

ANIMO

OptiBean

OptiBeanXL

Model 2017

TOUCH



Your perfect espresso is just one touch away

servicebook



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FOREWORD

EN

Purpose of this document

This document is intended to be used as a service appendix in addition to the user manual with which **authorised trained service personnel** can install, program and maintain this machine.

- **Authorised trained service personnel** *refers to persons who can install, program, maintain and carry out repairs on the machine.*

Most of the settings, including the product settings, are secured by a PIN code. This PIN code is intended to prevent the user from accessing the service menu.

It is recommended to not leave this document with the user after installation and to change the standard factory PIN code.

All chapters and sections are numbered. The various figures referred to in the text can be found in the illustrations in the front of this booklet or with the subjects concerned.

Pictograms and symbols



NOTE

General instructions for: WARNING, CAUTION or NOTE.



CAUTION !

Warning of possible serious damage to the device or injury.



WARNING

Warning of electricity and/or electrical danger.



WARNING

Warning of electrostatic discharge (ESD) to electronics.



WARNING

Warning of serious crushing injury.

1. INTRODUCTION OPTIBEAN TOUCH

Explanation of OptiBean Touch type designation:

| Designation | Meaning | Description | Cup volume | Dispensing height of cup | Thermos jug |
|-------------|---------------------|--|------------|--------------------------|-------------|
| 1st digit | Number of canisters | 1 - 3 | | | |
| - | Standard brewer | 6.5-9.5 gram | 50-150 ml | 60-115 mm | 167 mm |
| XL | XL brewer | 9.5-13.4 gram | 150-230 ml | 60-115 mm | 167 mm |
| Touch | Touch screen | Touch-screen operated model year 2017 | | | |
| H&C | Hot & Cold | Prepared for cabinets with a cool unit | | | |



OptiBean
Touch

1
2
3
2 H&C
3 H&C



Base cabinet
Hot & Cold



OptiBean
XL
Touch

2 XL
3 XL
2 XL H&C
3 XL H&C

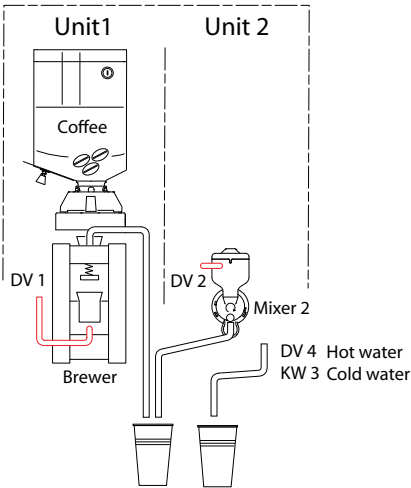


With access
to the litter
bin

OptiBean (XL) Touch

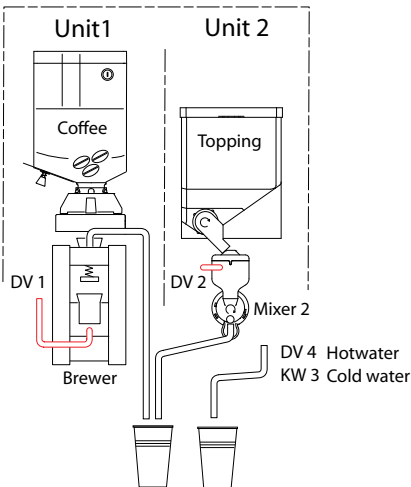
1.1 Principles of operation

OptiBean 1 Touch

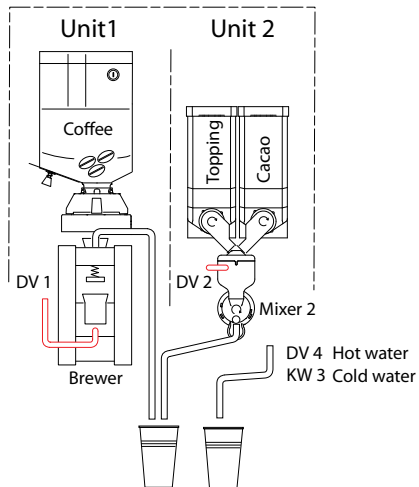


EN

OptiBean 2 (XL) Touch






OptiBean 3 (XL) Touch



1.2 Model code

The OptiBean Touch models are configured according to the standard canister configurations shown below.

| OptiBean (XL) | | Model code | | Canister configurations | | |
|---------------|--|------------|-------|-------------------------|---------|--------------|
| | | Std. | XL | 1 | 3 | 4 |
| 1 |  | 3B 1A | - | Coffee beans | | |
| 2 |  | 3B 2A | 3B 2B | Coffee beans | Topping | |
| | | 3B 4A | 3B 4B | | Cocoa | |
| | | 3B 5A | 3B 5B | | Tea | |
| | | | | | | |
| 3 |  | 3B 3A | 3B 3B | Coffee beans | Topping | Cocoa |
| | | 3B 6A | 3B 6B | | Topping | Sugar |
| | | 3B 7A | 3B 7B | | Topping | Tea |
| | | 3B 8A | 3B 8B | | Tea | Cocoa |
| | | 3B 9A | 3B 9B | | Tea | Sugar |
| | | 3B AA | 3B AB | | Topping | Coffee inst. |
| | | 3B BA | 3B BB | | Topping | Decaf inst. |

Button settings

Download an overview of the standard recipes and optional recipes from <http://www.animo.eu/en/sd>.

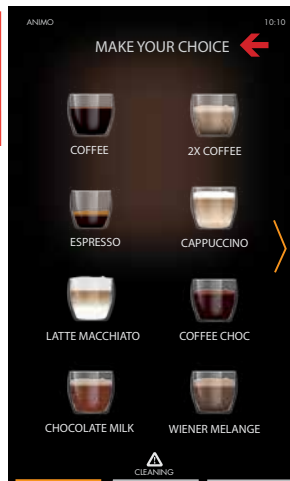
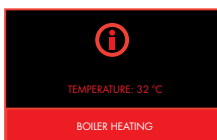
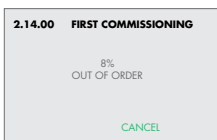
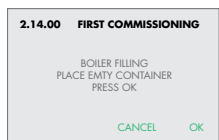
Enter the website address in your web browser and you can download the relevant technical documentation without requiring a login code.

2. FIRST MENU SETTINGS AFTER INSTALLATION

The following data must be set in the operator and service menus immediately after the first use of the machine. The factory language setting is English.

Switch on the machine

- Follow the instructions on the display



- Press **SELECT A DRINK** for 2 seconds for quick access to the **OPERATOR MENU**.



Do not want a quick access to the operator menu?
Go to menu 1.11 Sound & Vision / 1.1.06 Menu key access / and select Yes. This function only works when the door key is 'open', so only the key owner can access the menu.

0.05 OPERATOR MENU

Select OPERATOR MENU to access the operator menu.

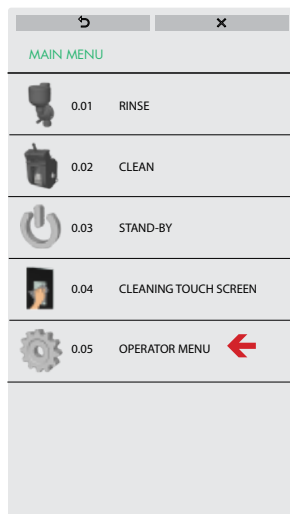
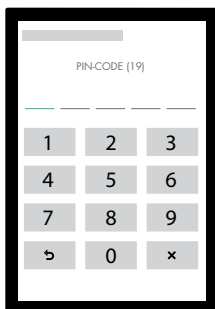
Use PIN code 1 - 1 - 1 - 1 - 1.



One step back



Leave the menu



Operator menu (page 52)

- 1.01 Clock *Time* (set)
Date (set)
- 1.02 Switching times (set)

The energy safe mode of the machine is activated by default. If this mode is not required, it can be deactivated. To save energy, please always program a timer so that the machine will switch on and off automatically.

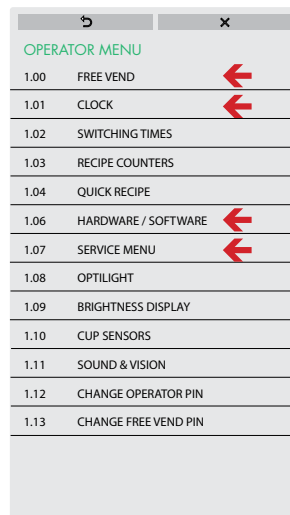
- 1.08 OptiLight

The OptiLight is set to 'Random' by default. It runs through the whole colour spectrum in 10 minutes. If only one colour is required, set 'Random' to '0 minutes' and mix your own colour using red, blue and green.

- 1.07 SERVICE MENU

Select SERVICE MENU to access the service menu.

Use PIN code 2 - 2 - 2 - 2 - 2.



Service menu (Page 58)

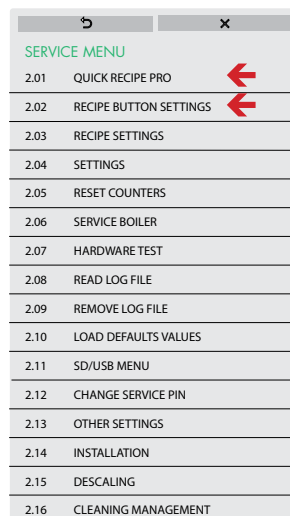
- 2.02 Button settings <Recipe name> (set)

Every machine contains preprogrammed basic recipes. Each button can be changed if required. The factory-set recipes can be found in the recipes settings document. This document can be downloaded from <http://www.animo.eu/en/sd>.

See chapter 2.1 How to program a recipe.

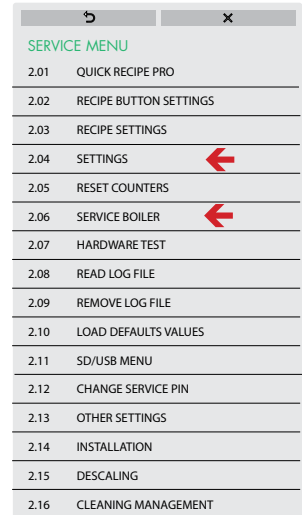
- 2.01 Quick recipe Pro <Recipe name>
Cup volume (ml) (set)
Coffee (sec.) (set)
Topping (sec.) (set)
Chocolate (sec.) (set)
Test recipe

See chapter 2.2 How to correct a recipe.



OptiBean (XL) Touch

- 2.04 Settings Language (set)
- 2.06 Service boiler Service moment
Cups (set)
Months (set)



Cups

The message indicates that the device must be descaled. If a water filter is fitted (recommended), this is also an indication that the filter must be replaced.



We strongly recommend to use a water filter.

Calculate your filter capacity by using the capacity information provided with the filter. Set the number of cups into the menu so that the signal [Service Boiler] appears on the display.

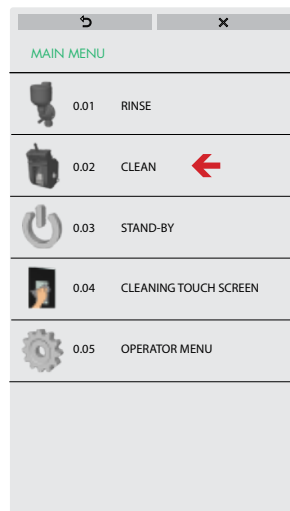
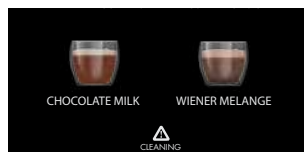
Months

If desired, a reminder can be set for the boiler service message to appear. For example: If 12 months is set during installation, the boiler service message will appear on the display 12 months after installation.

