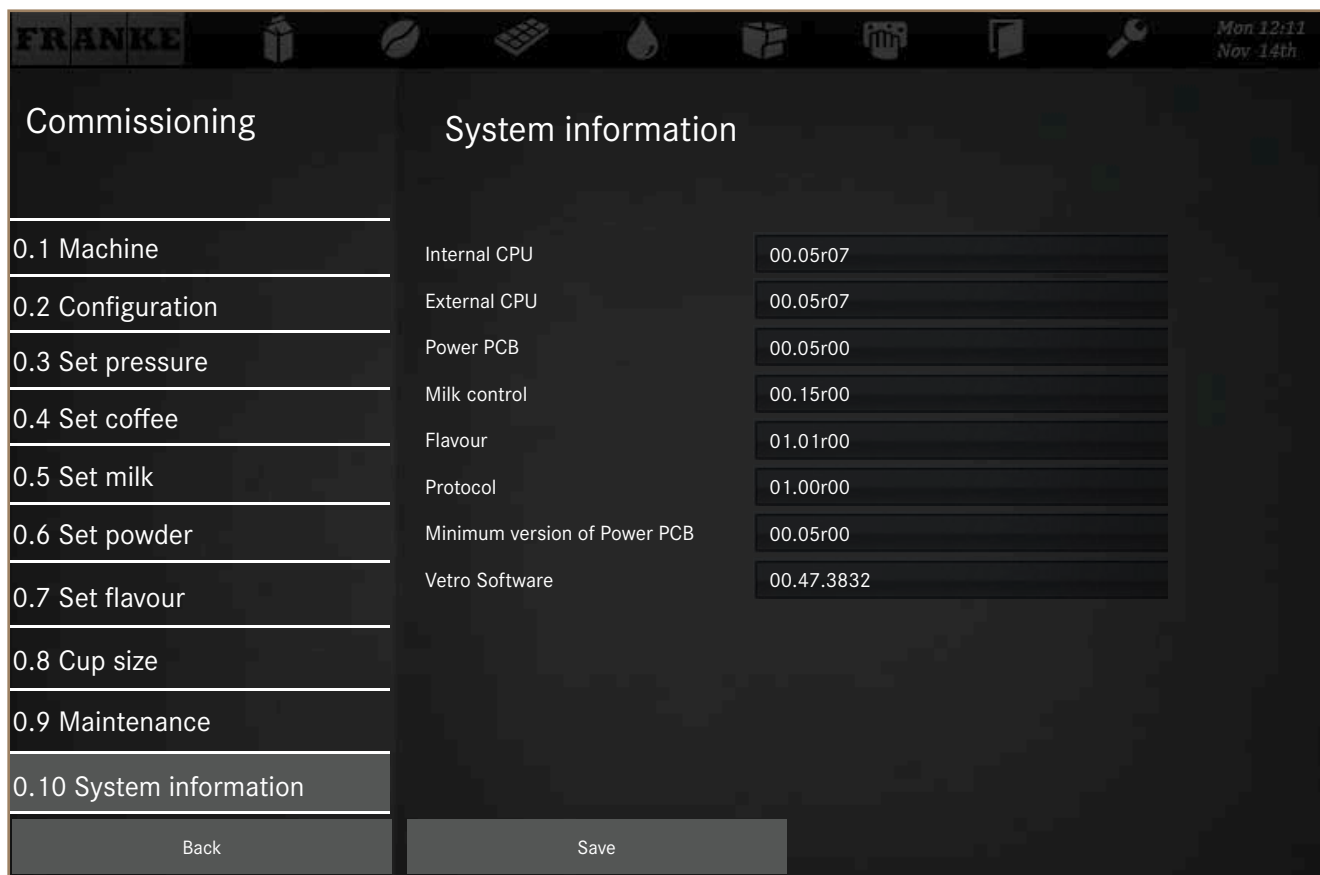
Months: 0-24

- Utilization time after which maintenance must be performed.
- Each month is counted as having 28 days to avoid rounding.
- Default: 0 (switched off, maintenance cycles not dependent on the time).

Service phone no.: Max. input 20 characters.

- Individual input of the telephone number of the Service technician. This information is displayed when maintenance is required.
- Default: empty

0.10 System information



Here you will find technical information regarding the hardware and software revisions of the machine.

1. Configure machine



Basic settings for drink production, presentation, operation, etc. are undertaken under the **Set machine** menu. The settings made can influence the later configuration tasks and options, as with **0 Commissioning**.

1 Configure machine



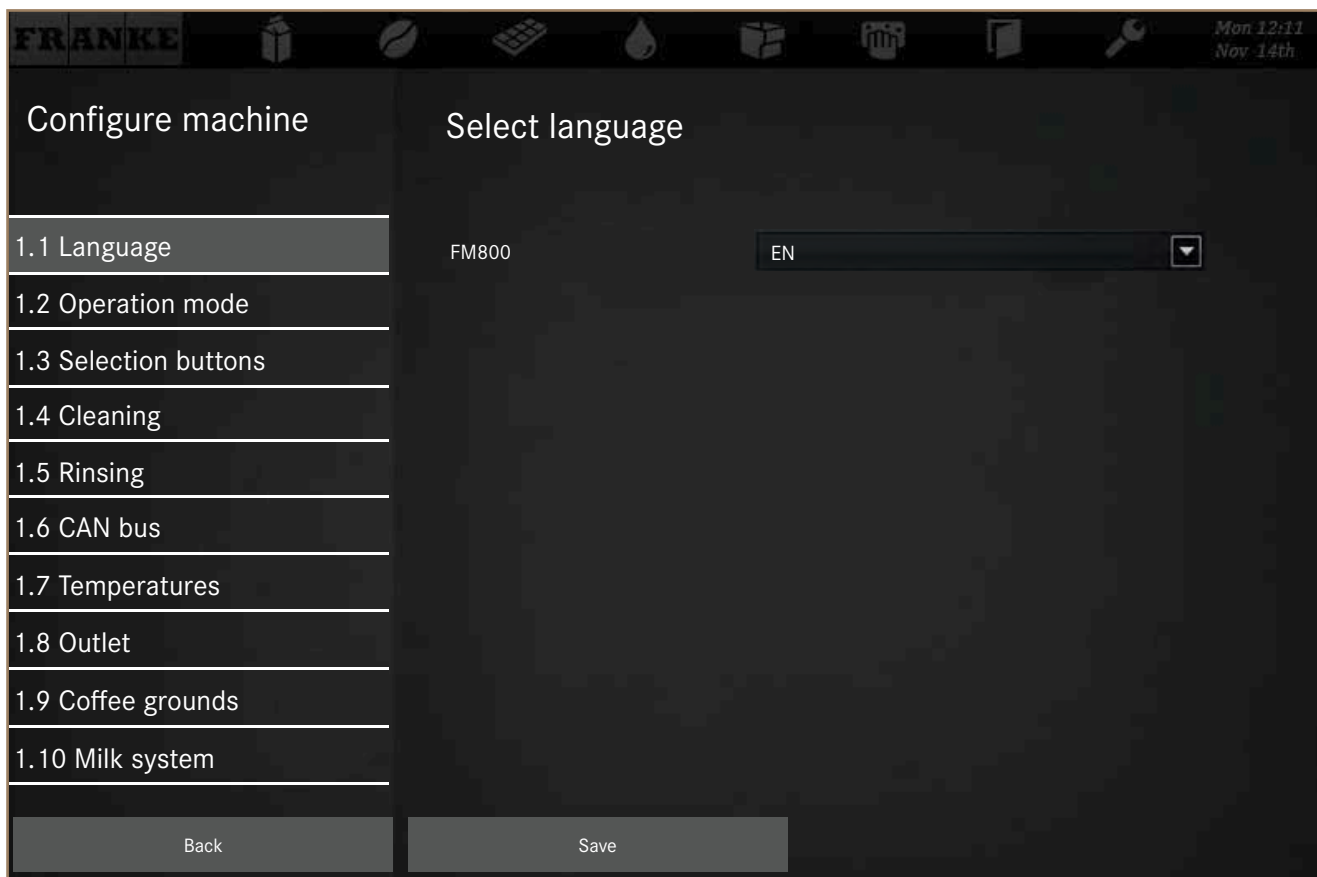
Menu item	Description	Page
1.1 Language	Select desired language from list	25
1.2 Operation mode	Define desired operation mode for the coffee machine	28
1.3 Selection buttons	8 selection buttons can be assigned various functions in accordance with customer preference	29
1.4 Cleaning	Set cleaning parameters	31
1.5 Rinsing	Set rinsing behavior	34
1.6 CAN bus	Define CAN IDs for coffee machine and add-on units	36
1.7 Temperatures	Set temperatures for coffee and hot water/steam and temperature level	37
1.8 Outlet	Set the outlet height and the outlet delay	39
1.9 Coffee grounds	Set coffee ground chute option, quantity of cakes in the grounds container and press-out time	41
1.10 Milk system	Configure monitoring of milk system	42
1.11 Flavour	Activate Flavour Station and define syrup types	44
1.12 Accounting	Set accounting parameters	45
1.13 Sensors	Set cup monitoring	48
1.14 Edge lighting	Set the behavior of the edge lighting	49
1.15 Decaf	Permit utilization of decaffeinated coffee	50

1.1 Language

OK?

Information from customer:

- User language



Language

Language:

- DE
- EN
- FR
- ...

- Several languages are available.
- Default: DE.

1.2 Operation mode

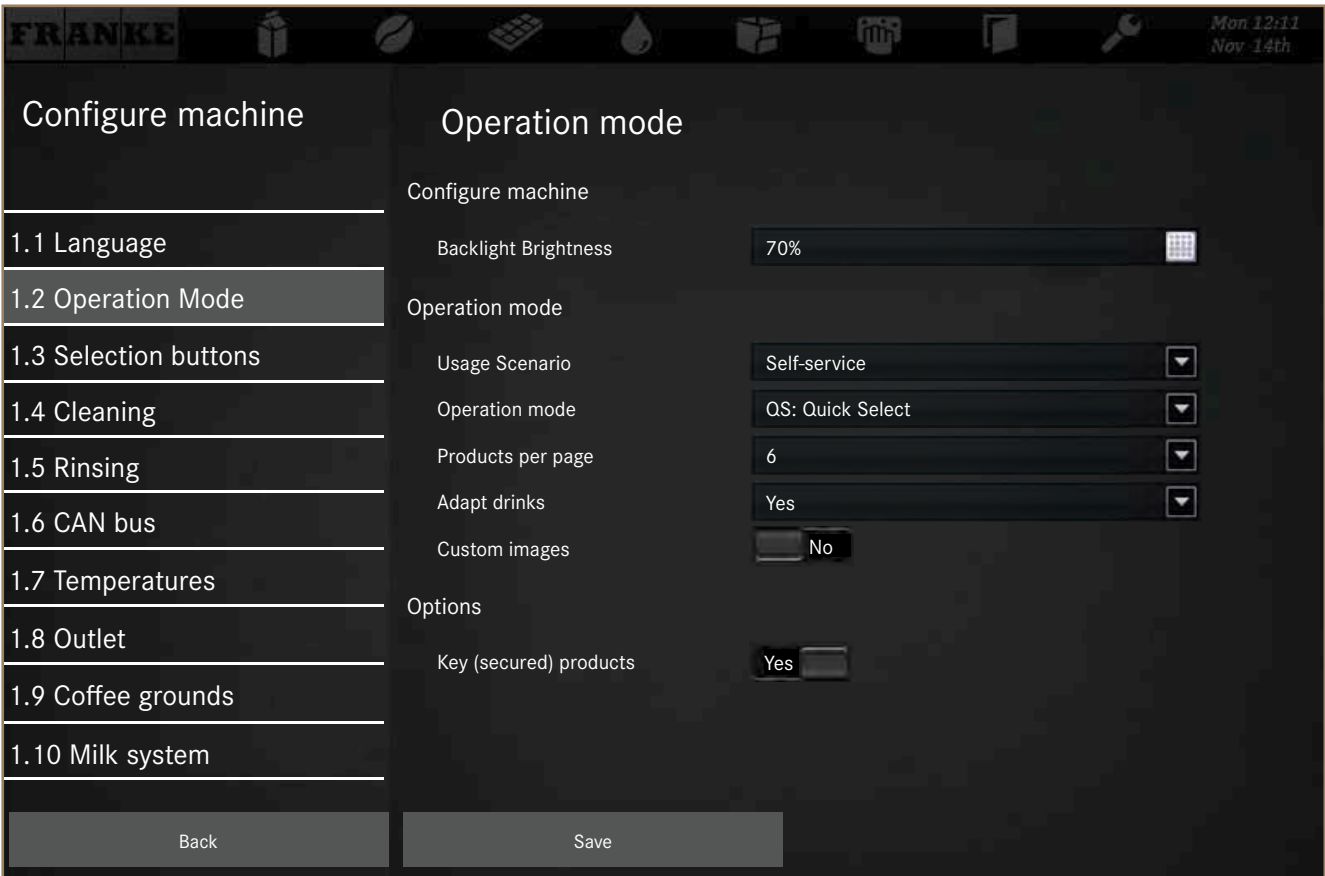


Information from customer:

- Planned usage scenario of the coffee machine (Non-self-service or Self-service)
- Desired operation mode
- Number of products that are to be displayed simultaneously
- Depiction of the images
- Usage of customer images
- Function Adapt drinks in the Self-service Usage Scenario



Certain configurations, e.g. the number of drinks displayed per page, can be defined separately for each operation mode. The respective settings are not changed when switching between the operation modes.



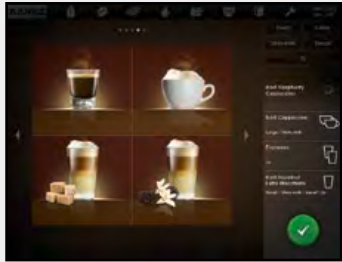



Set-up

Backlight Brightness: 0 - 100%

- Default: 85%.

Operation mode

- Usage Scenario:
- Non-self-service
 - Self-service
- The coffee machine can be operated in two usage scenarios.
 - A total of three operation modes are available for the two usage scenarios for the operation of the coffee machine.

	Cash Register	Quick Select	Inspire Me
			
Usage Scenario	<ul style="list-style-type: none"> ▪ Non-self-service utilization ▪ Additional products can be added during product preparation. 	<ul style="list-style-type: none"> ▪ Self-service ▪ Possible options appear after the product selection. ▪ Credit Mode: <ul style="list-style-type: none"> ▪ Product prices, credit, missing credit ▪ You can activate Credit Mode in the My Settings menu under 1 Configure machine, 1.5 Accounting. Select Activate accounting. 	<ul style="list-style-type: none"> ▪ Self-service ▪ The products can be grouped on menu cards.
Construction Operator panel:	<ul style="list-style-type: none"> ▪ Level 1: Product selection. Column with the possible options, the production status and the waiting list 	<ul style="list-style-type: none"> ▪ Level 1: Product selection ▪ Level 2: Status Drink Selection 	<ul style="list-style-type: none"> ▪ Level 1: Menu cards with grouped selection ▪ Level 2: Product selection ▪ Level 3: Status Drink Selection
		Status Drink Selection (if activated)	
			
		Function: Product preview, display of product options and start of preparation.	

Usage Scenario Non-self-service

Only the **Cash Register** operation mode is available in the **Non-self-service** usage scenario.

Operation mode: Cash Register

- Permanently stored: **Cash Register**

Products per page:

- 4
- 9
- 16

- Default: **16**

Depiction

- Photo
- Iconized

- Default: **Photo**

Self-service Usage Scenario

The coffee machine can be operated in the **Quick Select** or **Inspire Me** operation modes in the **Self-service** usage scenario.

Operation mode:

- Quick Select
- Inspire Me

Default: **Quick Select**

Products per page:

- 6
- 12
- 20

Default: **12**

Adapt drinks:

- Yes
- No

Possibility for self-service customers to modify the selected drink ad hoc in accordance with the allocation of the selection buttons.

Custom images:

- Yes
- No

Permit customer-specific images. If the custom images are activated, then only these will be used. Images from Franke cannot be used simultaneously with the customer's images.

Options

Key (secured) products:

- Yes
- No

- Selected products can be blocked with the **key (secured) products** option. Key (secured) products can be prepared only after a PIN code has been entered (see Chap. 6. *Access rights*, p. 117).
- Default: **No**

1.3 Selection buttons



Information from customer:

- Key configuration
- Prices or PLU, respectively

FRANKE Mon 12:11
Nov 14th

Configure machine

- 1.1 Language
- 1.2 Operation mode
- 1.3 Selection buttons
- 1.4 Cleaning
- 1.5 Rinsing
- 1.6 CAN bus
- 1.7 Temperatures
- 1.8 Outlet
- 1.9 Coffee grounds
- 1.10 Milk system

Back

Selection buttons

Button 1	Small	▼
PLU no.	2	▼
Price	3.50	▼
		☰
Button 2	Medium	▼
PLU no.	3	▼
Price	4,10	▼
		☰
Button 3	2x	▼
PLU no.	5	▼
Price	5.90	▼
		☰

Save

Selection buttons



- Product options:
- Small
 - Medium
 - Large
 - 2x
 - Low fat milk
 - Decaf
 - Flavour 1
 - Flavour 2
 - Flavour 3
 - Extra Shot
 - Iced

▪ The eight selection buttons can be assigned various product options. The product options appear under **Status Drink Selection**.

Recommendation:

- Selection buttons on the left side: Select drink size
- Selection buttons on right side: Select additional settings

Price: Input of amount

Store surcharge for the option. The total price is calculated by the machine.

PLU: Input of PLU number

Store PLU number for price calculation (if working with PLU numbers).

1.4 Cleaning



Service technicians:

- Application and process knowledge for cleaning and caring for the coffee machine



Cancel cleaning (This information is EXCLUSIVELY for Service technicians):

- Tip on the upper right-hand corner three times within 1.5 s and authenticate with the Technician PIN. The cleaning is canceled (hidden button, 15 mm from the top and 12 mm from the right).
- Error code E 356 is entered in the internal error log list.
- Canceled cleaning procedures are not counted.

Cleanings should take place after a certain number of product dispensings or after a certain time. Prompt for cleaning or forced cleaning takes place depending on what is reached first.

FRANKE Mon 12:11
Nov 14th

Configure machine **Cleaning**

1.1 Language

1.2 Operation mode

1.3 Selection buttons

1.4 Cleaning

1.5 Rinsing

1.6 CAN bus

1.7 Temperatures

1.8 Outlet

1.9 Coffee grounds

1.10 Milk system

Cleaning process

Cleaning cycles

AfterSteam time s

Neutralization Yes No

Process behavior

Force at start

Off after cleaning No

Buzzer No

Prompt to clean

By drinks

By time h

Cleaning process

Cleaning cycles: 4-9 cycles

Number of cleaning procedures up to the dissolving of the cleaning tablet.

- 5: Ideal value for dissolving Franke cleaning tablets
- Set 9 cycles with special outlet for jug.
- Default: 5 cycles

AfterSteam time: 0.0-25.5 s

Time period for the steam pulse that occurs after cleaning or rinsing in order to empty the pipes.

- 0.0: No AfterSteam time
- Default: 6 s

Neutralization:

- Yes
- No

At the time of the neutralization, 200 ml of water is brewed with 3 g of ground coffee per grinder after the cleaning. The brewing procedure neutralizes the pH value in the machine.

The bypass tube is also neutralized. The bypass valve is switched on at 50% and switched off at 95%.

- No: No neutralization after cleaning
- Yes: Neutralization after cleaning
- Default: No



If OFF after cleaning is activated with Yes, neutralization brewing occurs only after the machine is restarted.

- ▶ Dispose of the first product after the restart.

Process behavior

Force at start:

- Yes
- No

- No: No forced clean when the coffee machine is restarted.
- Yes: Forced clean when the coffee machine is switched on if this has been switched off for more than one hour.
- Default: No

Off after cleaning: Yes
 No

- **No:** No automatic switch-off after cleaning.
- **Yes:** The coffee machine shuts down automatically after cleaning. The neutralization is carried out after the next start, insofar as this is activated.
- **Default:** No

Buzzer: Yes
 No

Acoustic signals call upon the user to act during the cleaning process.

- **No:** Acoustic signal is deactivated.
- **Yes:** Acoustic signal is activated.
- **Default:** No

Prompt to clean

By drinks: 0-999 products

Clean request after number of drink preparations.

- **0:** switched off
- **Default:** 250

By time (hours): 0-23 h

Clean request after a particular number of hours, measured starting with the first drink preparation.

- **Default:** 0 (switched off)

By time (minutes): 0-59 min.

Clean request after a particular number of minutes, measured starting with the first drink preparation.

Default: 0 (switched off)

Force to clean

By drinks: 0-999 products

Forced clean after number of drink preparations.

- **0:** switched off
- **Default:** 250

By time (hours): 0-23 h

Forced clean after a particular number of hours, measured starting with the first drink preparation.

- **Default:** 0 (switched off)

By time (minutes): 0-59 min.

Forced clean after a particular number of minutes, measured starting with the first drink preparation.

Default: 0 (switched off)

1.5 Rinsing



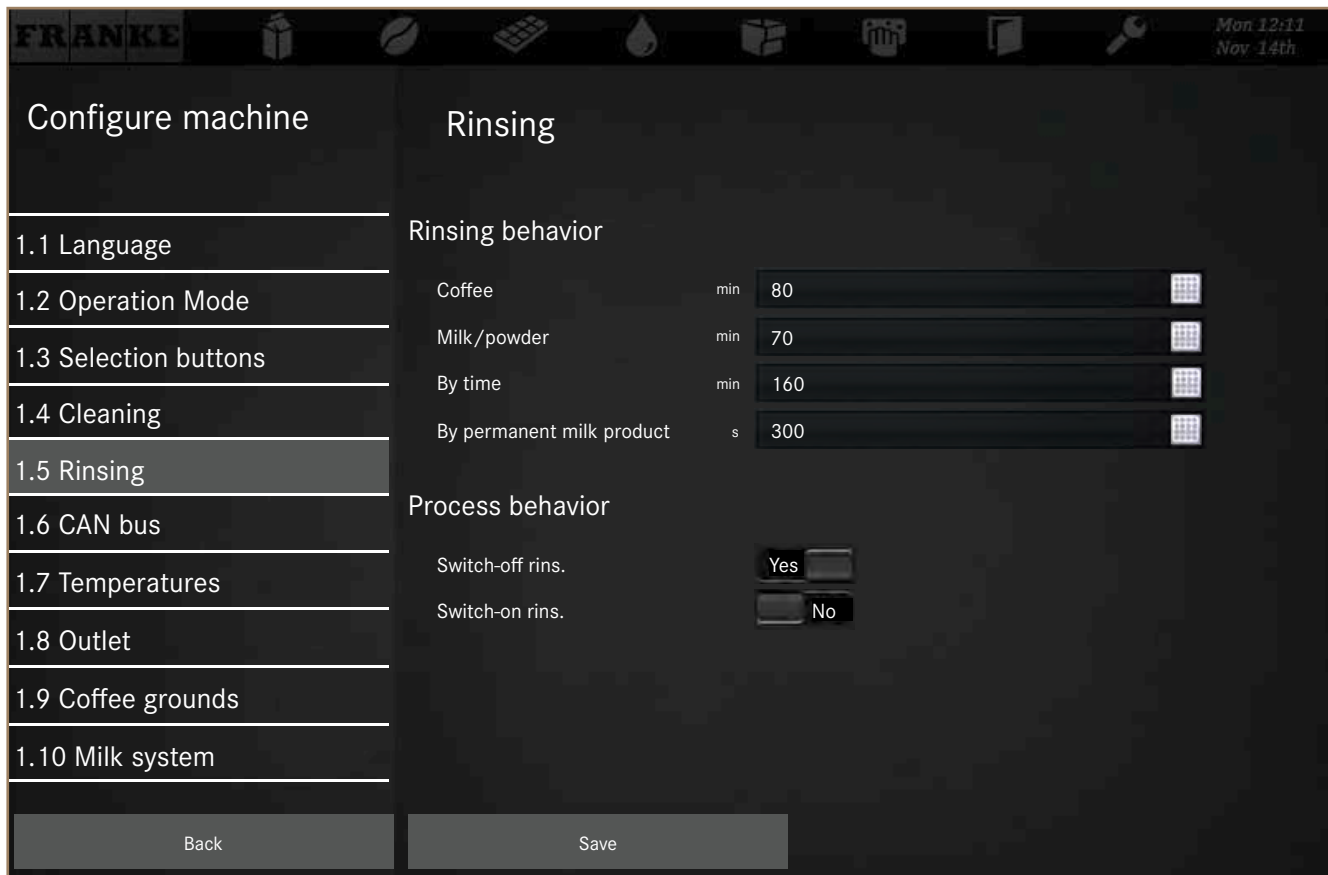
Service technicians:

- Application and process knowledge for cleaning and caring for the coffee machine



Three seconds before the start of a forced rinse, the buttons on the display are blocked. A signal sounds and the display indicates that a rinsing is about to begin.

No drinks can be prepared during the rinsing.



Rinsing behavior

Coffee: 0-99 min.

Time until the automatic rinsing after the last preparation of a coffee drink.

- 0: switched off
- Default: 30 min

Milk/powder: 0-99 min.

Time until the automatic rinsing after the last preparation of a milk and/or powder product.

- 0: switched off
- Default: 5 min

Continue on next page

By time: 0-250 min.

Time until the forced rinse for all systems, independent of previously performed rinsing procedures or drink preparations.

- 0: switched off
- Default: 0 min

By permanent milk product: 0-1500 s

Time after the last permanent outlet up to the automatic rinsing.

- 0: switched off
- Default: 20 s

Process behavior

Switch-on, switch-off rinsing:

- Yes
- No

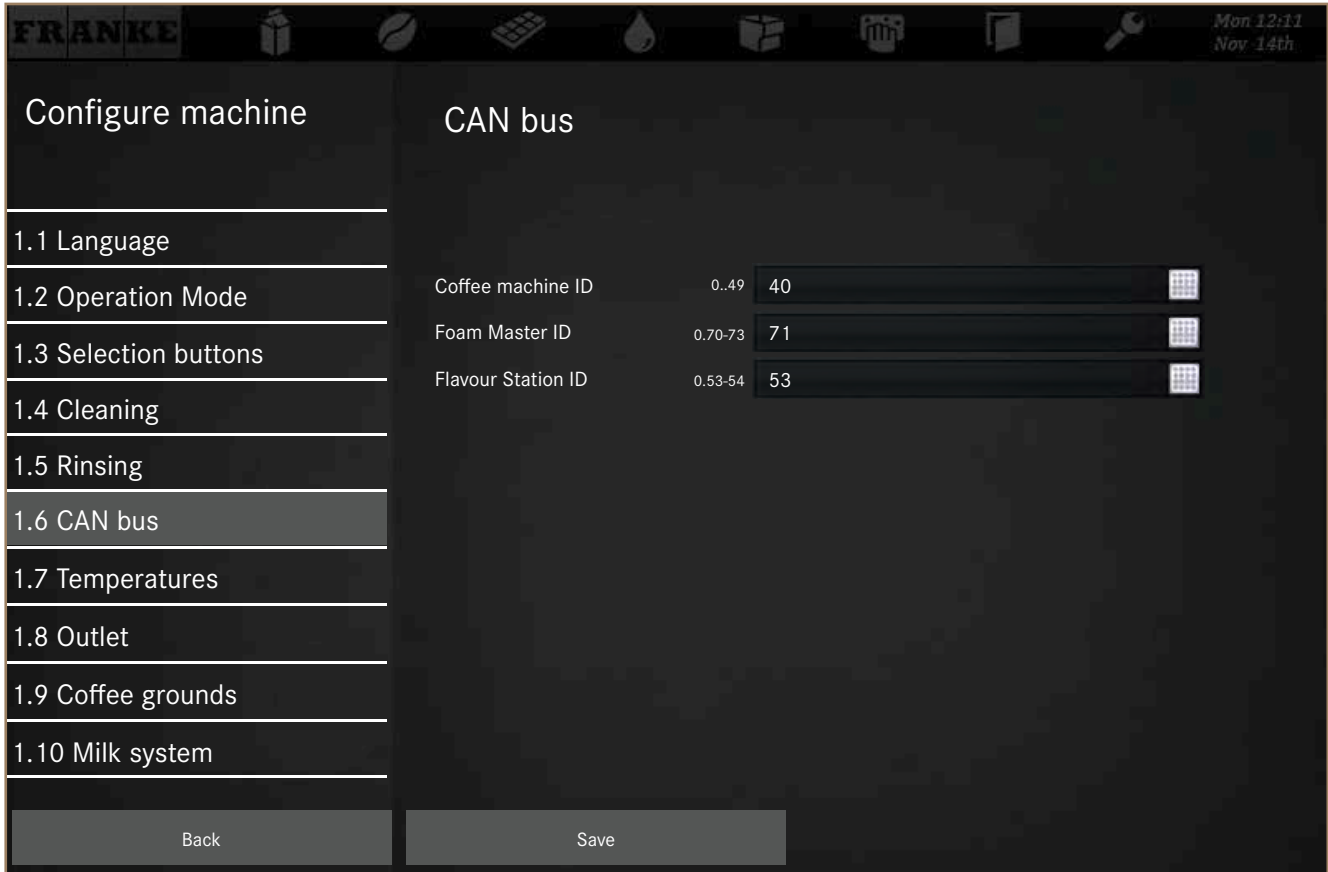
- No: No rinsing when the coffee machine is switched On or Off.
- Yes: The coffee machine rinses when the system is switched On or Off.
- Default: Yes

1.6 CAN bus



Service technicians:

- IDs



CAN bus

Coffee machine ID: 0 - 49

Identification of respective CAN node in the coffee machine.

- 0: Off
- Default: 0

Foam Master ID: 0, 70, 71, 72, 73

▪ Communication between Foam Master and coffee machine.
 ▪ 70 - 73: CAN node identification Foam Master.

- 0: Off
- Default: 0

ID Flavour Station: 0, 53, 54

▪ Communication between Flavour Station and coffee machine.
 ▪ 53 - 54: CAN node identification Flavour Station.

- 0: Off
- Default: 0

1.7 Temperatures

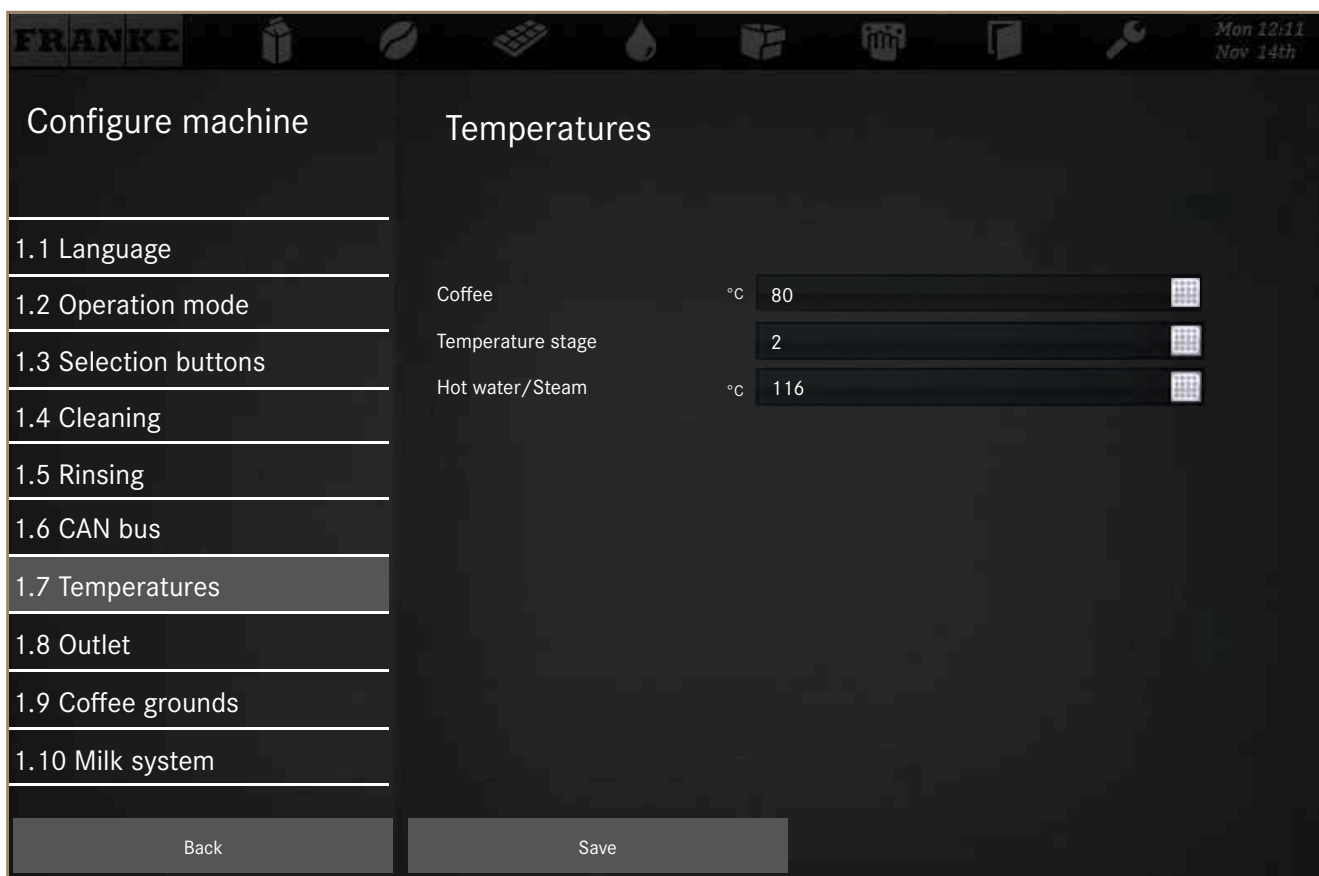


Information from customer:

- Planned capacity utilization of the coffee machine
- Site



In these settings, remember the location, ambient temperature and capacity utilization of the machine.



Temperatures

Coffee: 0-98 °C

- Temperature setting in the coffee boiler
- Default: 85 °C

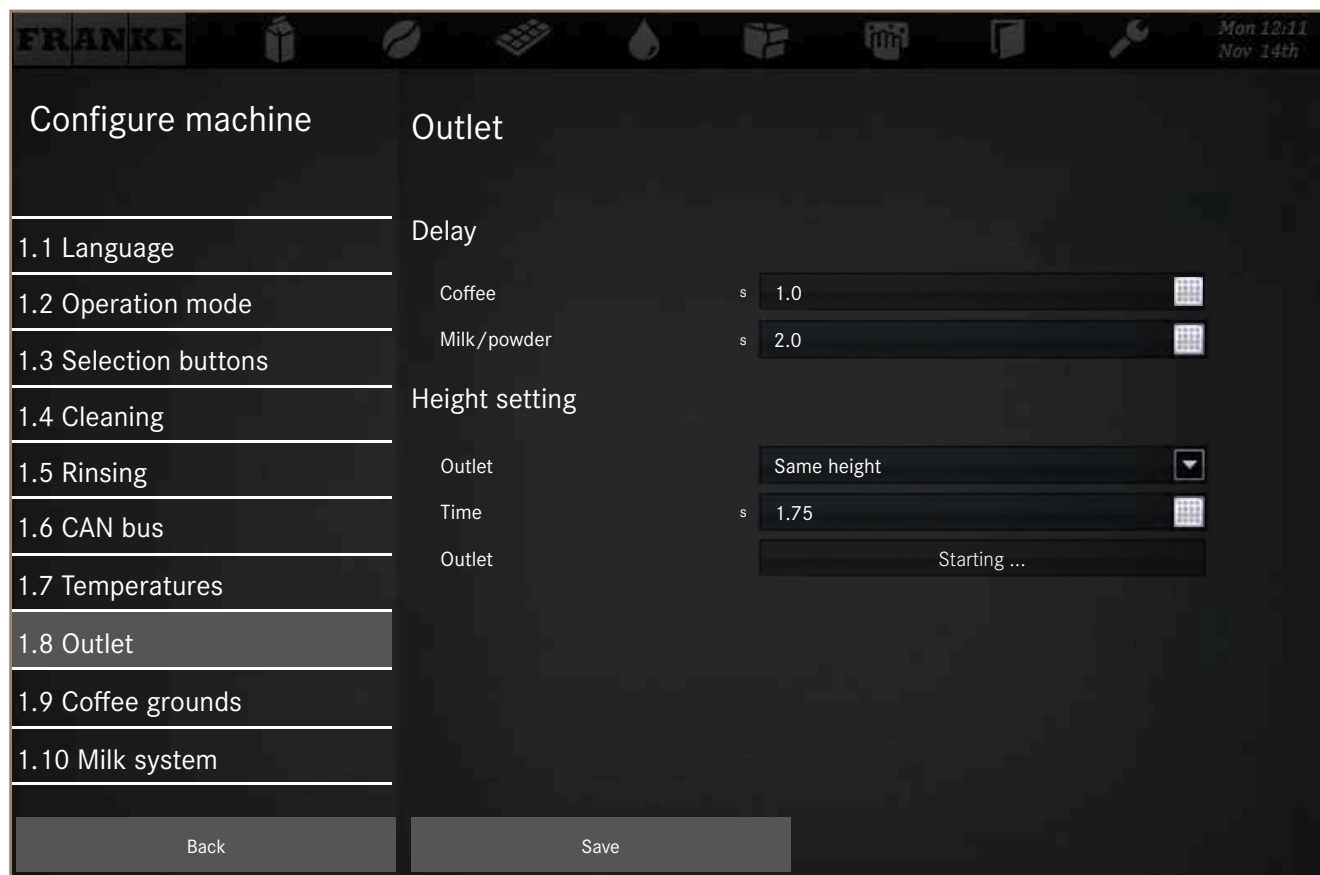
Temperature stage: 0 - 3

- The coffee machine compensates for the cooling down of the system by raising the temperature in order to keep the outlet temperature constant.
- The temperature in the coffee boiler is increased by 0.5°C every 3 minutes until the maximum value of the selected stage or a temperature of 107°C is reached.
- The temperature increase in the coffee boiler starts again after each drink preparation.
- The set coffee temperature, together with the over temperature, should not exceed the boiling point or the maximum value of 107°C.
- 0: no Over temperature
- 1: max. 3 °C
- 2: max. 6 °C
- 3: max. 0 °C
- Default: 1

Hot water/Steam 115 - 120 °C

Default: 115

1.8 Outlet



Delay

Wait time after the preparation of a coffee product or of a milk or powder product before the outlet moves back to its original position.

Coffee: 0.0 - 5.0 s

- Default: 3.0 s
- 0.0 s: The outlet moves immediately back to its original position after the dispensing of a coffee product.

Milk/powder: 0.0 - 5.0 s

- Default: 1.0 s
- 0.0 s: The outlet moves immediately back to its original position after the dispensing of a milk or powder product.

Height setting

Outlet:

- Per product
- Fixed in place
- Same height

- **Per product:** The outlet moves to an individual height for each product. This is defined under *2 Set drinks, 2.5 Outlet*.
- **Fixed:** The outlet is fixed in place at a permanent position.
- **Same height:** The outlet moves to same height for each product.
- **Default:** Per product

Time:

0.00 - 6.00 s

- The outlet height is defined by change in position over time and is limited electronically.
- **0.00:** Outlet in highest position
- **0.01 - 6.00:** The outlet changes height in the defined time.
- **Default:** 0.00 s

Change time:

No

Automatic process.

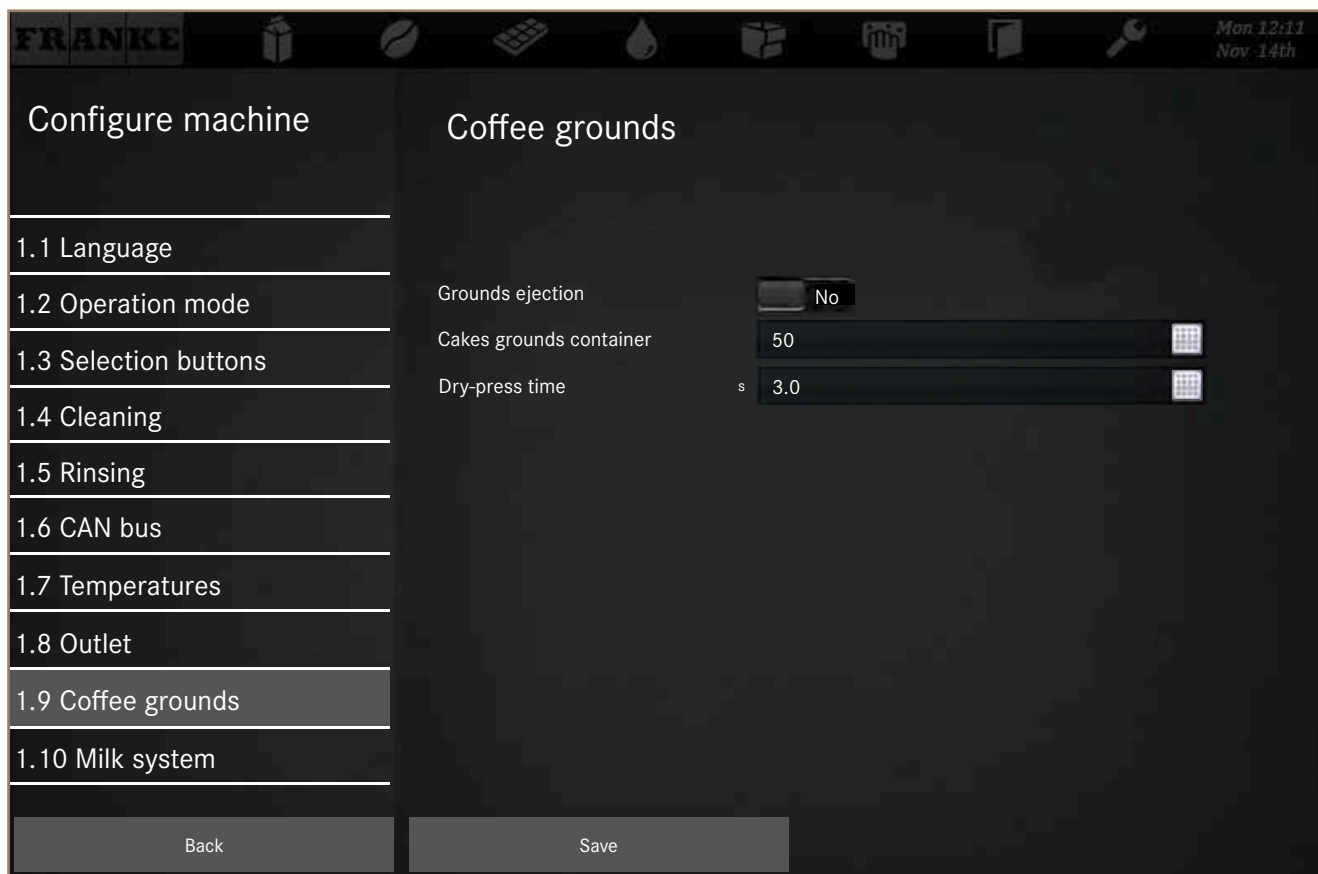
- ▶ Follow the instructions on the monitor.

1.9 Coffee grounds



Job/coffee machine order

- Does the coffee machine have a grounds container?



Coffee grounds

Grounds ejection:

- Yes
- No

- Yes: Machine with grounds ejection
- No: Machine with grounds container
- Default: No

Cakes grounds container:

- Grounds ejection Yes: 100-9900
- Grounds ejection No: 11-99

- Coffee machine with grounds container (Grounds ejection: No)
- Monitoring filling level of grounds container
- 10 units before the set quantity, the message **Empty grounds container** appears
- Once the set number is reached, the message **Grounds container full** appears.
- Default Grounds ejection No: 50
- Default Grounds ejection Yes: 500

Dry-press time 0.0-4.0s

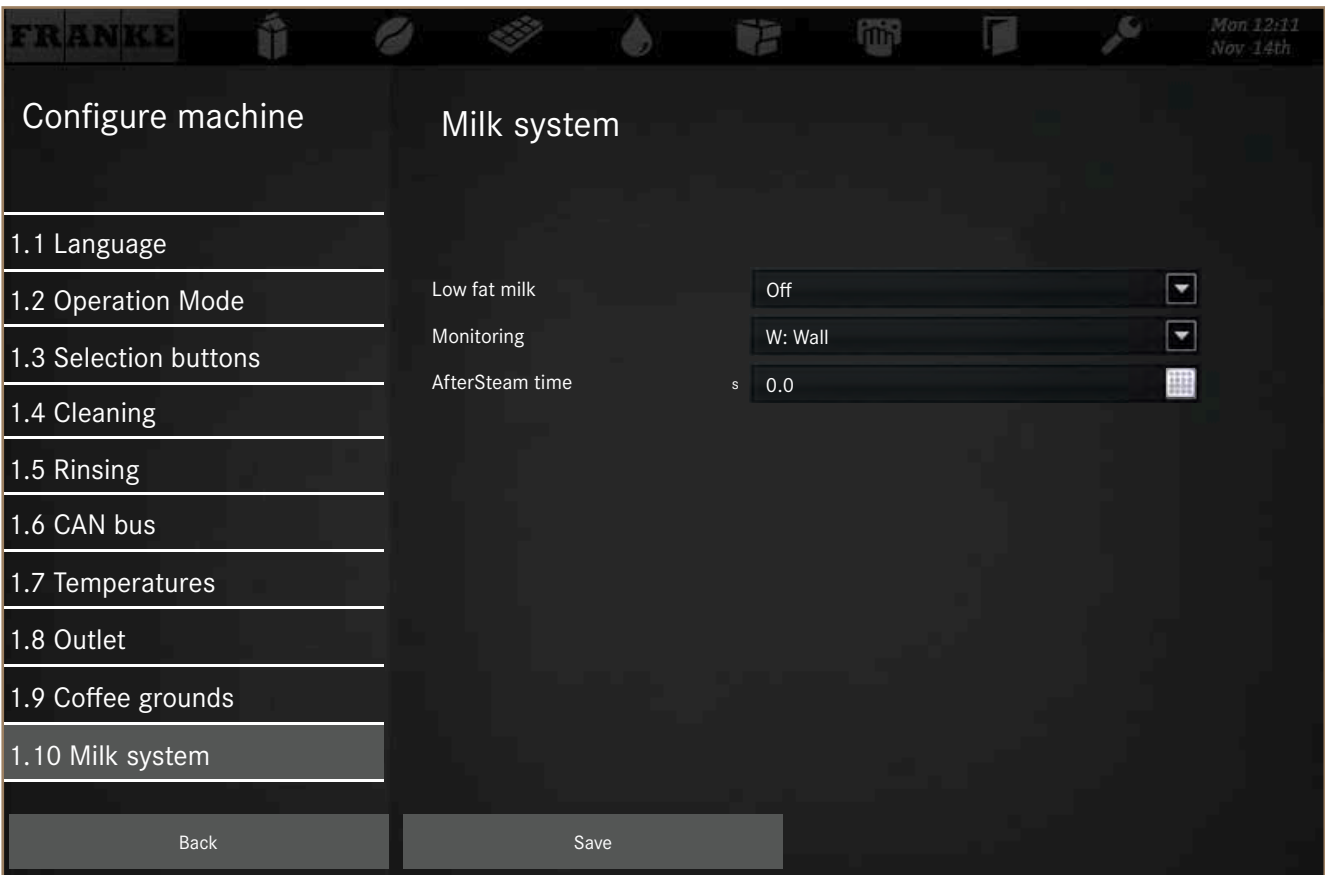
- The piston presses the grounds cake together for the time period set prior to the ejection. The dry-press time influences the moisture content of the grounds cake.
- 0.0: No dry-press time
- Short pressing time: Faster product end, moist cake
- Long pressing time; Later product end, dry grounds cake
- Default: 0.5 s

1.10 Milk system



Job/coffee machine order

- Milk system monitoring



Milk system

Skimmed milk:

- Off
- Type 2

- In order for the selection buttons to be able to be assigned the option "Low fat milk", Type 2 must be set here.
- Default: Off

Monitoring:

- W: Wall
- L: Milk tubes
- W + L (both)
- Without

- **W: Wall:** The filling level of the milk is monitored by means of a capacity sensor on the side wall of the refrigeration unit. The sensor is actuated at a milk level of around 1.4 l.
 - If the milk falls below this level, first the error message **E131 Milk empty** appears and then **E130 Add cold milk**.
- **L: Milk tubes:** The filling level of the milk is monitored by a conductivity sensor in the milk tube.
 - If no milk is flowing through the tube, the error message **E 130 Add cold milk** appears.
 - The preparation of milk products is immediately canceled and the products are blocked.
- **W+L:** The filling level of the milk is monitored through both sensors.
 - If the level is not achieved, then first the error message **E 131 Milk empty** will appear.
 - When there is no longer any milk in the tube, the error message **E 130 Add cold milk** is displayed.
- **None:** No fill level monitoring for milk.
- **Default:** **Wall**



The **W: Wall** monitoring ensures that the products are completely produced. If the milk is not sufficient, drink preparation will be blocked.

AfterSteam time:

0.0 – 25.5 s

- The AfterSteam is used to clean the milk tube after a milk product.
- **Default:** 0.0 s

1.11 Flavour



Information from customer:

- Syrup types



Flavour

Flavour Station:

- Yes
- No

- **Yes:** Coffee machine is connected to a Flavour Station.
- **No:** No Flavour Station available.
- **Default:** No

Flavour 1, 2, 3: Selection of syrup types

- Only the flavor types stored here are available later for the drink settings.
- **Default:** Flavour 1: 253; Flavour 2: 254; Flavour 3: 255

1.12 Accounting



Information from customer

- Accounting procedure

Select accounting type

Select accounting type:

- Off
- CS
- CAN bus
- VIP

- Off: No accounting system.
 - The following configuration tasks are dispensed with.
- CS: Accounting via Coffee Standard Interface.
- CAN bus: Accounting is controlled by CAN bus.
 - Sufficient funds configuration task is dispensed with.
- VIP: Accounting with EVA-DTS via VIP Box.

Behavior

Credit display:

- No
- Yes

- **No:** Credit is not displayed.
- **Yes:** Credit is displayed.

Polling time

0.05–0.50 s

(Accounting CS and VIP):

- Polling time is the time between a correctly answered CS command and the time the next command is sent to the Accounting.
- With Accounting CS and VIP.
- The longer the polling time, the lower the accounting load and the slower the accounting operation.
- **Default:** 0.15 s

Sufficient funds:

- Yes
- No

- **No:** All products will be displayed.
- **Yes:** The product display is adjusted to the means of payment that has been inserted. Products that cannot be dispensed with the money that has been inserted have a line drawn through them.

Accounting switch:

- Yes
- No

- The customer can switch off the accounting system temporarily. This function must be activated here.
- **No:** The customer cannot shut down the accounting.
- **Yes:** The customer can shut down the accounting.

Accounting type:

- Price
- PLU

- **Price:** Price on coffee machine
- **PLU:** Via PLU numbers and price lists

Price download (CS and VIP):

- No
- Yes

- **Yes:** Prices can be entered at the operator panel and loaded onto the accounting system. This function is available only with Accounting CS and Accounting VIP.
- **No:** No price download
- **Default:** No

Price list

- 0
- 0-1
- 0-2
- 0-3

- Price list that is displayed on the operator panel and that is used for calculation.

Price display

Currency <ul style="list-style-type: none"> ▪ CHF ▪ EUR ▪ ... 	A variety of currencies can be selected from.
Decimal: 0-2	<ul style="list-style-type: none"> ▪ Price display with 0, 1 or 2 decimals. ▪ Default: 2
For drink: <ul style="list-style-type: none"> ▪ Yes ▪ No 	<ul style="list-style-type: none"> ▪ Yes: Price is displayed at the time of product selection. ▪ No: Price is not displayed at the time of product selection. ▪ Default: Yes
For drink dispensing: <ul style="list-style-type: none"> ▪ Off ▪ From interface ▪ From coffee machine 	<ul style="list-style-type: none"> ▪ Off: No price display during drink dispensing. ▪ From interface ▪ From coffee machine ▪ Default: From interface

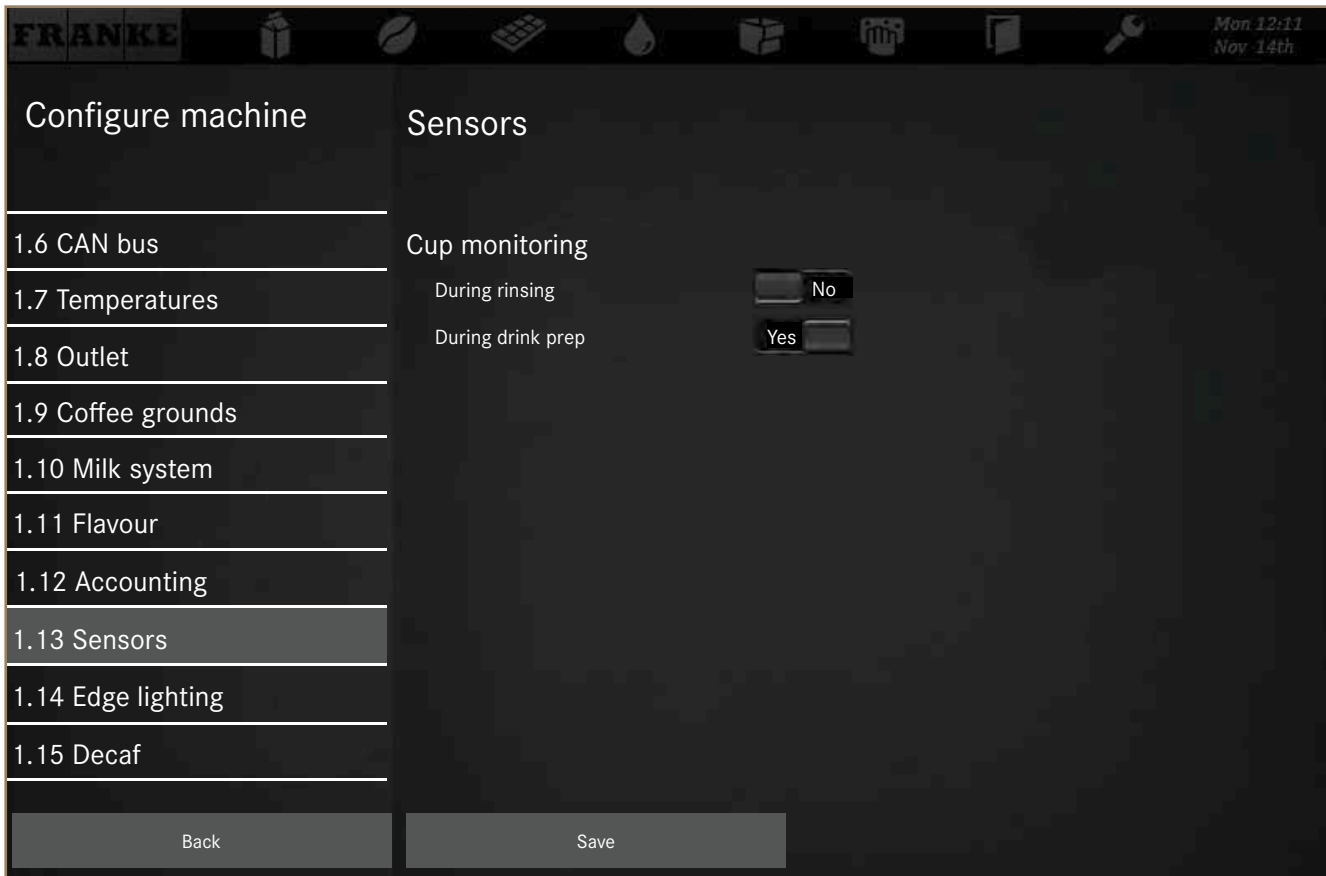
CCI Coffee Credit Interface

Selected text <ul style="list-style-type: none"> ▪ Insert coins ▪ Insert card ▪ Insert key ▪ #insert your own text# 	Selection text for payment request.
Own text: Input text	Is displayed only when #Own text# is displayed.

CSI Coffee Standard Interface

Selected text <ul style="list-style-type: none"> #insert your own text# Insert card Insert key 	Selection text for payment request.
Own text: Input text	Is displayed only when #Own text# is displayed.

1.13 Sensors



Cup monitoring

During rinsing:

- Yes
- No

- **Yes:** The coffee machine does not rinse if there is a cup under the outlet.
- **No:** Cup monitoring is not activated.
- **Default:** No

During drink prep:

- Yes
- No

- **Yes:** Drink preparation not possible until there is a cup under the outlet.
 - a) Cup missing, no Accounting is activated:
Display: **Cup missing**.
Product cancel after 10 s if no cup is placed under the outlet.
The machine switches to the next product or to the product selection.
 - b) Cup missing, Accounting is activated:
Display: **Cup missing**, until a cup is placed underneath.
The procedure can be canceled with the Cancel button.
- **No:** Cup monitoring during product dispensing is not activated.
- **Default:** No

1.14 Edge lighting



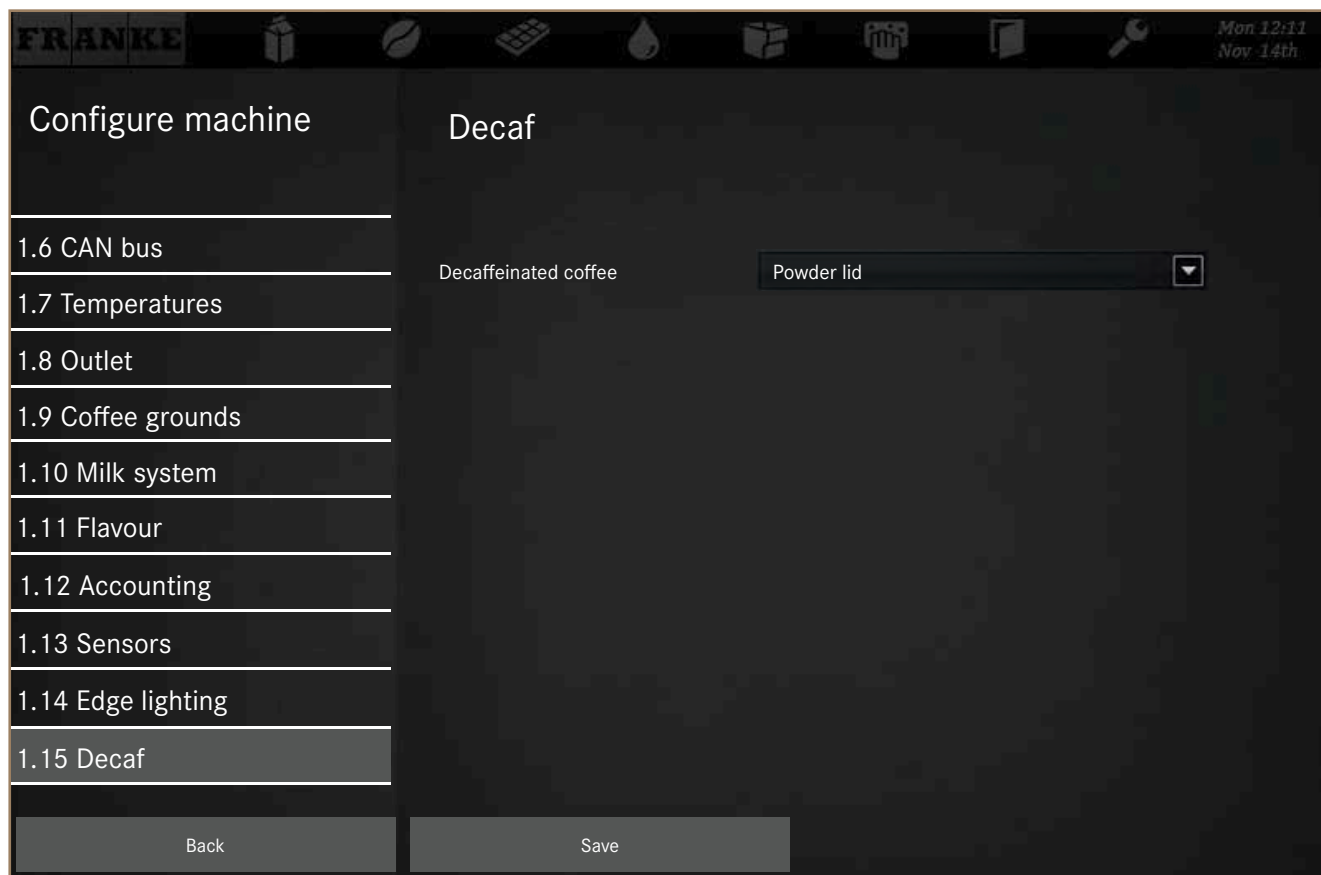
Edge lighting

Select lighting:

- Off
- Red
- Green
- Blue
- Yellow
- Cyan
- Magenta
- White
- Flash
- Color gradient
- User-defined

- **Off:** No edge lighting.
- **Red, green, etc.:** Edges are lit in the selected color.
- **Flashing:** Flashing light.
- **Color gradient:** Colors change continuously.
- **User-defined:** Colors can be defined individually by entering RGB values.
- **Default value:** Color gradient

1.15 Decaf



Decaf

Decaffeinated coffee:

- Grinder 1
- Grinder 2
- Grinder 3
- Powder lid

Decaffeinated coffee can be filled into a coffee bean hopper in the form of beans or into a powder container in the form of powder or through the powder lid.

2. Set drinks

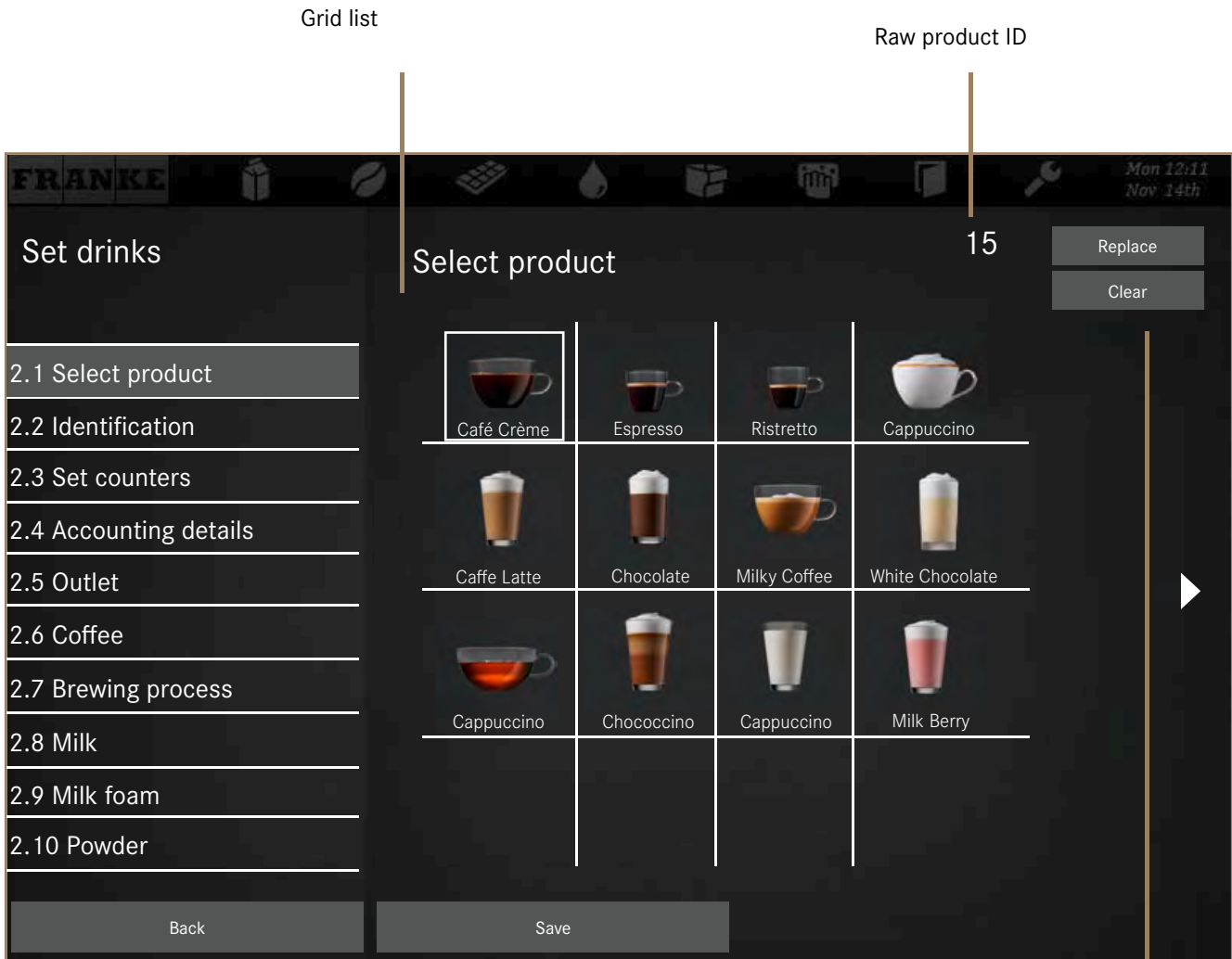
2 Set Drinks



Menu item	Description	Chapter
2.1 Select product	Select drink or create new one	53
2.2 Identification	Name drink and activate advertising image	56
2.3 Set counters	Set counters	57
2.4 Accounting details	Set accounting details for the drink	58
2.5 Outlet	Configuring outlet height for the selected drink	59
2.6 Coffee	Configuring parameters for coffee	60
2.7 Brewing process	Configuring brewing process	62
2.8 Milk	Set milk	64
2.9 Milk foam	Setting milk foam	65
2.10 Powder	Set powder	67
2.11 Flavour	Set flavour	69
2.12 Water Quantity Tea	Configuring water quantity for tea	70
2.13 Steam/Autosteam	Configuring Autosteam options	71
2.14 External resource	Integrate external resources	72
2.15 Product sequence	Define drink production sequence	73
2.16 Cup size	Scale product	75



- Drinks can be defined under the **Set drinks** menu on the basis of preset raw products.
- The configuration tasks that are displayed under the individual menu items are dependent on the selection of the raw product under **2.1 Select product**.



- **Replace** – replace available product.
- **Create new** (appears when an empty box has been selected) – defines a new drink on the basis of a raw product.
- **Clear** – delete available product.

2.1 Select drink



Service technicians:

- Basic coffee knowledge
- Basic knowledge for drink setting

Customer:

- Desired product selection



The entire product selection set for the coffee machine is depicted under 2.1 [Select product](#). You have the possibility of replacing and clearing existing products or of setting them once again. In addition, you can also create new products on the basis of raw products.

Replace available drink

The screenshot shows the FRANKE coffee machine's programming interface. On the left is a vertical menu titled 'Set drinks' with options: 2.1 Select product, 2.2 Identification, 2.3 Set Counters, 2.4 Accounting details, 2.5 Outlet, 2.6 Coffee, 2.7 Brewing process, 2.8 Milk, 2.9 Milk foam, and 2.10 Powder. The main area is titled 'Select product' and shows a grid of 12 drink options. The first row contains Café Crème (selected), Espresso, Ristretto, and Cappuccino. The second row contains Caffè Latte, Chocolate, Milky Coffee, and White Chocolate. The third row contains Cappuccino, Chococcino, Cappuccino, and Milk Berry. At the top right of the main area, the number '15' is displayed, along with 'Replace' and 'Clear' buttons. A 'Back' button is at the bottom left and a 'Save' button is at the bottom center of the main area.

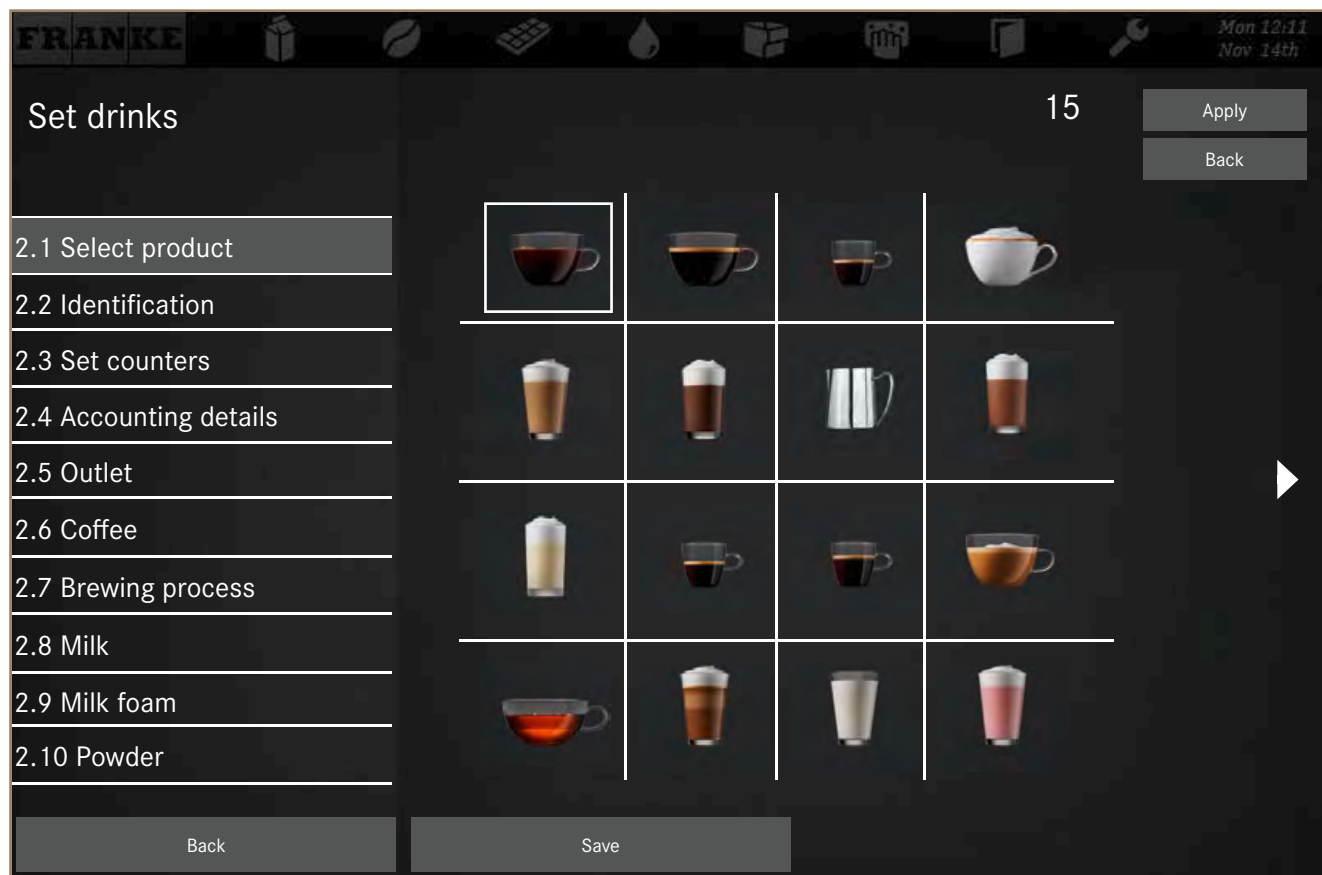
- ▶ Select a product.
- ▶ Press the **Replace** button.
- ▶ Select the product that you wish to use to replace the original one.
- ▶ Configure the product parameters.

Create new drink



- ▶ Tip in an empty cell.
- ▶ Press the **Create new** button.

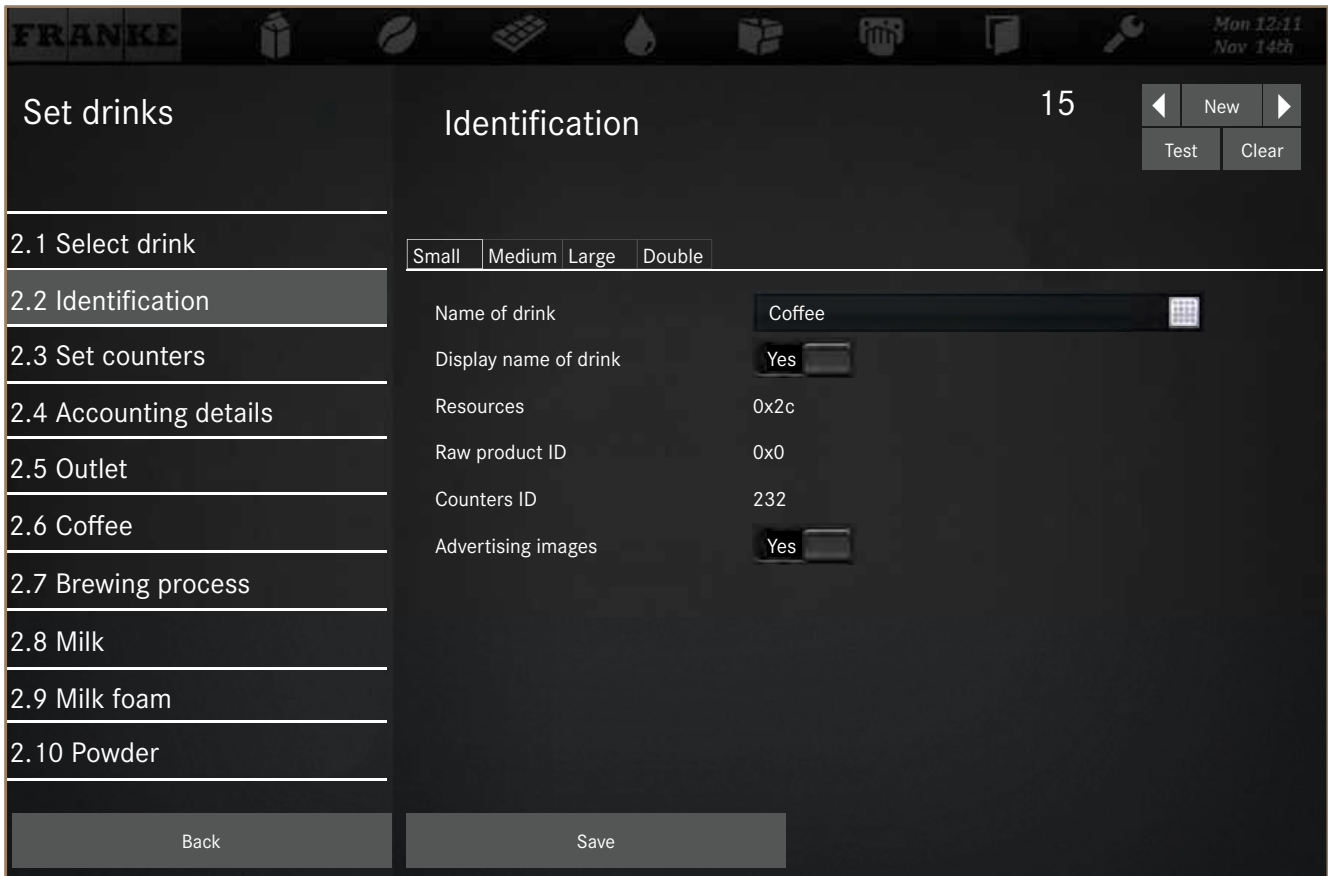
Product catalogue



- ▶ Select a product.
- ▶ Press the **Apply** button.
- ▶ Configure the product parameters.

 The availability of different drinks depends on the Franke Product Catalogue and on the coffee machine equipment.

2.2 Identification



Identification

Display of Resources, Raw product ID and Counter ID.

Name of drink:

Assignment of a drink name.

Display drink name: Yes No

- Yes: The drink name is displayed in the product selection.
- No: Drink name is not displayed.
- Default: No

Advertising images: Yes No

Default: No

2.3 Set counters

The screenshot shows the 'Set counters' configuration interface. At the top, the 'FRANKE' logo is on the left, and the date 'Mon 12:11 Nov 14th' is on the right. The main title 'Set counters' is centered, with a counter value of '15' and 'New' and 'Test' buttons. Below the title, there are tabs for 'Small', 'Medium', 'Large', and 'Double'. The configuration options are: 'Cycles' set to 'Coffee', 'Milk portions' set to '1', 'Number of cups' set to '1', and 'Key (secured) product' set to 'Yes'. A 'Back' button is at the bottom left, and a 'Save' button is at the bottom right.

Set counters

Cycles: 1 - 10

- 1 - 10 cycles per button press.
- When 2 cycles are entered, the drink production runs with programmed brewing quantity and grinding quantity two times through, one after the other.
- For the preparation of larger quantities per price unit.

Milk portions: 1 - 10

- 1 - 10 milk portions per button press.
- Programmed milk quantity is multiplied times factor x.
- For the preparation of larger quantities per price unit.

Number of cups: 1 - 20

- 1 - 20 cups per button press

Permanent function: Yes
 No

- **No:** Drink preparation with one button press.
- **Yes:** Product runs until the draw is canceled.

Key (secured) product: Yes
 No

- **Yes:** The drink is a key (secured) product dispensed with PIN code.
- **No:** The drink is not a key (secured) product.

2.4 Accounting details

- OK?** Information from customer:
- Product prices

Accounting details

PLU: 0-999

- Each product has a PLU of its own in the set-up.
- The same PLU can be assigned for products with the same price.
- 0: The product is free. These products are also available with a communications failure.
- Recommendation: Utilization of low PLU numbers.

Price list 0/1/2/3: 0.00 - 650.00

Four different prices can be defined per product.

Number (Token 1/2):

- 0
- 1

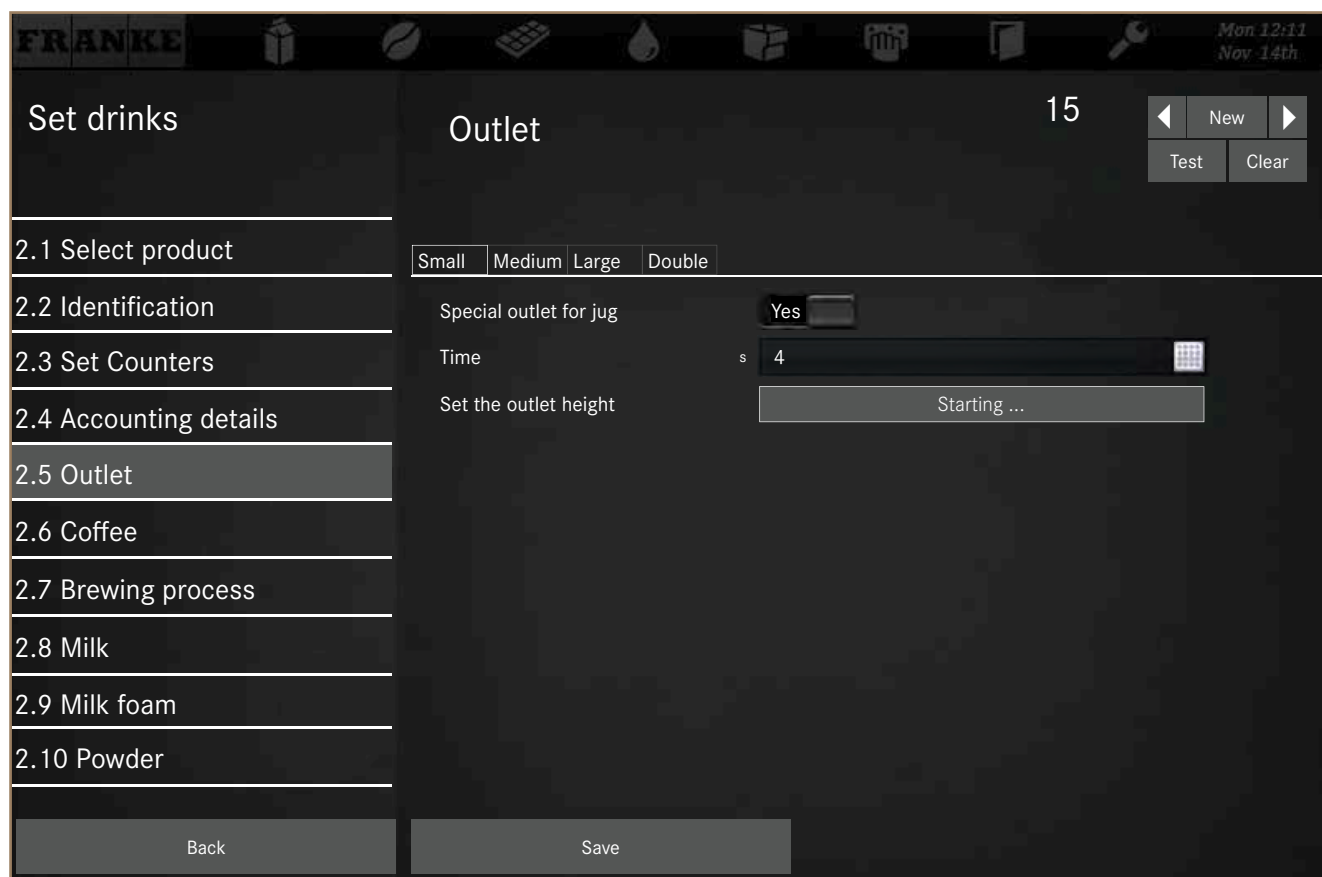
Default: 0

Free:

- Yes
- No

- Yes: The product is available for free.
- No: The product is not available for free.