Water hardness table

| Water quality | Hardness | | | | Service moment after (cups) |
|---------------|----------|-------|---------|-----------|-----------------------------|
| | °D | °F | mmol/l | mgCaCo3/l | |
| Very hard | 18-30 | 32-55 | 3.2-5.3 | 321-536 | 5,000 |
| Hard | 12-18 | 22-32 | 2.2-3.2 | 214-321 | 12,500 |
| Average | 8-12 | 15-22 | 1.4-2.2 | 268-214 | 20,000* |
| Soft | 4-8 | 7-15 | 0.7-1.4 | 72-268 | 40,000 |
| Very soft | 0-4 | 0-7 | 0-0.7 | 0-72 | 0 = off |

- Select **CLEANING** to run the cleaning program (without a cleaning tablet) and to reset the cleaning message.



Shut down

Please follow chapter 6 Transport / Shut down to empty the boiler system before transporting or putting the machine in storage.

PIN CODE overview

Owner / key holder

PINCODE

Can be changed

Operator menu

1 - 1 - 1 - 1 - 1

see menu 1.12

Standby



Jug

Free vend pin

1 - 2 - 3 - 4 - 5

see menu 1.13

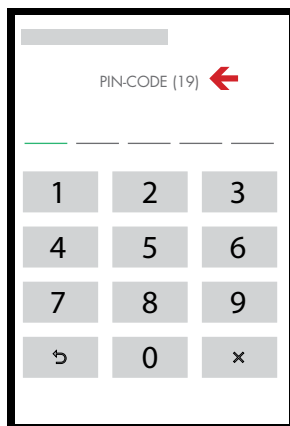


Trained service engineer

Service menu

2 - 2 - 2 - 2 - 2

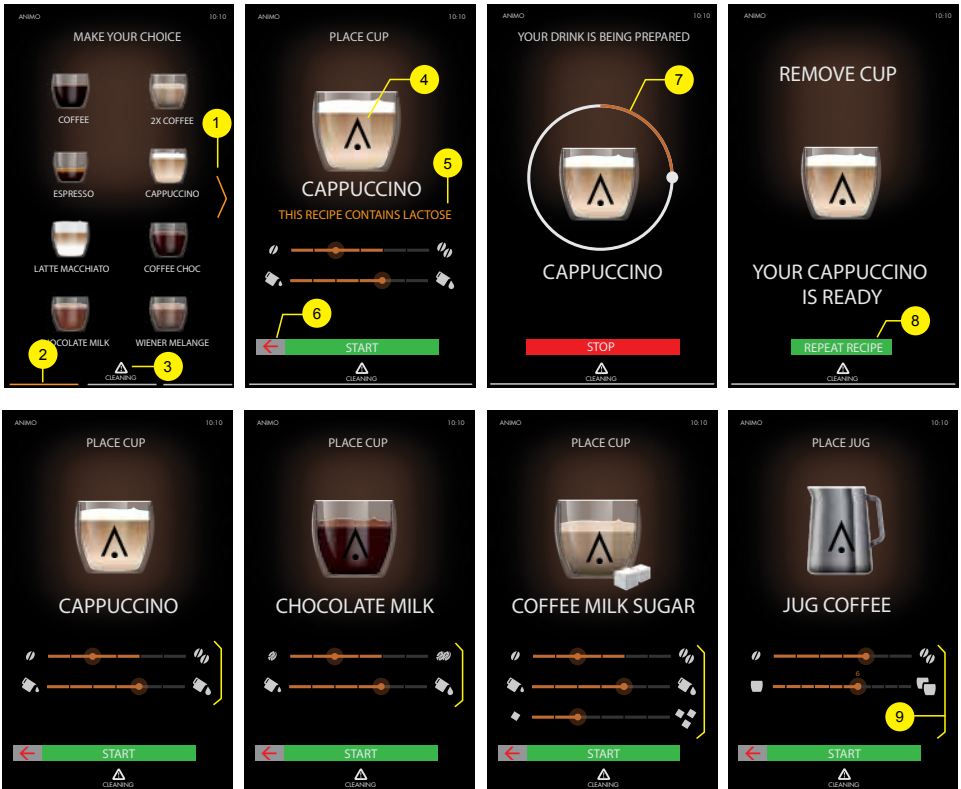
see menu 2.12



2.1 User interface during free vend

The user interface helps the user to select a drink (recipe) and informs them about the status of the process. Some of the items below are deactivated by default. The menu number next to it shows where it can be activated in the menu.

1. Swipe or press to move to screen 2 and/or 3, depending on the number of drinks programmed.
2. Screen number and position
3. Cleaning and service attention signals
4. Show logo on cup (operator menu 1.11.02)
5. Show allergy information (operator menu 1.11.05)
6. Back button
7. Process
8. Show repeat recipe (operator menu 1.11.04)
9. Strength settings for coffee, cocoa, milk or sugar / Number of cups in jug



2.2 User interface when the payment system is connected

The user interface below shows how the user is informed when the device is switched into the payment mode. Some of the items below are deactivated by default. The menu number behind it shows where it can be activated in the menu.

1. This line shows information about how a drink must be paid for (by cash, chip, card, etc.).
2. Credit can be displayed. (service menu 2.04.05.00.09)
3. Each drink shows its price. (service menu 2.02.01.02)
4. Free vend pin (1 - 2 - 3 - 4 - 5) (service menu 2.02.0x.00)



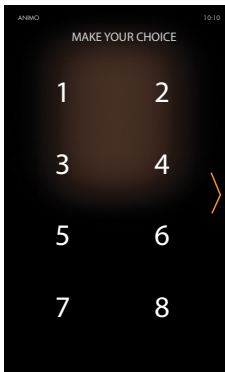
2.3 User interface drink selection screens

There is a maximum of 3 screens to program. Each screen contains a maximum of 8 drink positions.

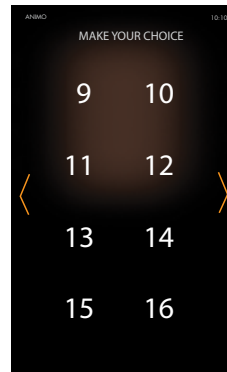
If there are (e.g.) 12 drink selections programmed, only 2 screens are active.

If there are (e.g.) 20 drink selections programmed, 3 screens are active.

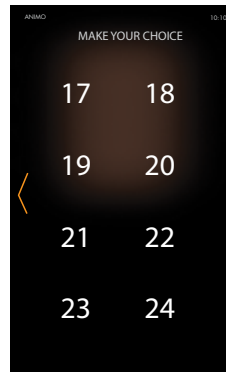
Screen 1



Screen 2

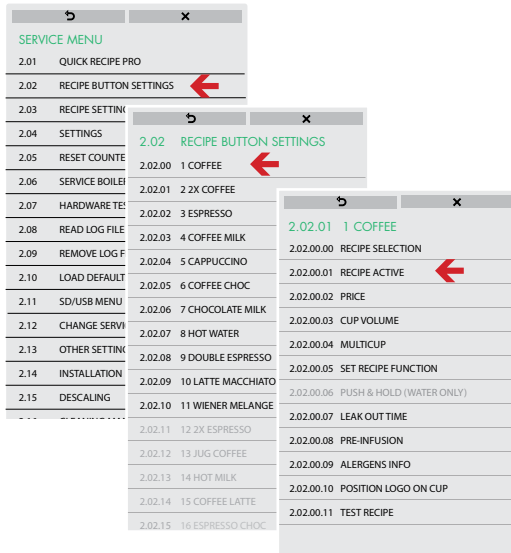


Screen 3





2.4 How to program a recipe?

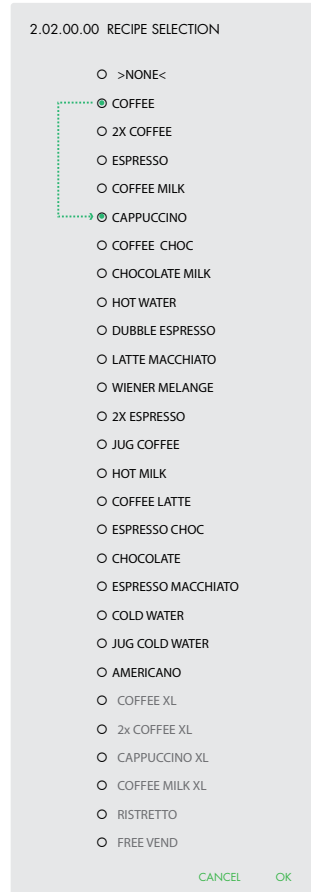
Every machine contains preprogrammed basic recipes. Each key can be changed if required. In the example shown below button 1 is changed from **coffee** to **cappuccino**.



1. Navigate to the service menu item shown above.
2. Select RECIPE BUTTON SETTINGS / 1 COFFEE / BUTTON
 - The black and grey texts show the recipes that are available in the machine.
 - The recipes in black texts are active (buttons are visible in the display).
 - The recipes in grey texts are not active (to activate, go to RECIPE ACTIVE).
3. Select the required recipe in the preprogrammed recipe list and press OK.

 The recipes that are factory-set can be found in the recipes settings document which can be downloaded from <http://www.animo.nl/en/sd>.

 Instead of a RECIPE, a Free Vend PIN can be programmed. Use this Free Vend PIN to switch the touch panel on the free vend when a payment system is active.

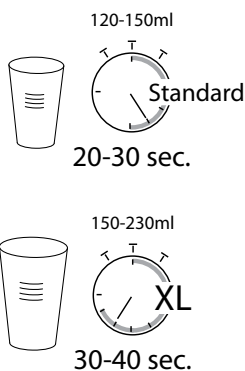
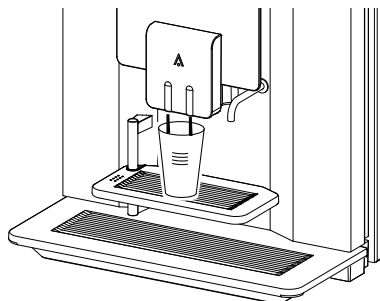


example: OptiBean 3 Touch



2.5 How do you correct a recipe?

An easy way to check the volume and taste of the dispensed drink without leaving the menu:



1. Navigate to the service menu item shown above.
2. Change one or more settings.
3. Place an empty cup under the outlet and press TEST RECIPE. Your drink is made.

i When the cup volume (menu parameter) is increased, instant products like topping and chocolate will be automatically and proportionally increased. The coffee, however, will not be automatically increased!