2.5 Outlet



Outlet

Special outlet for jug:

- Yes
- No

- For hot water and coffee products.
- **Yes:** The special outlet for jug for the respective product is activated.
- **No:** No special outlet for jug.

Time: 0-6 s

Manual configuration of the outlet.

Set the outlet height:

Automatic process for setting the outlet height for the respective product.

2.6 Coffee



Brewing quantity

Water quantity 0 - 800 ml

0: No water quantity. Product sequence is set automatically to 0. No coffee available.

Bypass On: 0 - 100%

The input value defines from which point in time during the brewing process (as a percentage of the brewing quantity) the bypass is opened and hot water is added to the coffee.

Bypass Off: 0 - 100%

The input value defines from which point in time during the brewing process (as a percentage of the brewing quantity) the bypass is closed and the adding of hot water is stopped.

The input value **Bypass Off** must be greater than that for **Bypass On**.

Example:

- Water quantity 100 ml.
- Bypass On 25%
- Bypass Off 75%

The bypass starts after 25 ml. Hot water is added to the coffee during the following 50 ml (ratio: approx. 2 parts of coffee to approx. 1 part hot water). The bypass is then closed. This is followed by 25 ml coffee.

Brewing w/ pump: ▪ On
 ▪ Off

- **An:** Brewing with preset pump pressure. If a fresh-water tank is connected to the machine, this menu item must be selected.
- **Off:** Brewing with building water pressure. If a fresh-water tank is connected to the machine, this menu item may not be selected.

Grind quantity

Grinder 1/2/3: 0-22 g

- If the grind quantity for all selectable grinders is set to 0.0, then the powder feed is activated.
- **0.0:** No grind quantity defined
- **22.0:** Maximum grind quantity, sum of the grind quantities of the grinders used.

Example:

- Grind quantity Grinder 1: 5.0 g.
New maximum grind quantity for grinder 2/3: 18.0 g.
- Grind quantity grinder 2: 13.0 g.
New maximum grind quantity for grinder 3: 4.0 g.
- Grind quantity Grinder 1: 4.0 g.
Maximum grind quantity of 22.0 g has been reached.

Monitoring: ▪ No
 ▪ Yes

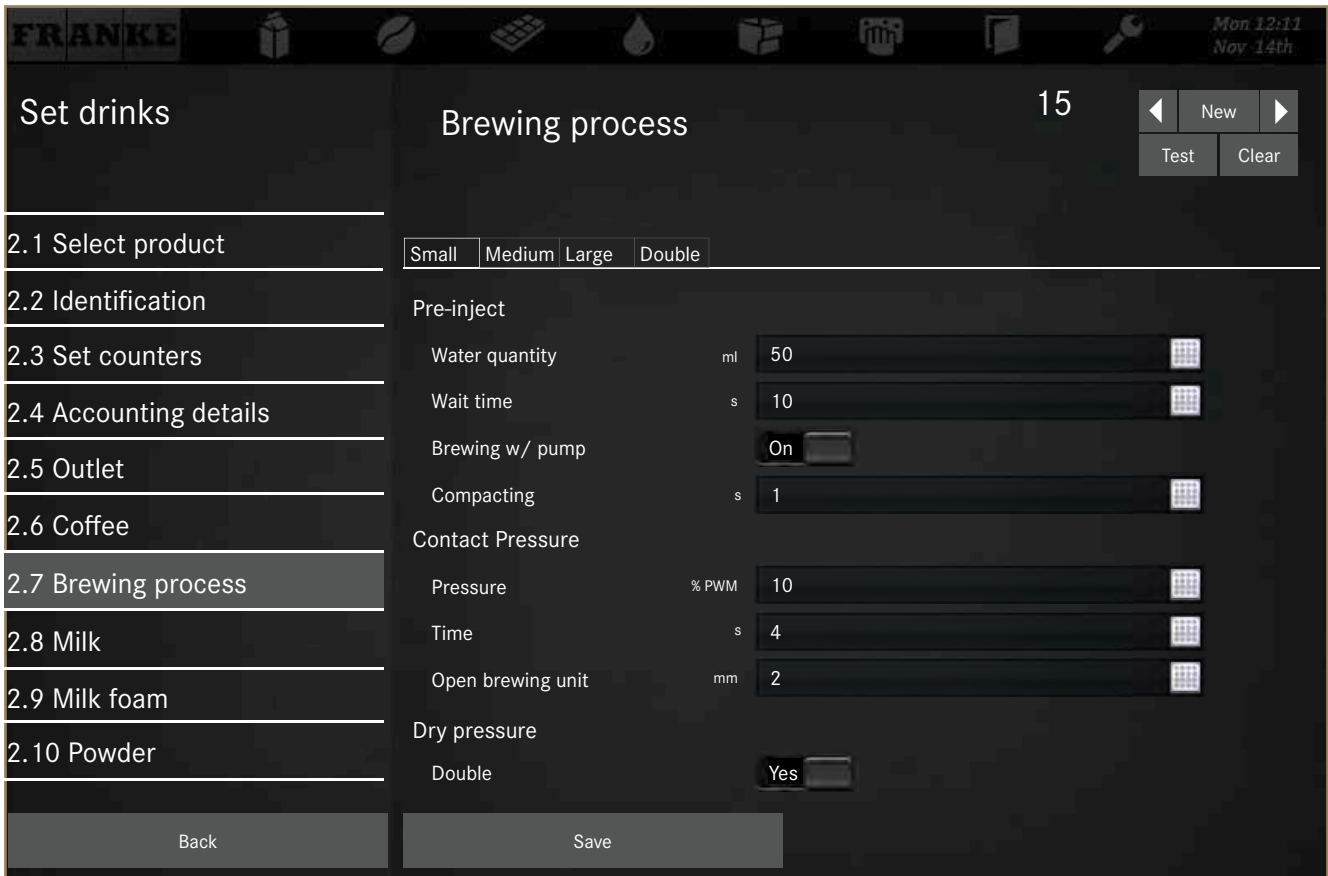
- **No:** No monitoring of the bean fill level.
- ▶ **Set** if the grind quantity is less than 6 g.
- **Yes:** Bean fill level is monitored in brewing chamber.
 - Brewing chamber is assumed to be empty if the brewing unit reaches the increment 1540 when closing. If this occurs, the brewing unit recalibrates and the product button must be pressed once more into grinding position.
 - **E120 no ground coffee** appears in the display.
 - Under normal circumstances this situation will not arise because the coffee bean hoppers are also monitored. As soon as a bean hopper is recognized as being empty, the affected products can no longer be selected.

Product sequence

Coffee position: 0, 1, 2, 3

Position Coffee in the product sequence while dispensing the drink *see Chapter VI, 2 Set drinks, 2.15 Product sequence, p. 73.*

2.7 Brewing process



Pre-inject

Pre-injection increases the brewing time and affects product quality.

Water quantity: 0 - 100 ml

- 0: No pre-inject.
- The water quantity for the pre-inject is added to the coffee fill level (see *Chapter IV Service Menu. Programming, 0. Commissioning, 0.4 Set coffee, p. 16*).

Wait time: 0.0 - 25.5 s

- 0.0: No wait time
- Wait time between dosing of the water quantity for pre-injection and dosing of water quantity for the actual brewing procedure. The length of pre-injection is determined by the programmed water quantity for pre-injection, pump pressure and the programmed wait time.

Brewing w/ pump: ▪ On
 ▪ Off

- **Off:** Pre-injection with building water pressure. If a fresh-water tank is connected to the machine, this menu item may not be selected.
- **On:** Pre-injection with preset pump pressure (default value for all products). If a fresh-water tank is connected to the machine, this menu item must be selected.

Compacting: 0.0 - 1.0 s

- **0.0:** No compacting.
- Compacting of the grounds cake after pre-injection.
- Compacting compresses the grounds cake. This results in greater resistance for the brewing water and a longer brewing time.

Contact Pressure

Pressure: 0 - 55% PWM

- **PWM:** Pulse-width modulation in percent.
- **0:** The brewing chamber closes up to a fixed, defined increment position. Ground coffee is circulated in the brewing unit, which reduces the formation of foam.
- **1 - 55:** Pressure applied to ground coffee in the brewing chamber.
- *Graphical representation of pulse-width modulation, see p. 101*

Pressing time: 0.0 - 5.5 s

- **0.0:** No pressing time.
- The piston presses the ground coffee for the time period set in order to compress it prior to brewing.

Open brewing unit: 0.0 - 5.0 mm

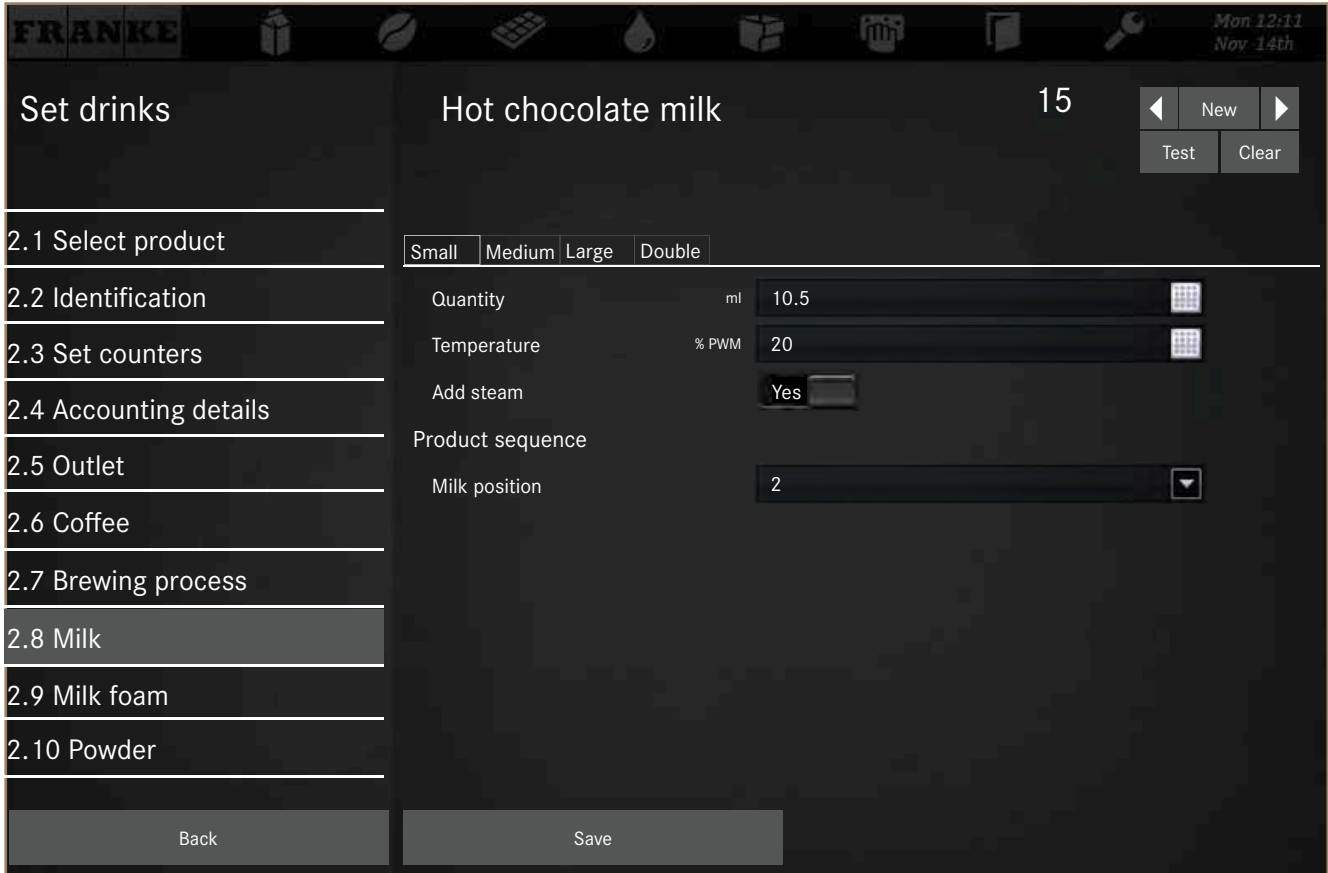
- **0.0:** Do not open brewing unit for brewing process.
- Opening the brewing unit for brewing process. Observe piston position when making settings.

Dry pressure

Double: ▪ No
 ▪ Yes

- **No:** No double dry pressure for pressing out the grounds cake.
- **Yes:** Double dry pressure for pressing out the grounds cake; the grounds cake is pressed out after brewing, resulting in a reduction of residual moisture.
- ▶ Programming only if grounds cake is too moist. Wear on the O-ring on the outlet piston is greater.

2.8 Milk



Milk

Quantity: 0.0-99.9 s

- 0.0: No milk. The product sequence for milk is set automatically to 0. This means that no milk is available.
- The milk quantity is defined by the pump run time.
- If the milk quantity is increased again from 0.0 s, then the product sequence for milk must be reactivated. (see p. 64).
- If the milk quantity is changed within the available range, then the value for the product sequence remains unchanged (see p. 64).

Temperature: 0; 40-90% PWM

- Input of the temperature in % PWM.
- Default value: 0: cold milk; 40: hot milk

Add steam: Yes
 No

Steam must be added in order to achieve a higher milk temperature (greater than approx. 60°C).

Product sequence

Milk position: 0, 1, 2, 3

- Position of the milk in the drink production see *Chapter VI, 2 Set Drinks, 2.15 Product sequence, p. 73.*

2.9 Milk foam

The screenshot shows the Franke service menu interface. At the top, the 'FRANKE' logo is on the left, and the date and time 'Mon 12:11 Nov 14th' are on the right. The main title is 'Hot chocolate milk foam' with a price of '15'. Below the title are navigation buttons: 'New', 'Test', and 'Clear'. A left sidebar contains a list of menu items from '2.1 Select product' to '2.10 Powder', with '2.9 Milk foam' selected. The main content area shows settings for the selected item: 'Quantity' (10.5 s), 'Temperature profile' (Hot), 'Quality distribution' (100% solid), 'Product sequence', and 'Foam position' (2). At the bottom are 'Back' and 'Save' buttons.

Milk foam

Quantity: 0.0-99.9 s

- 0.0: No milk foam. The product sequence for milk foam is automatically set to 0. This means that no milk foam is available.
- The milk foam quantity is defined by the pump run time.
- If the milk foam quantity is increased again from 0.0 s, then the product sequence for milk foam must be reactivated.
- If the milk foam quantity is changed within the available range, then the value for the product sequence remains unchanged.

Temperature profile:

- Hot
- Cold

Reference is made to the temperatures that were set at the time of commissioning, see *Chapter VI, 0 Commissioning, 0.5 Milk, p. 17.*

Quality distribution:

- 100% solid
- 100% liquid
- 50% solid 50% liquid
- 50% liquid 50% solid
- 70% solid 30% liquid
- 30% solid 70% liquid

- The foam qualities are produced in the way defined under the menu item *0.5 Set milk*.
- The foam qualities are produced in the sequence that they are named.

Product sequence

Position of milk foam:

0, 1, 2, 3

Position of the milk foam during drink production see *Chapter VI, 2 Set drink, 2.15 Product sequence, p. 73*.

2.10 Powder



The Powder dosing units must be calibrated, see *Chapter IV Service Menu, 0 Commissioning, 0.6 Set powder, p. 19*.

FRANKE

Mon 12:11
Nov 14th

15

Set drinks

2.1 Select product

2.2 Identification

2.3 Set Counters

2.4 Accounting details

2.5 Outlet

2.6 Coffee

2.7 Brewing process

2.8 Milk

2.9 Milk foam

2.10 Powder

Small Medium Large Double

Powder dosing unit 1

Water quantity ml 200

Powder quantity g 20.5

Product sequence

Powder position 3

Back Save

New

Test Clear

Powder dosing unit 1/2

Water quantity: 0-800 ml

- Water quantity
- 0: No water portion. Product sequence is automatically set to 0. This means that no powder is available from Dosing unit 1 or 2.
- 30: Minimum water quantity. No drinks containing powder can be produced with smaller water quantities.
- If the water quantity is increased from 0 back to a value of 30 or greater, the product sequence for powder dosing unit 1 or 2 (see p. 64) must be reactivated.
- If the water quantity is changed within the available range, then the value for the product sequence remains unchanged (see p. 64).

Powder quantity: 0.0-457.1 g

- 0: No powder split
- The powder quantity is restricted to the ratio of 1.75:1 (1.75 parts water [ml] : 1 part powder [g])

Examples:

- With 100 ml water, the adjustable powder quantity is limited to 57.1 g.
- With 175 ml water, the adjustable powder quantity is limited to 100.0 g.
- With 800 ml water, the adjustable powder quantity is limited to 457.1 g.

Product sequence

Powder position: 0, 1, 2, 3

Position of the powder during drink production *see Chapter VI, 2 Set Drinks, 2.15 Product sequence, p. 73.*

2.11 Flavour

The screenshot shows the 'Flavour' configuration screen on a FRANKE coffee machine. The interface includes a top bar with the FRANKE logo, icons for various machine functions, and the date/time 'Mon 12:11 Nov 14th'. The main area is split into a left sidebar with menu items (2.7 to 2.16) and a main configuration area. The main area shows options for Type A (Vanilla), Type B (Per product), and quantities for each (20ml, 25ml, 30ml) with eligibility checkboxes (Yes/No). Buttons for 'Back' and 'Save' are at the bottom.

Flavour

Type A/Type B:

- Per product
- Vanilla
- Grappa
- Strawberry

Quantity of syrup types: 0-100 ml

Eligibility of syrup types:

- Yes
- No

- Configuring Types A and B
- The syrup types are displayed that were defined when the machine was configured, *see Chapter VI, 1 Configure machine, 1.11 Flavour, p. 44*
- Configure the flavor quantity that is to be added to the selected product.
- 0: No flavour. Product sequence is automatically set to 0.
- If the flavour quantity is increased again from 0 ml, the product sequence for the respective syrup type must be reactivated (*see p. 64*).
- If the flavor quantity is changed within the available range, then the value for the product sequence remains unchanged.
- Yes: Syrup can be selected and deselected with the option *Adapt drinks*.
- No: The operator of the coffee machine cannot influence syrup.

2.12 Water Quantity Tea

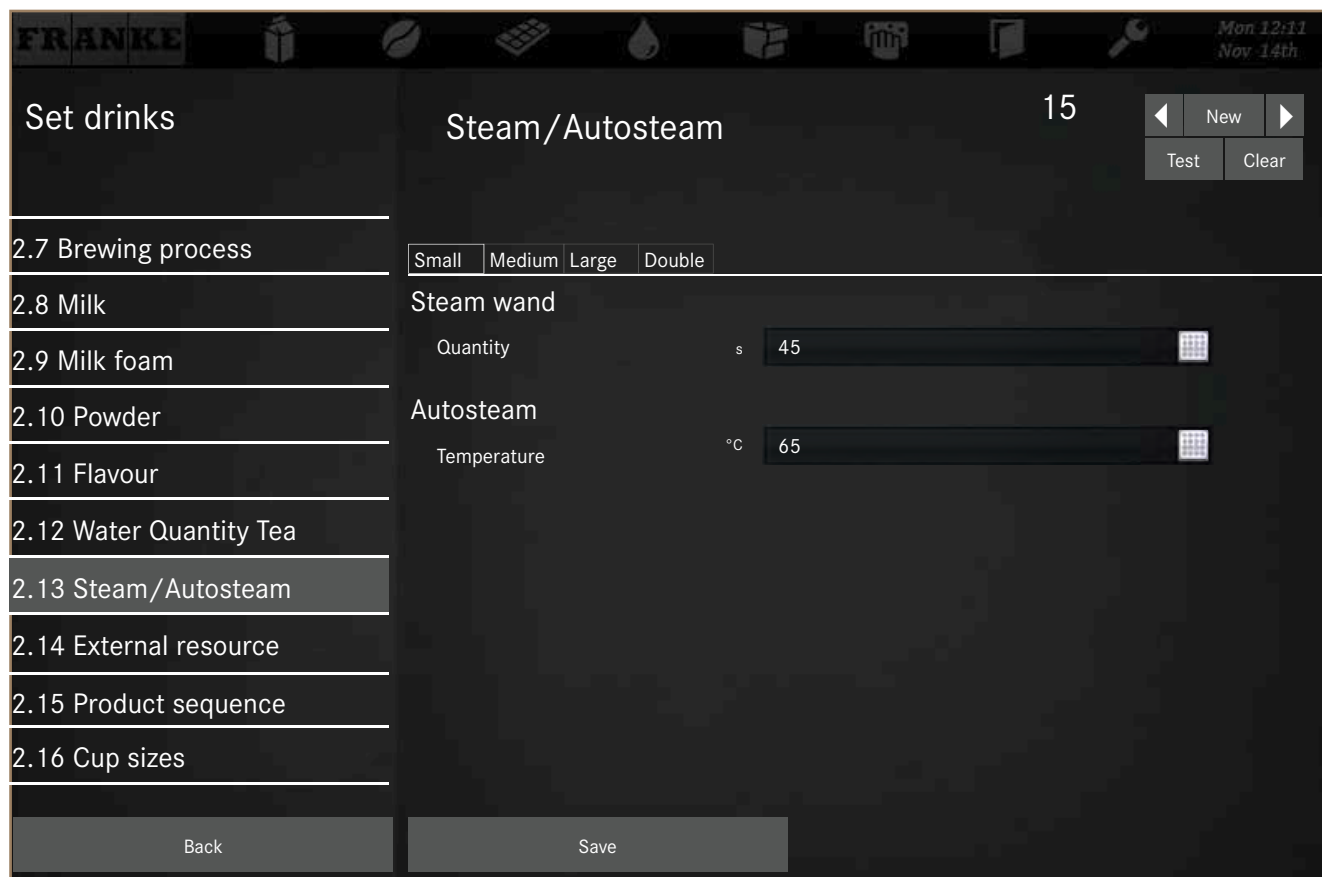


Water Quantity Tea

Quantity: 0.0-60.0 s

- 0.0: no hot water.
- The quantity of hot water or cold water is defined by the water dispensing time.

2.13 Steam/Autosteam



Steam wand

Quantity s: 0.0 - 250.0 s

- 0.0: no steam.
- The steam quantity is defined by the AfterSteam time.

Autosteam


Temperature: 0 - 100 °C

- Set steam temperature.
- 0.0: no steam.



The menu item is visible only if the Autosteam option is activated; see *Chapter VI Service Menu, 0 Commissioning, 0.2 Configuration, Additional settings, p. 14.*

2.14 External resource

 Normally, these parameters do not need to be set.



External resource

Output:

- Off
- X6.6/X6.5
- X6.8/6.7

- Off: No external resource.
- Four possible outputs on the SPLP power PCB.
 - X6.6/X6.5
 - X6.8/6.7
- Default: Off

Time:

0.0 - 25.0 s

- 0.0: No time indicated for external resource.
- The respective output is activated during the time period that has been set.

2.15 Product sequence

The screenshot shows the 'Product sequence' configuration screen for a coffee machine. The interface includes a top navigation bar with the 'FRANKE' logo and various icons. The main area is divided into a left sidebar with a list of components and a central configuration area. The 'Product sequence' section is currently selected, showing a list of components and their corresponding sequence values. The values are: Coffee (1), Milk (2), Milk foam (3), Powder 1 (0), Powder 2 (0), Flavour 1 (2), Flavour 2 (0), Flavour 3 (0), External resource (0), and Wait time (0). The interface also includes buttons for 'Back', 'Save', 'New', 'Test', and 'Clear'.

Component	Sequence Value
Coffee	1
Milk	2
Milk foam	3
Powder 1	0
Powder 2	0
Flavour 1	2
Flavour 2	0
Flavour 3	0
External resource	0
Wait time	0

Product sequence

Coffee, milk foam, etc.: 0 - 8

- Defines the sequence of the component products of a drink.
- Simultaneous production processes are possible to some extent. The machine will produce everything in Sequence 1, then everything in Sequence 2, etc. until all products have been prepared.

Behavior

Wait time: 0.0 - 25.0 s

- 0.0: No wait time between component products.
- If a wait time is defined in the product sequence, then a duration must be assigned to it.
- The input value determines the wait time between component products.
- The wait time cannot be made parallel with other processes.
- 2 flavours cannot run in parallel.

M/S Start immediately: ■ No
 ■ Yes

- **No:** Milk and/or foam does not start until after the grinding procedure.
- **Yes:** Milk and/or foam starts directly after button is pressed independently of the grinding procedure.

Delay brewing unit: ■ No
 ■ Yes

- **No:** Brewing unit closes immediately after the grinding.
- **Yes:** Brewing unit does not close until the brewing process is imminent according to the product sequence. This prevents any dripping coffee from affecting the appearance of the milk foam.

Start powder dosing unit 0.0 - 25.0 s
 1/2:

- **0.0:** No delayed start of powder dosing units 1/2.
- The programmed time refers to the time interval between the starting time of a previous component product (e.g. milk) and the starting time of the powder. This allows the mixing of the two products to be controlled.

Example:

- Milk: Position 1, output duration 15 s.
- Powder 1: Position 1, output duration 10 s.
 - If Start powder 1 is programmed for 0.0 s, the dispensing of milk and powder starts at the same time. The powder finishes dosing 5 s before the milk.
 - If Start powder 1 is programmed for 5.0 s, then the milk starts dispensing first and 5.0 s later the powder. Both component products finish dispensing at the same time.
 - If Start powder 1 is programmed for 10.0 s, then the milk starts dispensing first and 10.0 s later the powder. The powder finishes dosing 5 s after the milk.

2.16 Cup sizes



Cup sizes

Medium/Large/X-Large
(2x):

- Clear
- Scale

- **Scale** is used to activate the cup sizes Medium, Large and 2x.
- The existing recipe "Small" is multiplied times the stored factor.
- The option can be called up with selection buttons.



The quality of the scaled versions must be checked.

3. Date and Time



The **Date and Time** menu is used to set date, time of day, the change between Daylight Savings Time and Standard Time and Timers if necessary.

3 Date and Time



Menu item	Description	Page
3.1 On/Off machine	Configuring automatic on and off switching of coffee machine	77
3.2 Date and Time	Set date, time and change between Daylight Savings Time and Standard Time	78
3.3 Timer 1 – 4	Setting timers 1 – 4	80

3.1 On/Off machine



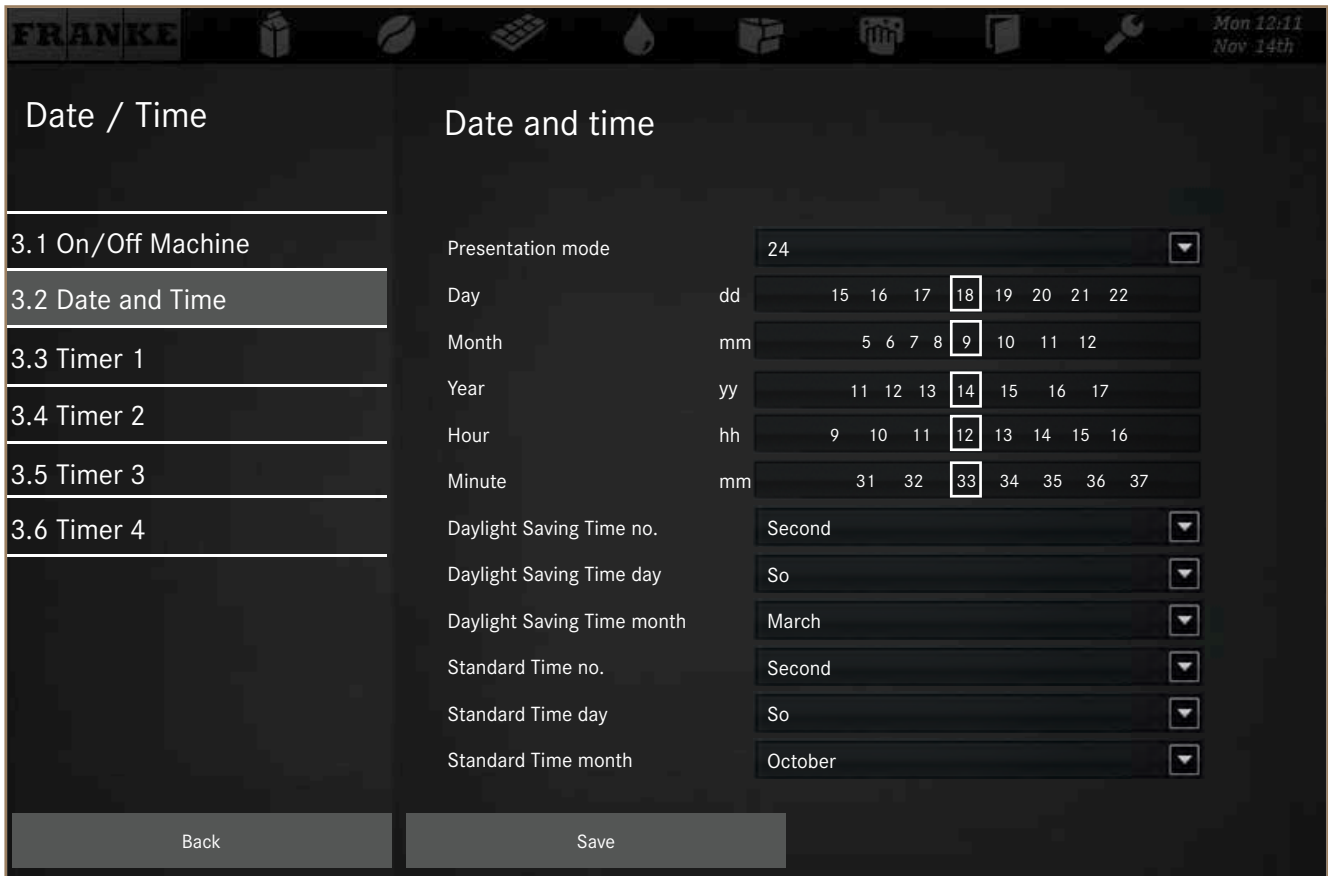
On/Off machine

PIN code:

- Yes
- No

- **Yes:** The coffee machine can be switched on or off only with the PIN code (see Chap. 6. *Access rights*, p. 117).
- **No:** The coffee machine can be switched on or off without the PIN code.

3.2 Date and time



Date and time

Presentation mode: (hours) ▪ 12
 ▪ 24

- 12: 12-hour display
- 24: 24-hour display

Day: 0 - 31 (days)

- Set the day for the date display.
- dd: Day

Month: 0 - 12 (month)

- Set the month for the date display.
- mm: Month

Year: 0 - 63 (year)

- Set the year for the date display.
- yy: Year

Hour: 0 - 23

- Set the hour for the time display.
- hh: Hour

Minute: 0 - 59

- Set minute for the time display.
- mm: Minute

Switching from Standard Time to Daylight Savings Time or from Daylight Savings Time to Standard Time

Example (see illustration , p. 78):

- The change from Standard Time to Daylight Savings Time takes place on the 2nd Sunday in March.
- The change from Daylight Savings Time to Standard Time takes place on the 2nd Sunday in October.

Summer no.:

- First
- Second
- Third
- Last

Define day for the change from Standard Time to Daylight Savings Time.

Summer day: Mo, Tu, ..., Sa, So

Define day of week for the change from Standard Time to Daylight Savings Time.

Summer month:

- March
- April
- May
- September
- October
- November

Define month for the change from Standard Time to Daylight Savings Time.

Winter no.:

- First
- Second
- Third
- Last

Define day for the change from Daylight Savings Time to Standard Time.

Winter day: Mo, Tu, ..., Sa, So

Define day of week for the change from Daylight Savings Time to Standard Time.

Winter month:

- March
- April
- May
- September
- October
- November

Define month for the change from Daylight Savings Time to Standard Time.

Time difference:

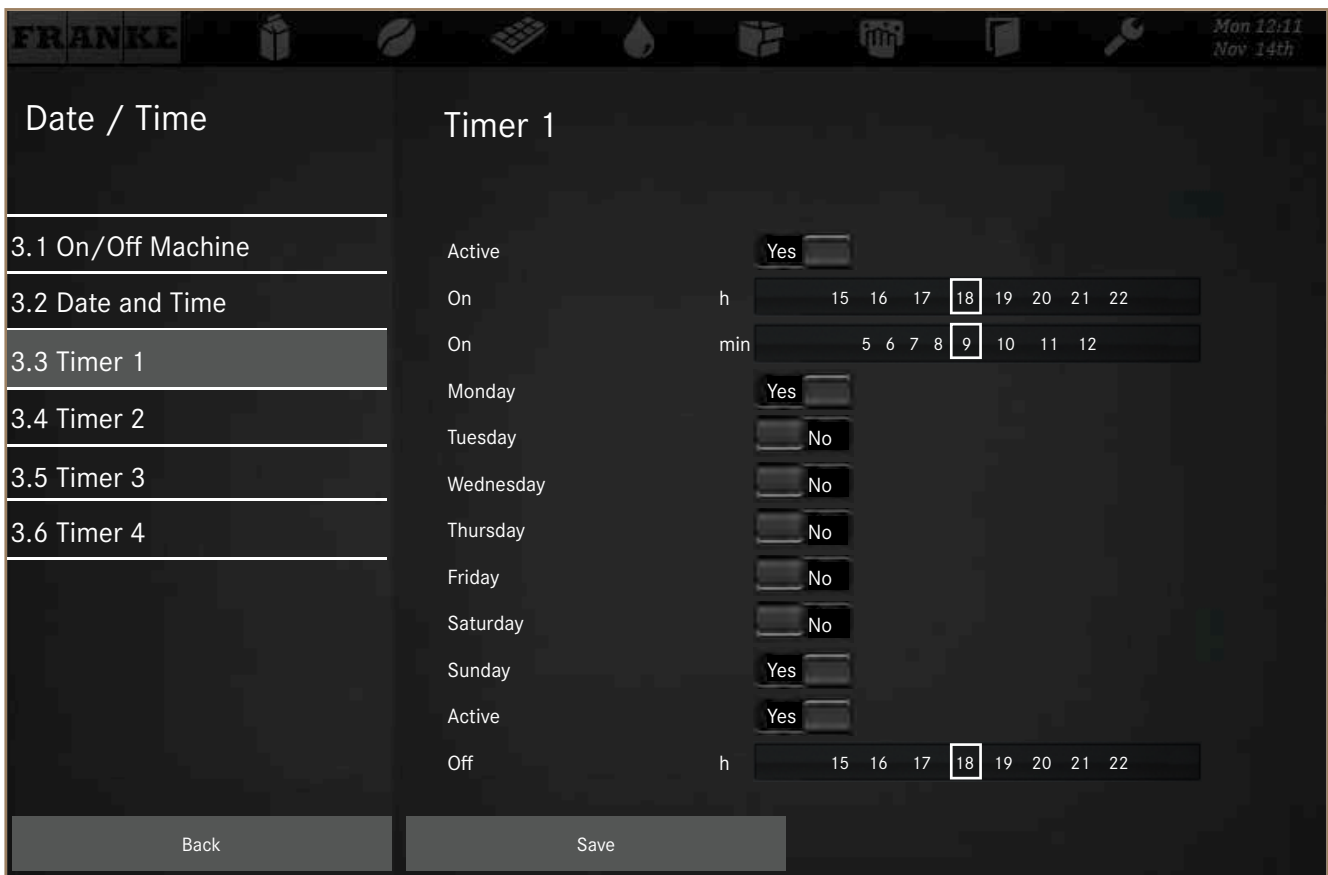
- 0
- 30
- 60
- 90
- 120

- Define the time difference between Daylight Savings Time and Standard Time.

3.3 Timers 1 – 4



- The timers can be used to define the time of day and day of the week that the coffee machine switches on and off automatically.
- If the On and Off times are to vary on different days, additional timers must be configured.



Timers 1 - 4

Switch on automatically

Active: Yes
 No

- **Yes:** *Switch on automatically* is activated.
- **No:** *Switch on automatically* is not activated.

On h: 0 - 23

Switch-on time (hour)

On min: 0 - 59

Switch-on time (minute)

Monday - Sunday: Yes
 No

Days of week on which the machine is to switch on automatically.

Shut down automatically

Active: Yes
 No

- **Yes:** *Automatic shutdown* is activated.
- **No:** *Automatic shutdown* is not activated.

Off h: 0 - 23

Switch-off time (hour)

Off min: 0 - 59

Switch-off time (minute)

Monday - Sunday: Yes
 No

Days of week on which the machine is to switch off automatically.

4. Counters



- Each prepared drink is counted and can be viewed and cleared under this menu item.
- The counters that can be cleared display the date of the last time they were cleared.
- In addition, data is recorded on commissioning, maintenance, component replacement and software updates.

4 Counters



Menu item	Description	Page
4.1 Machine total	Counter for products with coffee and milk (excluding purely milk and powder products and products with syrup)	83
4.2 Cycles	Cycles counter	84
4.3 Water filter	Counter for the service life of the water filter	85
4.4 Grinders/dosing units	Counters for grinders and powder dosing units	86
4.5 Cleanings	Counter for cleanings performed	88
4.6 Coffee products	Counter for all products with a coffee split	89
4.7 Milk products	Counter for all products with a milk split	90
4.8 Water products	Counter for all cold and hot water products	91
4.9 Powder products	Counter for all products with a powder split, independent of the powder type	92
4.10 Flavour products	Counter for all products with a flavour split, regardless of the number of flavour types.	93
4.12 All products	Counters for for every product set	94
4.13 Maintenance	Counter for maintenance	95
4.13 Events	Counter for milestone events (commissioning, replacement of components, updates)	96

4.1 Machine total



- Count is made per end product.
- Canceled drinks are counted as completed products and included in the count.
- Count excluding water, steam, pure milk and flavour products.
- Additionally, this counter is backed up on one-wire memory.



Machine total

Current:

Number

Shows the current counter values of all products in total. In contrast to the maintenance counter that counts cycles, milk, etc. individually, here the end products are counted: one Cappuccino corresponds to the value 1.

4.2 Cycles



Cycles

Current: Number

Indicates how many cycles have been performed since the last clearing.

Most recently cleared: Date, Time

Indicates the last time the cycles counter was cleared.

Counters: Clear

The current counter value is cleared.

4.3 Water filter



Filter water quantity

Water quantity: Number of liters

- Indicates the water quantity used.

Remaining qty: Number of liters

- Water quantity remaining before the water filter is to be replaced (difference between filter capacity and water quantity used).
- The measurement takes place at the end of a water dosing. Flowmeter pulses are counted up (2000 pulses per 1000 ml).
- Water quantities for rinsing, neutralization quantities, test product quantities and individual steps in the brewing process are also counted.

Filter capacity: Number of liters

Indicates according to which flow amount the water filter needs to be replaced. For setting, see *Chapter IV. The Service Menu, 0 Commissioning, 0.2 Configuration, Water filter p. 14.*

Date of last filter replacement: Date and time

Indicates the last time the filter was replaced.