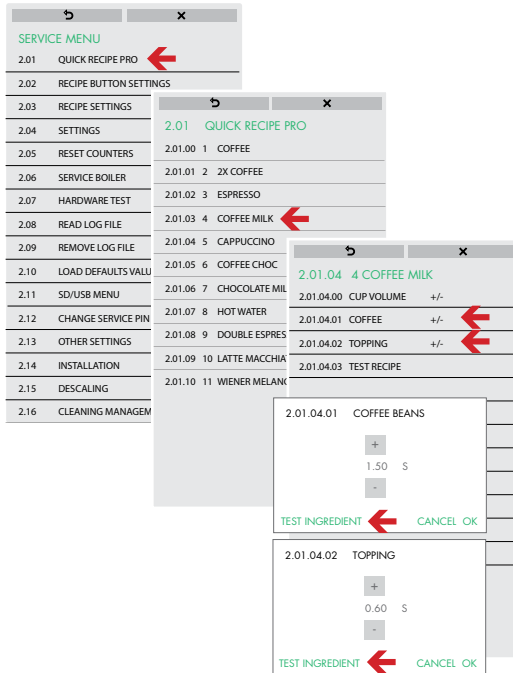
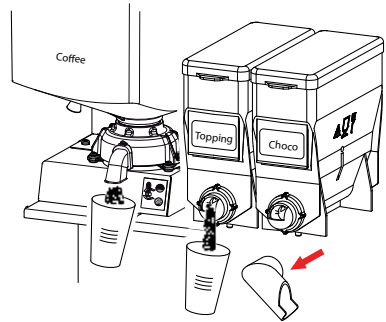
If the optimum settings are found for the first coffee, copy the set grinder time for all the coffee drinks: Coffee Milk, Espresso, Cappuccino, Latte Macchiato, etc.

2.6 How do you measure the weight of an ingredient?

Only the grinder or the ingredient motor will be driven (no water is dispensed).



It is strongly recommended to check the coffee measurement using a set of mini scales. These are easy to order via the internet.



? gram



1. Navigate to the service menu item shown above.
2. Hold an empty cup under the outlet.
3. Press TEST INGREDIENT. Only the chosen ingredient will be dispensed.
4. Measure the weight of the ingredient*

*Coffee

Standard espresso group: min. 6.5 g - max. 9.0 g.
 XL espresso group: min. 9.5 g - max. 12.5 g.

2.7 Adjustment rules

2.7.1 Espresso group

The OptiBean can be configured to the following espresso groups:

Standard espresso group

- A good cup of coffee (lungo) can be made with 7.5 - 8 g (0.26 - 0.28 ounce) of coffee.
- Suitable for a maximum of 9.0 g (0.32 ounce) of ground coffee (1 cup of coffee).
- Not suitable to brew a double cup of coffee in one brew cycle.
- There is a double-cup recipe (2x coffee) available in the software (double brew cycle).



XL espresso group

- Suitable for a maximum of 12.5 g (0.44 ounce) of ground coffee (1 cup of coffee).
- Suitable to brew a double cup of espresso (2x 70 ml) or double-cup coffee (2 x 115 ml) in one single cycle.
- Not suitable to brew a double cup of coffee > 115 ml in one cycle.



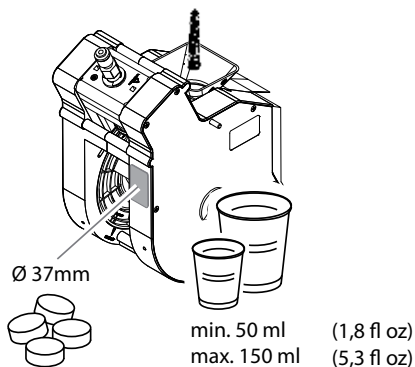
(imp)

Standard

min. 6,5 - max. 9,5* gram (0,23 oz)

(0,34 oz)

⚠ 0-0-0-0 * max. 9,0 gram (0,32 oz)
 ⚠ 0-0-0-0 * max. 9,5 gram (0,34 oz)

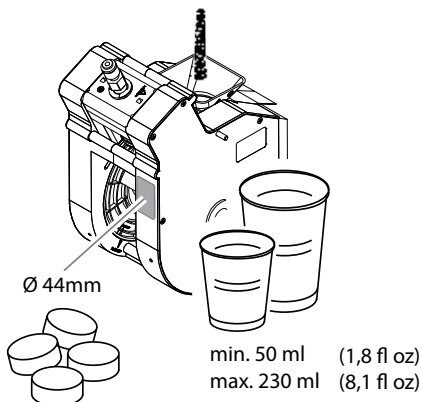


XL

min. 9,5 - max 13,4* gram (0,34 oz)

(0,47 oz)

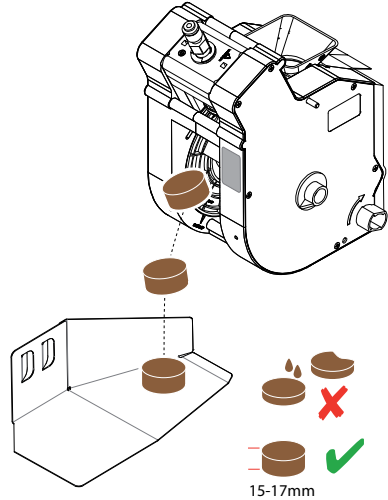
⚠ 0-0-0-0 * max. 12,5 gram (0,44 oz)
 ⚠ 0-0-0-0 * max. 13,4 gram (0,47 oz)



OptiBean (XL) Touch

2.7.2 Coffee waste (puck)

- It is very important how the compressed puck looks like when it is thrown out of the brewer.
- A puck that is too wet and falling apart is a sign that too little coffee is being dispensed and/or the coffee grinder is too coarsely tuned!
- Catch the puck while adjusting the compressed puck. Tip: Use the stainless steel brewer cover.
- A good puck is whole, dry and at least 15-17 mm thick.
- It is normal that a small amount of water leaves the brewer when it opens.

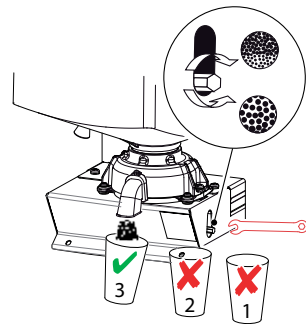


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2.7.3 Coffee grinder

There are two factors that affect the output of the coffee grinder: The grinder rotation time (**2.1 Quick recipe pro / Coffee beans**) and the **grinding fineness** of the coffee grinder. Try to find a balance among:

- Cup volume (menu setting)
- Amount of ground coffee (menu setting)
- Ground coffee - coarse or fine (grinder adjustment)
- When the coffee grinder is set to a coarser setting, the volume of the grinder increases.
- When the coffee grinder is set to a finer setting, the volume of the grinder decreases.
- Adjust the grinder to a finer setting only when the grinder is operating! Adjustment from fine to coarse can be done when the grinder is stationary.
- Adjust the grinder setting in steps of 1/4 turns only. Note: Only the 3rd cup of coffee is made 100% with the changed grinding fineness! (do not measure the first 2 cups).

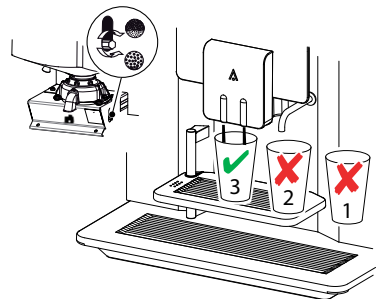


Run-in period of grinding discs

Tests have shown that new ceramic grinding discs have a start-up period of 10 kg of coffee beans (about 1350 cups at 7.5 g / XL = 1000 cups at 9.5 g).



We recommend to readjust (set to finer) the grinder after this period.



2.8 How to adjust a coffee?

After installation, the machine must always be adjusted for the coffee beans to be used. Use this chapter to help you do this. Once the coffee-making process has been set, the user must always use the same bean melange (mixture).

Coffee crème (lungo)

Always start with adjusting a **coffee** (usually button 1). First, make a couple of coffees without changing the settings and measure the brewing time of these cups of coffee.



The coffee brewing time is the time from the moment the pump starts until the moment the pump stops.

The brewing time of a coffee is dependent on two factors:

- *grinding fineness*
- *coffee dosage*

Adjust the grinder in such a way that a good cup of coffee is made according to the brewing times shown on the right. Make use of Chapters 2.2 to 2.4.

Espresso

Once the coffee creme has been set, there are some more settings for the Espresso.

Because the same coffee grind is used for an Espresso-based drink, the brew time for an Espresso (50 ml) will be much lesser than for a normal coffee.

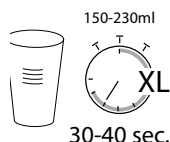
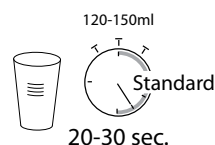
If there is still volume left in the brew chamber from the espresso group (Standard: max. 9.0 g. / XL: max. 12.5 g) it is possible to increase the grinding time.

By increasing the grinder time for the espresso drink in small steps, more coffee will be dispensed into the brewer chamber. This creates more resistance and a longer brewing time.

2.01 Quick recipe pro

2.01.03 Espresso (drink)

Espresso
Coffee beans (ingredient)



OptiBean (XL) Touch

Cappuccino and Latte Macchiato

Milk-based drinks are drinks such as Coffee Latte, Cappuccino and Latte Macchiato.

If the perfect setting for the espresso has been found, just copy this setting to all espresso-based drinks, like Cappuccino and Latte Macchiato.



2.01 Quick recipe pro

- 2.01.04 Cappuccino (drink)
 - Cappuccino
 - Coffee beans (ingredient)
- Latte Macchiato
- Topping (ingredient)



When the cup volume (menu parameter) is increased, instant products like topping will be automatically and proportionally increased.

Chocolate / Chocolate + Milk

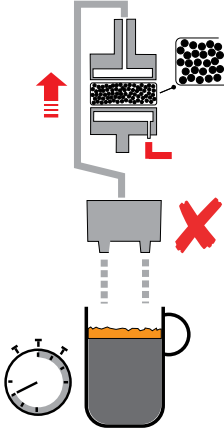
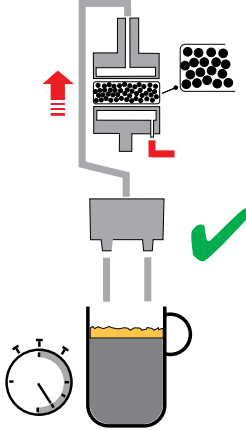
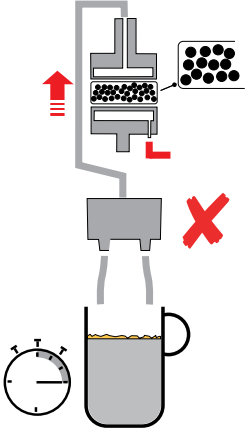
2.01 Quick recipe pro

- 2.01.05 Chocolate (drink)
 - Chocolate
 - Cocoa (ingredient)
- 2.01.06 Chocolate Milk (drink)
 - Chocolate Milk
 - Cocoa (ingredient)
- Chocolate Milk
- Topping (ingredient)



When the cup volume (menu parameter) is increased, instant products like topping and chocolate will be automatically and proportionally increased.

2.9 Adjustment tips

| Cream layer too low | Cream layer perfect | Cream layer missing or too light |
|--|---|--|
| <ul style="list-style-type: none"> - The grind is too fine - Bitter taste - The preparation time is too long - Ground coffee dosing is high <p>- Coffee drips from the splitter</p> <p>The coffee is ground too fine or the dispensed coffee is too much. The extraction is too extreme due to too long a contact time (too many bitter substances).</p>  <p>Advice: Set the coffee grinder to a coarser setting (adjustment is counterclockwise). Also, decrease the coffee dosing by 0.1 sec.</p> <p>Note! When setting the grinder to a coarser setting, there is a risk of excess measurement (coffee volume/weight increases) as a result of which the espresso group can jam.</p> | <ul style="list-style-type: none"> - The grind is correct - Perfect coffee taste - The preparation time is correct - The coffee measurement is correct - Coffee sprays full and parallel <p>The coffee is ground well. The taste extraction is optimal. The cream layer is firm and persists for a long time.</p>  <p>Advice: Enjoy your coffee.</p> | <ul style="list-style-type: none"> - The grind is too coarse - Weak taste - The preparation time is too short - Ground coffee dosing is too low - Coffee sprays bend outwards <p>The ground coffee is too coarse and cannot reach a good extraction. The coffee is underextracted. There is little or no cream layer.</p>  <p>Advice: Set the coffee grinder to a finer setting (adjustment is clockwise). Adjust the grind setting in steps of a maximum of 1/4 turns each time. Do not measure the first 2 cups of coffee. Only the 3rd cup of coffee is made 100% with the changed grinding fineness!</p> |

2.10 Advanced recipe settings

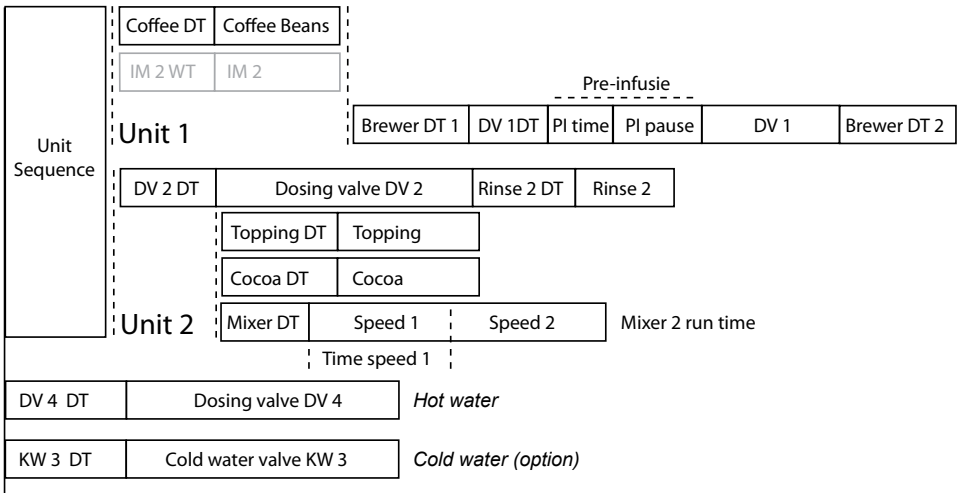
Before changing the advanced recipe settings (service menu 2.03), you must first know how the various parts such as valves, coffee grinder, ingredient motors and mixers work together. See Section 2.11 Timeline recipe settings.

Obey the following guidelines:

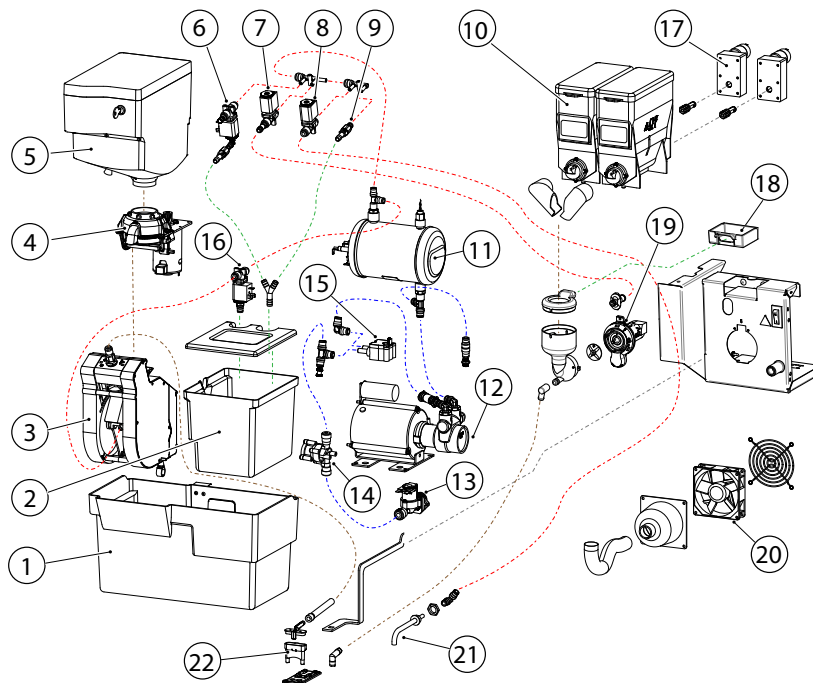
- **Unit sequence:** *Coffee with milk:* First coffee (unit 1) then milk (unit 2). *Cappuccino/Latte macchiato:* First milk (unit 2) then espresso (unit 1).
- **Ingredient dispensing times are set in seconds (in steps of 0.01 sec).**
- **All parameters (water and ingredients such as topping and chocolate) are based on a 100-ml drink and converted automatically in the programme to the cup volume as set in 1.4 Quick recipe / 2.1 Quick recipe pro 2) and 2.2 Key settings.**
 Note: The coffee measurement (of the coffee grinder) is not linked to the cup volume setting.
- **When a drink consists of DV1 and DV2, the sum of these water quantities must always be 100 ml.**
- **A rinse parameter is used to ensure that the mixer is properly rinsed. When the mixer is almost empty, a small amount of hot water is dispensed to the mixer so that it is as clean as possible on completion. A realistic rinse value is 8 ml. Note: This does not have to be deducted from the water quantity. The programme calculates this automatically! For example: Set parameter DV2 = 100 ml, Rinse 2 = 8 ml --> the programme carries out the action as follows: DV2 = 92 ml, Rinse 2 = 8 ml.**



2.11 Timeline recipe settings



3. PRINCIPLES OF OPERATION

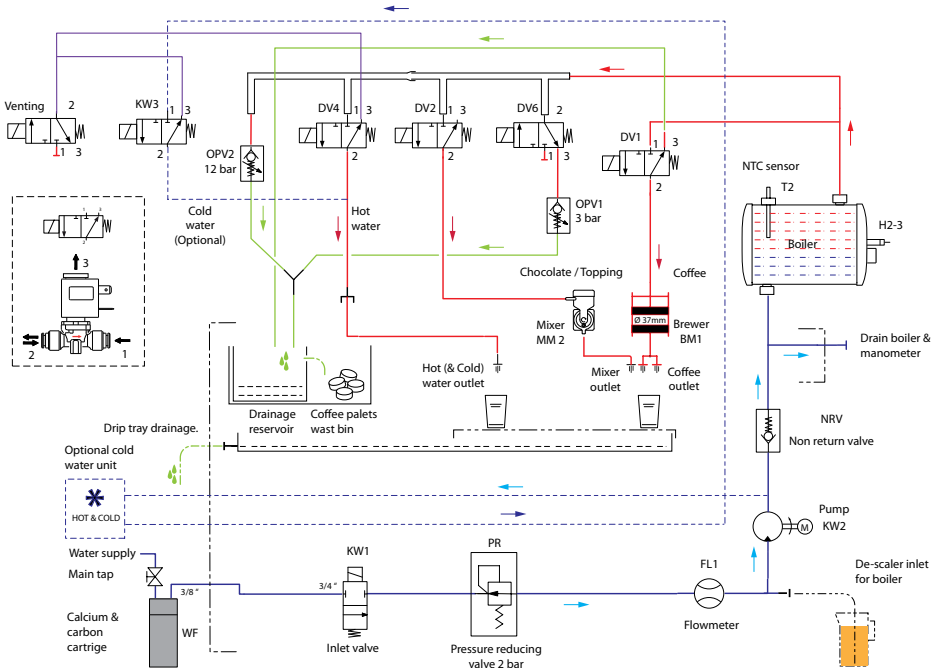


| Item | | Description |
|------|------|-----------------------------------|
| 1. | | Coffee waste bin |
| 2. | | Drainage reservoir |
| 3. | BM1 | Espresso group (reversed) |
| 4. | IM1 | Coffee grinder |
| 5. | | Coffee bean canister |
| 6. | DV6 | Expansion water valve + OPV 3 bar |
| 7. | DV2 | Mixer valve 3/2 way |
| 8. | DV4 | Hot water valve 3/2 way |
| 9. | OPV2 | Pressure relief valve 12 bar |
| 10. | | Instant canisters |
| 11. | H2-3 | Pressure boiler |

| Item | | Description |
|------|-------|------------------------------|
| 12. | KW2 | Pump 10 bar |
| 13. | KW1 | Inlet valve |
| 14. | PR | Pressure reducer 2 bar |
| 15. | FL1 | Flow meter |
| 16. | DV1 | Brewer valve |
| 17. | IM2-3 | Canister drive motor |
| 18. | | Cassette moisture extraction |
| 19. | MM2 | Mixer system |
| 20. | | Fan |
| 21. | | Hot water outlet |
| 22. | | Coffee / Drink outlet |

OptiBean (XL) Touch

3.1 Water management



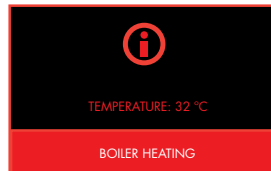
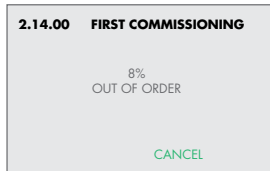
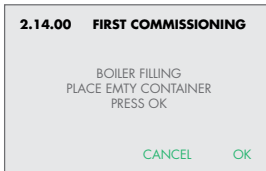
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| Code | Description |
|------|-----------------------------|
| WF | Water filter |
| KW1 | Inlet valve |
| PR | Pressure reducer 2 bar |
| FL1 | Flow meter |
| KW2 | Pump 10 bar |
| NRV | Non-return valve |
| H2-3 | Pressure boiler |
| T2 | NTC sensor |
| DV1 | Brewer valve 3/2 way (N.C.) |

| Code | Description |
|------|---|
| DV2 | Mixer valve 3/2 way (N.C.) |
| DV4 | Hot water valve 3/2 way (N.C.) |
| DV6 | Water expansion valve 3/2 way (N.O.) |
| KW3 | Cold water valve (H&C optional) |
| OPV1 | Pressure relief valve 3 bar water expansion |
| OPV2 | Pressure relief valve 12 bar |
| BM1 | Espresso group |
| MM2 | Mixer system |
| DV7 | Venting valve 3/2 way (H&C optional) |

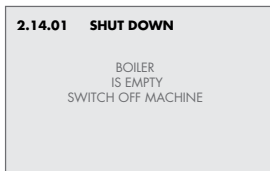
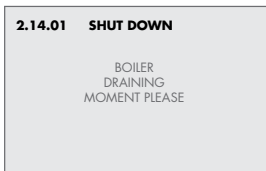
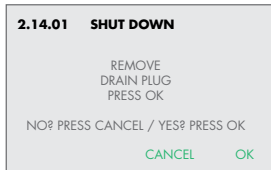
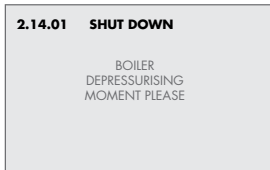
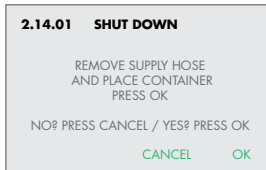
3.1.1 Commissioning

Switch on the machine using the ON/OFF switch. The display illuminates with the text 'Position the drip tray and press start'. The inlet valve [KW1] opens and the water flows via the pressure reducer [PR], flow meter [FL1] and pump [KW2] to the pressure boiler [H2-3], which is filled. The inlet valve [KW1] closes when the flow meter [FL1] has measured 1.3 litres. The excess water (approximately 0.2 litres) flows via the pressure relief valve [DV1] to the coffee outlet and drip tray. When the boiler has reached the set temperature, the machine is ready for use. Once the commissioning menu has been activated, the control remembers that the water system has been filled. If the machine is taken out of use for an extended period, the water system must be drained. See chapter 7 Shut down.