Date of next filter replacement: Date and time

Indicates when the next filter replacement is due according to the configuration of the machine. For setting, see *Chapter IV. The Service Menu, 0. Commissioning, 0.2 Configuration, Water filter p. 14.*

Filter replacement: Confirm

Confirmation that the water filter was replaced.

4.4 Grinders/dosing units

Section	Item	Status	Time	Action
Grinders/dosing unit	Powder dosing unit 1		00:07:48	
	Most recently cleared	Not cleared		
	Counter			Clear
	Powder dosing unit 2		00:00:00	
	Most recently cleared	Not cleared		
	Counter			Clear
	Grinder 1		00:00:00	
	Most recently cleared	Not cleared		
	Counter			Clear
	Grinder 2		00:00:00	
Most recently cleared	Not cleared			
Counter			Clear	

Powder dosing unit 1/Powder dosing unit 2

Powder dosing unit 1/2: dd:hh:mm

Indicates the current total running time of Powder dosing unit 1 (2) since the last clearing in days, hours and minutes.

Most recently cleared: Date and time
 Not cleared

Indicates when the Powder dosing unit 1 (2) counter was last cleared.

Counters: Clear

Reset Powder dosing unit 1 (2) counters.

Grinder 1 / Grinder 2 / Grinder 3

Grinder 1 2 / 3: dd:hh:mm

Indicates the current total running time of Grinder 1 (2, 3) since the last clearing in days, hours and minutes.

Most recently cleared: Date and time
 Not cleared

Indicates when the Grinder 1 (2, 3) counter was last cleared.

Counters: Clear

Reset Grinder 1 (2, 3) counter.

4.5 Cleanings



Cleaning

Current:

Number

Total number of cleanings performed. Canceled cleaning procedures are not counted.

4.6 Coffee products



All Coffee products

Current: Number

- Count of all products with a coffee split.
- Every coffee portion is counted.
- Canceled drinks are counted as completed products and included in the count.

Last clearing:

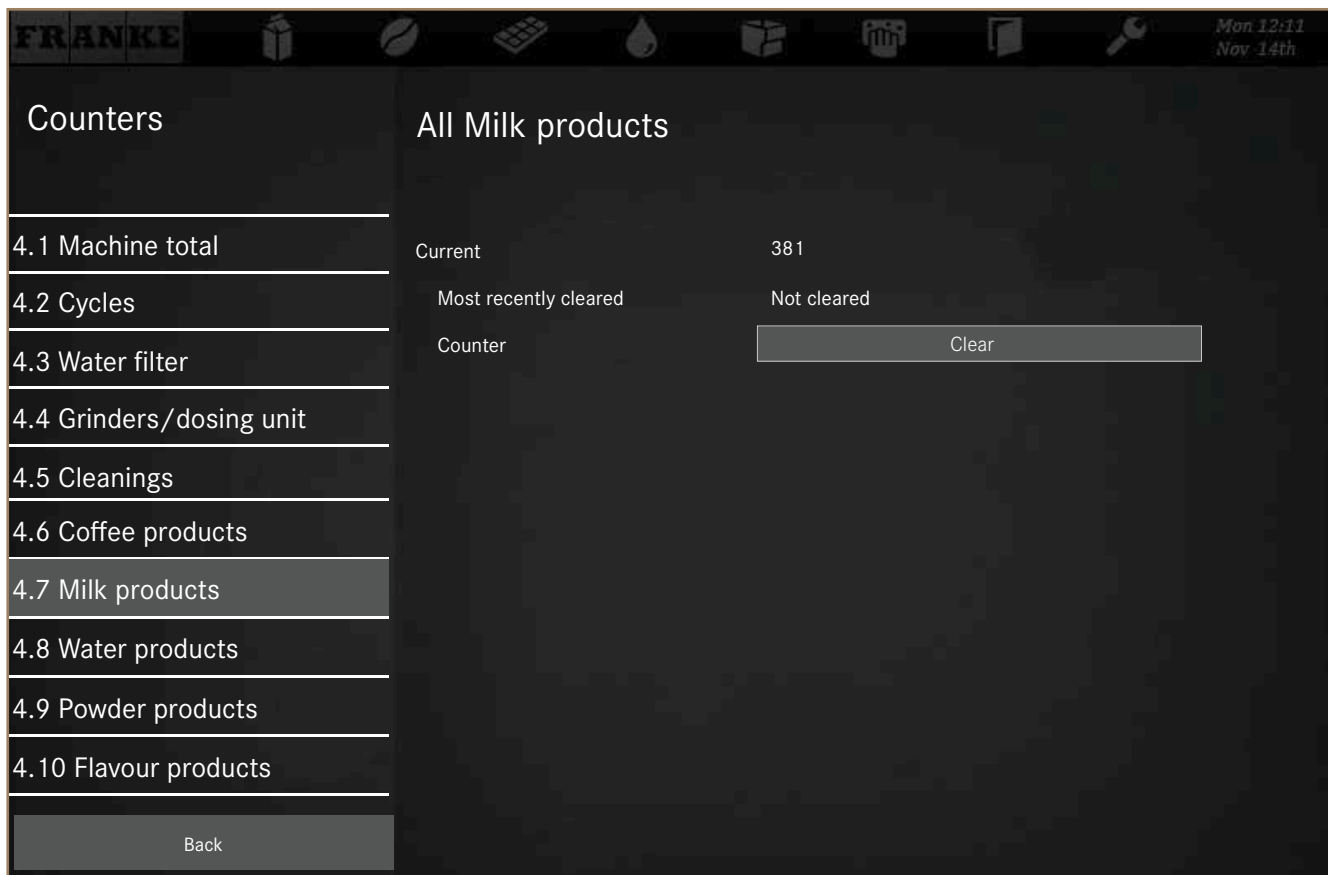
- Date and time
- Not cleared

Indicates the last time the coffee products counter was cleared.

Counters: Clear

Clear all coffee products counter.

4.7 Milk products



All Milk products

Current: Counter value

- Count of all products with a milk split.
- Every milk portion is counted.
- Canceled drinks are counted as completed products and included in the count.

Last clearing:

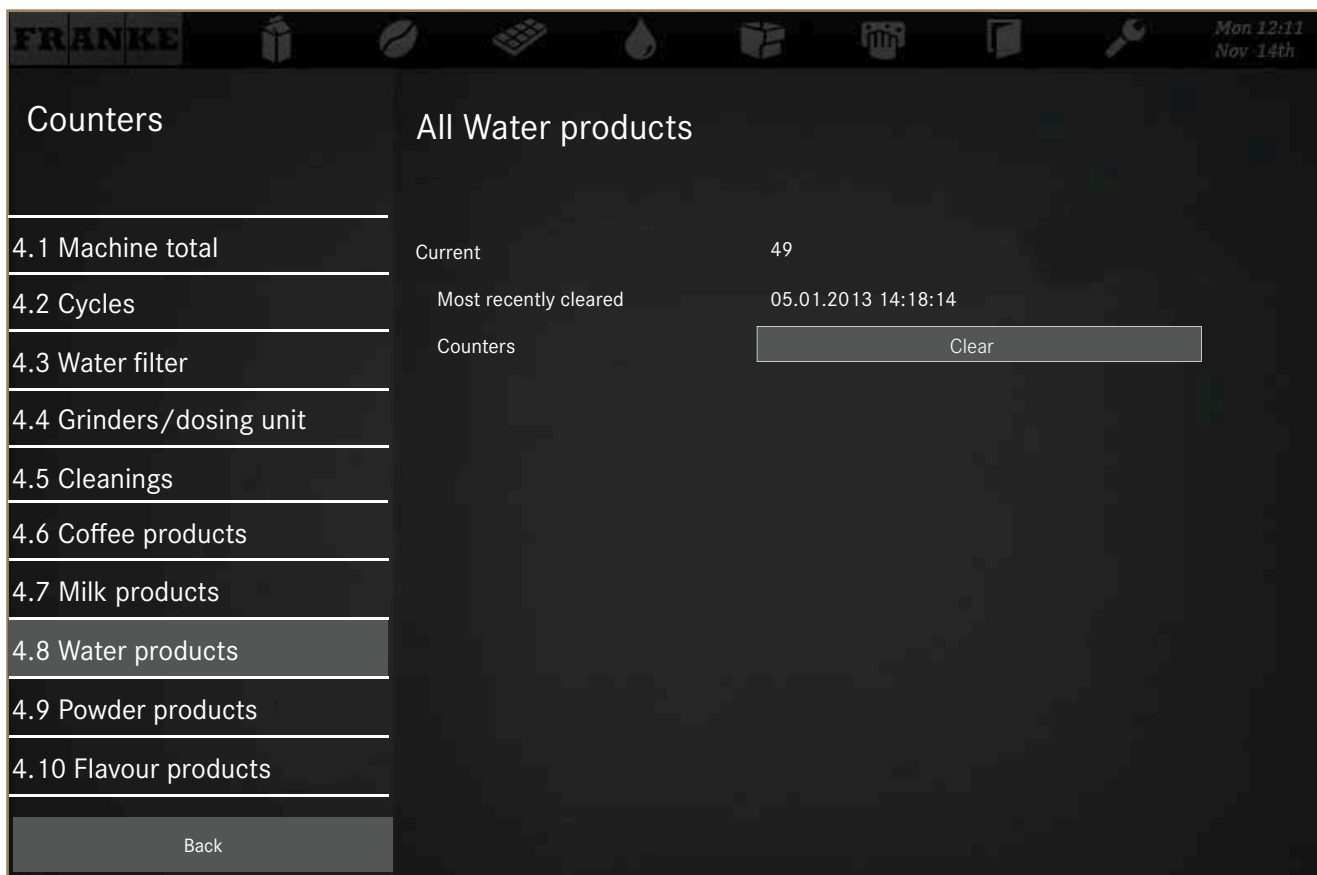
- Date and time
- Not cleared

Indicates the last time the milk products counter was cleared.

Counters: Clear

Clear milk product counter.

4.8 Water products



All Water products

Current: Counter value

- Count of all water products.
- Every water portion is counted.
- Canceled drinks are counted as completed products and included in the count.
- Count does not include products dispensed from the coffee outlet.

Last clearing:

- Date and time
- Not cleared

Indicates the last time the water products counter was cleared.

Counters: Clear

Clear the water products counters.

4.9 Powder products



All Powder products

Current: Counter value

- Counting all products with a powder split.
- Every powder portion is counted.
- Canceled drinks are counted as completed products and included in the count.

Last clearing:

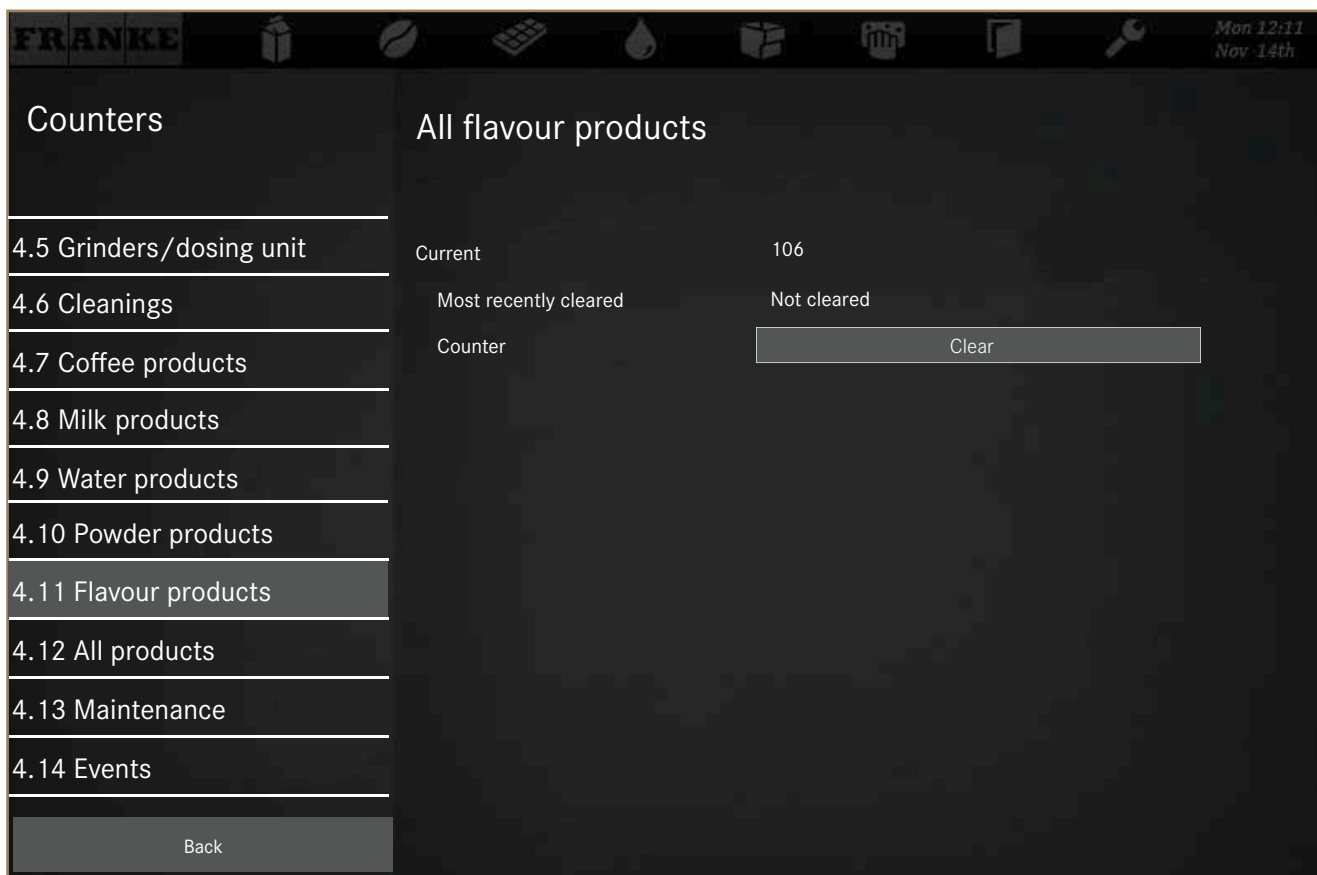
- Date and time
- Not cleared

Indicates the last time the powder products counter was cleared.

Counters: Clear

Clear powder products counters.

4.10 Flavour products



All flavour products

Current: Counter value

- Count of all products with a flavour split, regardless of the number of flavour types.
- Every flavour portion is counted.
- Canceled drinks are counted as completed products and included in the count.

Last clearing: Date and time
Not cleared

Indicates the last time the flavor products counter was cleared.

Counters: Clear

Clear flavor products counter.

4.11 All products

Counters	All products	Value
4.4 Grinders/Dosing units	Espresso Doppio S	0
4.5 Number of cleanings	Tea S	0
4.6 Products with coffee	Hot Chocolate S	0
4.7 Products with milk	Chococcino S	0
4.8 Water products	Latte Macchiato S	0
4.9 Products with powder	Latte Macchiato Caramel S	0
4.10 Products with flavor	Latte Macchiato Caramel M	0
4.11 All products	Latte Macchiato Caramel L	0
4.12 Maintenance	Latte Macchiato Caramel 2x	0
4.13 Events	Latte Macchiato Vanilla S	0
	Coffee XL S	0
	Espresso S	0

All products

Espresso doppio S: Counter value
(Example):

- Counting all products set on the coffee machine.
- Every draw of the respective product is counted.
- Canceled drinks are counted as completed products and included in the count.
- If a product is cleared from the product offering, then the counter is also cleared.

4.12 Maintenance

Maintenance

Maintenance cnt current value: Counter value

- The maintenance counter counts the individual products as follows:
 - Cold and hot water products/powder products: 1/6. An intermediate counter is used for counting. When it reaches the value 1, the maintenance counter is advanced by 1.
 - Coffee products: One cycle: 1
 - Milk products: 1
 - For products with various component products, these are counted separately (example: 1 Cappuccino is counted with 3, 1 milk and 2 cycles).
 - Steam products are not counted.
- Each time the machine is switched on or the grounds door is closed, the system checks whether the maintenance counter has exceeded the set maintenance value. For setting, see *Chapter IV. The Service Menu, 0. Commissioning, 0.9 Maintenance p. 22.*

Counter value of last maintenance: Number

Information display of counter value at time of last maintenance.

Counter value for next main-
tenance: Number

Information display of counter value for the triggering of the next maintenance.

Date of last maintenance: Date

Information display of date of last maintenance.

Date for next maintenance: Date

Information display of date for the triggering of the next maintenance.

Maintenance: Confirm

Confirmation that maintenance was performed.

4.13 Events



Counters for data on commissioning, maintenance, component replacement and software updates.

The screenshot shows the FRANKE service menu interface. At the top, there is a navigation bar with the FRANKE logo and several icons representing different machine components. The main content is divided into two sections: 'Counters' on the left and 'Events' on the right. The 'Counters' section lists various machine components, with '4.13 Events' currently selected. The 'Events' section displays a table of recorded events, including their descriptions, dates, and times.

Counter	Event Description	Date and Time
4.4 Grinders/Dosing units	Initial commissioning	15.03.2013 17:05:00
4.5 Number of cleanings	Commissioning in the field	15.04.2013 10:27:00
4.6 Products with coffee	Maintenance performed	Not performed
4.7 Products with milk	Water filter replaced	Not replaced
4.8 Water products	Software updated	15.03.2013 15:01:00
4.9 Products with powder	Vetro replaced	Not replaced
4.10 Products with flavor	Power PCB replaced	Not replaced
4.11 All products	Boiler module replaced	Not replaced
4.12 Maintenance	Brewing unit replaced	Not replaced
4.13 Events		

At the bottom of the interface, there is a 'Back' button.

Events

Initial commissioning:	Date and time	Date and time of the first commissioning of the coffee machine.
Commissioning in the field:	Date and time	Date and time of commissioning in the field.
Maintenance performed:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not performed 	Date and time of last maintenance.
Water filter replaced:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not replaced 	Date and time of the last replacement of the water filter.
Software updated:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not performed 	Date and time of the last software update.
Vetro replaced:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not replaced 	Date and time of the replacement of the Vetro (the value is not yet recorded at the present time).
Power PCB replaced:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not replaced 	Date and time of the replacement of the power PCB (the value is not yet recorded at the present time).
Boiler module replaced:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not replaced 	Date and time of the replacement of the boiler module (the value is not yet recorded at the present time).
Brewing unit replaced:	<ul style="list-style-type: none"> ▪ Date and time ▪ Not replaced 	Date and time of the replacement of the brewing unit (the value is not yet recorded at the present time).

5. Test functions



The machine must be heated up in order to be able to perform optimal tests.



Explanations of abbreviations, using M Grinder 1 X1 as an example:

- The first part identifies the category. The following abbreviations may appear:
 - H = Heating
 - B = Filling level or temperature sensor
 - M = Motor
 - Y = Valve
 - IR = Infrared light barrier
- The second part names the component.
- The third part indicates the position of the component.
- The fourth part indicates the electrical connection.
 - ▶ M Grinder 1 X1: Motor grinder position 1 at connection X1

WARNING

Danger of scalding or injury from working on a machine

- ◆ Strict observation of the directions contained in the instructions is imperative.
- ◆ Pay attention and work carefully.

NOTE

Damage caused by continuous operation of individual components

The test functions activate individual components for function verification. Excessively long test operation can destroy the components.

- ◆ Activate the components only 2 to 3 s for the function test.
- ◆ Switch off the components immediately after test.

NOTE

Damage from overheating the boiler!

The test function activates the boilers for function verification. NTC temperature sensor monitoring is not active during this process. Operating an empty boiler or operating too long in test mode can ruin the boiler.

- ◆ Activate the components only 2 to 3 s for the function test.
- ◆ Switch off the components immediately after the test.

5 Test functions



Menu item	Description	Page
5.2 Brewing unit	Brewing unit test functions	100
5.3 Outlet	Outlet test functions	102
5.4 Flowmeter Coffee	Flowmeter coffee test functions	103
5.5 Milk system/pump	Milk system/pump test functions	104
5.6 Heaters	Heaters test functions	106
5.9 Outputs separately	Test functions of all outputs	108
5.10 Inputs separately	Test functions of all inputs	114

5.1 Brewing unit



Brewing unit

PWM: 0 – 100% PWM

- PWM: Pulse-width modulation
- Definition of the required speed of the brewing unit through configuration of the pulse-width modulation.
- *Graphical representation of pulse-width modulation, see p. 101.*

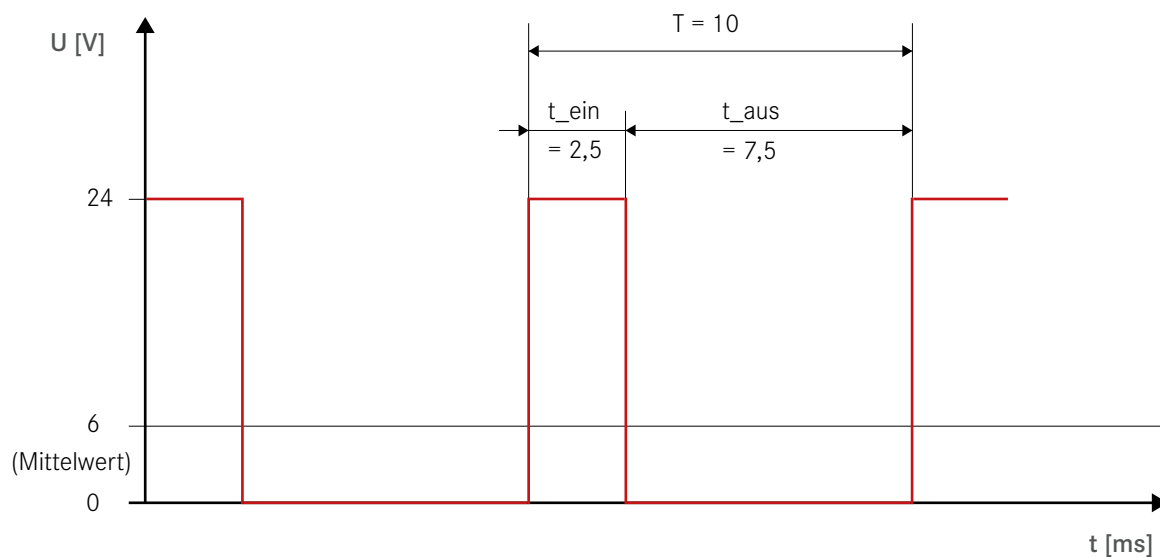
Graphical representation of pulse-width modulation



Example:

- PWM signal = 25%
- U = 24 VDC
- f = 100 Hz

T = cycle duration
 T = 1/f
 f = 1/T
 t_{on} = pulse duration
 t_{off} = pulse interval



Up/Down

- Up
- Down

- Brewing unit moves in desired direction at defined speed.
- **Up**: Brewing unit moves up.
- **Down**: Brewing unit moves down.

Brewing unit increments: Number

Information display

Light barrier reached:

- On
- Off

- **On**: Brewing unit is in the lowest position.
- **Off**: Brewing unit is not in the lowest position.

Current in brewing unit: mA (milliampere)

Display of current strength in the brewing unit at the moment.

5.3 Outlet



Outlet

PWM: Input in % (0 – 100%)

- Definition of the required speed of the outlet through configuration of the pulse-width modulation.
- *Graphical representation of pulse-width modulation, see p. 101.*

Up/Down:

- Up
- Down

- Outlet moves in the desired direction at the defined speed.
- **Up**: Outlet moves upwards.
- **Down**: Outlet moves downwards.

Limit switch:

- On
- Off

- **On**: The outlet has moved all the way downwards and has reached the rinsing position.
- **Off**: The outlet is above the rinsing position.

Power outlet: mA (milliampere)

- Power consumption Outlet motor

5.4 Flowmeter coffee



Flowmeter coffee

B9 Flowmeter Coffee: Display of flowmeter

- Current flow amount (2000 pulses per 1000 ml)

Y3 Bypass:

- On
- Off

- **On:** Valve bypass output port is activated.
 - Activation audible by switching of valve.
- **Off:** Valve bypass output port is not activated.

Y33 Main water:

- On
- Off

- **On:** Main water valve output port is activated.
 - Activation audible by switching of valve.
- **Off:** Main water valve output port is not activated.

5.5 Milk system/pump



Milk system/pump

PWM: Input in % (0 – 100%)

- Setting the pulse-width modulation determines the desired voltage at which Milk pump 1 should be activated.
- *Graphical representation of pulse-width modulation, see p. 101.*

Milk pump 1:

- On
- Off

- On: Milk pump 1 output port is activated.
 - Activation of Milk pump 1 audible and milk is dispensed.
- Off: Milk pump 1 output port is not activated.

Y38 Milk type valve 1:

- On
- Off

- On: Milk type 1 valve output is activated.
 - Activation of valve in the refrigeration unit is audible.
- Off: Milk type 1 valve output is not activated.

Y40 Milk type valve 2:	<ul style="list-style-type: none">▪ On▪ Off	<ul style="list-style-type: none">▪ On: Milk type 2 valve output is activated.<ul style="list-style-type: none">▪ Activation of the valve in the cooling chamber is audible.▪ Off: Milk type 2 valve output is not activated.
Y45 ChangeValve Thermoblock	<ul style="list-style-type: none">▪ On▪ Off	<ul style="list-style-type: none">▪ On: Milk proceeds through the Thermoblock.▪ Off: Milk does not proceed through the Thermoblock.
Y46 Hot milk:	<ul style="list-style-type: none">▪ On▪ Off	Without function
Y39 Drainage:	<ul style="list-style-type: none">▪ On▪ Off	<ul style="list-style-type: none">▪ On: Drainage opened▪ Off: Drainage closed
B6 NTC6 FM refrigerator:	Temperature in °C	Display of the milk temperature in the milk tube.

5.6 Heaters



Heaters

H1 Boiler:

- On
- Off

- Coffee boiler
- **On**: Boiler 1 heating is activated.
 - Activation is audible by contact of relay K1.
- **Off**: Boiler 1 heating is not activated.

B1 NTC1 Coffee boiler:

Temperature in °C

Boiler temperature display.

H2 Boiler:

- On
- Off

- Hot water/steam boiler
- **On**: Heating 2 is activated.
 - Activation is audible by contact of relay K2.
- **Off**: Heating 2 is not activated.

B2 NTC2 H/D boiler:

Temperature in °C

Boiler temperature display.



The activation of the boiler is ended automatically after 10 s in order to ensure that it does not overheat. This is however not reported to the operator panel; the switch remains at **On**.

H3 Thermoblock:

- On
- Off

- **On:** Thermoblock heating is activated.
 - Activation is audible by contact of relay K3.
- **Off:** Thermoblock heating is not activated.

B3; NTC3 Thermoblock:

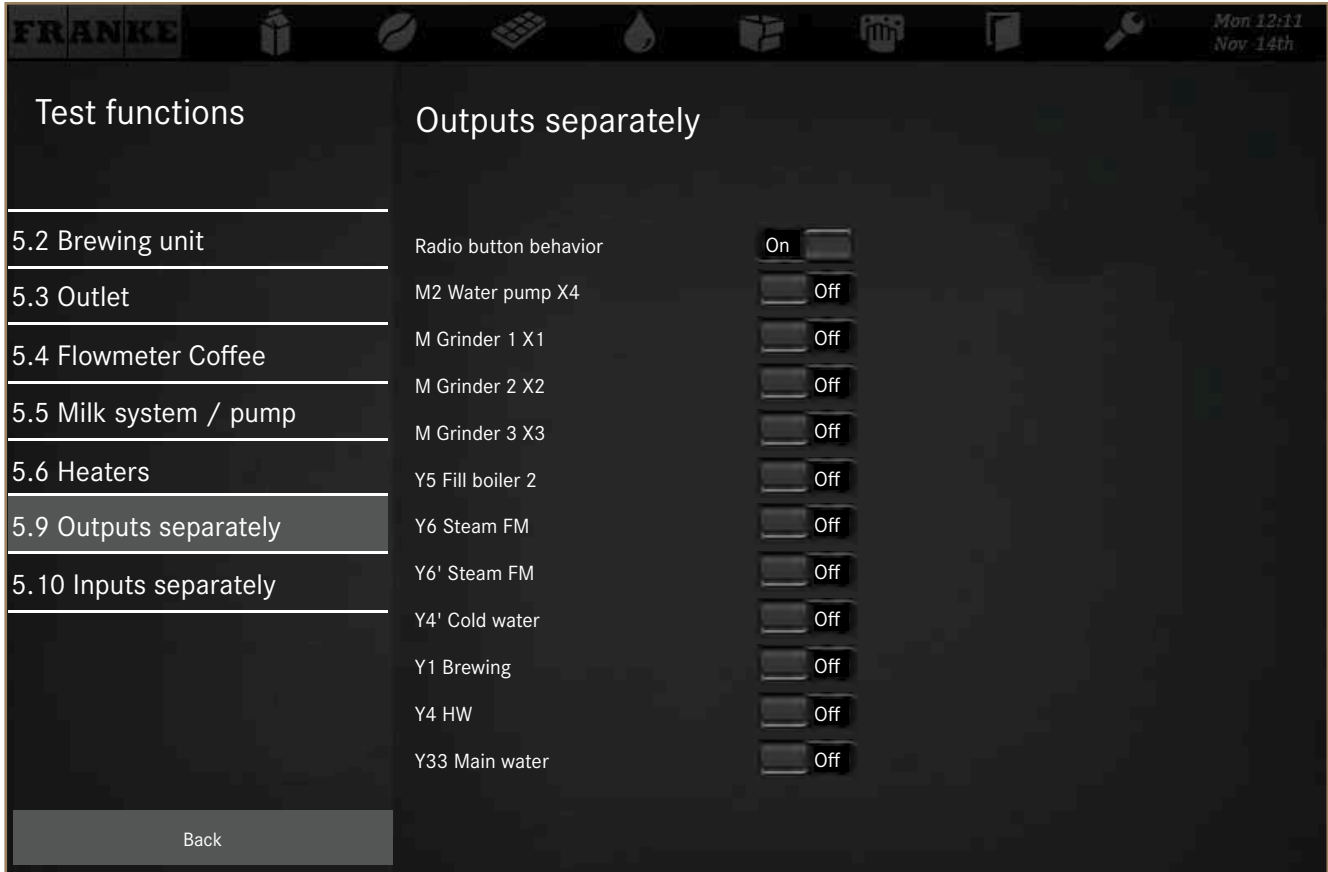
Temperature in °C

- Display of the temperature in the Thermoblock

5.7 Outputs separately



- To test whether signal is being transmitted by the desired component and for checking functionality.
- Following checking using the **Outputs separately** testing function, the components remain to be tested if necessary with the **Inputs separately** testing function in order to ensure an accurate diagnosis.



Outputs separately

Radio button behavior:

- On
- Off

- **On:** Radio button behavior is activated; only one of the buttons can be set to **On**. If a switch is switched to **On**, then any other switch that is already at **On** position will switch to **Off**.
- **Off:** There is no limit to how many switches may be simultaneously set to **On**.

M2 Water pump X4:

- On
- Off

- **On:** Water pump On.
 - Motor noise is audible.
- **Off:** Water pump Off.

M Grinder 1 X1:

- On
- Off

- **On:** Grinder left On.
 - Grinder is running audibly.
- **Off:** Grinder left Off.
- If the grinder is activated too long, then this will cause the brewing chamber to be overfilled.

M Grinder 2 X2:

- On
- Off

- **On:** Grinder center On.
 - Grinder is running audibly.
- **Off:** Grinder center Off.
- If the grinder is activated too long, then this will cause the brewing chamber to be overfilled.

M Grinder 3 X3:

- On
- Off

- **On:** Grinder right On.
 - Grinder is running audibly.
- **Off:** Grinder right Off.
- If the grinder is activated too long, then this will cause the brewing chamber to be overfilled.

Y5 Fill boiler 2:

- On
- Off

- **On:** Boiler 2 valve opened.
 - Valve switches audibly.
- **Off:** Boiler 2 valve closed.

Y6 Autosteam/Steam FM:

- On
- Off

- **On:** Steam valve opened.
 - Valve switches audibly.
- **Off:** Steam valve closed.

Y6' Steam FM:

- On
- Off

- **On:** Autosteam/steam valve opened.
 - Valve switches audibly. If Autosteam is mounted, then a steam pulse will escape from the steam wand.
- **Off:** Autosteam/steam valve closed.

Y4' Cold water:

- On
- Off

- **On:** Cold water valve opened.
 - Valve switches audibly.
- **Off:** Cold water valve closed.

Y1 Brewing:

- On
- Off

- **On:** Brewing valve opened.
 - Valve switches audibly.
- **Off:** Brewing valve closed.

Y4 Hot water:

- On
- Off

- **On:** Hot water valve opened.
 - Valve switches audibly.
- **Off:** Hot water valve closed.

Y33 Main water:

- On
- Off

- On: Main water valve opened.
 - Valve switches audibly.
- Off: Main water valve closed.

Y20 Steam FM:

- On
- Off

- On: Steam valve opened.
 - Valve switches audibly. A steam pulse escapes through the outlet.
- Off: Steam valve closed.

Y31 Air/Milk:

- On
- Off

- On: Air/Milk valve opened.
 - Valve switches audibly.
- Off: Air/Milk valve closed.

Y30 Clean/Milk:

- On
- Off

- On: Clean/Milk valve opened.
 - Valve switches audibly.
- Off: Clean/Milk valve closed.

Y3 Bypass:

- On
- Off

- On: Bypass valve opened.
 - Valve switches audibly.
- Off: Bypass valve closed.

Y2 Outlet switch:

- On
- Off

- On: Outlet switch valve opened.
 - Valve switches audibly if the Special outlet for jug option is installed.
- Off: Outlet switch valve closed.

Y37 Air/Autosteam:

- On
- Off

- On: Air/Autosteam valve opened.
 - Valve switches audibly if the Autosteam option is installed.
- Off: Air/Autosteam valve closed.

Y25 Water L:

- On
- Off

- On: Powder dosing unit valve opened.
 - Valve switches audibly if the Instant option is installed.
- Off: Powder dosing unit valve closed.

M FM cooling chamber fan:

- On
- Off

- On: Cooling chamber fan output On.
 - Fan is audible in cooling chamber.
- Off: Cooling chamber fan output Off.

M KM ground fan:

- On
- Off

- Fan in the machine is underneath the water pump.
- **On:** Machine fan On.
 - Fan in machine audible.
- **Off:** Machine fan Off.

M Fan Powder:

- On
- Off

- **On:** Powder fan On.
 - Fan for powder audible if the Powder option is installed.
- **Off:** Powder fan Off.

M Whisk 1:

- On
- Off

- **On:** Whisk left On.
 - Switching of the left whisk motor is audible if the Powder option is installed. No dosing.
- **Off:** Left whisk Off.

M Worm 1:

- On
- Off

- **On:** Left worm On.
 - Left worm audible if the Powder option is installed.
- **Off:** Left worm Off.

M Worm 2:

- On
- Off

- **On:** Center worm On.
 - Center worm audible if the optional dual powder dispenser is installed.
- **Off:** Center worm not Off.

Flavour Station Type 1:

- On
- Off

- **On:** Pump Type 1 On.
 - Pump audible, flavour runs out if a Flavour Station is available.
- **Off:** Pump Type 1 Off.

Flavour Station Type 2:

- On
- Off

- **On:** Pump Type 2 On.
 - Pump audible, flavour runs out if a Flavour Station is available.
- **Off:** Pump Type 2 Off.

Flavour Station Type 3:

- On
- Off

- **On:** Pump Type 3 On.
 - Pump audible, flavour runs out if a Flavour Station is available.
- **Off:** Pump Type 3 Off.

Y42 Air/Milk FM:

- On
- Off

- **On:** Air/Milk Foam Master valve opened.
 - Air-pulse valve in the cooling chamber is audible.
- **Off:** Air/Milk Foam Master valve closed.

Y22 Sanitizing:

- On
- Off

- On: Sanitizing valve opened.
 - Valve switches audibly.
- Off: Sanitizing valve closed.

Y38 Milk supply 1:

- On
- Off

- On: Milk supply 1 valve opened.
 - Valve in the refrigeration unit switches audibly.
- Off: Milk supply 1 valve closed.

Y39 Drainage:

- On
- Off

- On: Drainage valve opened.
 - Valve switches audibly.
- Off: Drainage valve closed.

Y40 Milk supply 2:

- On
- Off

- On: Milk supply 2 valve opened.
 - Valve in the refrigeration unit switches audibly.
- Off: Milk supply 2 valve closed.

Y45 Temperature switch:

- On
- Off

- On: Temperature switch valve opened.
 - Valve switches audibly.
- Off: Temperature switch valve closed.

X25-Pin 1:

- On
- Off

- On: Output X25-Pin 1 is activated.
 - Voltage measureable (24 V).
- Off: Output X25-Pin 1 is not activated.

X25-Pin 2:

- On
- Off

- On: Output X25-Pin 2 is activated.
 - Voltage measureable (24 V).
- Off: Output X25-Pin 2 is not activated.

X25-Pin 5:

- On
- Off

- On: Output X25-Pin 5 is activated.
 - Voltage measureable (24 V).
- Off: Output X25-Pin 5 is not activated.

X25-Pin 7:

- On
- Off

- On: Output X25-Pin 7 is activated.
 - Voltage measureable (24 V).
- Off: Output X25-Pin 7 is not activated.

CAN bus wink:

- On
- Off

- Node ID of a device connected to the machine
- **On:** CAN bus wink is activated. Wink command is sent to an ID.
 - A signal tone or blinking LED on the device indicates that a wink command has been sent to the ID and everything is functioning.
 - If a wink command is sent to ID 0, then all participants with the customer identification Franke connected to the network indicate this with a signal tone or blinking LED.
 - Signal tone: Collection 3, protocol converter and others.
 - LED flashes at 100 ms intervals: Flavour Station, Foam Master and DIVA.
- **Off:** CAN bus wink is not activated.

Edge lighting red:

- On
- Off

- **On:** Edge lighting red goes on.
- **Off:** -

Edge lighting green:

- On
- Off

- **On:** Edge lighting green goes on.
- **Off:** -

Edge lighting blue:

- On
- Off

- **On:** Edge lighting blue goes on.
- **Off:** -

Beeper:

- On
- Off

- **On:** Beeper sounds
- **Off:** -

Backlight:

- On
- Off

- **On:** Backlight becomes dark.
- **Off:** Normal brightness of the display

5.8 Inputs separately



- To test whether signal is being received by the desired component and for indirect checking of functionality. The status of the respective input port is displayed.
- Only one output port can be activated at a time.



Inputs separately

B5 Steam boiler level: Value

- Fill level of steam boiler is checked by level sensor and displayed.
- Displays A/D value with 10-bit resolution
- 350 to 550: Boiler full
- 600 to 850: Boiler empty

B1 NTC1 Coffee boiler: Temperature in °C

- Display of the current temperature in the coffee boiler

B2 NTC2 Tea/Steam boiler: Temperature in °C

- Display of the current temperature in the tea/steam boiler

B3 NTC3 Thermoblock: Temperature in °C	<ul style="list-style-type: none"> ▪ Display of the current temperature in the Thermoblock
IR powder Grinder 1: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ Fill level monitoring with light barrier. ▪ On: No powder available. ▪ Off: Powder available.
IR double powder right: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ Fill level monitoring with light barrier. ▪ On: No powder available. ▪ Off: Powder available.
IR Grinder 2: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ Fill level monitoring with light barrier. ▪ On: No beans available. ▪ Off: Beans available.
IR Grinder 3: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ Fill level monitoring with light barrier. ▪ On: No beans available. ▪ Off: Beans available.
Fresh water tank: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ Monitoring with level sensor. ▪ On: Fresh water tank empty. ▪ Off: Fresh water tank not empty (also displayed if no fresh-water tank is connected).
Accounting: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ The key-operated switch is connected to the floor group of the coffee machine. ▪ On: Accounting system temporarily bypassed/switched off. ▪ Off: Accounting on.
Cup sensor: ▪ On ▪ Off	<ul style="list-style-type: none"> ▪ On: Cup missing (also displayed if no cup sensor is installed). ▪ Off: Cup present.

Grounds door:

- On
- Off

- On: Grounds door closed.
- Off: Grounds door open.