3.1.2 Shut down

Activate the shut down menu in the service menu and follow the instructions on the display. To drain the boiler, a drain plug must be removed from the boiler drain hose. To do this, remove the back panel of the machine. The control now knows that the water system is empty and reconnection will automatically activate the commissioning menu.



3.1.3 No preparation

When no drinks are dispensed by the machine, the pressure in the pressure boiler [H2-3] is maintained at 3 bar. Any expansion water from the boiler drains away via the valve [DV6], which is set as a NO (normally open) valve. The 3-bar overpressure relief valve OVP1 drains any boiler expansion water to the drainage reservoir.

3.1.4 Coffee preparation

When a coffee is chosen, the coffee grinder measures approximately 7.5 g of coffee (9.5 g for OptiBean XL) into the espresso group, which then turns to the set position (brew). The inlet valve [KW1], coffee valve [DV1] and expansion valve [DV6] are activated. Note: The expansion valve [DV6] is connected as an NO (normally open) valve. Once activated, the pressure relief valve [OPV1] is closed, which makes it possible to increase the pressure to 10 bar while the coffee is being made. The ground coffee is first (PI-time) moistened with a small quantity of water (pre-infusion). This is done at a low water pressure of 2 bar. After a short soak interval (PI-pause) the water pump [KW2] starts, the pressure is increased to 10 bar and the actual coffee-making process begins. Depending on how fine the coffee is ground and the addition of water, the coffee-making process takes between 15 and 25 seconds. After the flow meter [FL1] has measured the set amount of water, the coffee-making process is stopped. +KW1 and DV1 close and DV6 opens. While the brewer goes into the start position [fill], the coffee residue (pellet) is ejected into the waste bin.

EN

3.1.5 Chocolate preparation

For preparing instant, only the water pressure is used.

When a chocolate is chosen, the inlet valve [KW1] and the mixer valve [DV2] open. The pressure in the mains water supply is reduced to 2 bar by the pressure reducer [PR] and flows via the pressure boiler [H2-3] and the mixer valve [DV2] to the mixer system [MM2]. The chocolate ingredient is measured by ingredient motor 4 [IM4]. After the flow meter [FL1] has measured the set amount of water, the water dispensing process is stopped. KW1 and DV2 close. Shortly after that, the pressure boiler is brought back up to the operating pressure of 3 bar by the pump.

3.1.6 Coffee with Milk preparation

The pressure boiler system does not allow two pressure valves to be opened at the same time. This means that for a combination drink such as Coffee with milk, first the coffee is made and then the milk can be added to it. For the preparation of Cappuccino and Latte Macchiato, first the milk (froth) and then the coffee (espresso) is prepared. The preparation of the coffee with milk proceeds in the same way as for the coffee and the chocolate preparation. In the software the required unit sequence can easily be specified. For Coffee Milk this is Unit 1-2 (coffee first, then milk), for Cappuccino and Latte Macchiato this is Unit 2-1 (milk first, then coffee).

3.1.7 Hot water preparation

For dispensing hot water, only the water pressure is used.


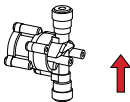


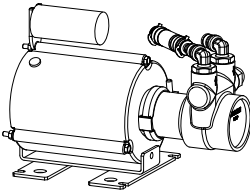
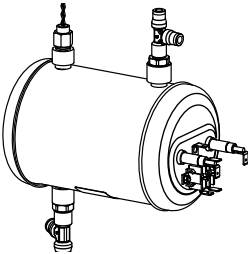

When hot water is chosen, the inlet valve [KW1] and the hot water valve [DV4] open. The pressure in the mains water supply is reduced to 2 bar by the pressure reducer [PR] and flows via the pressure boiler [H2-3] and the hot water valve [DV4] to the water outlet. After the flow meter [FL1] has measured the set amount of water, the water dispensing process is stopped. KW1 and DV4 close. Shortly after that, the pressure boiler is brought back up to the operating pressure of 3 bar by the pump.





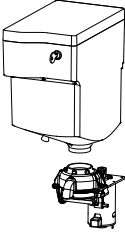
3.1.8 Cold water preparation (optional)

For dispensing cold water, only the water pressure is used.

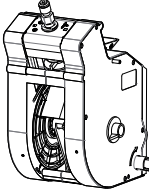
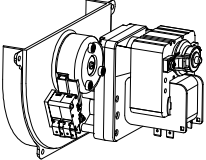

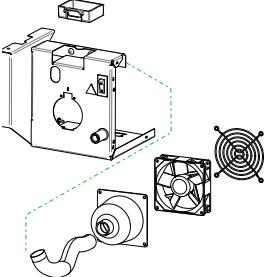
When cold water is chosen, the inlet valve [KW1] and the cold water valve [KW3] open, and the 'venting' valve closes. The pressure in the mains water supply is reduced to 2 bar by the pressure reducer [PR] and flows via the external cooler unit and cold water valve [KW3] to the water outlet. After the flow meter [FL1] has measured the set amount of water, the water dispensing process is stopped. KW1 and KW3 close and the 'venting' valve opens.

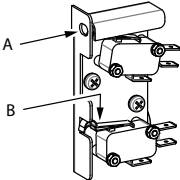
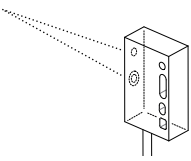
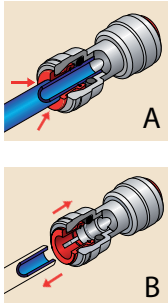

3.2 Components

| Component | Image |
|---|--|
| <p>Inlet valve KW1 [1001161] Opens and closes the water supply, 24 Vdc coil closure.</p> |  |
| <p>Pressure reducer DR [1000702] Reduces the water supply pressure to 2 bar. The water pressure is not adjustable. Pay attention to the flow direction!</p> |  |
| <p>Flow meter FL [1000530] Measures the supplied quantity of water using rotating magnets and a bipolar Hall sensor. Pay attention to the flow direction!</p> |  |
| <p>Power Relay [1004596] 3x The heating element, brewer motor and pump are controlled by a power relay.</p> |  |
| <p>Pump KW2 [1000696] Non-return valve [1000748] Rotary membrane pump; increases the water supply pressure to an espresso pressure of 10 bar. The rotating membrane cells increase the outlet water pressure. An internal bypass valve pumps the water round in the pump housing if no pressure decrease occurs. See Section 5.7 Check / set the pump pressure.</p> |  |
| <p>Pressure boiler H2-3 [1000530] Closed pressure boiler manufactured entirely from material AISI 316L</p> <p>Temperature sensor [1000740] Screw thread M12x1 / material AISI 316L / 100 kΩ / 25 °C</p> <p>Boil-dry protection [1000736] Activation temperature 135 °C / 2 pole / manual reset</p> |  |
| <p>Brewer valve DV1 [1000699] Supplies the brewer with hot water at 10 bar. When the valve is energised, the hot water supply to the brewer is opened. When this closes, the brewer is vented.</p> |  |

| Component | Image |
|---|---|
| <p>Expansion water valve DV6 [1000699] Pressure relief valve 4 bar [1007140]</p> <p>This valve is switched as an NO (normally open) valve. When the coil is not energised, the supply to the 4-bar pressure relief valve is open. When coffee is being made, this valve closes the 4-bar pressure relief valve so that the pump can increase the pressure to 10 bar. After the coffee has been made, this valve opens again and the excess water is led to the drainage reservoir.</p> |  |
| <p>Mixer valve DV2 [1000699]</p> <p>Supplies the mixer system with hot water. During the water measurement, use is made of the 2-bar water pressure that is reduced by the pressure reducer DR. The valve has an internal meter of 1.5 mm, which results to a supply pressure of 2 bar in a measurement speed of 14 ml/sec. When the valve closes, the mixer supply hose is vented and drained.</p> |  |
| <p>Hot water valve DV 4 [1000699]</p> <p>Supplies the hot water outlet with hot water. During the water measurement, the 2-bar water pressure that is reduced by the pressure reducer DR is used. The valve has an internal meter of 1.5 mm, which results to a supply pressure of 2 bar in a measurement speed of 14 ml/sec. When the valve closes, the mixer supply hose is vented and drained.</p> |  |
| <p>Pressure relief valve 12 bar [1007136]</p> <p>Overpressure protection for the boiler.</p> |  |
| <p>Coffee grinder [1000665]</p> <p>The coffee grinder grinds the beans and fills the brewer with a precisely measured quantity of coffee. See Section 3.5 Grinder for operation.</p> |  |

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| Component | Image |
|---|--|
| <p style="text-align: center;">Espresso group (reversed) [1004572] Espresso group XL (reversed) [1004798]</p> <p>The brewer is filled with ground coffee from the coffee grinder. Then the coffee is compacted, the pump starts and pumps hot water at a pressure of 10 bar through the coffee. The drink flows via the splitter into the cup. After the coffee has been made, the coffee pellet is ejected into the waste bin.</p> <p style="text-align: center;">See Section 3.4 Espresso group for operation.</p> |  |
| <p style="text-align: center;">Drive unit espresso group (reversed) [1004573]</p> <p>The 230-Vac motor in the drive unit drives the espresso unit. The drive unit contains two microswitches that check the position of the espresso group.</p> <p style="text-align: center;">See Section 3.4 Espresso group for operation.</p> |  |
| <p style="text-align: center;">Instant group</p> <p>Each of the ingredient canisters is driven by a motor running at 130 rpm. The instant product (ingredient) is pushed out of the canister by a worm screw and falls via the dispensing nozzle into the mixer unit. At the same time, hot water is measured into the mixer unit by the measuring valve DV2. The instant product and the water are mixed together by the mixer impeller driven by the mixer motor running at 16,500 rpm. The drink flows via the drink outlet into the beaker.</p> <p style="text-align: center;">See Section 3.6 Instant group for operation.</p> |  |
| <p style="text-align: center;">Ventilation mixer group</p> <p>Most of the water vapour released during the mixing is collected by the vapour drain ring and extracted via the extraction tray by the fan. The instant residue is collected by the extraction tray. The extraction tray can be easily removed (for cleaning) by dismantling the mixer unit. This largely prevents the water vapour from getting into the canister outlet and the ingredient from becoming moist.</p> <p style="text-align: center;">See Section 3.6.2 Ventilation mixer group for operation.</p> |  |

| Component | Image |
|--|--|
| <p style="text-align: center;">Door switches</p> <p>There are two door switches on the inside of the right-side panel. Switch A is activated when the door is closed and switches off the machine when the door is opened. Switch B is activated when the door lock is locked and switches on the hot water valve DV4 when the lock is opened.</p> |  <p>The diagram shows two electrical switches, labeled A and B, mounted on a metal plate. Switch A is a normally closed switch, and switch B is a normally open switch. Arrows point to each switch from their respective labels.</p> |
| <p style="text-align: center;">Cup detection sensor [1003231]</p> <p>Reflection infrared sensor. This sensor can optionally be built into the machine door. This sensor checks whether there is a cup or mug positioned under the (correct) spout. See chapter 3.3 Cup detection for operation.</p> |  <p>The diagram shows a rectangular sensor module with a lens on the front and a cable on the back. Dotted lines indicate the sensor's field of view.</p> |
| <p style="text-align: center;">Quick release coupling</p> <p>In this machine various components are used that have quick release couplings. To remove the Teflon hose from this connection, the outer ring [A] must be pushed in first to release the hose [B]. This outer ring does not have to be pushed in when inserting the hose.</p> |  <p>Diagram A shows a blue Teflon hose being inserted into a metal coupling. A red arrow points to the outer ring (A) being pushed in. Diagram B shows the hose (B) being pulled out of the coupling after the outer ring has been pushed in.</p> |
| <p style="text-align: center;">Telfon® pressure hose</p> <p>A high-quality Teflon pressure hose is used in this machine. Never shorten this hose with side cutters. This will deform the hose and it can damage the internal o-ring when it is inserted into the quick release connection, resulting in leaks. Always shorten a new hose using the special cutting tool (see the illustration) or cut through it with a sharp knife without exerting too much pressure on the hose.</p> |  <p>The image shows two tools: a pair of side cutters (top) and a red special cutting tool (bottom).</p> |

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3.3 Cup detection (optional)

The sensors detect the presence of a cup below the coffee outlet of the beverage dispenser. Coffee is only prepared when a cup has been placed. Also, the outlet for hot water is equipped with a cup sensor. The sensitive sensors will detect paper cups as well as porcelain or glass cups.

The new cup detection is extremely safe for use and prevents you from wasting freshly brewed coffee or tea.



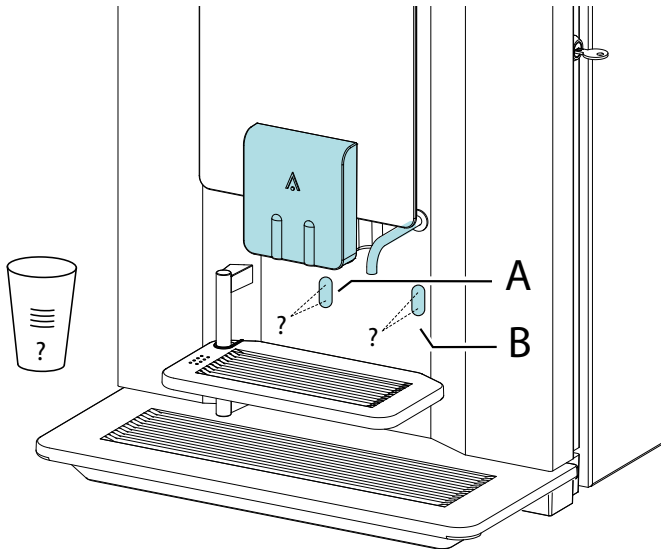
WARNING

- Keep the sensor windows free of dirt.
- Do not hold your fingers below the drink spouts when a drink is being prepared.



Caution

- The cup detection sensors are activated by default.
- Run the rinsing program with the door closed.
- When placing a cup, the the energy safe mode of the machine is deactivated.



- A:** Cup detection for the coffee, cappuccino, chocolate spout.
B: Cup detection for the tea water spout

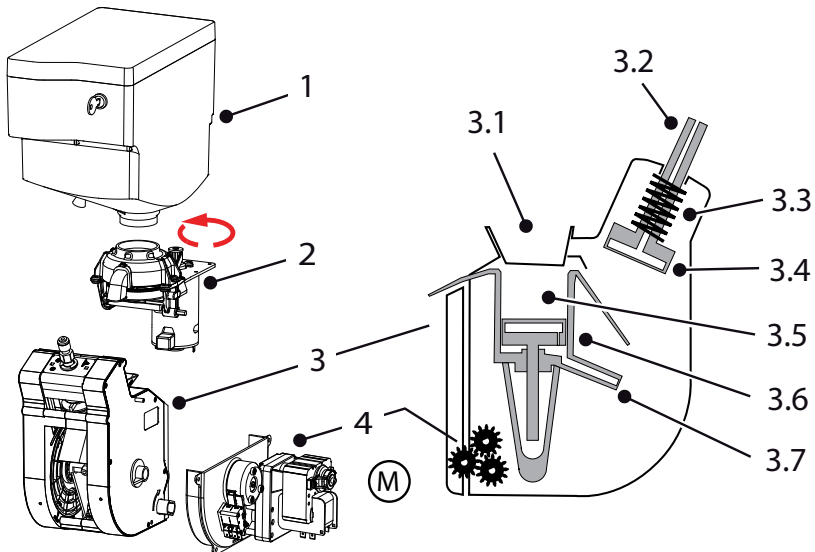
3.4 Espresso group (reversed)

The espresso group consists of a drive unit [4] and an espresso unit [3].

The 230-Vac motor in the drive unit drives the espresso unit.

The upper [3.4] and lower pistons [3.6] are moved up and down by the drive wheels located in the side panels. Their operation is explained in detail in the next chapter.

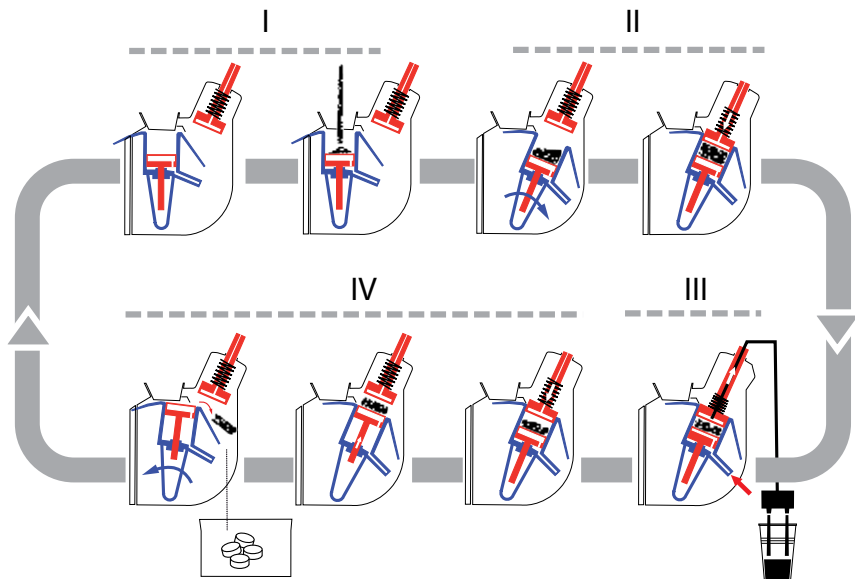
| Major components | Technical data | Material |
|--------------------|-------------------------------|-----------------|
| 1. Bean canister | Content 1.5 kg | PC |
| 2. Coffee grinder | See 3.5 Coffee grinder | |
| 3. Espresso group | | |
| 3.1 Filler opening | | |
| 3.2 Coffee outlet | 4 mm quick release coupling | |
| 3.3 Spring | | stainless steel |
| 3.4 Upper piston | 150 µm bore | stainless steel |
| 3.5 Brewer chamber | Ø 37 mm Standard / Ø 44 mm XL | |
| 3.6 Lower piston | 315 µm bore | stainless steel |
| 3.7 Water supply | | |
| 4. Drive unit | 230 Vac 50 Hz / 28 rpm | |



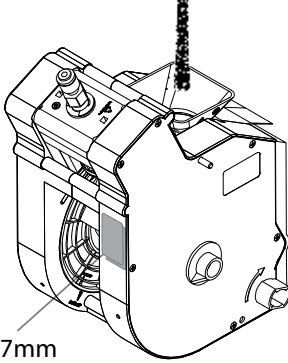
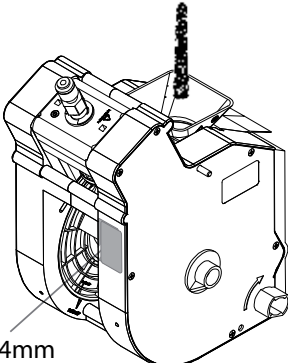


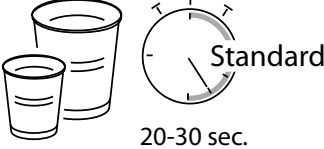
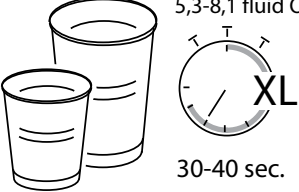
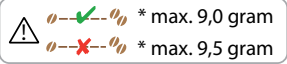

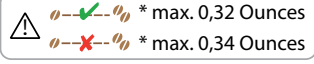
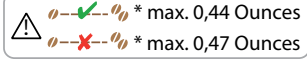
3.4.1 Operation

The ground coffee is measured into the espresso group and then the group closes. Hot water is forced at high pressure through the layer of coffee. The complete espresso cycle is described and illustrated below. This also explains the function of the position switches 1 & 2 (see Section 3.4.4) located in the drive unit.

| Position | Action | Switch position | 2 | 1 |
|-----------|--------------|---|---|---|
| I | Start / fill | Idle position of the espresso group. Ground coffee is measured into the brewer chamber. | 0 | 0 |
| II | Compact | The espresso group moves to the brew position. The upper piston compresses the ground coffee. | 0 | 1 |
| III | Brew | A very small quantity of low-pressured hot water is added to the coffee pellet (pre-infusion). Then the pump starts and pumps hot water at a pressure of 10 bar through the compacted coffee. | 1 | 1 |
| IV | Eject | The espresso group moves back to the start position and ejects the coffee residue. | 0 | 1 |
| Error E24 | | If the switch position shown here occurs, it results in the error E24 (brewer error). | 1 | 0 |



3.4.2 Espresso brewer specifications

| Standard brewer | XL Brewer |
|---|---|
| <p>min. 6,5 - max. 9,5* gram min. 0,23 - max. 0,35* Ounces</p> | <p>min. 9,5 - max 13,4* gram min. 0,34 - max 0,47* Ounces</p> |
|  <p>Ø 37mm</p> |  <p>Ø 44mm</p> |
|  <p>120-150ml 1,8-15,3 fluid Ounces</p> |  <p>150-230ml 5,3-8,1 fluid Ounc</p> |
|  <p>Standard 20-30 sec.</p> |  <p>XL 30-40 sec.</p> |
| <p>min. 50 - max. 150 ml</p>  <p>* max. 9,0 gram * max. 9,5 gram</p> | <p>min. 150 - max. 230 ml</p>  <p>* max. 12,5 gram * max. 13,4 gram</p> |
| <p>min. 1,8 fl oz - max. 5,3 fl oz</p>  <p>* max. 0,32 Ounces * max. 0,34 Ounces</p> | <p>min. 5,3 - max. 8,1 fl oz</p>  <p>* max. 0,44 Ounces * max. 0,47 Ounces</p> |

EN

3.4.3 Dismantling

Espresso group

The espresso group can be disconnected from the drive unit as follows:

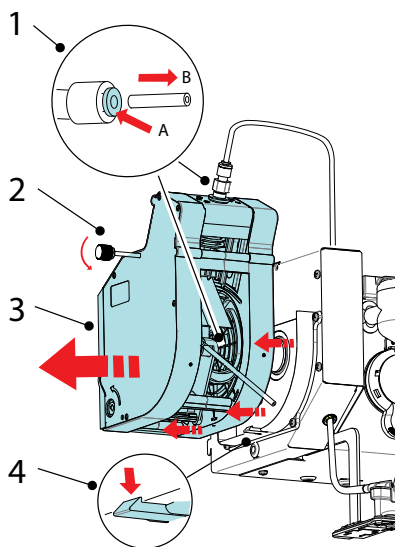
1. Switch off the machine.
2. Remove both hoses [1] from the espresso group.

i To remove the Teflon hose from this connection, the outer ring [A] must be pushed in first to release the hose [B]. This outer ring does not have to be pushed in when inserting the hose.