Powder feed:

- On
- Off

- On: Powder lid open.
- Off: Powder lid closed.

B11 Milk level 1:

- On
- Off

- On: Type 1: Milk present.
- Off: Type 1: No milk available.

B12 Milk level 2:

- On
- Off

- On: Type 2: Milk available.
- Off: Type 2: No milk available.

B6 NTC6 FM refrigerator:

Temperature in °C

- Display of the current temperature in the refrigerator.

B4 NTC4 Autosteam:

Temperature in °C

- ###: No temperature sensor connected.
- Temperature Autosteam/Steam.

6. Access rights



The access rights make it possible to define different PIN codes for different tasks.

6 Access rights



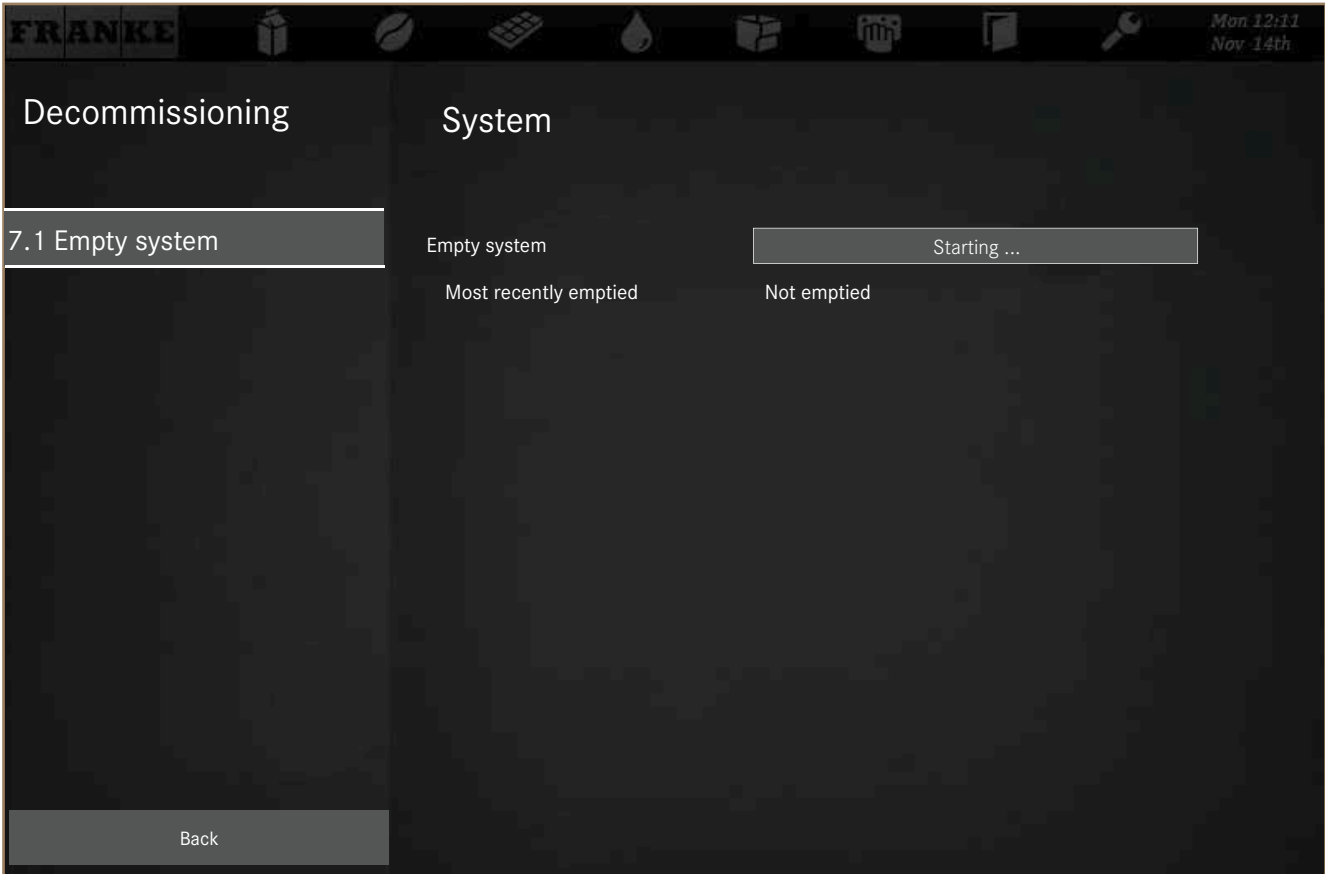
Menu item	Description
6.2 Settings	Define PIN code for <i>My Settings</i>
6.3 Settings (B)	Define PIN code for <i>My Settings (B)</i>
6.4 Settings (C)	Define PIN code for <i>My Settings (C)</i>
6.5 Maintenance	Define PIN code for the Maintenance Menu
6.6 Key (secured) Products	Define PIN code for key (secured) products
6.7 On/Off Machine	Define PIN code for switching the coffee machine On and Off

Menu item	PIN code Default values
6.2 Settings	1111
6.3 Settings (B)	2222
6.4 Settings (C)	3333
6.5 Maintenance	7777
6.6 Key (secured) Products	8888
6.7 On/Off Machine	9999

7. Decommissioning



Observe the instructions for decommissioning (see *Section 5 - Decommissioning*).



Empty system

Empty system:

Start

- Start Empty system.
 - The fluid-system is emptied automatically.

Most recently emptied:

- Date and time
- Not emptied

Information display of last emptying of the system.

8. Updating the software

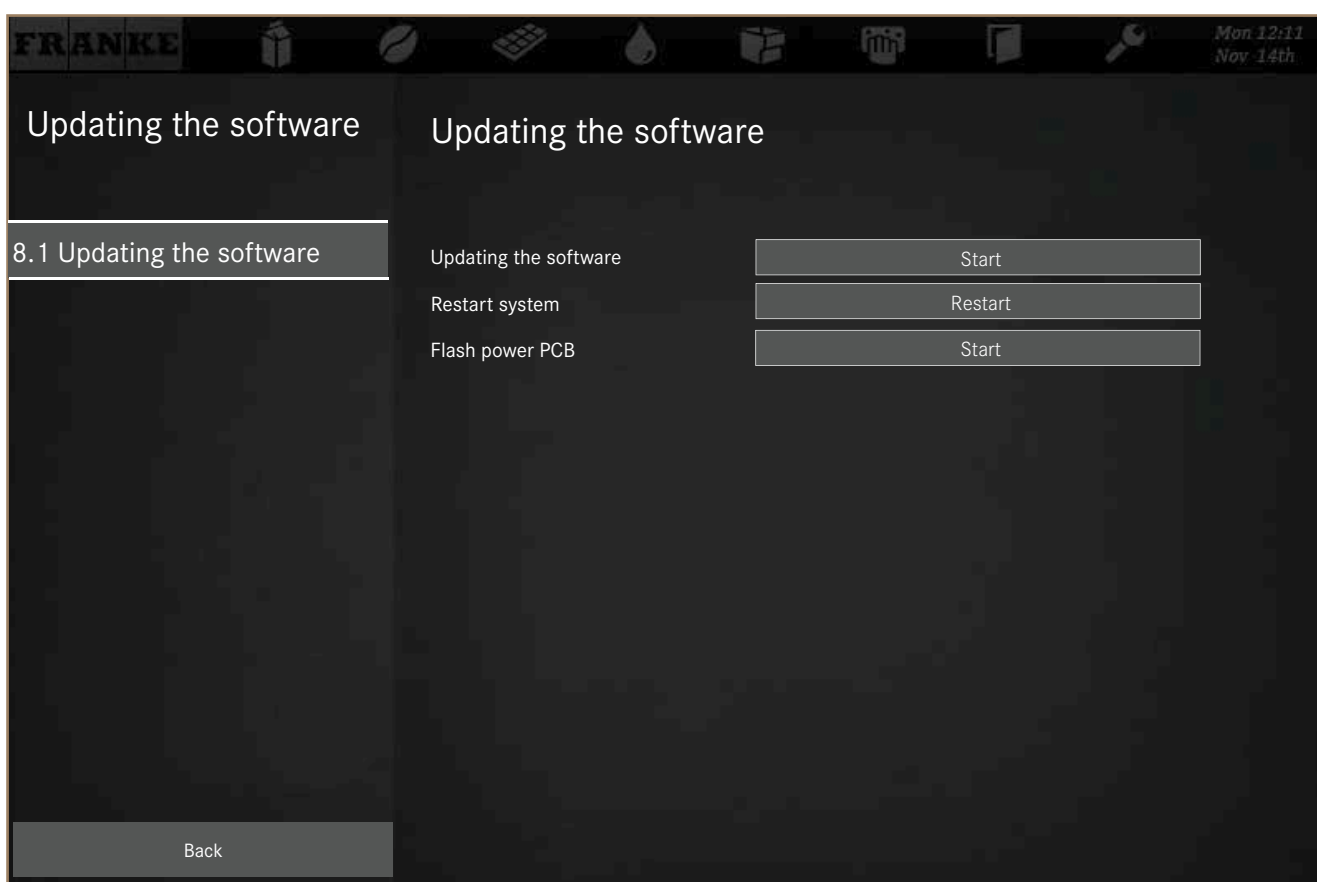


Carry out a software update only in the following cases:

- If the file structure on the machine is damaged.
- If the new software version contains essential changes in comparison to the installed version (see CSS, FM800/ Software Update, Service Information).

Perform software update:

- ▶ Download the current software from CSS.
- ▶ Save the *.upd file on an empty USB stick.
- ▶ Back up customer-specific images, advertising images, symbols and configured drinks from the machine onto a second USB stick.
- ▶ Update the Product Catalogue as well with each software update.



Updating the software

Update the software:

Start

Update the software.

Restart system:

Restart

Restart system.

Flash the power PCB:

Start

Flash the power PCB.

V. Individualization and data transfer



The **Individualization and data transfer** menu offers the following options:

- Load and view individual image objects on the coffee machine.
- Save and load settings.
- Use customer images and Franke images as drink images, screen savers or advertising images.
- Define behavior of the operation modes and screen savers.



- USB stick for data backup
- USB stick with customer images

Individualization and data transfer



Menu item	Description	Page
1 Manage images	Load, save and manage images	121
2 Modify depiction	Define depiction in the operation modes, screen savers, etc. and activate drinks	125
3 Backing up/loading data	Back up settings and data on USB stick and load on machine	142
4 Import FPC	Import the Franke Product Catalogue	144
5 Eject USB stick	Eject the connected USB stick	

1. Manage images



The customer can load and save his own images under the menu item **1 Manage images** and also manage the existing Franke images and his own images.

1 Manage images

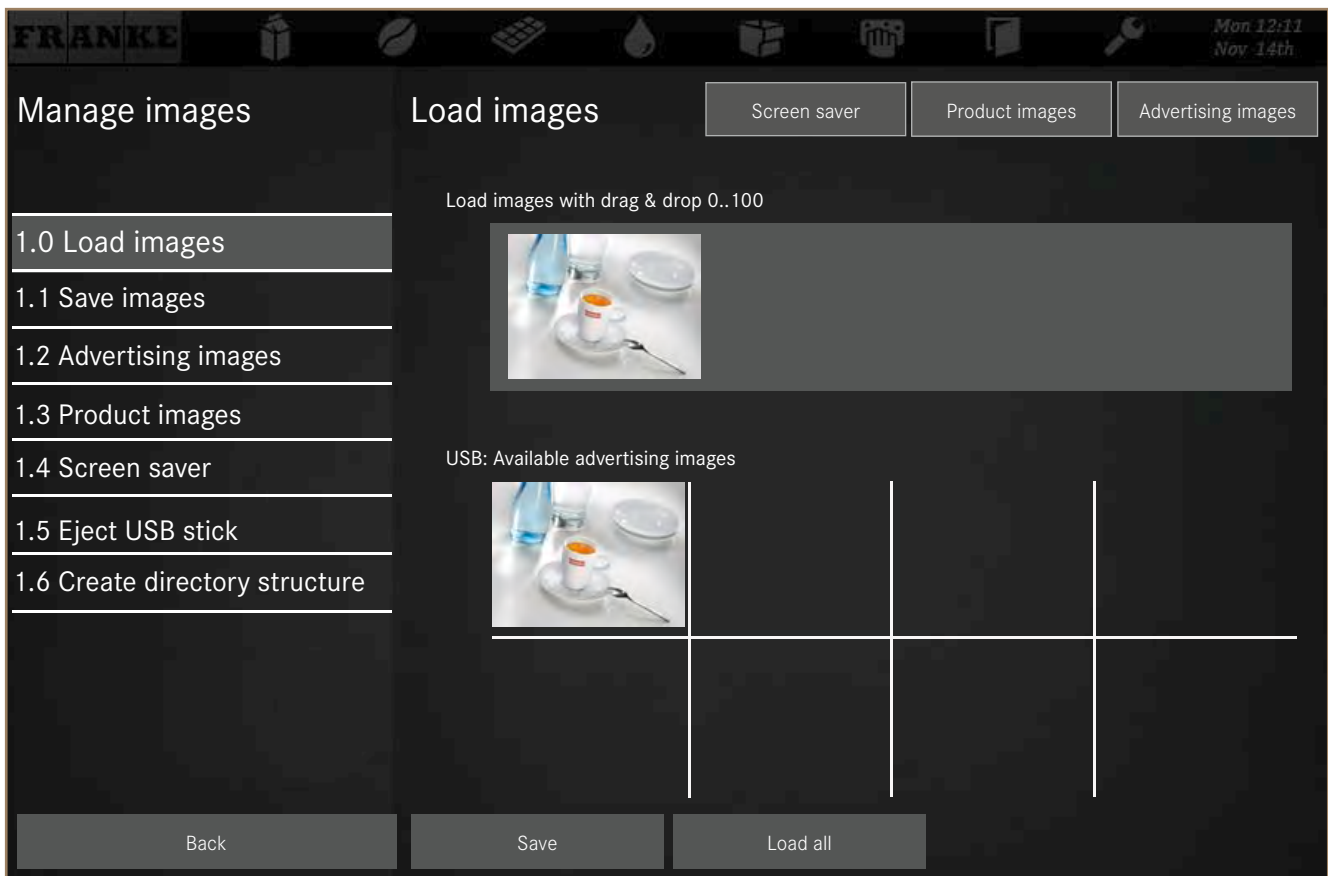


Menu item	Description	Page
1.0 Load images	Load images from a USB stick	122
1.1 Save images	Back up images on a USB stick	123
1.2 Advertising images	Advertising images	124
1.3 Product images	Product images	124
1.4 Screen Saver	Setting screen savers	124
1.5 Eject USB stick	Eject the connected USB stick	
1.6 Create directory structure	Create directory structure	

1.0 Load images

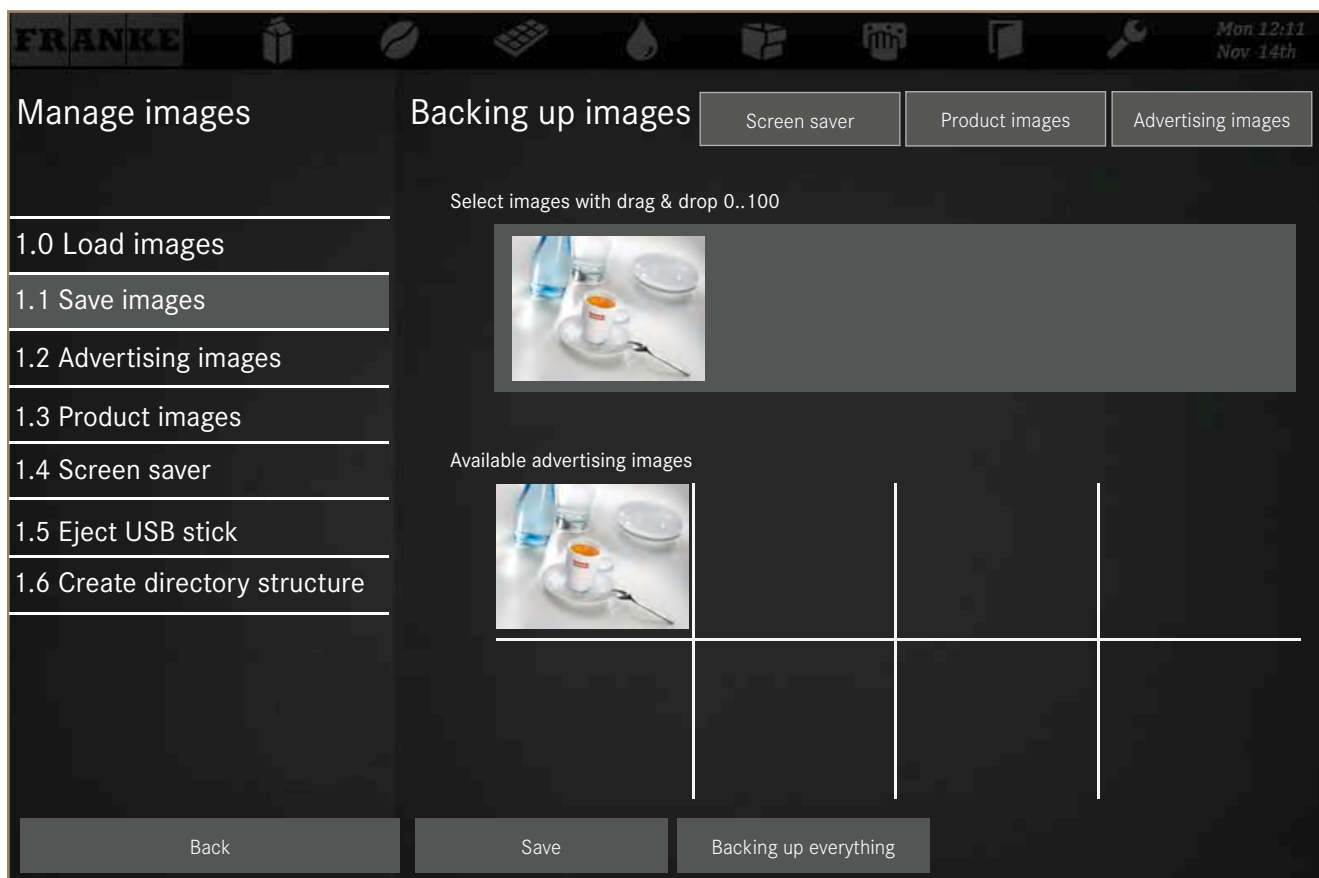
Image requirements

	Screen saver	Product images	Advertising images
Image size (Width x Height)	800 x 600 px	430 x 274 px	800 x 600 px
Data format	PNG with 24 bit	PNG with 24-bit and 8-bit alpha channel as required	PNG with 24 bit
Orientation	-	Centered on vertical axis	-
Memory folder on USB stick	Drive:\QML-Files\rc\custom\screensavers	Drive:\QML-Files\rc\custom\drinks	Drive:\QML-Files\rc\custom\images



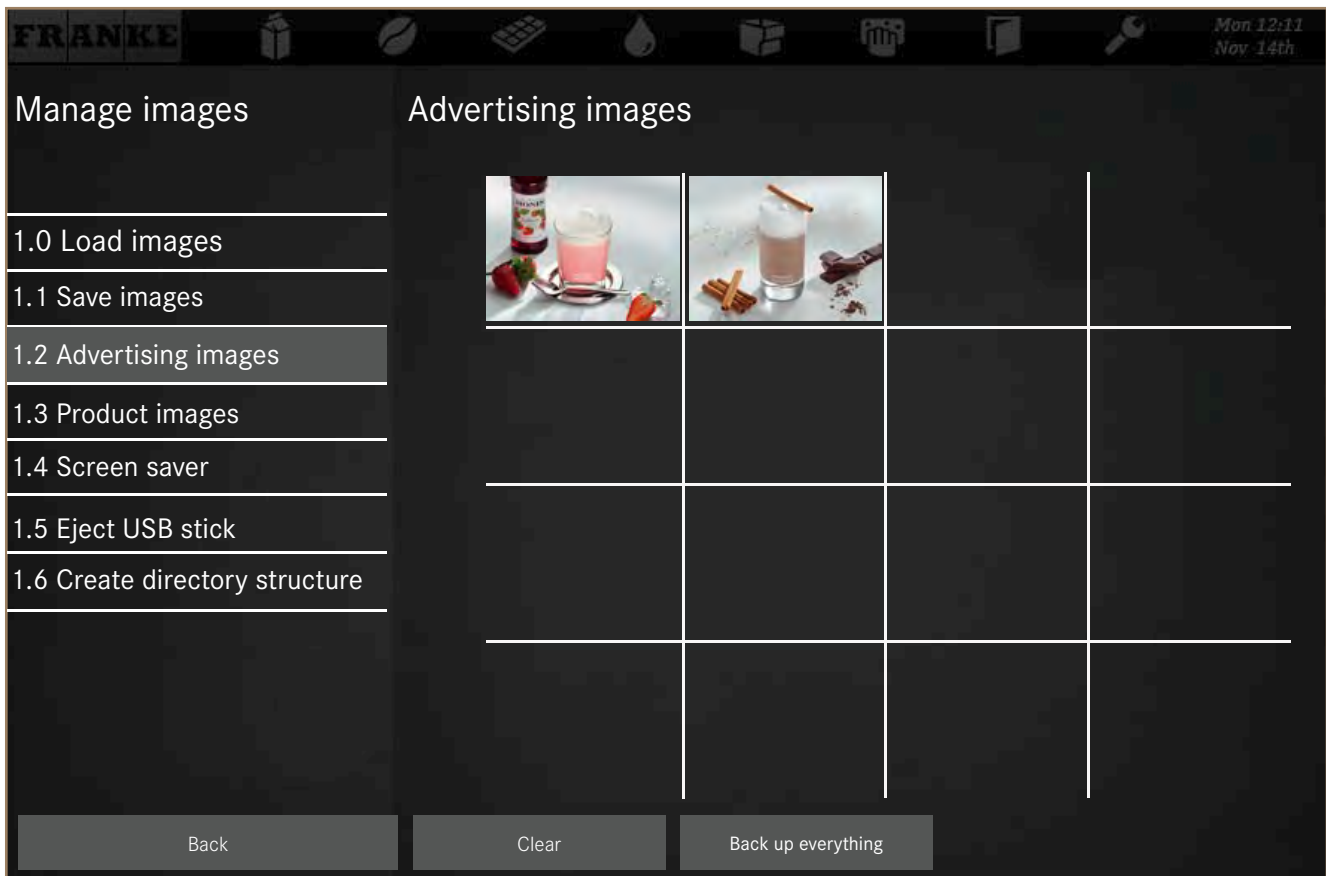
- ▶ Insert USB stick with the required directory structure to the operator panel at the right.
 - You can create the directory structure using menu item 1.6.
- ▶ Select image type (screen saver, product image or advertising image).
- ▶ Copy individual images with Drag&Drop and complete with Save or Upload all.

1.1 Backing up images



- ▶ Insert USB stick into operator panel on the right.
- ▶ Select image type (screen saver, product image or advertising image).
- ▶ Drag individual images to the top with Drag & Drop and actuate the **Save** button to save the selected images on the USB stick or save all available images on the USB stick with **Back up everything**.

1.4 Advertising images



1.3 Product images

1.2 Screen saver

The menu items 1.3 Product images and 1.4 Screen saver are constructed analogously to 1.2 Advertising images.

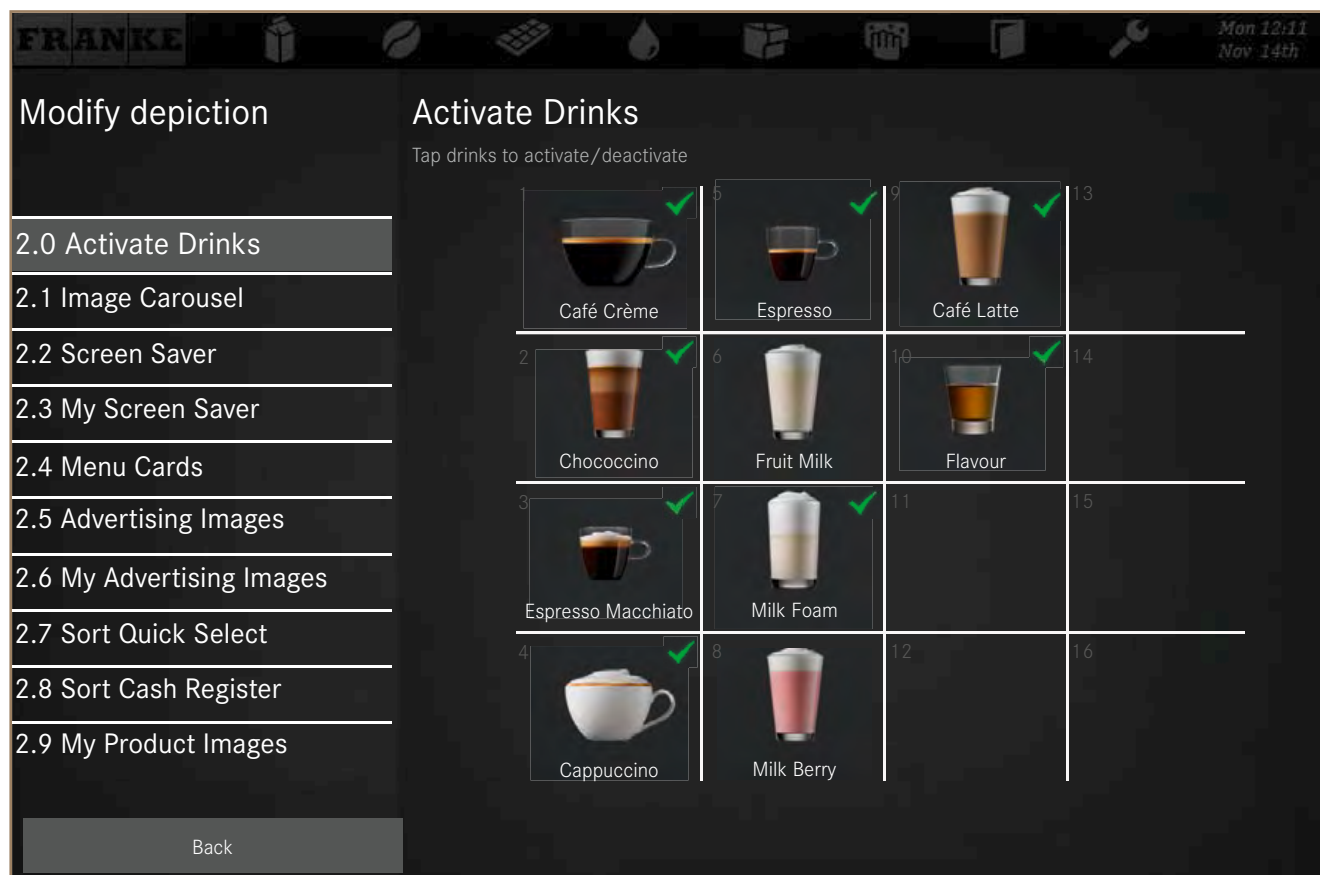
2. Modify depiction

2 Modify depiction



Menu item	Description	Page
2.0 Activate Drinks	Activate and deactivate the programmed drinks	126
2.1 Image Carousel	Select images for the Image Carousel, remove images from the Image Carousel, activate and deactivate the Image Carousel	127
2.2 Screen saver	Select Franke images for the screen saver, remove Franke images from the screen saver	129
2.3 My Screen Saver	Select own images for the screen saver, remove own images from the screen saver	131
2.4 Menu Cards	Select images for the menu cards, remove images from the menu cards, activate and deactivate menu cards	133
2.5 Advertising images	Add and remove Franke advertising images that are displayed during drink dispensing	135
2.6 My Advertising Images	Add and remove your own advertising images that are displayed during drink dispensing	137
2.7 Sort Quick Select	Adjust the alignment of the drinks on the monitor	139
2.8 Sort Cash Register	Adjust the alignment of the drinks on the monitor	140
2.9 My Product Images	Assign images to the products	141

2.0 Activate Drinks

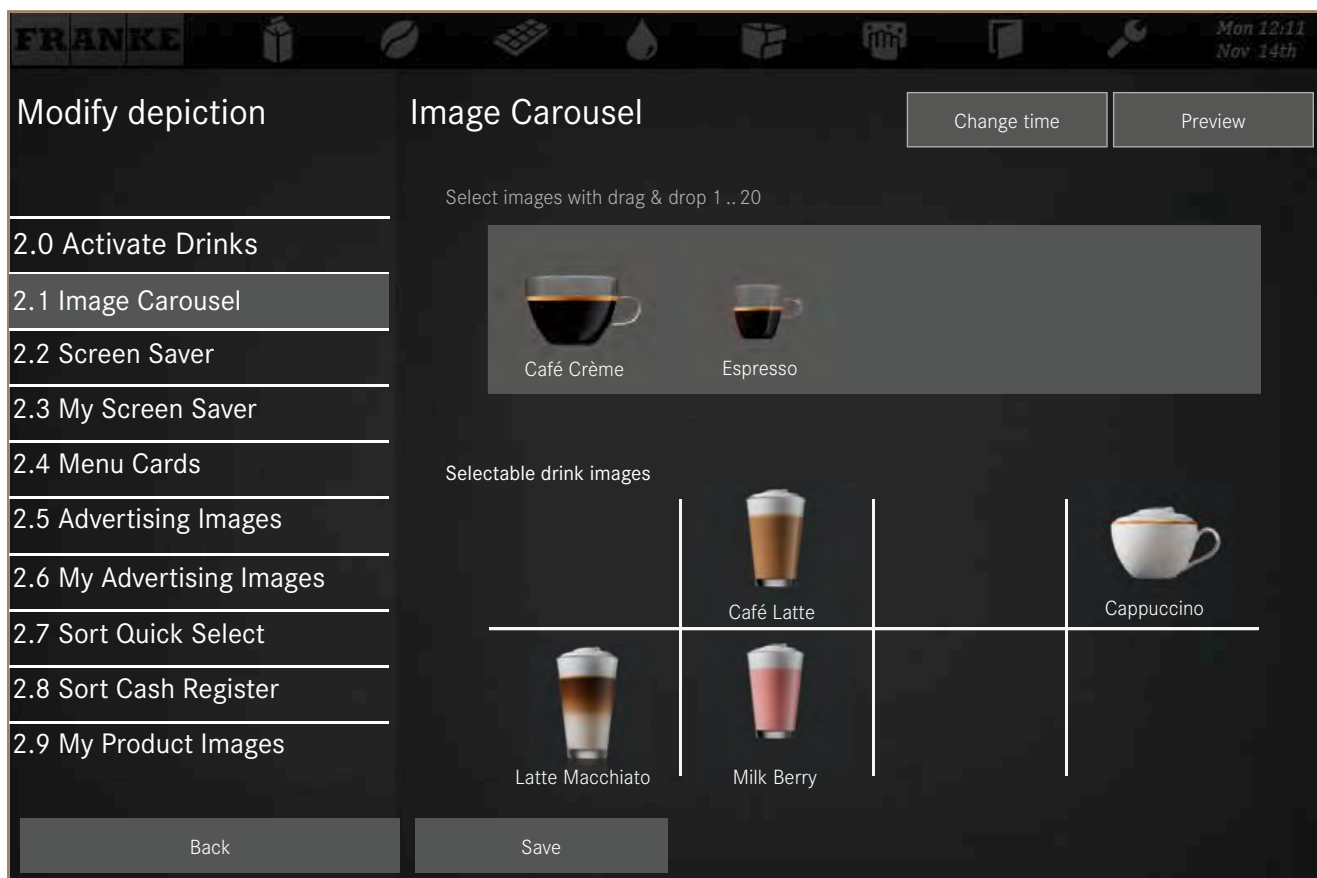



Programmed drinks can be activated and deactivated under the menu item **2.0 Activate drinks**.

► To accomplish this, set or remove the checkmark at a product image by touching it.

Only activated products appear on the product selection. This means that drinks can be temporarily removed from the list of offerings.

2.1 Image Carousel



 Drink images can be added to the Image Carousel per Drag&Drop under the 2.1 Image Carousel menu item. The Image Carousel can be activated and deactivated as screen saver.

- ▶ Tip on the Change time button.

The second monitor level opens (see next page).

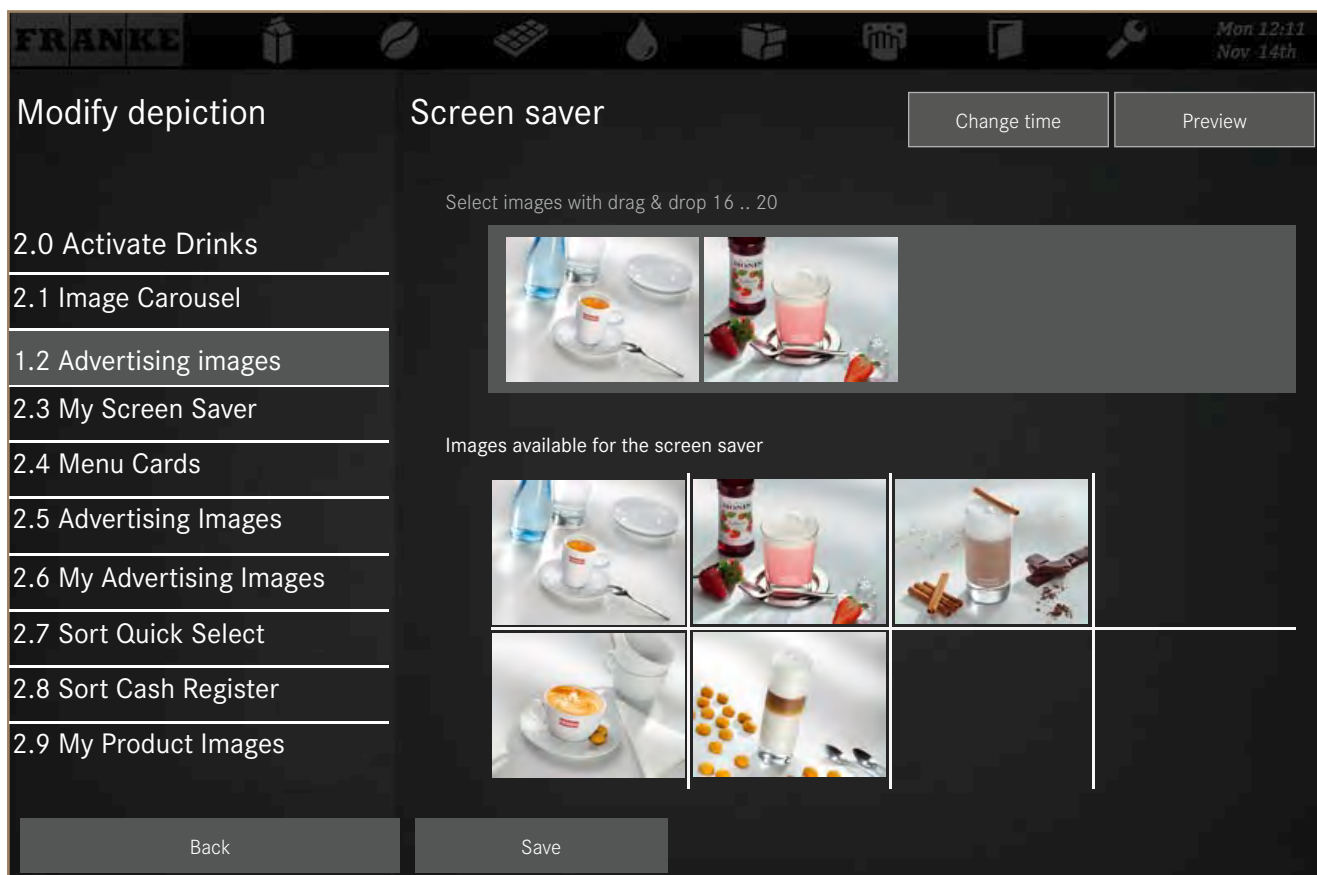


- ▶ Activate the Image Carousel and set the time that passes before the Image Carousel is displayed.



If the Image Carousel is activated as screen saver, then **screen saver** and **My Screen Saver** are automatically deactivated.

2.2 Screen Saver



Franke images can be added to or removed from the screen saver per Drag&Drop under the menu item 2.2 Screen Saver.

► Tip on the Change time button.

The second monitor level opens (see next page).


The screenshot shows the FRANKE software interface. At the top, there is a header with the FRANKE logo and several icons. The date and time are displayed as "Mon 12:11 Nov 14th". The main interface is divided into two sections: "Modify depiction" on the left and "Screen saver" on the right. The "Modify depiction" section contains a list of menu items: 2.0 Activate Drinks, 1.1 Save images, 2.2 Screen Saver, 2.3 My Screen Saver, 2.4 Menu Cards, 2.5 Advertising Images, 2.6 My Advertising Images, 2.7 Sort Quick Select, 2.8 Sort Cash Register, and 2.9 My Product Images. The "Screen saver" section has two tabs: "Images" and "Preview". Below the tabs, there is a text prompt "Select images with drag & drop 2 .. 20" and a preview area showing two images of food and drinks. Below the preview area, there is a text prompt "Define waiting time for screen saver" and a label "Screen saver waiting time". There is a "Time" label and a "Minutes" label. A toggle switch is set to "On". Below the toggle switch, there is a numeric keypad with buttons for 0, 1, 2, 3, and 4. At the bottom of the interface, there are "Back" and "Save" buttons.



- ▶ Activate the screen saver and set the time that passes before the screen saver is displayed.
If Screen Saver is activated, then Image Carousel and My Screen Saver are automatically deactivated.

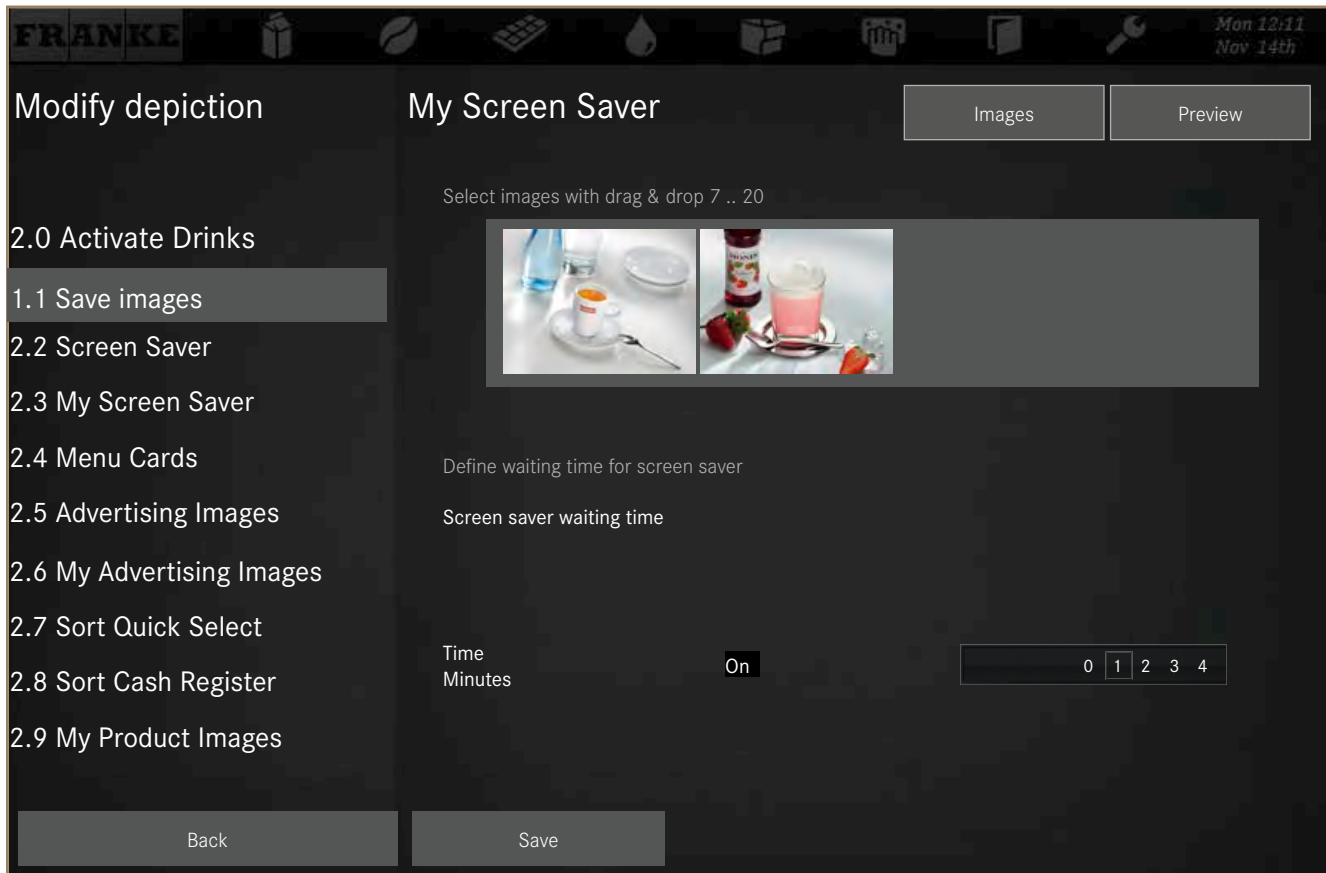
2.3 My Screen Saver



 Customer images can be added to or removed from the screen saver per Drag&Drop under the menu item **2.2 My Screen Saver**.

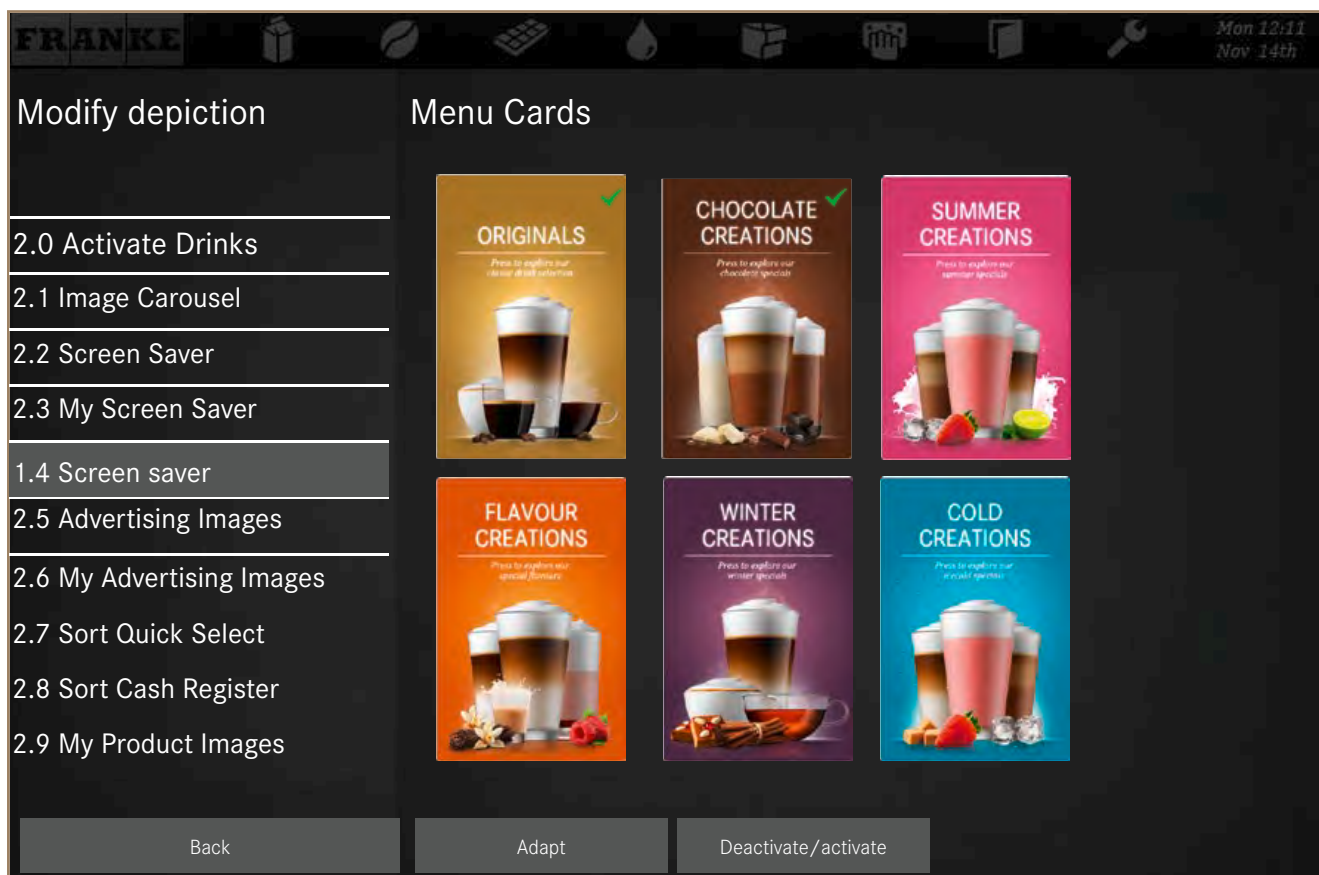
► Tip on the Change time button.

The second monitor level opens (see next page).



- ▶ Activate **My Screen Saver** and set the time that passes before the screen saver is displayed.
If **My Screen Saver** is activated, then **Image Carousel** and **Screen Saver** are automatically deactivated.

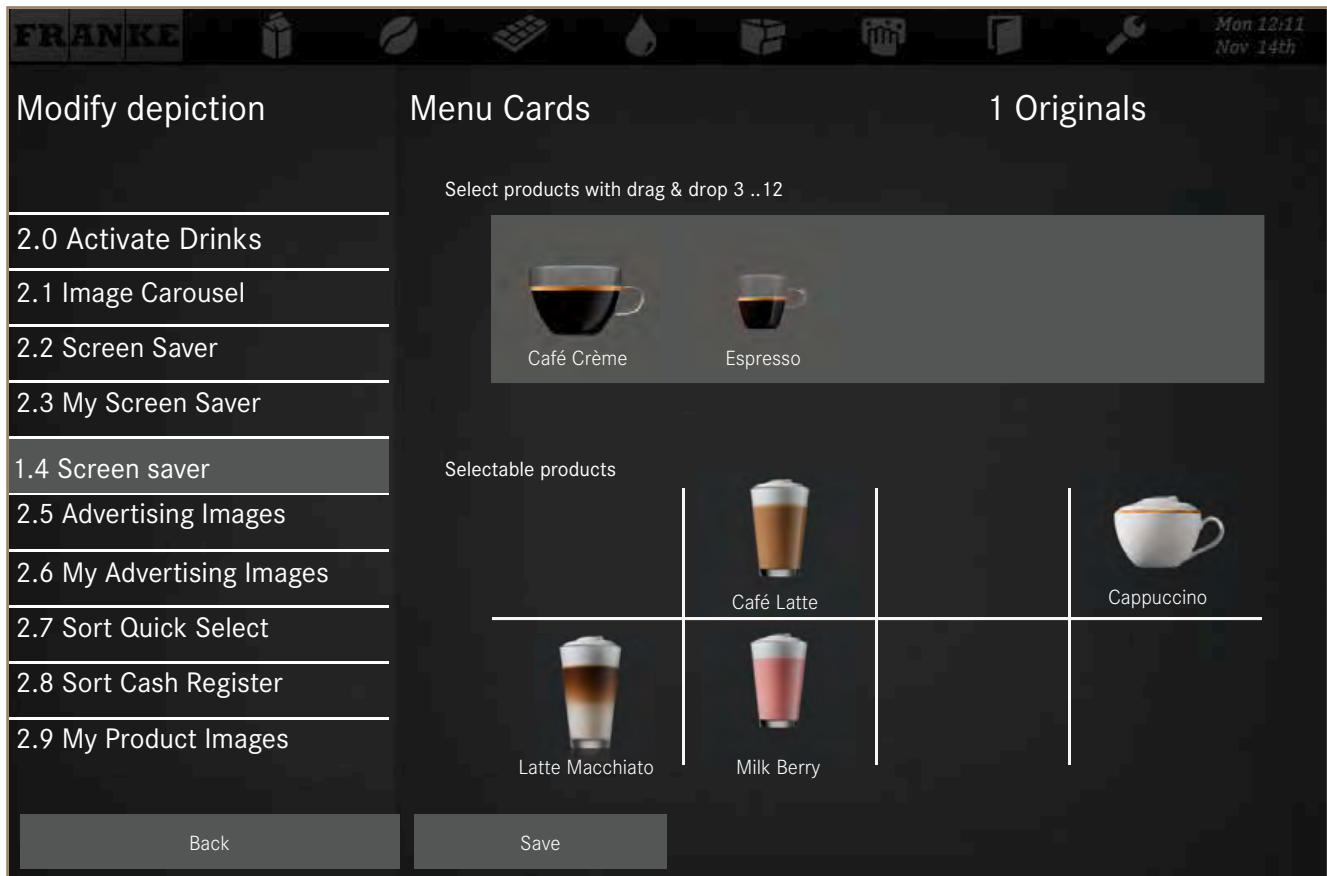
2.4 Menu Cards



The customer can create and name menu cards as well as add drinks to them under the menu item 2.4 Menu Cards. Existing menu cards can be activated and deactivated.

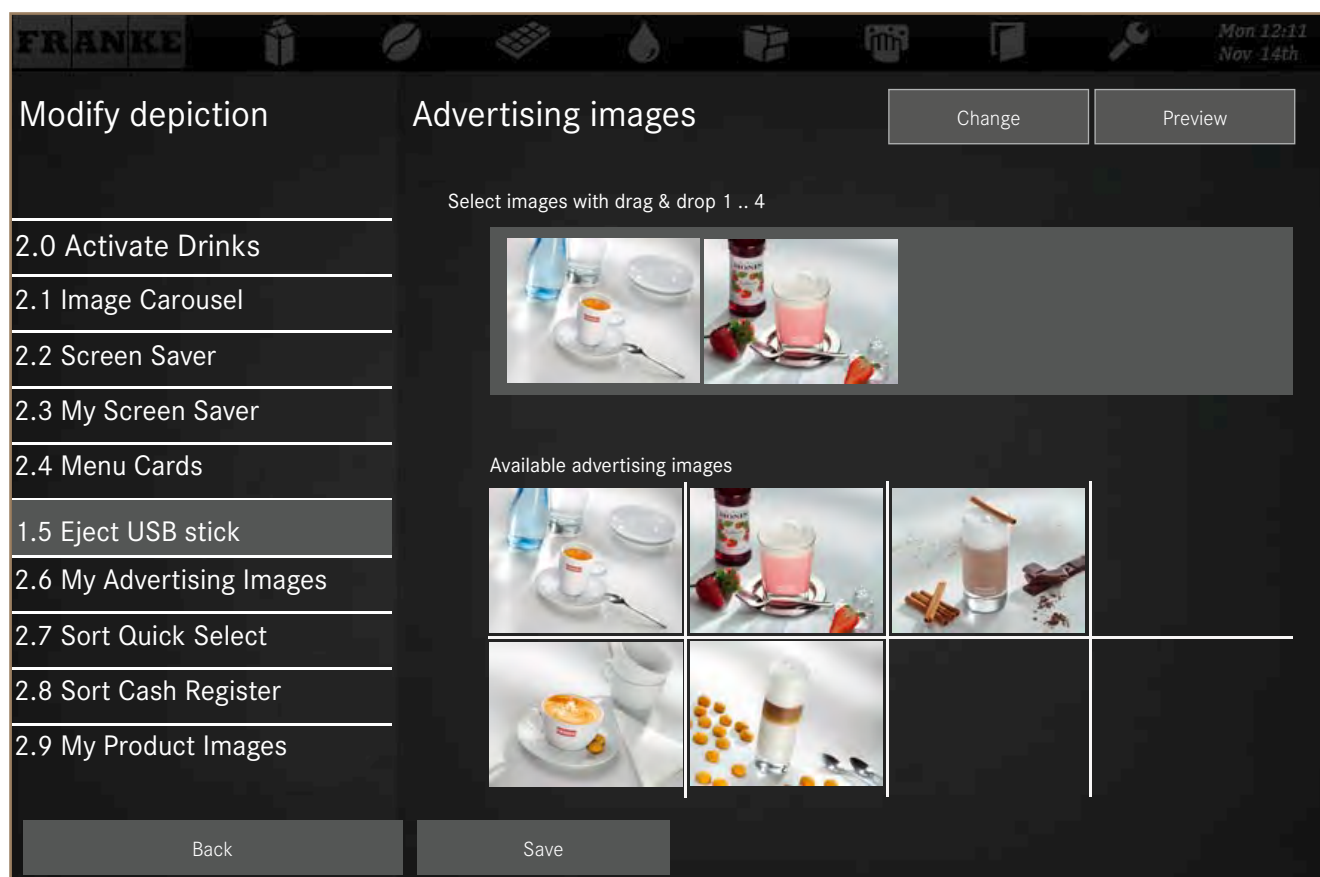
- ▶ Tip on a card and press the De/activate button.
- ▶ If you wish to edit a menu card, press on the Modify button.

The second monitor level opens (see next page).

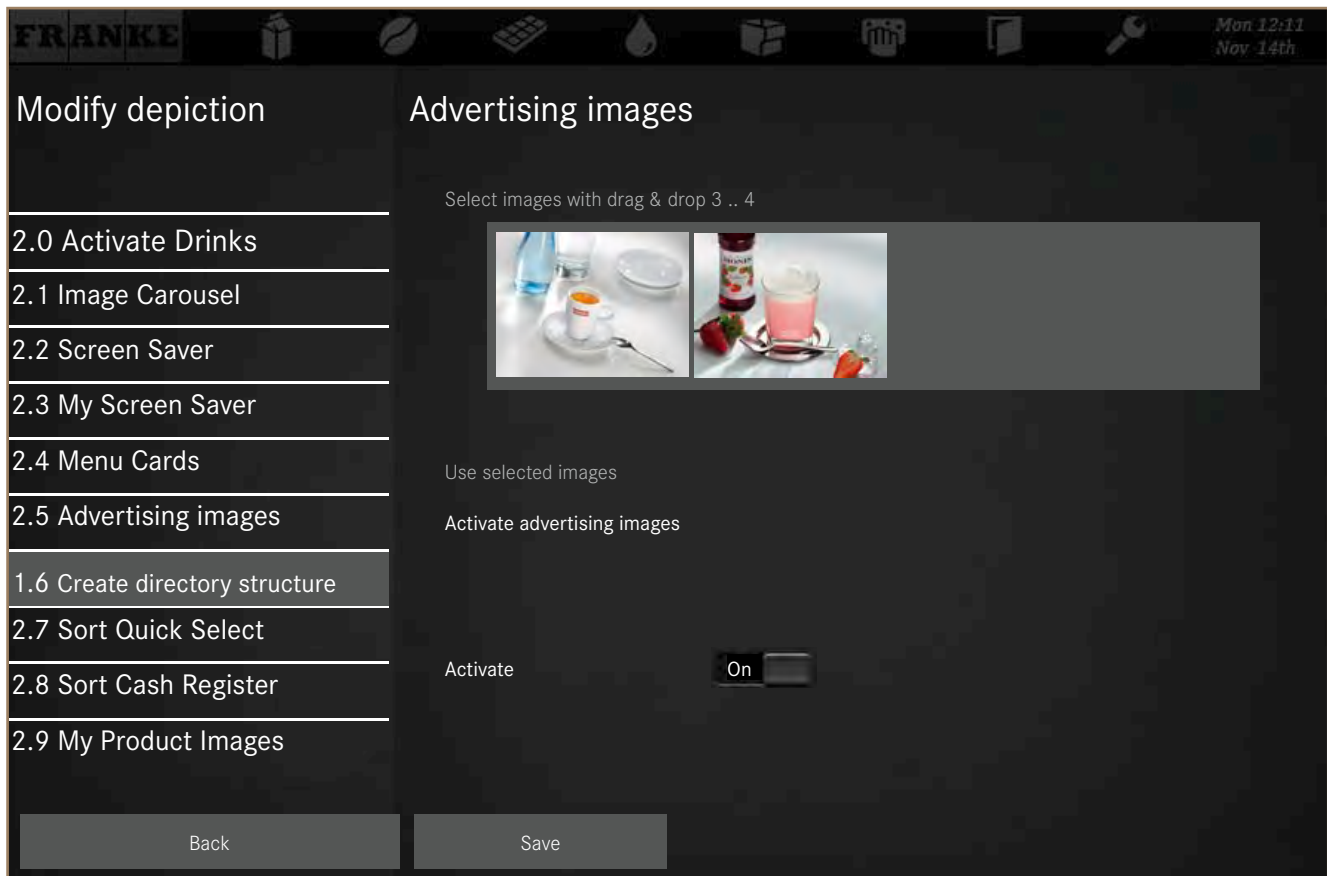


- ▶ Add or remove product images from the menu card with Drag&Drop.

2.5 Advertising images

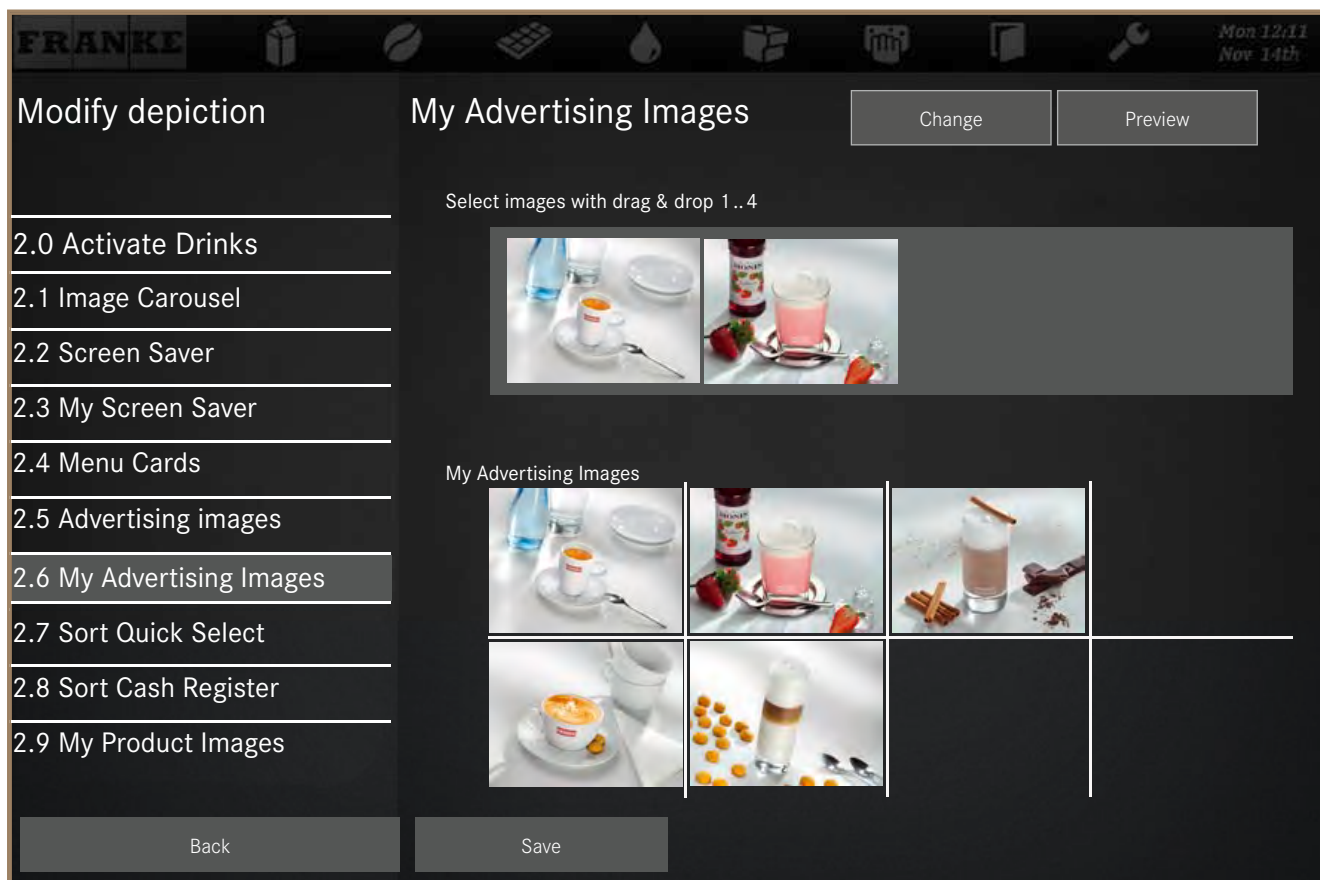


The customer can select which advertising images are to be displayed from among the available advertising images under the menu item [2.5 Advertising Images](#).

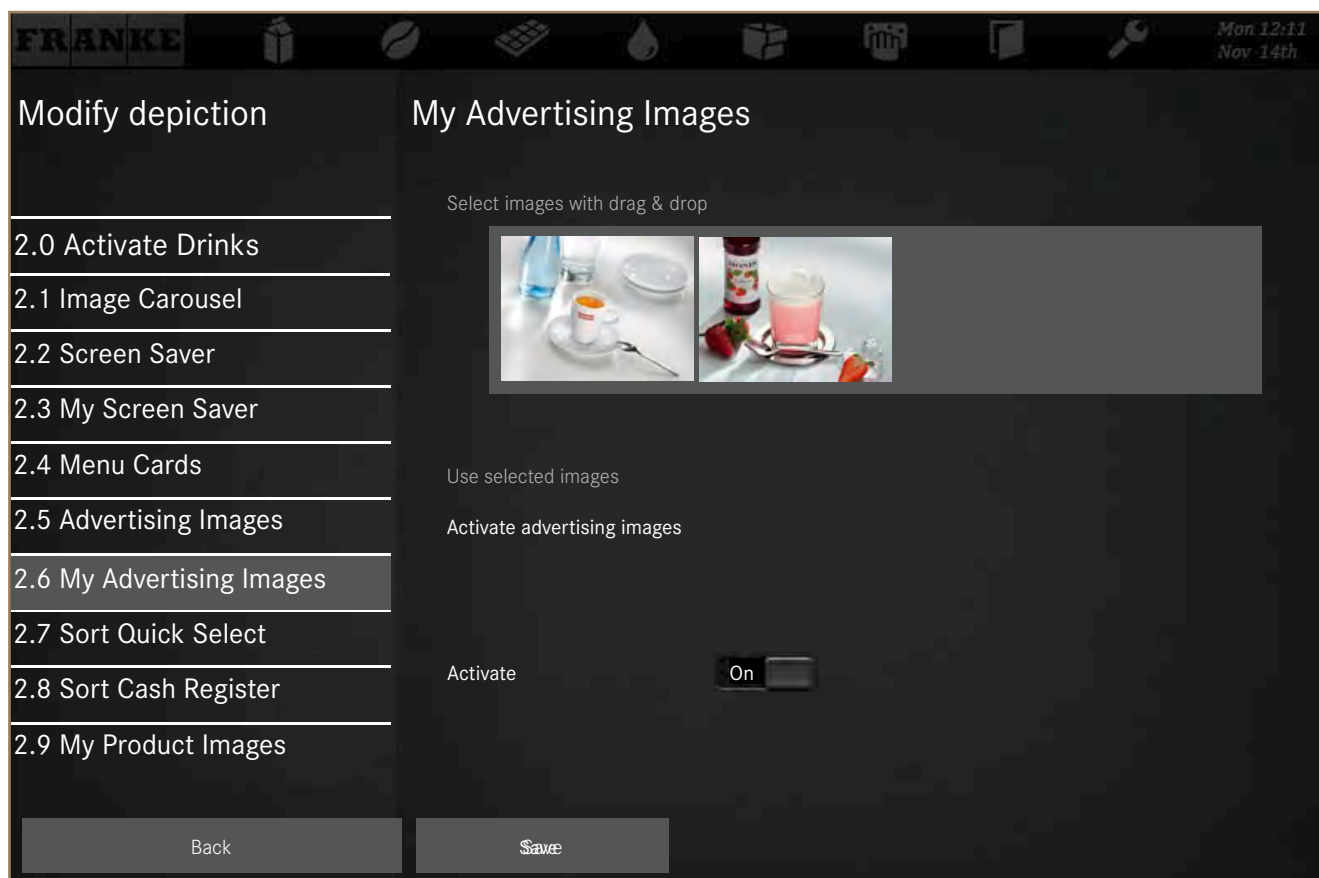


- ▶ Activate or deactivate the display of the advertising images.

2.6 My Advertising Images

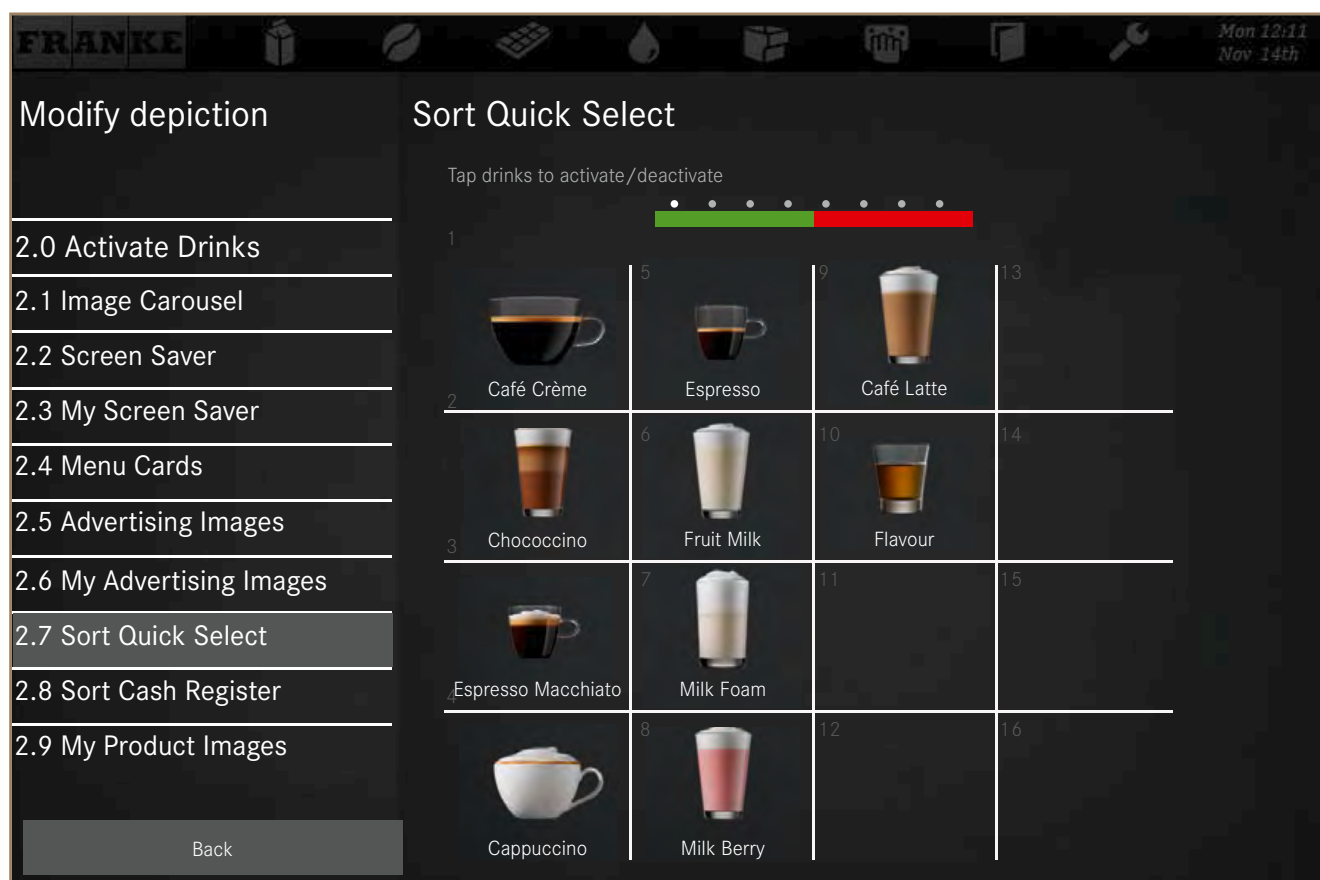


The customer can select which advertising images are to be displayed from among his own advertising images under the menu item 2.6 My Advertising Images.



- ▶ Activate or deactivate the display of your own advertising images.

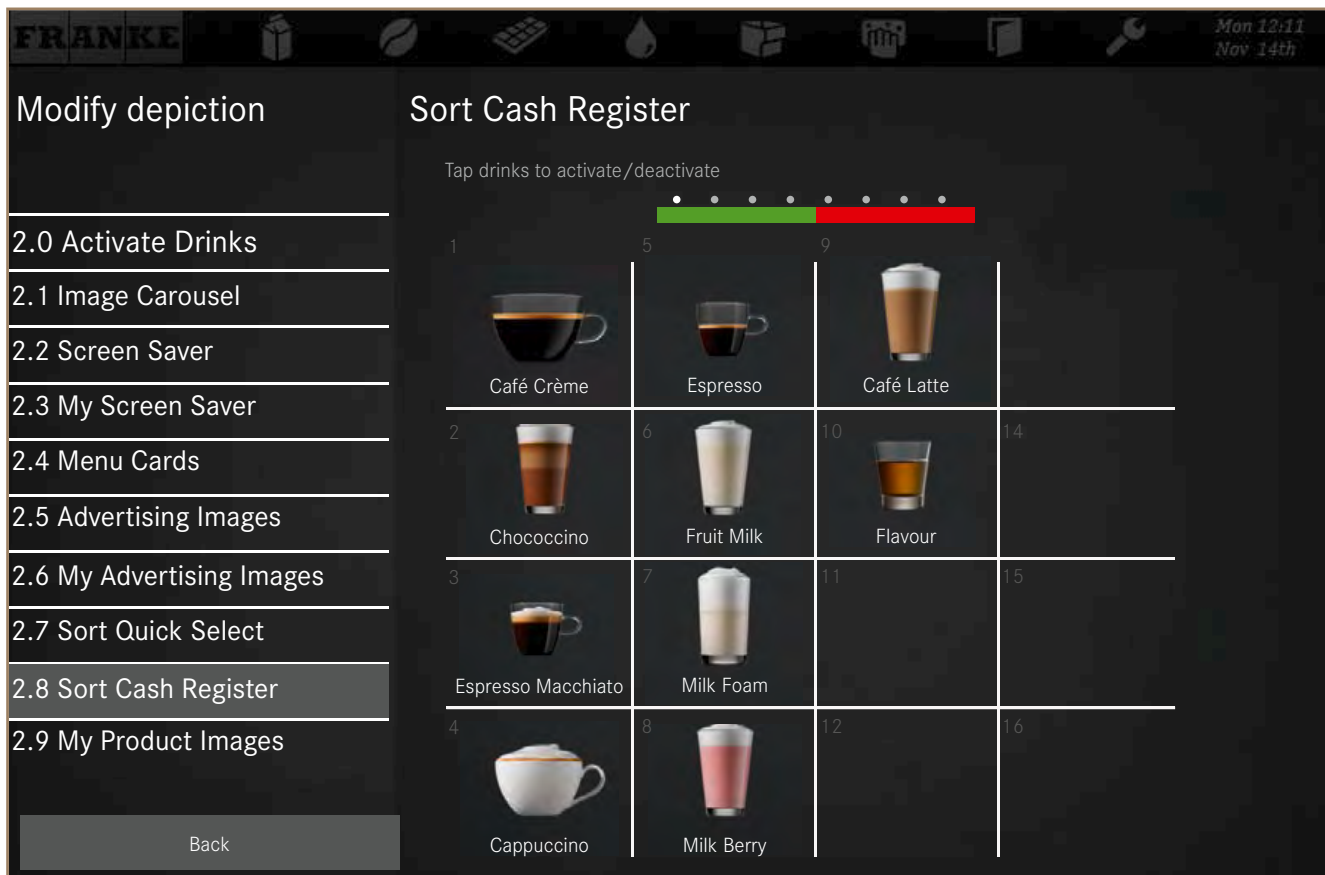
2.7 Sort Quick Select



The customer can use the [2.7 Sort Quick Select](#) menu item to modify the alignment of the drinks in the product selection. Thus, for example, he can set the drinks for which he wishes to promote sales on the first page.

- ▶ Select a drink and add it by tipping in a field.

2.8 Sort Cash Register



The customer can use the [2.8 Sort Cash Register](#) menu item to modify the alignment of the drinks in the product selection. Thus, for example, he can set the drinks that are frequently ordered on the first page.

- ▶ Select a drink and add it by tipping in a field.

2.9 My Product Images



The customer can assign his own images to the drinks under the menu item 2.9 My Product Images.

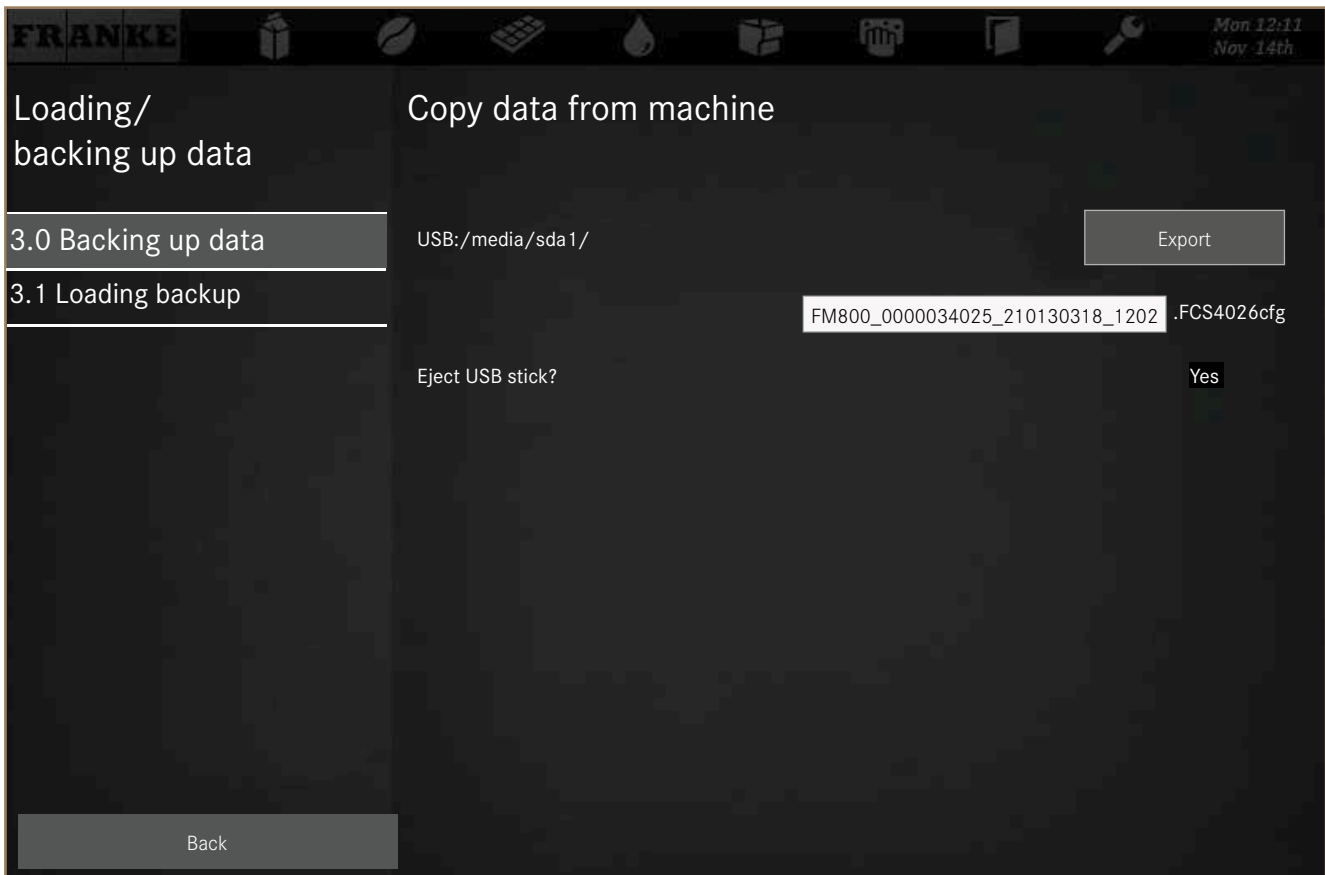
3. Loading/backing up data

3 Backing up/loading data



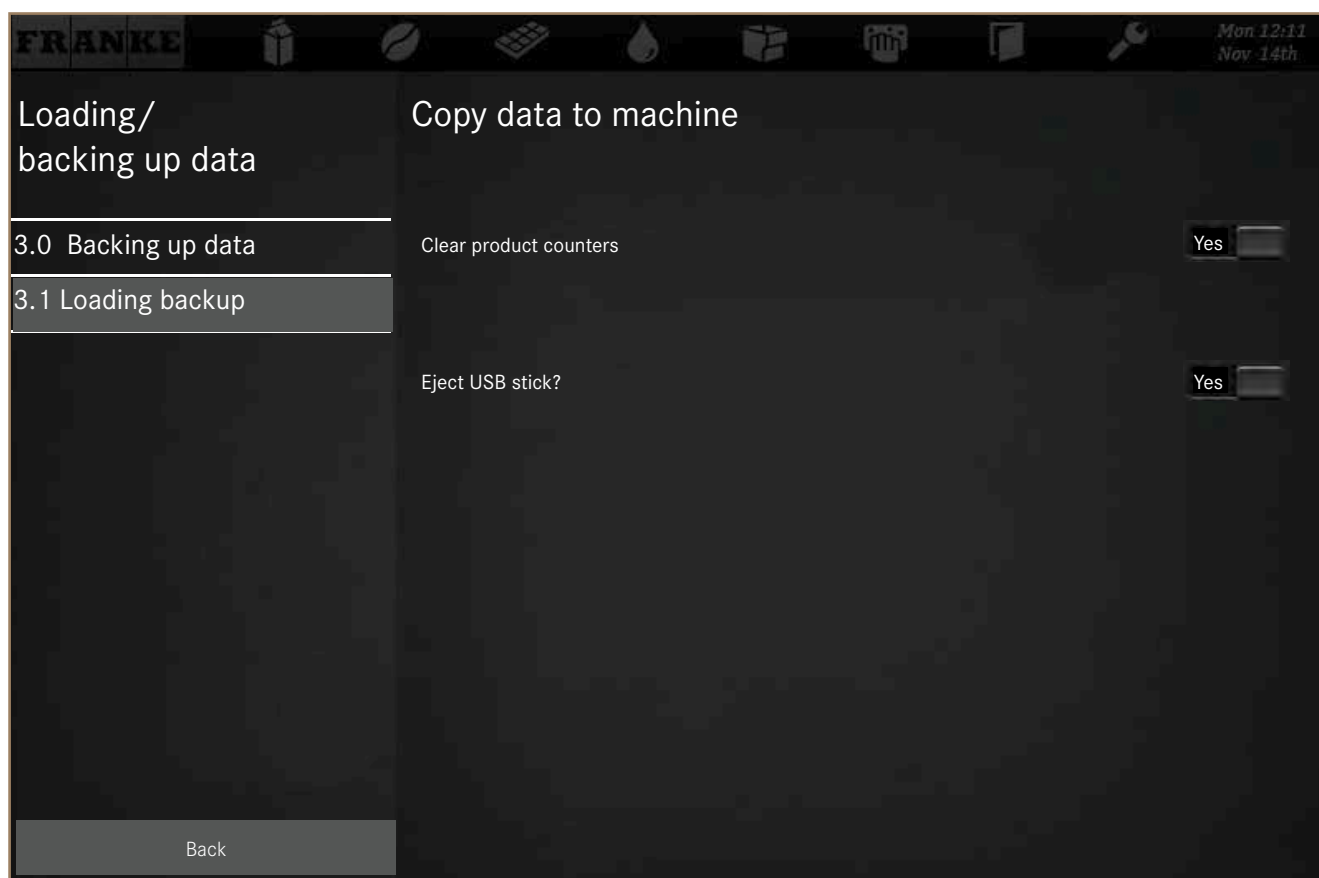
Menu item	Description	Page
3.0 Backing up data	Exporting data and settings	142
3.1 Loading backup	Load saved settings and data on machine	143

2.0 Backing up data



Customer-specific machine data can be backed up under the menu item 3.0 Backing up data.