3. Unscrew the locking pin [2].
4. Unlock the snap hook [4] so that the espresso group [3] separates from the drive.
5. Lift the espresso group [3] from the drive unit.
6. Remove any coffee residue from the group by rinsing it with warm water.

i Do not clean the espresso group in the dishwasher. Do not overtighten the locking pin [2].

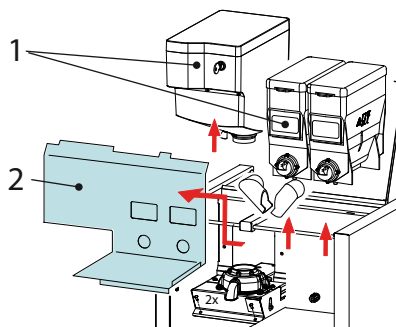
7. After the espresso group is repositioned (see 3.4.4), the group will start automatically as soon as the machine is switched on and the door is closed.



Drive unit

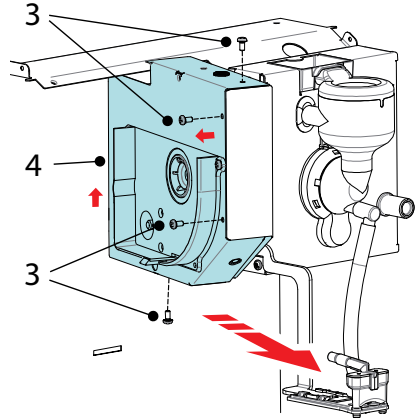
The drive unit can be taken out as follows:

1. Remove the bean canister and the ingredient canister [1] and dismantle the cover [2] behind it.



OptiBean (XL) Touch

2. Remove the screws [3] around the motor housing [4].
3. Carefully take the motor house [4] out of the machine.
4. Disconnect the connectors from the drive unit.

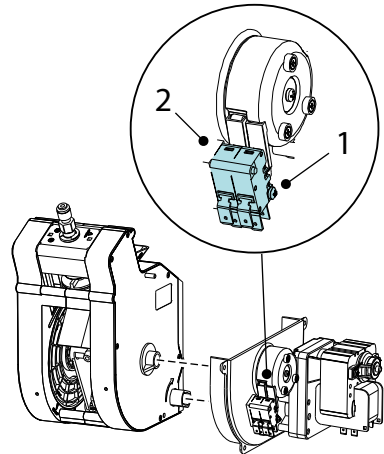
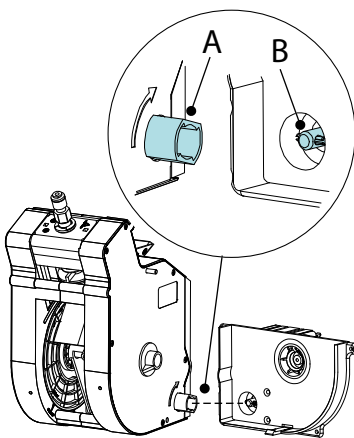


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3.4.4 Replace

Turn the drive shaft [A] into the position that makes the motor shaft [B] fit well when replacing the espresso group.

After closing the machine door, the software checks the espresso group by running it through a complete cycle.



The drive unit contains two microswitches that check the position of the espresso group.

Switch [1] (white lever, right) checks if the espresso group is in the brew position (brewing coffee).


Switch [2] (grey lever, left) checks if the espresso group is in the load position (filling ground coffee).

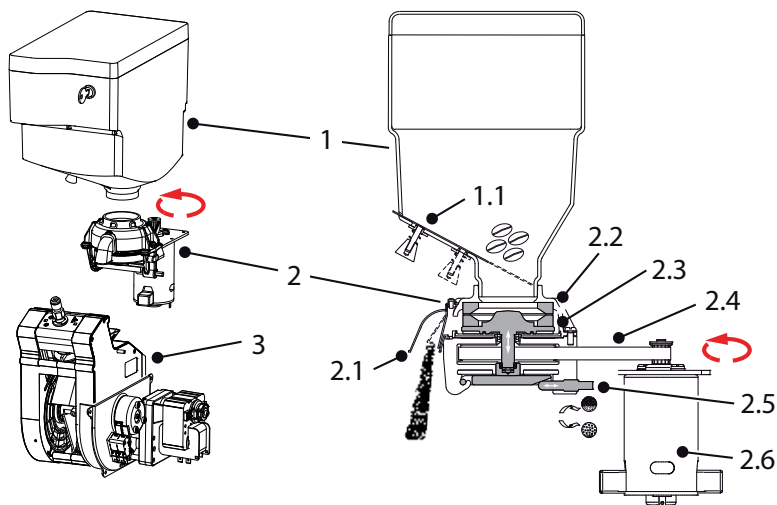
3.5 Grinder

The grinder is driven by a powerful DC motor [2.6].

The upper grinding disk [2.2] is fixed. The lower grinding disk [2.3] is driven by a drive belt [2.4]. The grinding fineness can be set with an adjustment screw [2.5]. When the screw is turned clockwise, the distance from the upper grinding disk reduces; when turned counter-clockwise, it increases.

The ground coffee leaves the grinder via the coffee outlet [2.1]. A rubber flap prevents the entry of moisture.

| Major components | Technical data | Material |
|--------------------------|--|----------|
| 1. Bean canister | Content 1.5 kg | PC |
| 2. Coffee grinder | Sound level < 70 dB(A) | |
| 2.1 Coffee outlet | | ABS |
| 2.2 Upper grinding disk | Ø 65 mm | Ceramic |
| 2.3 Lower grinding disk | Ø 65 mm | Ceramic |
| 2.4 Drive belt | | Rubber |
| 2.5 Fine adjustment | Hex. screw +  | |
| 2.6 DC motor | 230 Vdc | |
| 3. Espresso group | See Section 3.4 | |



OptiBean (XL) Touch

3.5.1 Basic adjustment

The coffee grinder is factory set for an average grinding fineness.



WARNING

- Keep your fingers away from the grinding mechanism when the machine is in operation.



WARNING

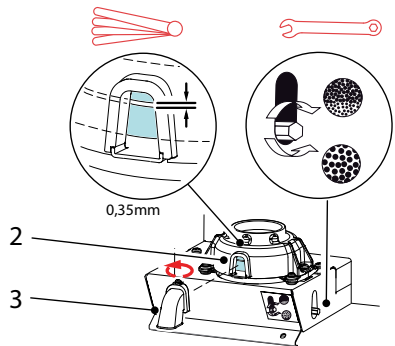
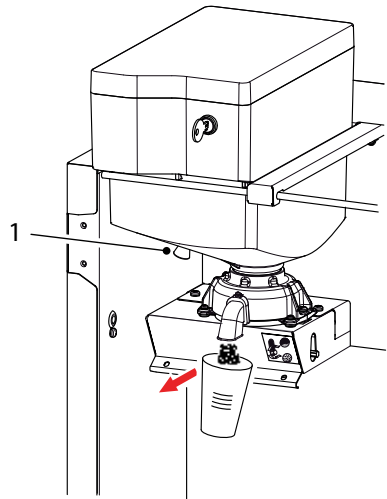
- If there is a sound of two stones rubbing against each other, make the grinding fineness coarser.
- The grinding disks must never come into contact with one another.
- The grinding fineness and the grind capacity depend on the type of coffee beans and the roasting.
- Always adjust the coffee grinder from coarse to fine with the grinder running or empty. Adjusting from fine to coarse can be done when the grinder is stationary.

1. Close the bean canister plug.
2. Remove the stainless steel coffee guide [1].
3. Hold a beaker under the coffee grinder outlet and run the grinder until it is empty.



Tip: Go to the service menu **2.07 Hardware test / Outputs / Grinder motor (IM1)**. Press **TEST** until the coffee grinder is empty. The speed increases.

4. Unscrew the black plastic coffee outlet [3] on the grinder.
5. Set the distance between the grinding disks [2] so that a 0.35-mm feeler gauge fits between them.
6. After adjusting the grinding fineness, carefully check the operation of the brewer, see Section 2.4.3. Adjust the grinding fineness as necessary!



3.5.2 Service life

The service life of the ceramic grinding disks is approximately 3 times longer than that of the steel grinding disks. The service life depends on the type of coffee beans* and is approximately 3,000 kg of coffee beans. With an average measure of 7.5 g/cup, that makes approximately 400,000 shots (XL=300,000 shots 9.5 g/cup).

When these grind quantities are reached, we advise you to replace the complete grinder. Not only the grinding disks must be replaced. By then, the bearings, carbon brushes and drive belt would also have reached their maximum service life. In case of a damaged grinding disc (due to stones or other foreign objects), the discs can be ordered and replaced as a separate set.

**light to dark roast, dry or oily, caramelized*

3.5.3 Run-in period of the grinding discs

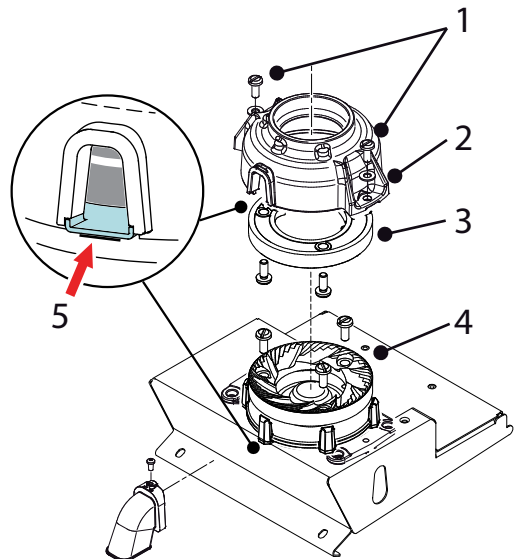
Tests have shown that new ceramic grinding discs have a run-in period of 10 kg of coffee beans (about 1350 cups at 7.5 g / XL=1000 cup at 9.5 g).



We recommend to readjust (to a finer setting) the grinder after this period.

3.5.4 Replacing the grinding discs

1. Follow chapter 3.5.1 Basic adjustment till point 5.
2. Switch off the machine.
3. Loosen the screws [1] and dismantle the grinder head [2].
4. Remove the grinding disks [5] by loosening the three screws [4].
5. Thoroughly clean all parts.
6. Fit the new grinding discs in reverse order.
7. Position the lower plastic sealing disc [5] so that it shuts the bottom of the grinder spout.



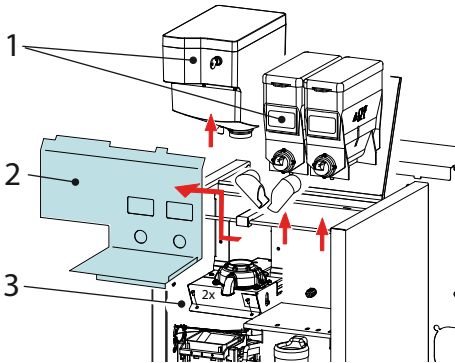
WARNING

- Do not drop the ceramic grinding discs.
- The grinding discs must never come into contact with one another.
- After assembly, adjust the grinding fineness.