3.1 Loading backup



Previously backed-up customer-specific machine data, e.g. after a software update, can be reloaded onto the machine under the menu item **3.0 Loading data**.

4. Import FPC

4 Import FPC



Menu item	Description	Page
Importing Product Catalogue	The Franke Product Catalogue is imported	

The Franke Product Catalogue (FPC) offers a large selection of recipes and product images. Every machine is shipped with the respectively current Franke Products Catalogue.

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FM 800

EN

Water flow diagram

compiled: 04.13

Order Number: 1H328817/B

Document Number: TD-104099/B



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2012-12-18	Preparation	HBD		0
2013-04-24	Update	HBD		B

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Issued December 2012. Subject to change without notice.

The present instructions reflect the state of the technology as of the date of issue.

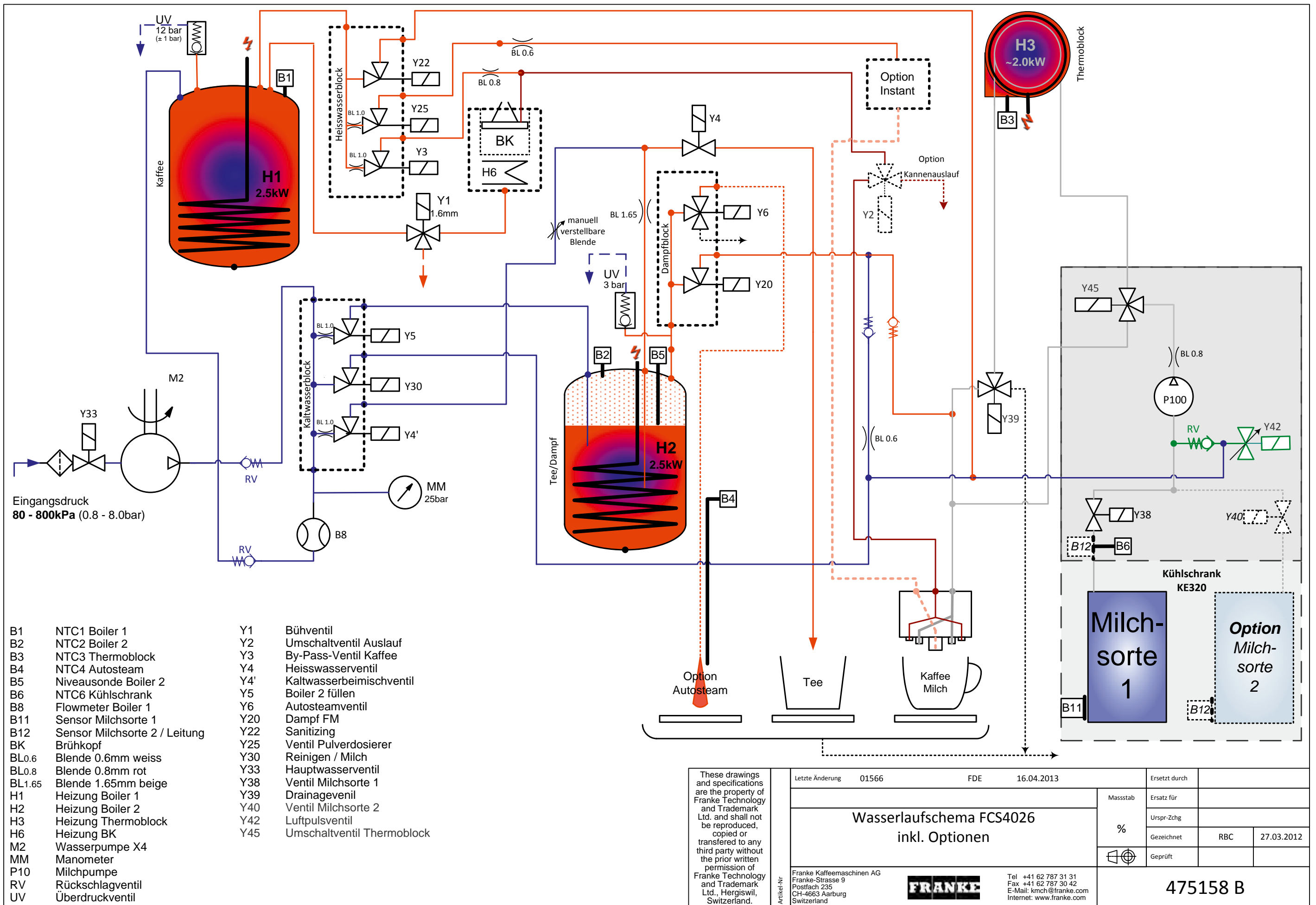
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I. Water flow diagram – FM800 2

I. Water flow diagram – FM800



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	Wasserlaufschema FCS4026 inkl. Optionen				Masstab	Ersetzt für
					%	Urspr-Zchg
	Franke Kaffeemaschinen AG Franke-Strasse 9 Postfach 235 CH-4663 Aarburg Switzerland				Gezeichnet	RBC
				Geprüft		
					475158 B	

FM 800

EN

Electrical diagrams

Document Number: TD-104102/0
Order Number: 1H328820/0
compiled: 04.13



Read the safety information chapter before working on the machines.

Change log

Date	Changes	Author	No.	ID
2012-12-19	Preparation	HBD		0

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I. For your safety

DANGER

Risk of death by electrocution!

Working on an open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.

WARNING

Danger of injury and of damage to the machine!

Changes implemented during the course of retrofits or repairs on the machine, if carried out incorrectly, can lead to injuries or machine failure.

- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Check modifications and retrofits and rectify if necessary.
- ◆ Do not undertake any modifications to the machine that are not described in the documentation provided by Franke.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Do not reach into the machine while it is operating.
- ◆ Only collect grounds in the grounds container or with a coffee grounds chute.

NOTICE**Damage from using inappropriate tools**

Using inappropriate tools may damage components of the machine and render it unusable.

- ◆ Use the tools recommended by Franke.

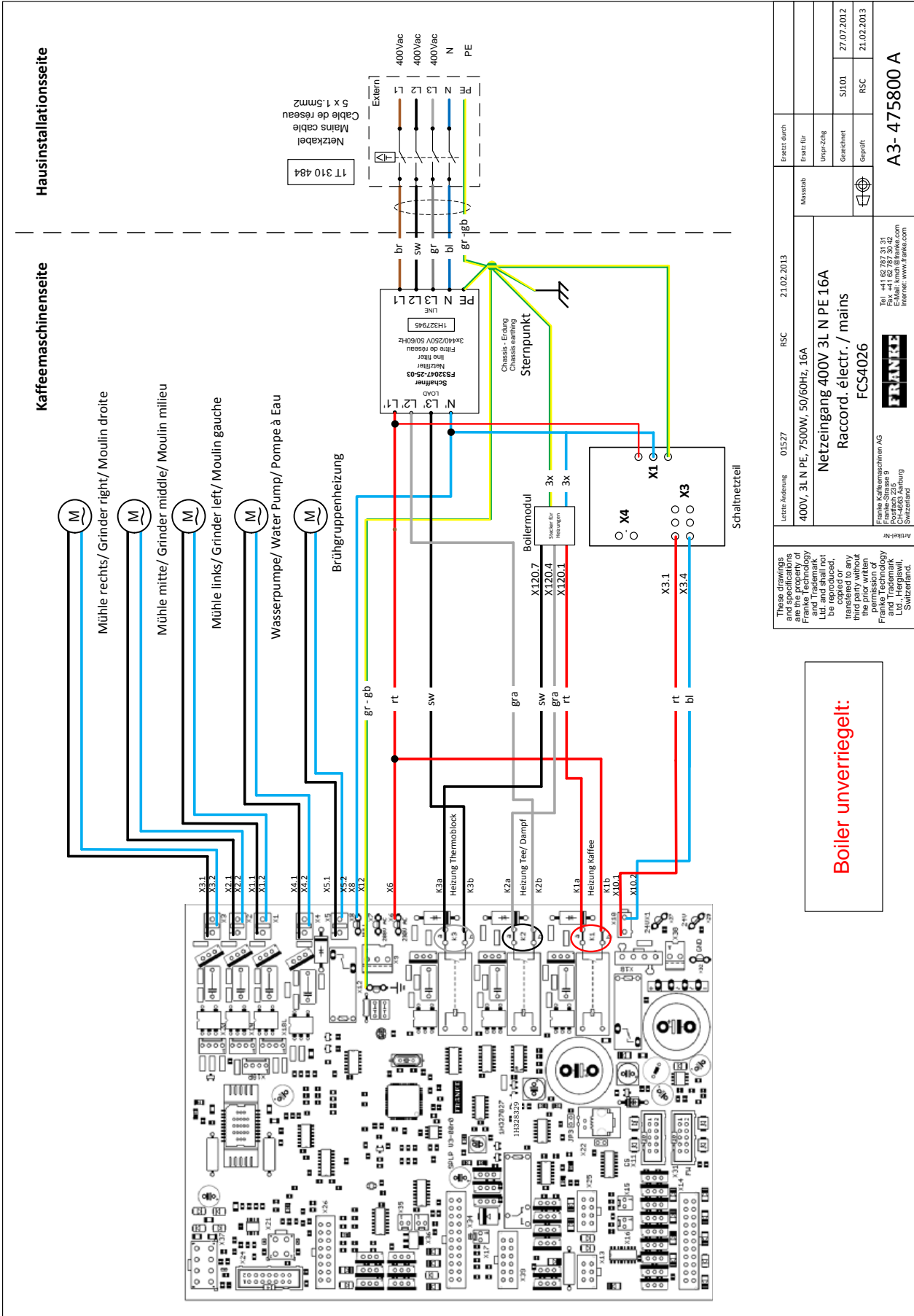
NOTICE**Damage from electrostatic charge**

Static charges can damage the sensitive electronics.

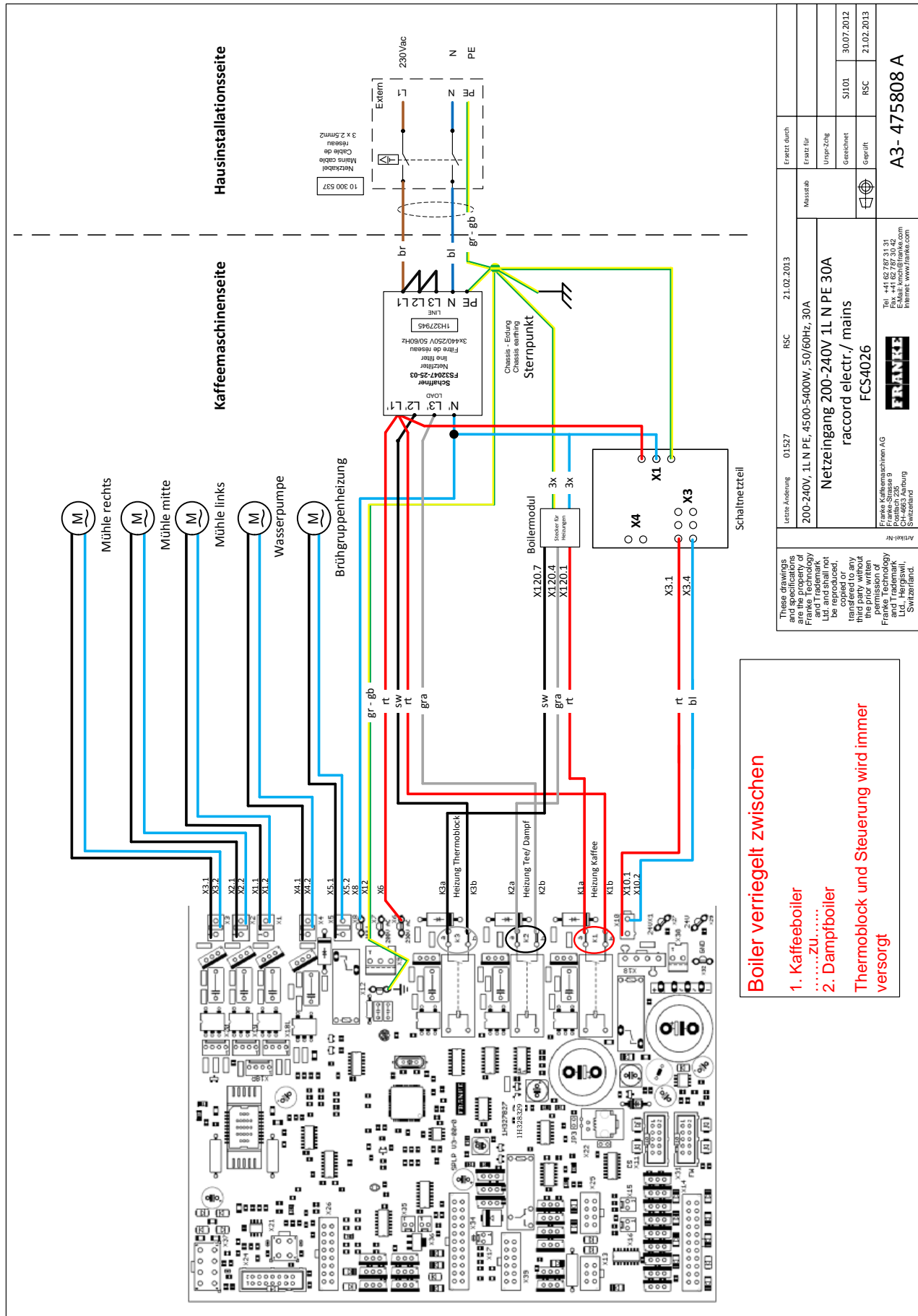
- ◆ Discharge any static electricity from the machine components and yourself before beginning work.

II. Electrical diagrams

1. Power input 400 V 3L N PE 16 A



2. Power input 200 - 240 V 1L PE 30 A



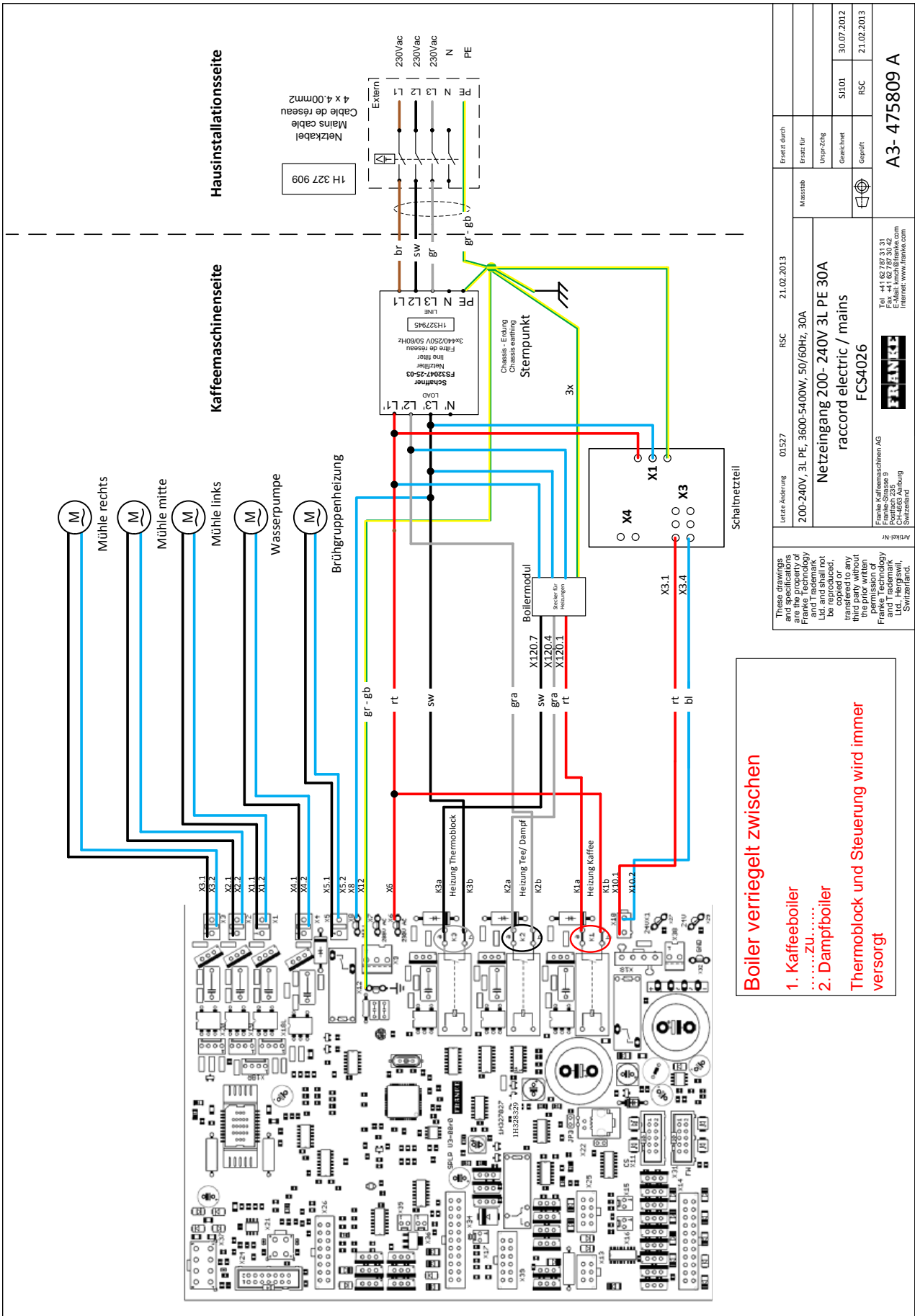
Artikel-Nr.	A3-475808 A		
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200-240V, 1L N PE, 4500-5400W, 50/60Hz, 30A	Ersetzt durch		21.02.2013
raccord electr./ mains	Ersetzt für		
FCS4026	Umgang		
	Gesichert	SJ101	30.07.2012
	Gegenlift	RSC	21.02.2013
	Massstab		
Franke Kaffeemaschinen AG Postfach 205 8600 Heringswil Switzerland Tel: +41 62 787 31 31 Fax: +41 62 787 31 32 E-Mail: kmr@franke.com Internet: www.franke.com			

Boiler verriegelt zwischen

1. Kaffeeboiler
-zu.....
2. Dampfboiler

Thermoblock und Steuerung wird immer versorgt

3. Power input 200 - 240 V 3L PE 30 A

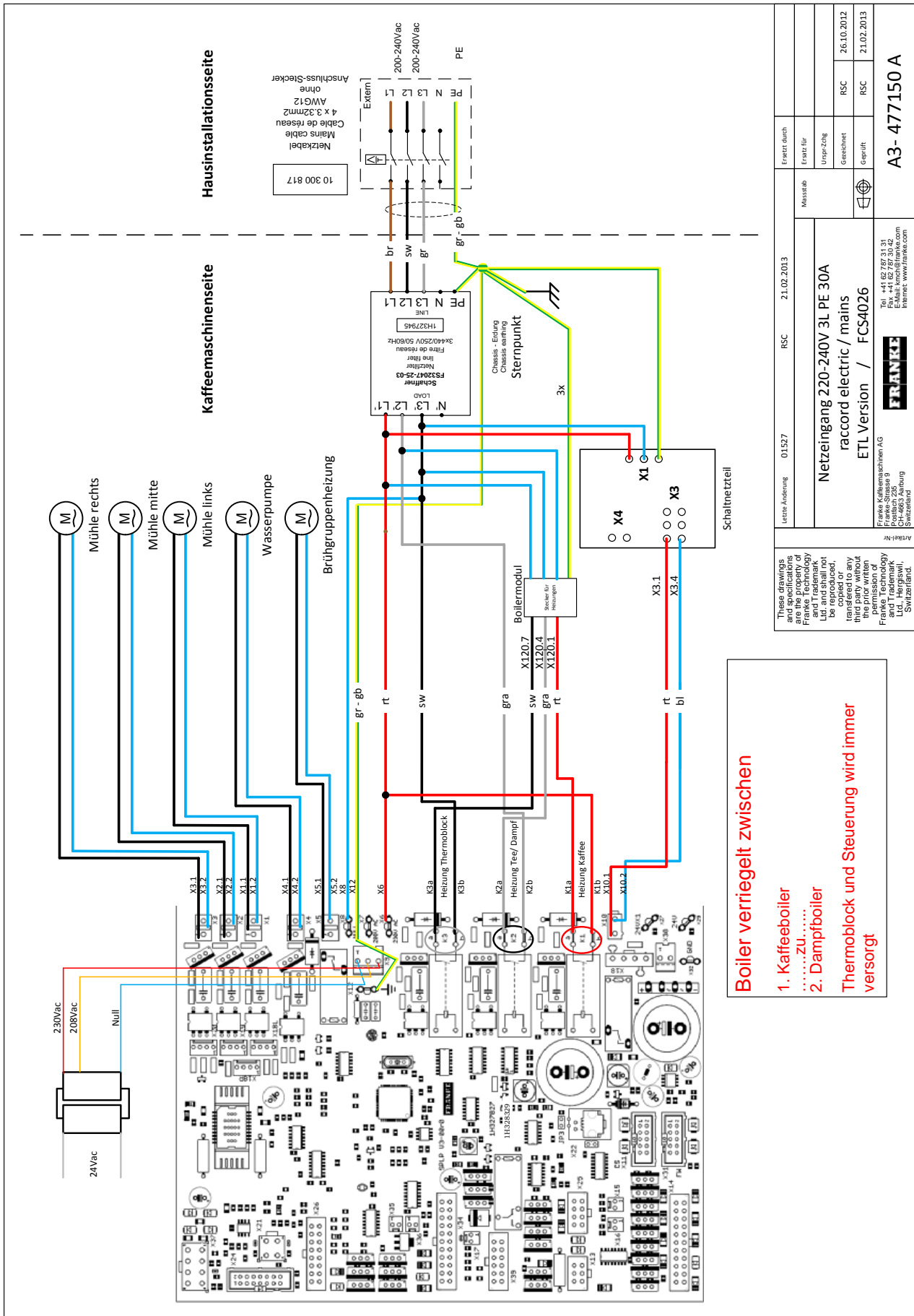


Boiler verriegelt zwischen

1. Kaffeeboiler
.....ZU.....
2. Dampfboiler

Thermoblock und Steuerung wird immer versorgt

4. Power input 220 - 240 V 3L PE 30 A, ETL Version



Boiler verriegelt zwischen

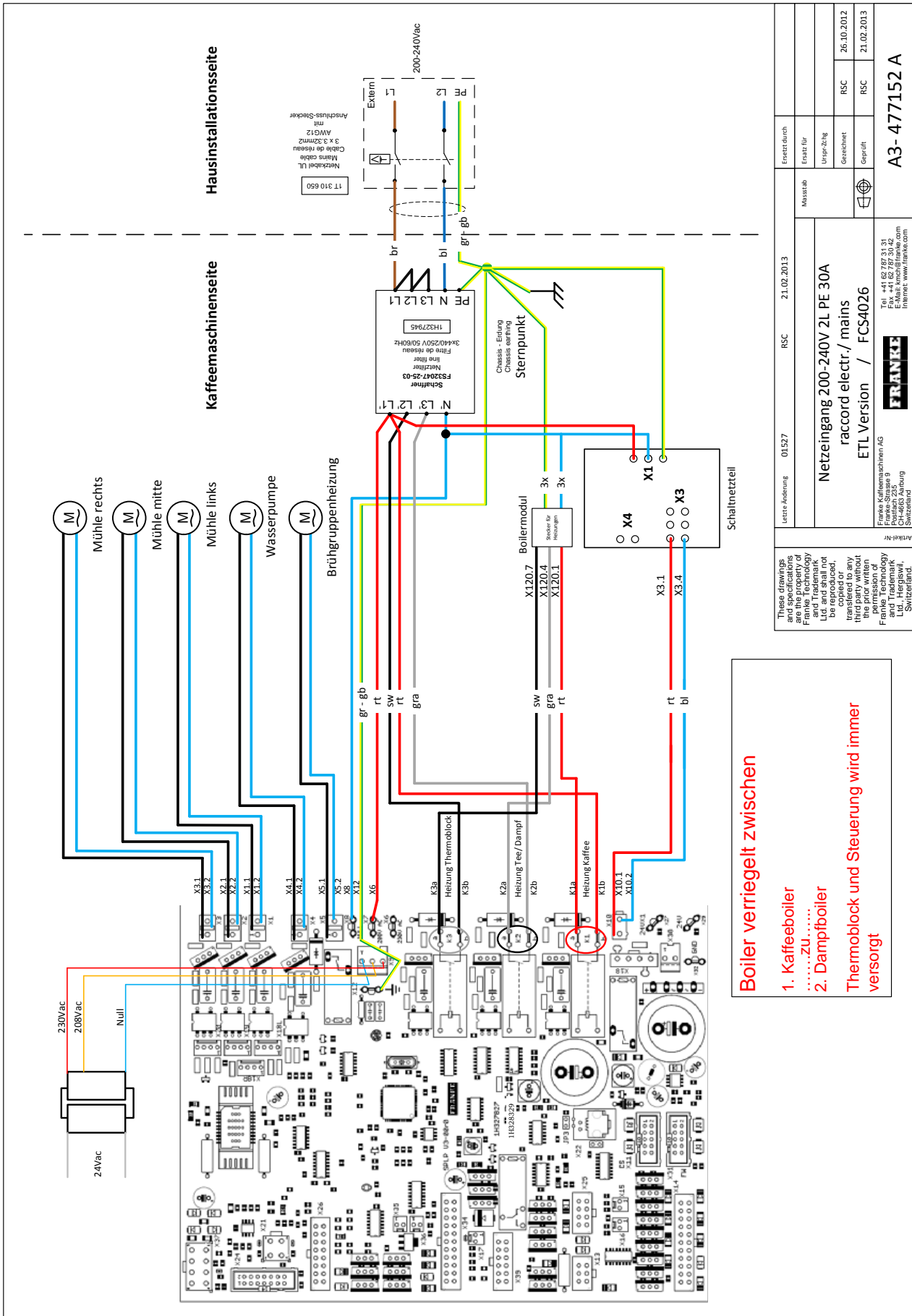
- 1. Kaffeeboiler
-zu.....
- 2. Dampfboiler

Thermoblock und Steuerung wird immer versorgt

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Artikel-Nr.	A3- 477150 A		
Letzte Änderung	01527	RSC	21.02.2013
Netzeingang 220-240V 3L PE 30A raccord electric / mains ETL Version / FCS4026			
Ersetzt durch			
Ersetzt für	Umgrüzung		
Geschrieben	RSC		26.10.2012
Geprüft	RSC		21.02.2013
Franke Kaffeemaschinen AG Franke-Strasse 9 CH-3400 Sarnen T: +41 02 787 31 31 E-Mail: kmc@franke.com Internet: www.franke.com			

5. Power input 200 - 240 V 2L PE 30 A, ETL Version



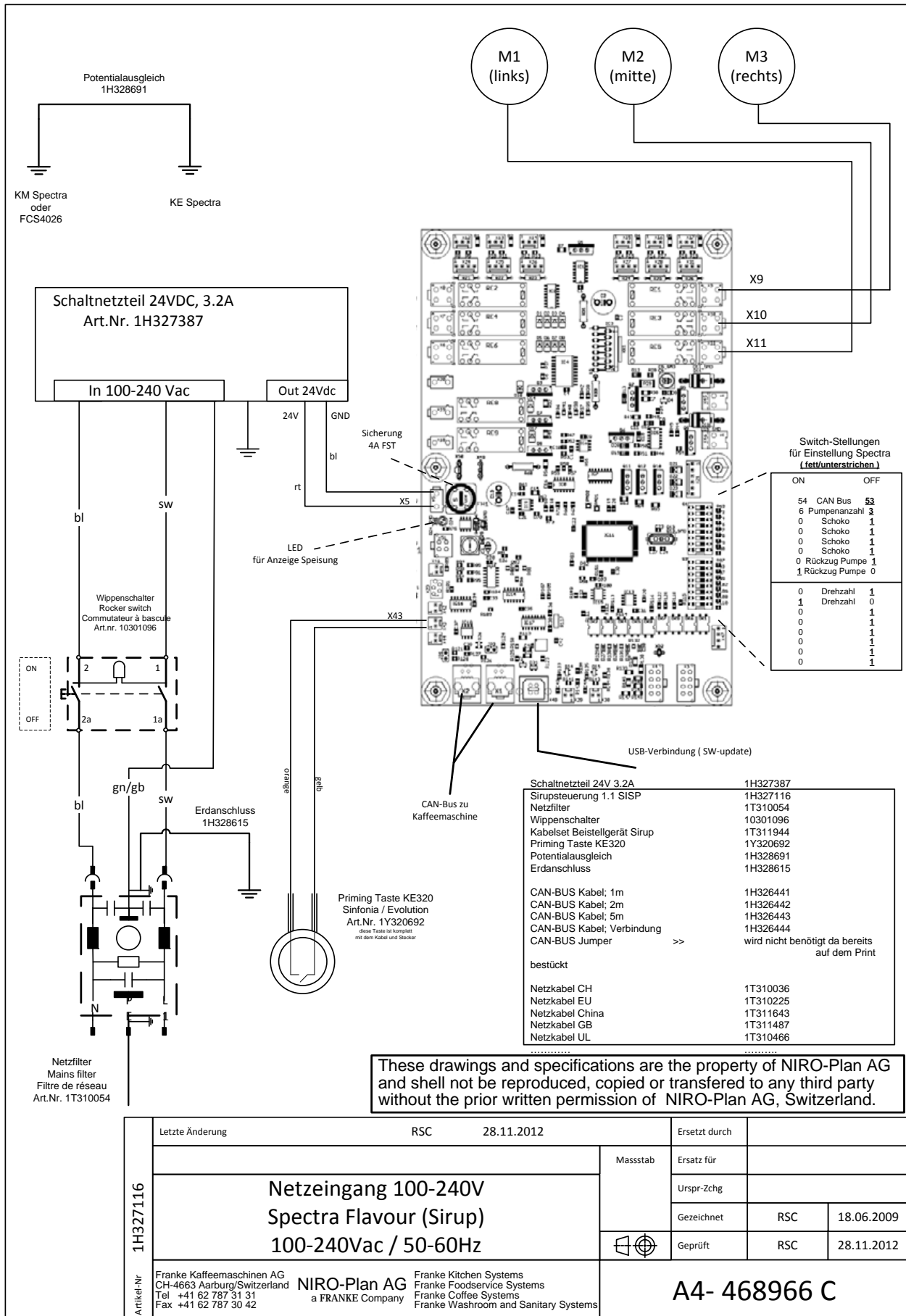
Boiler verriegelt zwischen

1. Kaffeeboiler
-ZU.....
2. Dampfboiler

Thermoblock und Steuerung wird immer versorgt

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Netzeingang 200-240V 2L PE 30A raccord electr. / mains ETL Version / FCS4026		Massstab				
Franke Kaffeemaschinen AG Franke-Strasse 9 CH-4863 Aarburg Switzerland Artikel-Nr. FRANKE Franke Kaffeemaschinen AG Tel. +41 62 787 31 31 Fax +41 62 787 30 42 E-Mail: knc@franke.com Internet: www.franke.com		Ersetzt durch	Ersetzt für	Urspr.-Zug	Gerechnet	Geprüft
				RSC	RSC	RSC
					26.10.2012	21.02.2013
						A3-477152 A

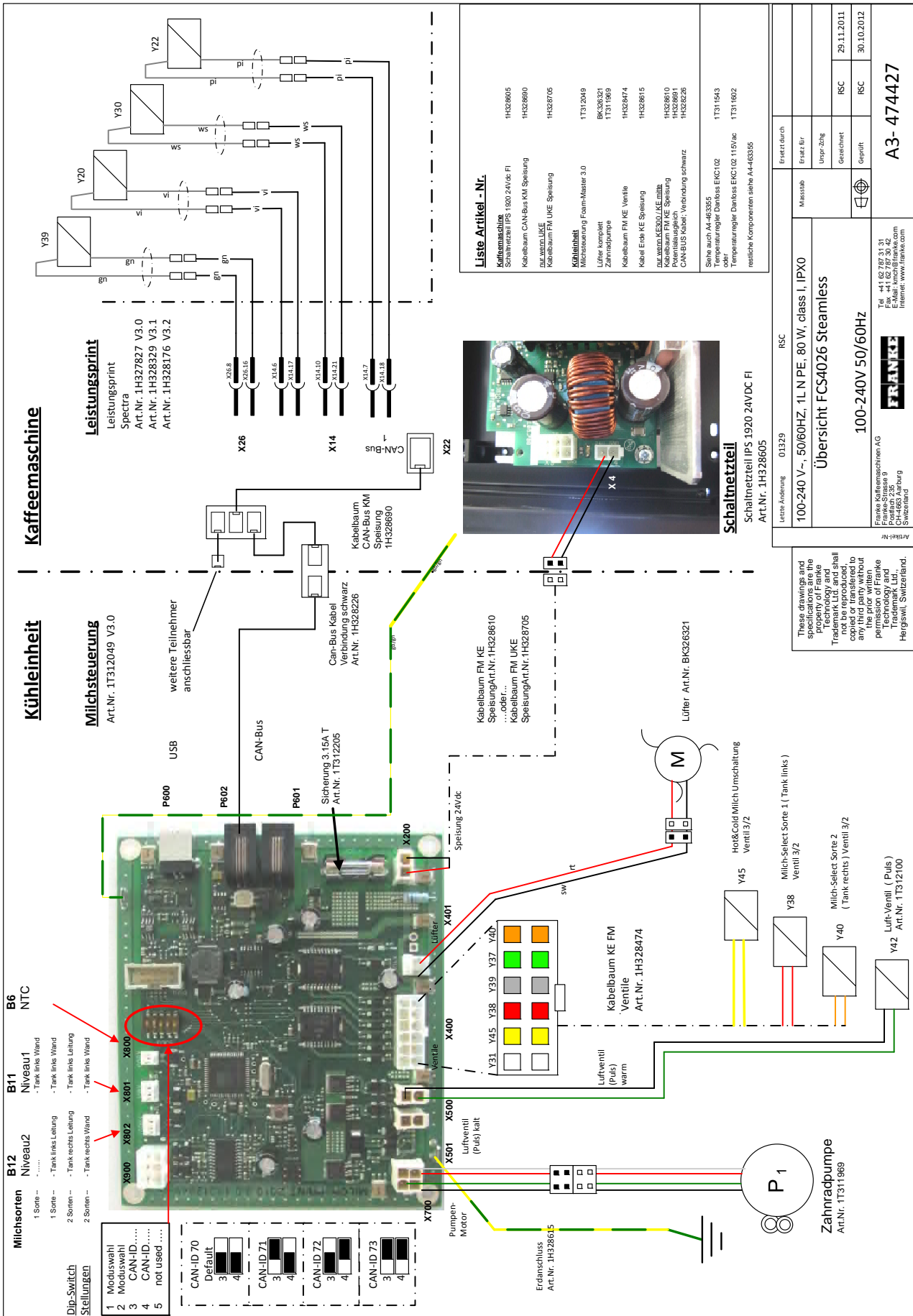
6. Power input Flavour 100 – 240 V, 100 – 240 Vac/50/60 Hz



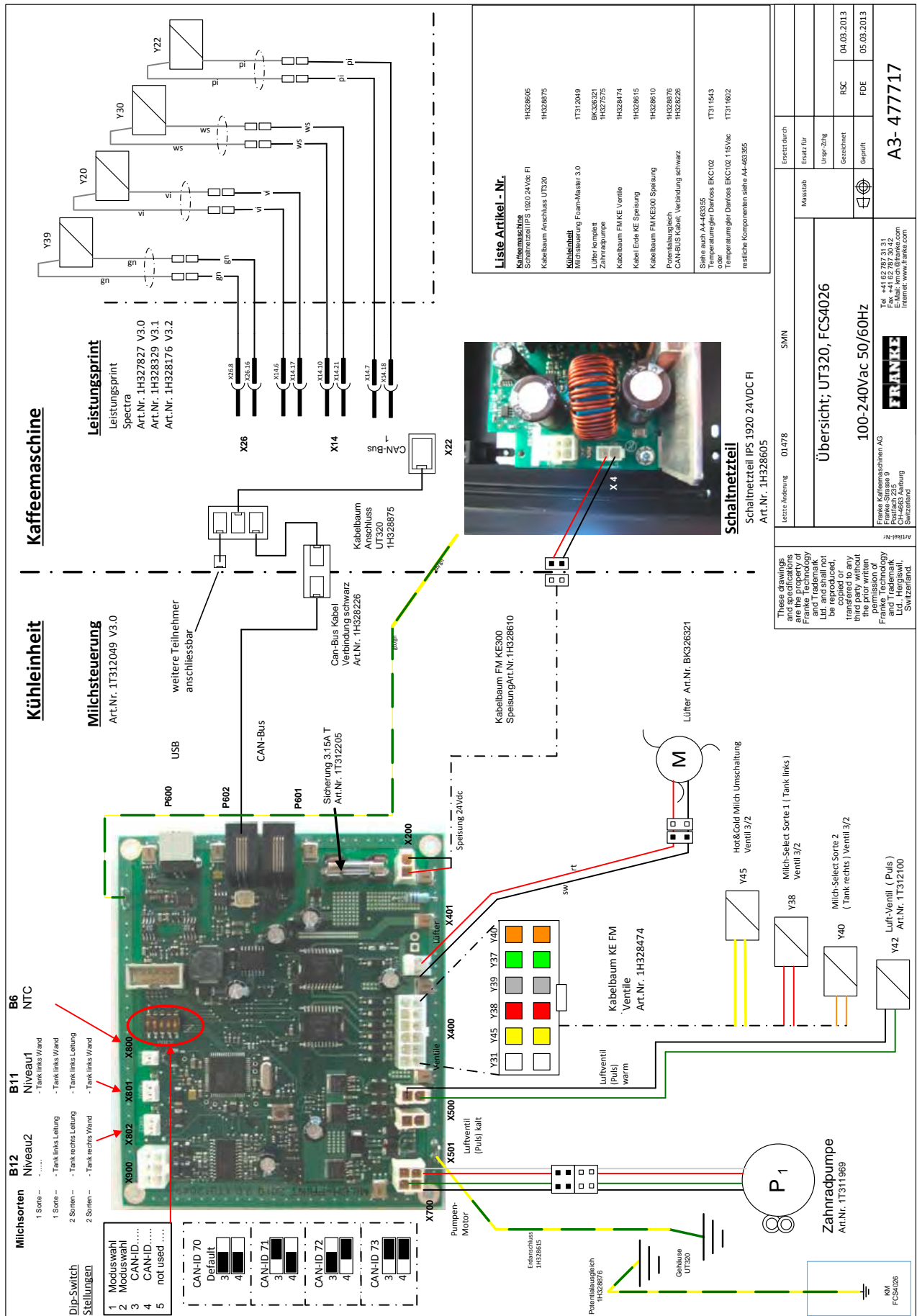
Order Number: 1H328820/0 compiled: 04.13

Document Number: TD-104102/0

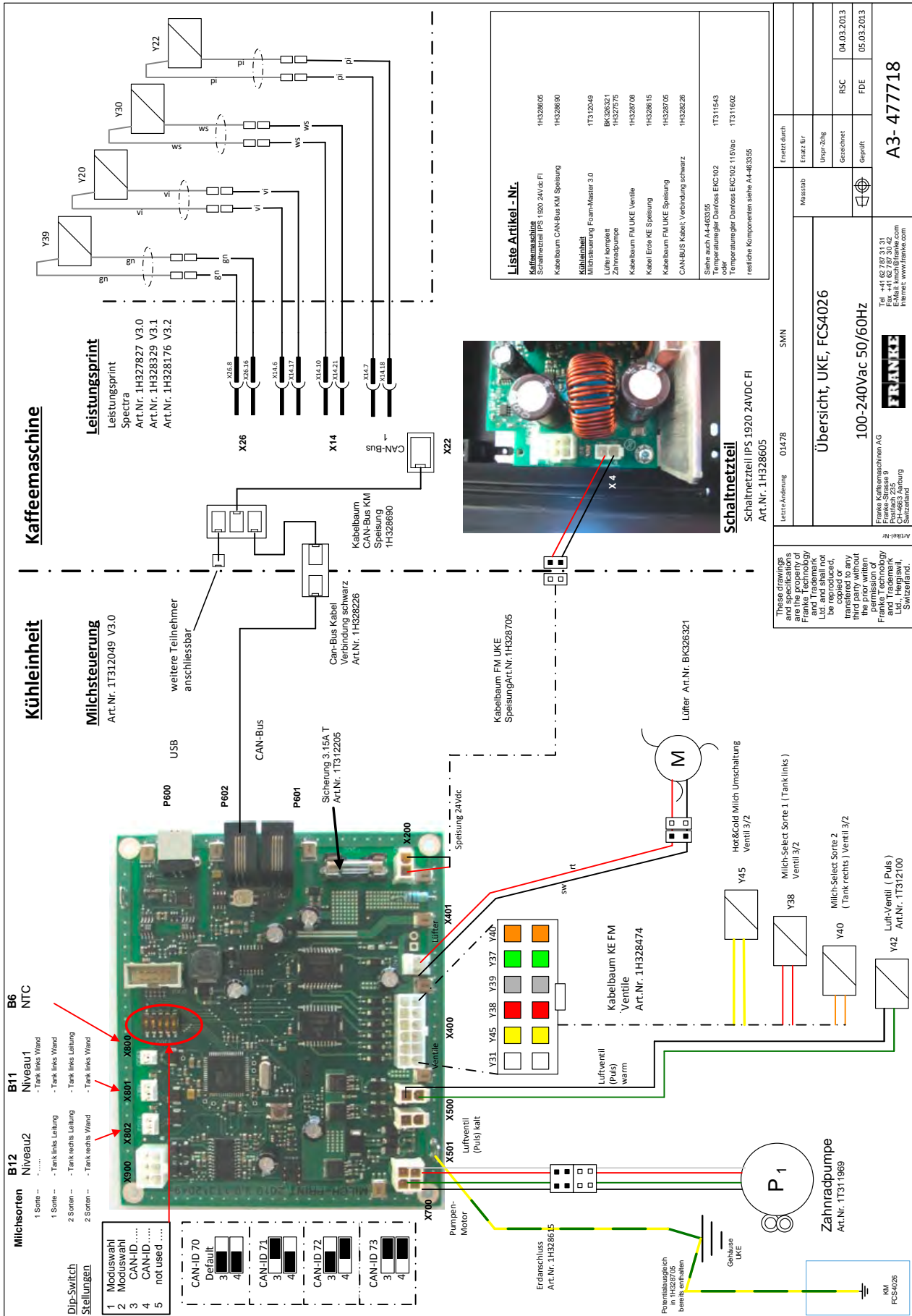
7. Overview Steamless, 100 – 240 V 50/60 Hz



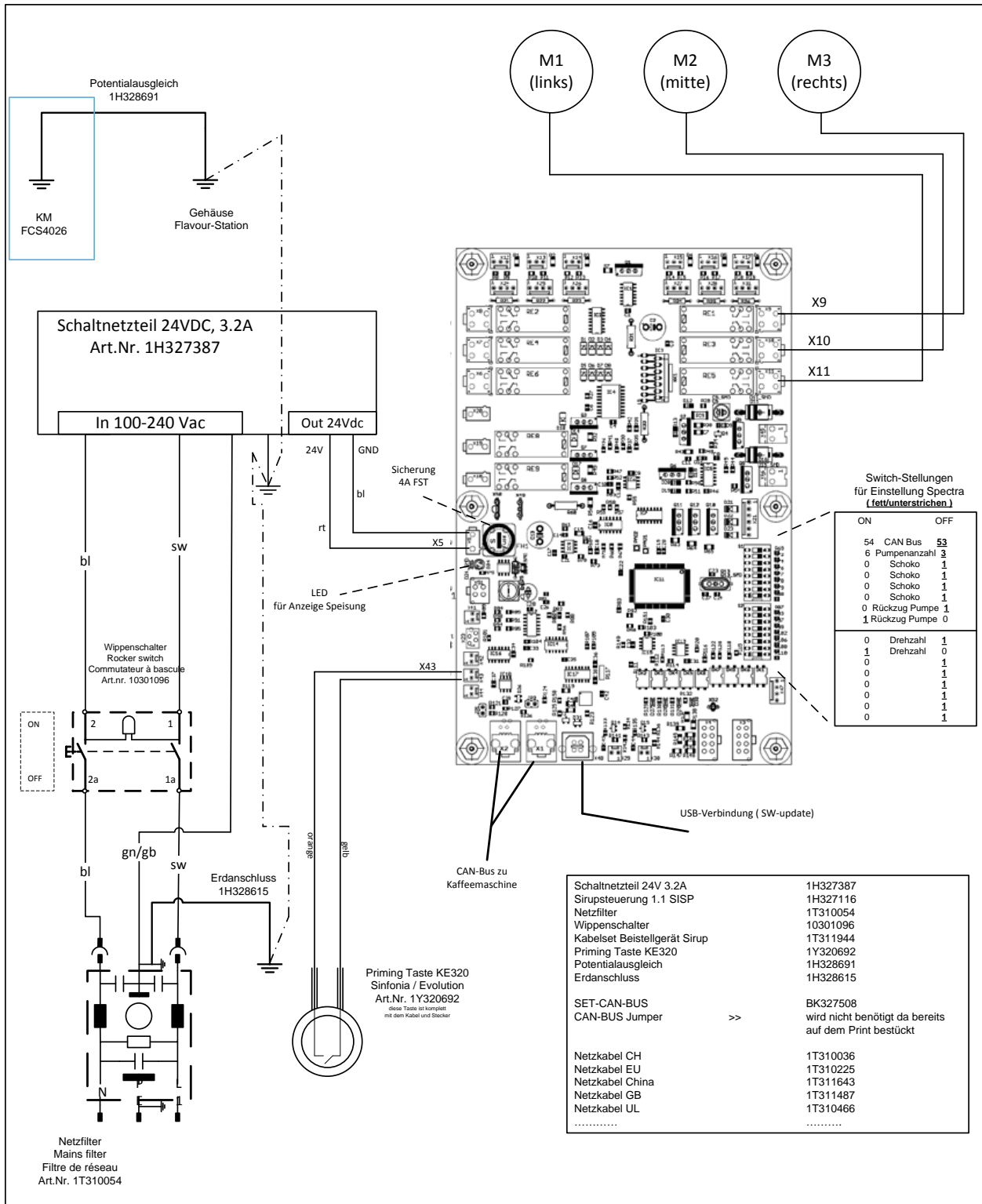
8. Overview UT320, 100 - 240 Vac 50/60 Hz



9. Overview, UKE, 100 - 240 Vac 50/60 Hz



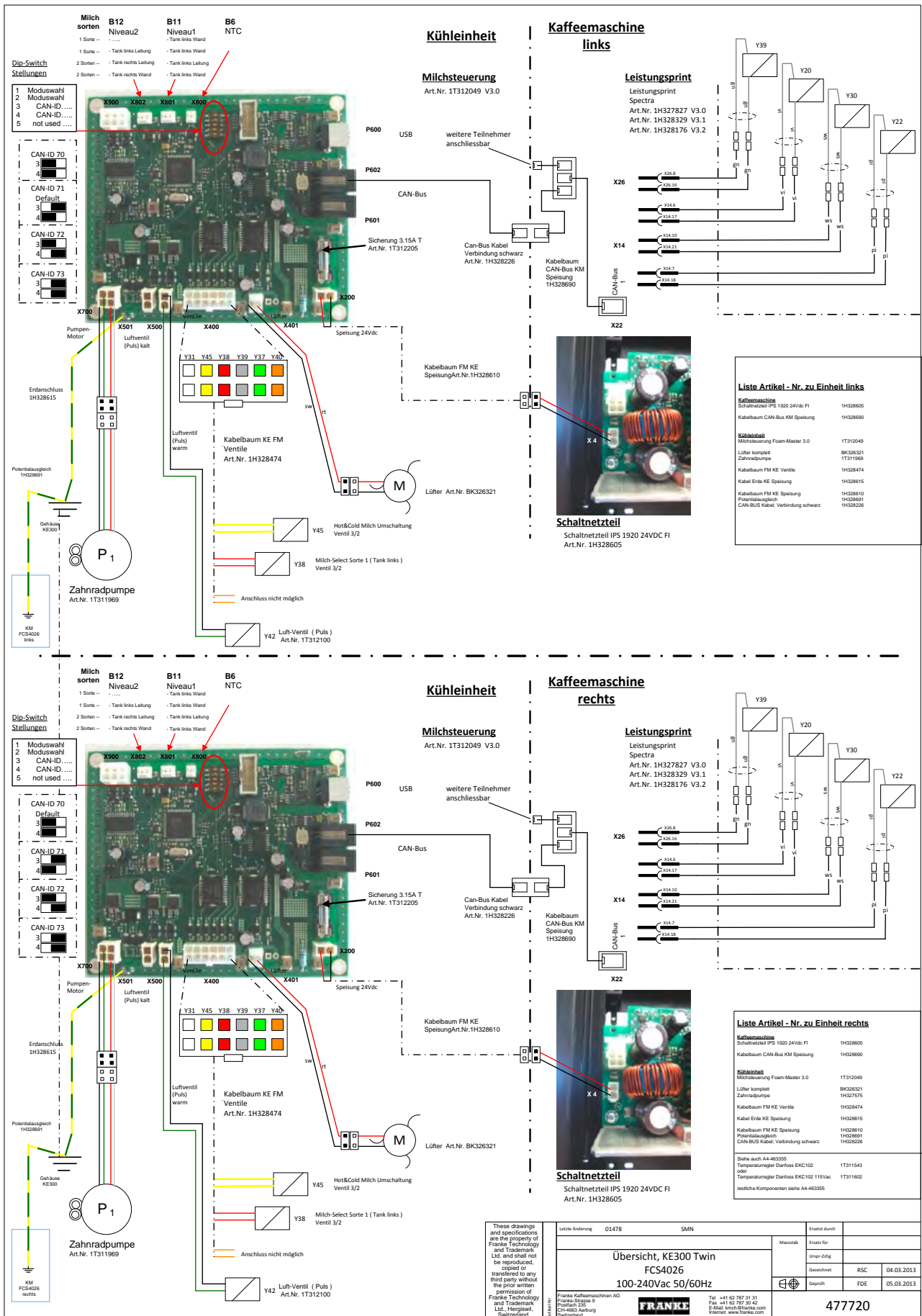
10. Overview, Flavour-Station, 100 - 240 Vac 50/60 Hz



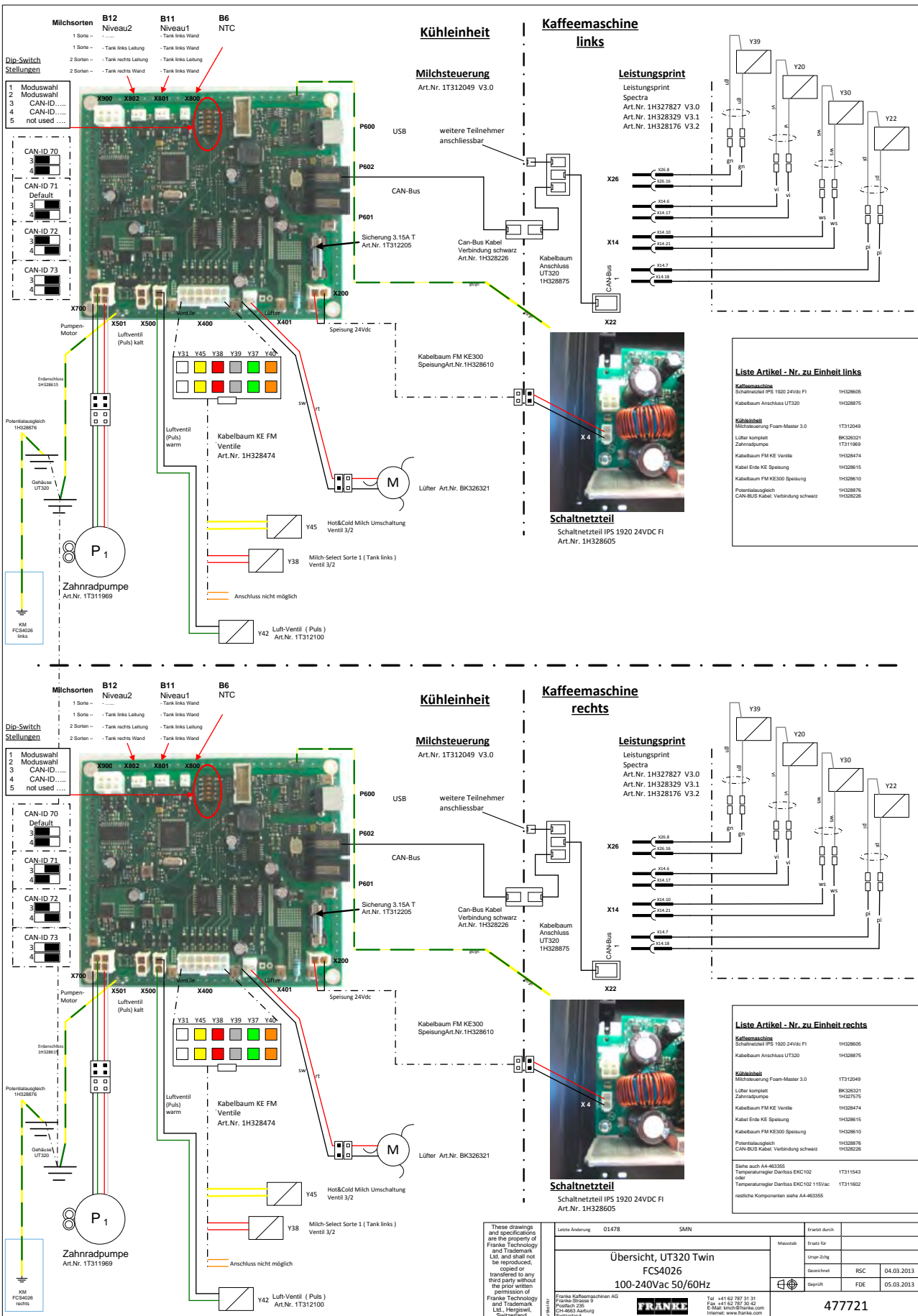
Order Number: 1H328820/0 compiled: 04.13
 Document Number: TD-104102/0

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	Übersicht, Flavour-Station FCS4026 100-240Vac 50/60Hz	Massstab	Ersatz für
		Urspr-Zchg	Gezeichnet RSC 04.03.2013
		Geprüft FDE	05.03.2013
		A4- 477719	
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11. Overview KE300 Twin, 100 - 240 Vac 50/60 Hz



12. Overview, UT320 Twin, 100 - 240 Vac 50/60 Hz



compiled: 04.13

Order Number: 1H328820/0

Document Number: TD-104102/0

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Übersicht, UT320 Twin
FCS4026
100-240Vac 50/60Hz

Erstellt durch	Maximal	Ersatz für	
		Unger-Zhig	
		Gewerkmet	RSC 04.03.2013
		Gewerk	FDE 05.03.2013

477721

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FM800

EN

Checklists and certificates

Order Number: 1H328823/0

Document Number: TTD-104-105/0



Read the safety information chapter before working on the machines.

Change log

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2013-02-26	Preparation	HBD		0
				A
				B

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I. Explanation of symbols

 **DANGER**

DANGER indicates potentially life-threatening danger or the danger of grave injuries.

 **WARNING**

WARNING indicates risk of injury.

 **CAUTION**

CAUTION directs your attention to a danger of minor injuries.

NOTE

NOTE directs your attention to the risk of damage to machinery.



Tips shortcuts and additional information



Prerequisites for additional steps



Information on materials and tool tips with information on usage (torque, etc.)



Prompt to clean components thoroughly with water. More detailed information is available at the respective passage in the text if necessary.

II. For your Safety



- The safety information applies to the entire instructions.
- Read and understand the present information before performing any work on the machine.
- The present instructions have been compiled exclusively for Franke service technicians or authorized partners. They will enable service technicians to perform their tasks on the coffee machine and its add-on units. These tasks include commissioning, programming, maintenance work, troubleshooting and product quality settings.

DANGER

Risk of death by electrocution!

Working on the open machine can lead to electrocution.

- ◆ Disconnect the machine from the power supply.
- ◆ Ensure that the machine cannot be accidentally turned on.
- ◆ Do not make any modifications to the machine that are not described in the documentation provided by Franke.

A damaged power supply cable may lead to electrocution.

- ◆ Never operate a machine that has been damaged or has a damaged power supply cable.
- ◆ If the power supply cable to this machine is damaged, it must be replaced by a power cord intended for that purpose.
- ◆ Ensure that the machine and power supply cable are not near any hot surfaces such as gas or electric stoves or ovens.
- ◆ Ensure that the power supply cable is not pinched and does not rub against sharp edges. The machine contains electrically conductive parts. Opening the machine can pose risk of death.
- ◆ Repairs should only be made using original replacement and accessory parts.

WARNING

Danger of injury and of damage to the machine from improper installation

A danger of injury exists with incorrect installation. The machines can be damaged.

- ◆ Evaluate structural conditions with respect to installation conditions.
- ◆ Observe local statutory requirements with respect to structural conditions.

If the conditions for installation are not 100% fulfilled, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

CAUTION

Health hazard from heavy lifting

Lifting heavy objects can cause injury.

- ◆ Do not lift or move machines by yourself.

WARNING

Risk of injury

Reaching into the machine may result in abrasions or crushing injuries from interior components.

- ◆ Exercise care and caution when working in an open coffee machine.
- ◆ Exercise care when making repairs or retrofits and follow the instructions.
- ◆ Do not reach into the machine while it is operating.
- ◆ Only collect grounds in the grounds container or with a coffee ground chute.

NOTE

Damage from using inappropriate tools

Using inappropriate tools may damage components of the machine and render them unusable.

- ◆ Use the tools recommended by Franke.

NOTE

Damage to the coffee machine or add-on units from improper transport!

The machine and add-on units may be damaged and their function may be impaired.

- ◆ Always transport the machine and the add-on units in an upright position.
- ◆ Load the machines and add-on units for safe transport in the vehicle.

NOTE

Damage caused by insufficient clearances

If the clearances between the machine and the wall and above the machine are not maintained, heat may accumulate in the machine and lead to faults.

- ◆ Maintain the installation dimensions prescribed by Franke.

III. Checklists

1. Installation – Evaluating the situation

WARNING

Danger of injury and of damage to the machine from improper installation

If the conditions for installation are not 100% fulfilled, the following applies:

- ◆ Do not install or start up coffee machines or add-on units.
- ◆ The customer is responsible for making improvements.
- ◆ Do not perform improvements at the customer site yourself.

Requirement	Ful-filled	Deviation/measured value
Surface	<input type="checkbox"/>	
Safety clearances above (min. 200 mm or 7 ¾")	<input type="checkbox"/>	
Safety clearances behind (min. 50 mm or 2")	<input type="checkbox"/>	
Load (min. 150 kg or 330.70 lbs)	<input type="checkbox"/>	
Separator (ground fault circuit interrupter)	<input type="checkbox"/>	
Outlet available	<input type="checkbox"/>	
Outlet connected	<input type="checkbox"/>	
Fuse	<input type="checkbox"/>	
Position of electrical connections	<input type="checkbox"/>	
Position of water connections	<input type="checkbox"/>	
Water pressure	<input type="checkbox"/>	
Connection piece	<input type="checkbox"/>	
Position of waste-water connections	<input type="checkbox"/>	
Pipe cross-section	<input type="checkbox"/>	
Connection piece	<input type="checkbox"/>	
Shut-off cock	<input type="checkbox"/>	
Water filter	<input type="checkbox"/>	
Water hardness	<input type="checkbox"/>	
Chlorine content	<input type="checkbox"/>	
pH value	<input type="checkbox"/>	
Holes available for grounds ejection (if required)	<input type="checkbox"/>	



All points fulfilled?

- The installation may proceed.

Are there any deviations?

- Inform the customer of any deviations.
- Propose solutions to resolve the problem(s).
- Postpone installation.
- Discuss the procedure with your supervisor, if necessary.

2. Commissioning: Recommended procedure



- Fully connected coffee machine.



- For instructions on commissioning the machine, see *Section 2 - Commissioning, Chap. VII Commissioning, p. 15*

Material checklist

Tools and additional materials	Completed
Service instructions	<input type="checkbox"/>
Laptop	<input type="checkbox"/>
Current software version, if update required (download from CSS)	<input type="checkbox"/>
Coffee machine type plate	<input type="checkbox"/>
Job/coffee machine order	<input type="checkbox"/>
Magnet	<input type="checkbox"/>
Open-end wrenches, sizes 10 and 14	<input type="checkbox"/>
Torx screwdriver, size 20	<input type="checkbox"/>
Scale (BK300494)	<input type="checkbox"/>
Grinder adjustment key (BK310252)	<input type="checkbox"/>
Collection container	<input type="checkbox"/>
Coffee beans, milk, chocolate powder for automatic coffee machines, syrup	<input type="checkbox"/>
Measuring cup	<input type="checkbox"/>
Customer product list	<input type="checkbox"/>
Customer's cups and glasses	<input type="checkbox"/>
Backup copy of the configuration for the customer	<input type="checkbox"/>
Handover report for the customer	<input type="checkbox"/>

Tasks during commissioning

Step	Tools/additional materials	Completed
Software update (carry out only if the newer software contains significant changes with respect to the installed version, see Service Information on software update)	<ul style="list-style-type: none"> Laptop or PC Current software version (download from CSS) USB cable Service Information on update (CSS) 	<input type="checkbox"/>
Configuring the machine	<ul style="list-style-type: none"> Magnet Open-end wrenches, sizes 10 and 14 Torx screwdriver, size 20 Scale (BK 300 494) Grinder adjusting wrench (BK 310 252) Collection container Coffee beans, milk, chocolate powder, flavour Measuring Cup 	<input type="checkbox"/>
Defining products	<ul style="list-style-type: none"> List of desired products Customer's cups and glasses Coffee beans, milk, chocolate powder, flavour 	<input type="checkbox"/>
Define customer access control	<ul style="list-style-type: none"> PIN codes for menu items 	<input type="checkbox"/>
Discuss cleaning and rinsing	<ul style="list-style-type: none"> PIN codes for the Maintenance Menu 	<input type="checkbox"/>
Saving the settings	<ul style="list-style-type: none"> USB stick 	<input type="checkbox"/>
Handover to customer	<ul style="list-style-type: none"> Back-up copy Handover report 	<input type="checkbox"/>

3. Handover to customer



- Fully equipped and operational machine.
- Back-up copy of settings.

Task	Persons	Completed
Explain operation	Customer or other person responsible	<input type="checkbox"/>
Rights and PIN codes	Customer	<input type="checkbox"/>
Discuss and demonstrate cleaning and rinsing	Customer or responsible individual (point out his responsibilities)	<input type="checkbox"/>
Discuss ordering cleaning supplies	Customer or other person responsible	<input type="checkbox"/>
Hand over user documentation with the instruction that the documentation must be stored with the coffee machine	Customer	<input type="checkbox"/>
Discuss service	Customer or other person responsible	<input type="checkbox"/>
Discuss maintenance intervals and contract	Customer or other person responsible	<input type="checkbox"/>
Explain hotline and help desk	Customer or other person responsible	<input type="checkbox"/>
Affix sticker to the machine, or save number in software	Technician	<input type="checkbox"/>
Hand over the machine clean and ready to use	Customer or other person responsible	<input type="checkbox"/>
Remove the packaging materials	Technician	<input type="checkbox"/>
Fill out the handover report, discuss and sign	Customer and technician	<input type="checkbox"/>

4. Programming – FM800 default values

Service Menu	Submenu	Machine data	Parameters	Default values
0 Commissioning	0.1 Machine		Machine	FM800
			Panel	Vetro Touch
			Version	1
			Machine no.	00000000000
			Install no.	00000000000
		Heating management	Network connection diagram	1LNPE
			Power grid connection	16 A
		Boiler/Thermoblock	Number	2
			Steam	Yes
			Thermoblock	Yes
	0.2 Configuration	Equipment	Position 1	None
			Position 2	Grinder
			Position 3	None
			Milk system	None
			Milk refrigerator	Refrigeration unit, left
			Milk types	1
			Low fat milk	Off
			Flavour Station	No
		Water filter	Liters	25
			Months	12
		Additional settings	Tank	No
			Autosteam	No
	0.3 Set pressure		Pressure setting	8 bar
	0.4 Set coffee	Coffee water	Calibration value	-
			Last calibration	-
		Grinder 1/2/3	Last setting	-
			Calibration value	-
			Last calibration	-
	0.5 Set milk	Water for cleaning	Calibration value	-
			Last calibration	-
		Milk type 1/2 solid/liquid foam hot	Temperature	50% PWM
			Add steam	No
			Air percentage	10% (solid); 40% (liquid)
		Milk type 1/2 solid/liquid foam cold	Air percentage	20% (solid); 40% (liquid)
	0.6 Set powder	Powder water	Calibration value	-
			Last calibration	-
			Water pre-add with product	5 ml
			Water post-add with product	10 ml
		Powder dosing unit 1/2/3	Calibration value	-
			Last calibration	-
	0.7 Set flavour	Flavour 1/2/3	Calibration value	-
			Last calibration	-
		Dose syrup in addition	Factor Extra Shot	1.2

Service Menu	Submenu	Machine data	Parameters	Default values	
	0.8 Cup sizes		Small	120 ml	
			Medium	220 ml	
			Large	400 ml	
			2 x	440 ml	
			Factors Medium (all options)	1.2	
			Factors Large (all options)	1.7	
	0.9 Maintenance			Number of draws	40 000
				Months	6
				Service phone no.	Empty
	0.10 System information			Internal CPU	-
				Internal CPU	-
				Coffee products	-
				Power PCB	-
				Milk control	-
				Flavour	-
				Protocol	-
				Minimum version of Power PCB	-
Vetro Software				-	
1 Machine	1.1 Language	Language	FM800	EN	
	1.2 Operation Mode	Set-up	Backlight Brightness	85 %	
			Usage Scenario	Self-service	
		With Self-service usage scenario	Operation mode	Quick Select	
			Products per page	12	
			Depiction	Photo	
			Operation mode	Cash Register	
		With Non-self-service usage scenario	Products per page	16	
			Adapt drinks	No	
			Custom pictures	No	
			Options	Key (secured) products	No
	1.3 Selection buttons	Button 1-8	Button 1-8	Off	
			PLU No.	0	
			Price	000.00	
	1.4 Cleaning	Cleaning process	Cleaning cycles	5	
			AfterSteam time	2.0 s	
			Neutralization	No	
		Process behavior	Force at start	No	
			OFF after cleaning	No	
			Buzzer	No	
Prompt to clean		By drinks	250		
		By time h	0 (switched Off)		
		By time min	0 (switched Off)		
Force to clean		By drinks	0		
	By time h	0 (switched Off)			
	By time min	0 (switched Off)			
1.5 Rinsing	Rinsing behavior	Coffee	30		

Service Menu	Submenu	Machine data	Parameters	Default values	
			Milk/powder	5	
			By time	0	
			By permanent milk product	60	
			Process behavior	Switch-off rinsing	Yes
				Switch-on rinsing	Yes
	1.6 CAN bus		Coffee machine ID	0	
			Foam Master ID	0	
			Flavour Station ID	0	
			Accounting ID	-	
	1.7 Temperatures		Coffee	88	
			Temperature stage	1	
			Hot water/steam	120	
	1.8 Outlet	Delay	Coffee	3.0	
			Milk/powder	1.0	
		Height adjustment	Outlet	Per product	
			Time (fixed, same height)	0.00 s	
			Outlet (fixed, same height)	No	
	1.9 Coffee grounds		Grounds ejection	No	
			Cakes (grounds ejection No)	50	
			Cakes (grounds ejection Yes)	500	
			Dry-press time	0.5 s	
	1.10 Milk system		Low fat milk	Off	
			Monitoring	Panel	
			AfterSteam time	0.0 s	
	1.11 Flavour		Flavour Station	No	
			Flavour 1/2/3	253/254/255	
	1.12 Accounting		Select accounting type	None	
			Behavior	Credit display	Yes
				Polling time (CS and VIP)	0.15 s
				Sufficient funds	No
				Accounting switch	No
				Accounting type	PLU
				Price download (CS and VIP)	No
Active prices				Price list 0	
Price display		Currency	CHF		
		Decimal	2		
		Price display at product	Yes		
		Price display during product output	From IF		
CCI Coffee Credit Interface		Selected text	-		
		Text input	-		
CSI Coffee Standard Interface		Selected text	-		
	Text input	-			
1.13 Sensors	Cup monitoring	During rinsing	No		
		During drink prep	No		
1.14 Edge lighting		Select lighting	Color gradient		
1.15 Decaf		Decaffeinated coffee	Off		
3. Date and Time	3.1 On/Off Machine		PIN	No	

Service Menu	Submenu	Machine data	Parameters	Default values	
	3.2 Date and Time		Presentation mode	12	
			Day	1	
			Month	1	
			Year	0	
			Hour	0	
			Minute	0	
			Standard/Daylight Savings Time no.	1	
			Standard/Daylight Savings Time day	1	
			Standard/Daylight Savings Time month	3	
			Daylight Savings/Standard Time no.	1	
			Daylight Savings/Standard Time day	1	
			Daylight Savings/Standard Time month	3	
			Time difference	0	
	3.3 – 3.6 Timer 1 – 4			Active (Automatic switch-on)	No
				On h	0
				On min	0
				Monday - Sunday	No
				Active (automatic switch-off)	No
				Off h	0
				Off min	0
6. Access rights	6.1 Settings	Menu and media	4 digits	1111	
	6.2 Settings (B)	My Settings (B)	4 digits	2222	
	6.3 Settings (C)	My Settings (C)	4 digits	3333	
	6.4 Maintenance	Maintenance	4 digits	7777	
	6.5 Key (secured) Products	Key (secured) products	4 digits	8888	
	6.6 On/Off Machine	On/Off Machine	4 digits	9999	

5. Counters FM800 – Overview

Counters	What is counted	What is not counted	When counter advances	Counting method	Counter can be cleared	Additional Information
4.1 Machine total	<ul style="list-style-type: none"> ▪ products at outlet ▪ canceled product 	<ul style="list-style-type: none"> ▪ water products ▪ steam products ▪ pure milk products ▪ pure flavour products 	Product end	advances by number of cups per button press	No	Additional back-up on one-wire memory
4.2 Cycles	<ul style="list-style-type: none"> ▪ Cycles ▪ canceled product if canceled after pressing 	<ul style="list-style-type: none"> ▪ cycles during rinsing and cleaning ▪ products which do not require a piston cycle 	After pressing	Advances by number of cycles per button press	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.2 Cycles, S.84)	Additional back-up on one-wire memory
4.3 Water filter	<ul style="list-style-type: none"> ▪ pure water products ▪ Coffee products ▪ Powder products ▪ individual steps of brewing process ▪ rinse water quantities ▪ neutralization water quantities ▪ test product water quantities 	Water quantities for the cleaning process and for refilling the steam boiler	After water is dosed	Flowmeter pulses are added together, counter advances by 1 liter after 2000 flow pulses	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.3 Water filters, p. 85)	
4.4 Grinders/dosing units	<ul style="list-style-type: none"> ▪ Total grinding time or powder dosing ▪ Product canceled during grinding process or powder dosing 	<ul style="list-style-type: none"> ▪ water products ▪ steam products ▪ pure milk products ▪ pure flavour products 	After dosing	Programmed total grinding time or powder dosing, incl. canceled products	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.4 Grinders/Dosing units, p. 86)	
4.5 Cleanings	Properly completed cleaning	Canceled cleanings	end of cleaning	advances 1 for each properly completed cleaning cycle	No	Additional back-up on one-wire memory
4.6 Coffee products	<ul style="list-style-type: none"> ▪ pure coffee products ▪ all products with a coffee split ▪ canceled product 	<ul style="list-style-type: none"> ▪ water products ▪ steam products ▪ pure milk products ▪ pure flavour products 	Product end	advances by number of cups per button press	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.6 Coffee products, p. 89)	
4.7 Milk products	<ul style="list-style-type: none"> ▪ pure milk products ▪ all products with a milk split ▪ canceled product 	<ul style="list-style-type: none"> ▪ water products ▪ steam products ▪ pure coffee products ▪ pure flavour products 	Product end	Advances by number of cups per button press	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.7 Milk products, p. 90)	
4.8 Water products	<ul style="list-style-type: none"> ▪ Cold-water products ▪ Pure hot-water products ▪ canceled product 	all other products	Product end	Advances by number of cups per button press	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.8 Water products, p. 91)	
4.9 Powder products	<ul style="list-style-type: none"> ▪ all products with a powder split ▪ canceled product 	all other products	Product end	Advances by number of cups per button press	Yes (see Section 6 - Programming, IV The Service Menu 4 Counters, 4.9 Powder products, p. 92)	
4.10 Flavour products	<ul style="list-style-type: none"> ▪ all products with a flavour split ▪ pure flavour products ▪ canceled product 	all other products	Product end	Advances by number of cups per button press	Yes (see Section 6 - Programming, IV The Service Menu, 4 Counters, 4.10 Flavour products, p. 93)	
4.11 All products	all products		Product end	advances by number of cups per button press	When a product is cleared from the product portfolio, the associated counter is also cleared	

 Continued on next page

Counters	What is counted	What is not counted	When counter advances	Counting method	Counter can be cleared	Additional Information
4.12 Maintenance	<ul style="list-style-type: none"> ▪ Coffee products ▪ all products with a coffee split ▪ Milk products ▪ all products with a milk split ▪ pure water products ▪ all products with a powder split ▪ canceled products 	<ul style="list-style-type: none"> ▪ steam products ▪ Flavour products 	Product end	<ul style="list-style-type: none"> ▪ coffee: advances by number of cycles per button press ▪ milk: advances by 1 per product ▪ Water: advances by 1 for every 6 products ▪ Powder: advances by 1 for every 6 products ▪ Products with various component products: advances by 1 per component product 	Yes (see Section 6 - Programming, IV The Service Menu 4.12 Maintenance, p. 95)	This counter triggers the Maintenance message (after the prescribed number of drinks).
4.13 Events	Data on commissioning, maintenance, component replacement and software updates		After confirmation of the respectively performed action	Advances 1 per completed action	No	Data for replacement of Power PCB, Vetro Touch, heating module and brewing unit can not yet be recorded.
Grounds cakes	<ul style="list-style-type: none"> ▪ Cycles ▪ Canceled product if brewing valve was opened 		After pressing	advances by 1 per piston cycle	Open grounds door for 5 s	Counter triggers prompt/force for emptying the grounds container.
Cycles since last cleaning	Cycles		After pressing	Advances by 1 per piston cycle	Automatically resets to 0 after completion of cleaning cycle	Counter triggers prompt/force for cleaning (after the prescribed number of cycles).
Number of times outlet moves down	outlet movements		When outlet moves in downward direction	advances by 1	No	
Number of rinses	Rinsings performed		End of rinse	advances by 1 per rinse	No	
Number of heating cycles K1	K1 switched on		When relay switches on	advances by 1	No	
Number of heating cycles K2	K2 switched on		When relay switches on	advances by 1	No	
Number of heating cycles K2	K3 switched on		When relay switches on	advances by 1	No	
Time since power connected	Seconds				Is cleared and restarted after unit is unplugged when reconnected to power mains.	
Time since last reset	Seconds				Is cleared and restarted at change to Energy saver mode.	
Time since machine last switched on	Seconds				Is cleared and restarted when device is switched on from the Energy saver mode.	

6. Decommissioning: Recommended procedure



Unless otherwise expressly stated, the tasks and actions described below apply to all FM800 coffee machine models

Action	Tools/additional materials	Completed
Backing up data	USB stick	<input type="checkbox"/>
Cleaning the grinder, coffee bean hopper and powder container	Brush (1L301160) Microfiber cloth (1H325974) Section 6 - Programming	<input type="checkbox"/>
Clean brewing piston	Socket wrench size 7 Brush (1L301160) Microfiber cloth (1H325974)	<input type="checkbox"/>
Clean powder system outlet tube and coupling	Screwdriver (short) No. 4 Brush set (1L301376)	<input type="checkbox"/>
Cleaning the coffee system	Cleaning instructions Brush set (1L301376) Cleaning tablets (BK300935) Brush (1L301160) Microfiber cloth (1H325974) Cleaning solution (BK301732) (only for coffee systems with fresh milk and flavour)	<input type="checkbox"/>
Emptying the water system	Section 6 - Programming	<input type="checkbox"/>
Disconnecting the power supply		<input type="checkbox"/>
Disconnecting the water lines		<input type="checkbox"/>
Disconnecting add-on units from the machine	Service documentation for add-on units (1Y320925)	<input type="checkbox"/>
Packing the machines and add-on units	Packaging materials	<input type="checkbox"/>

7. Recommissioning: Recommended procedure



In addition to general commissioning, the following components must be replaced and/or checked (depending on machine model) before the machine is recommissioned:

- Milk hoses
- Flavour hoses
- Brewing piston O-ring
- Silicone hose and coupling of the powder system (check and replace if necessary)
- Powder system intake
- Frother head

Instructions for recommissioning the machine, see *Section 5 - Decommissioning, V. Recommissioning, p. 16 ff.*

Action	Tools/additional materials	Completed
Replacing components	<ul style="list-style-type: none"> ▪ Section 5 - ▪ Service documentation for add-on units (1Y320925) ▪ Milk hoses ▪ Flavour hoses ▪ Brewing piston O-ring ▪ Silicone hose and coupling of the powder system (check and replace if necessary) ▪ Powder system intake ▪ Frother head ▪ Socket wrench size 7 ▪ Torx screwdrivers, sizes 10 and 20 ▪ Long-nosed pliers 	<input type="checkbox"/>
Commissioning the coffee machine and add-on units	<ul style="list-style-type: none"> ▪ Section 2 - Commissioning ▪ Service documentation for add-on units (1Y320925) 	<input type="checkbox"/>
Cleaning and rinsing the coffee system	<ul style="list-style-type: none"> ▪ Cleaning instructions ▪ Brush set (1L301376) ▪ Cleaning tablets (BK300935) ▪ Brush (1L301160) ▪ Microfiber cloth (1H325974) ▪ Clean solution (BK301732) (only for coffee systems with fresh milk and flavour) 	<input type="checkbox"/>

IV. Certificates

1. Declaration of conformity



FCS4026 (FM800)

Declaration of Conformity

Serial Number:

COFFEE
SYSTEMS



Declaration of conformity

Aarburg, 21.03.2013

We:

Franke Kaffeemaschinen AG
Franke-Strasse 9
4663 Aarburg
Switzerland

declare under our sole responsibility that our product,

Commercial coffee machine FCS4026 (FM800) and add-on units KE, CC, UKE, TW

to which this declaration refers, conforms to the following standards:

EN 50366:03+A1:06, EN 55014-1:06+A1:09+A2:11, EN 55014-2:97+A1:01+A2:08, EN 60335-1:12, EN 60335-1:02+A1:04+A2:06+A11:04+A12:06+A13:08, EN 60335-1:02/FprA:09, EN 62233:08, EN 60335-2-15:02+A1:05+A2:08+A11:12, EN 60335-2-75:04+A1:05+A2:08+A11:06+A12:10, EN 55022:10, EN 60335-2-24:03+A1:05+A2:07+A11:04+A12:09, EN 60335-2-49:03+A1:08, EN 1000-3-2:06+A1:09+A2:09, EN 61000-3-3:08, EN 61000-4-13:02+A1:09

in accordance with the provisions of the following directives:

2004/108/EC, 2006/42/EC, 2006/95/EC, 2009/125/EC, 1935/2004/EC, 10/2011/EC, 1275/2008/EC



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FM800

EN

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Read the safety information chapter before working on the machines.

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Subject to change without notice.

The present instructions reflect the state of the technology as of the date of issue.

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