3.5.5 Replacement of the drive belt

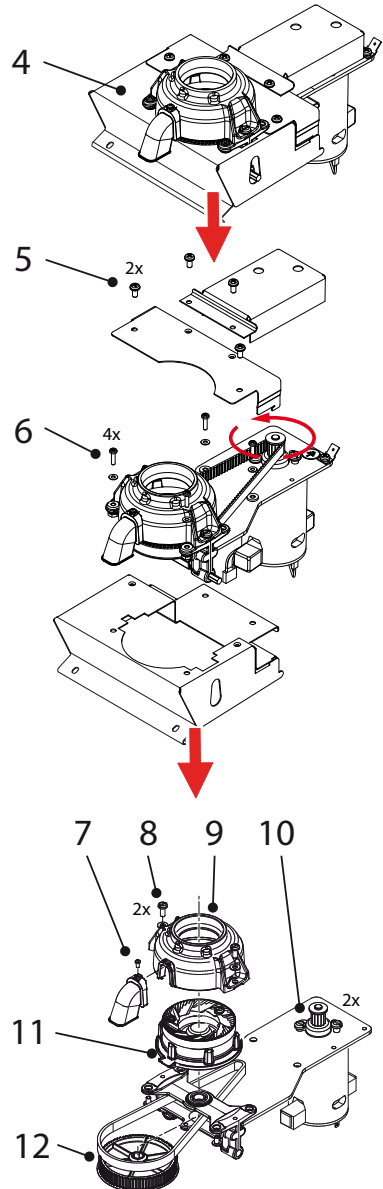
Coffee grinder housing disassembly

1. Remove the bean canister and the instant canister [1] and remove the cover plate [2] behind it.
2. Disconnect the electrical connections to the small coffee grinder circuit board (via the backplate).
3. Remove the two screws [3] on the bottom of the housing.



Drive belt removal

4. The whole assembly [4] can now be removed from the machine.
5. Remove the three screws [5] and remove the belt cover plate.
6. Remove the four screws [6] from the mounting rubbers and remove the coffee grinder along with motor plate.
7. Loosen the screen [7] on the coffee outlet and remove it.
8. Remove the two screws [8] from the grinder housing [9].
9. Remove the grinder housing [9].
10. Slightly loosen the motor screws [10] so that the drive belt tension is released.
11. Pull the grinding disk [11] carrier vertically upwards.
12. Remove the belt disk and belt [12] and replace these parts.
13. Fit the new belt disk and drive belt [12] in reverse order.
14. Tension the belt disk and tighten the motor screw again [10].



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3.5.6 Cleaning

Depending on the fineness of the grind and the intensity of use, coffee residue piles up in the grinder housing and on the grinding discs (fine particles, coffee oil, coffee residue), which can affect the grinding capacity, the measuring accuracy and also the taste.

Cleaning frequency

To guarantee a constant grind quality, it is recommended to clean the coffee grinder at least every 6 months.

Recommended cleaning agent

- Coffee grinder cleaner 430 g. GRINDZ™
- Art. no. 1000151
- Shelf life 18-24 months
- Gluten free

What is GRINDZ™? Is it harmful?

GRINDZ™ consists of 100% biological, natural materials (including grain, starch) and is absolutely harmless to health. It binds the coffee oil and cleans the grinder housing and grinding disks by friction. If small residual particles mix into the follow-up shots, this does not affect the extraction or the taste.

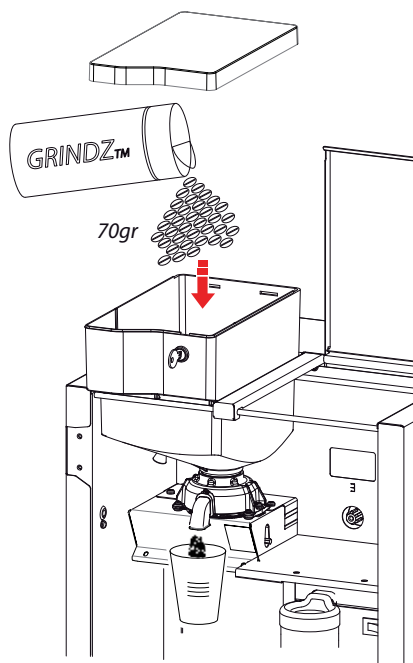
Cleaning with GRINDZ™

1. Close the bean canister plug.
2. Hold a beaker under the coffee grinder outlet.
3. Run the grinder until it is empty.



Tip: Go to the service menu: **2.7 Hardware test / Outputs / IM1**. Press the recipe key 11 until the coffee grinder is empty (the speed increases).

4. Lift the bean canister off the coffee grinder and remove the coffee beans.
5. Place 70 g of GRINDZ™ (2x content of the cover) in the bean canister.
6. Grind the GRINDZ™ with the grinder and collect the ground product.
7. Grind approximately 6 shots of coffee to 'flush' the GRINDZ™ residue out of the grinder housing.

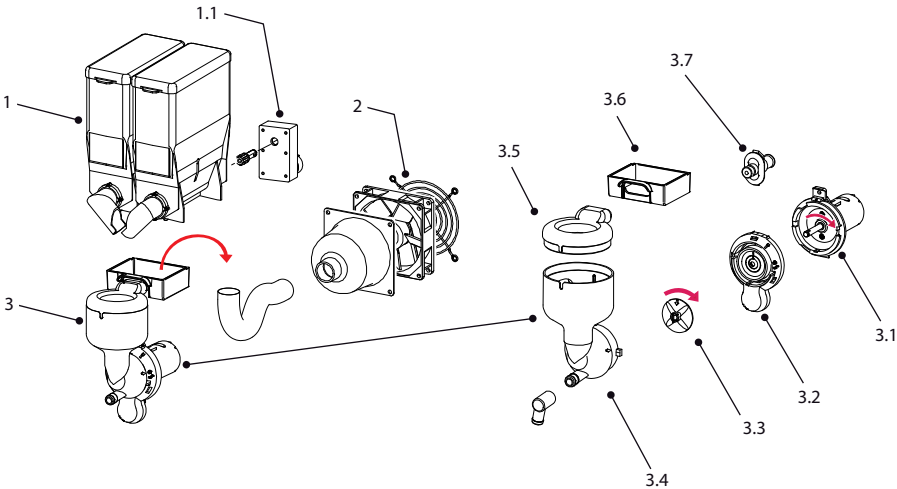


3.6 Instant group

The instant product (ingredient) is pushed out of the canister [1] by a worm screw and falls via the dispensing nozzle into the mixer unit [3.4]. At the same time, hot water is dispensed into the mixer unit. The instant product and the water are mixed together by the mixer impeller [3.3] driven by the mixer motor [3.1] running at 16,500 rpm. The drink flows via the drink outlet into the cup.

Most of the water vapor given off during the mixing is collected by the vapor drain ring [3.5] and extracted via the extraction tray [3.6] by the fan [2]. The instant residue is collected by the extraction tray. The extraction tray can be easily removed (for cleaning) by dismantling the mixer unit. This largely prevents the water vapor from getting into the canister outlet and the ingredient becoming moist.

| Major components | Art. no. | Technical data |
|----------------------------------|----------|---------------------|
| 1. Instant canister | | |
| 1.1 Ingredient motor | 02906 | 24 Vdc / 130 RPM |
| 2. Extraction System | | |
| 3. Mixer group series 247 | | |
| 3.1 Mixer motor | 1003567 | 24 Vdc / 16,500 RPM |
| 3.2 Mounting ring cpl | 1003568 | |
| 3.3 Mixer rotor | 1003569 | |
| 3.4 Mixer bowl | 1003570 | |
| 3.5 Extraction ring | 1003571 | |
| 3.6 Extraction drawer | 1003273 | |
| 3.7 Water inlet adapter | 1004667 | Ø 4 mm |



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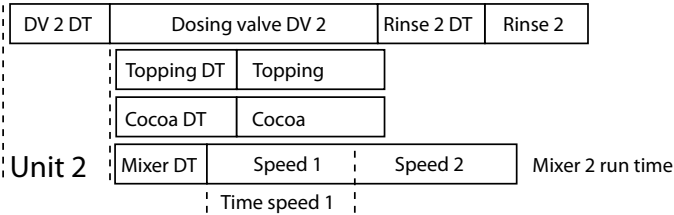
3.6.1 Adjustable mixer speed

The mixer speed is adjustable from 20 to 100%.

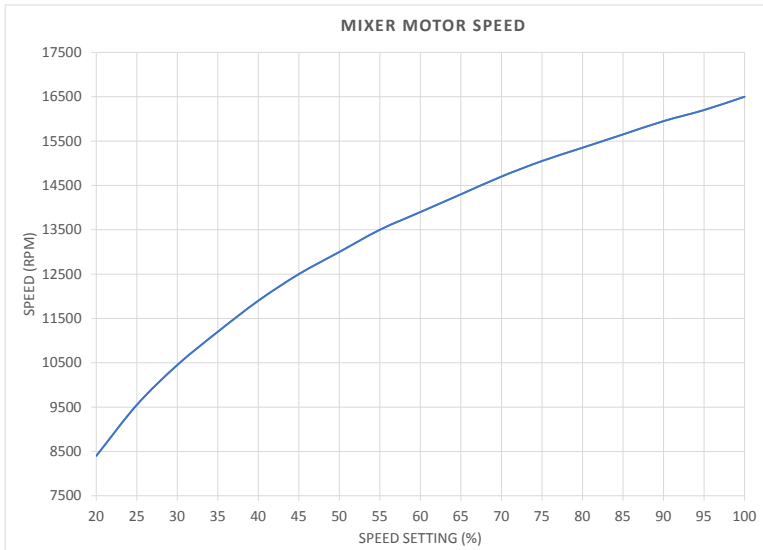
During the **running time**, two speeds can be set: **Speed 1** and **Speed 2**.

It is possible to adjust the percentage of **Time speed 1**.

Speed 2 is then performed over the remaining **mixing time**.



At low speed, instant product is less whipped as it is at a high speed.



3.6.2 Ventilation mixer group

The fan on the back of the machine ventilates the mixer group.

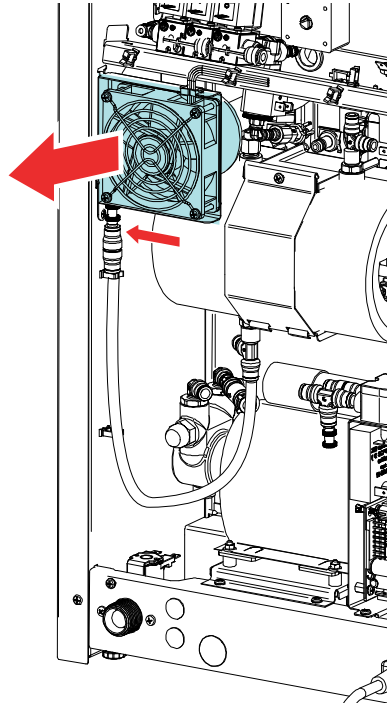
The fan is easy to remove by turning the screw underneath.

The fan speed can be adjusted in the service menu:

2.4 Settings

2.4.05 Fan

- └ Fan running time after preparation
- └ Fan speed during rest
- └ Fan speed recipe preparation

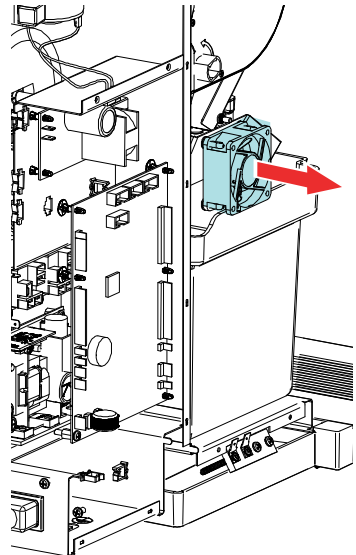


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3.6.3 Ventilation waste bin

The fan on the side of the machine ventilates the waste bin.

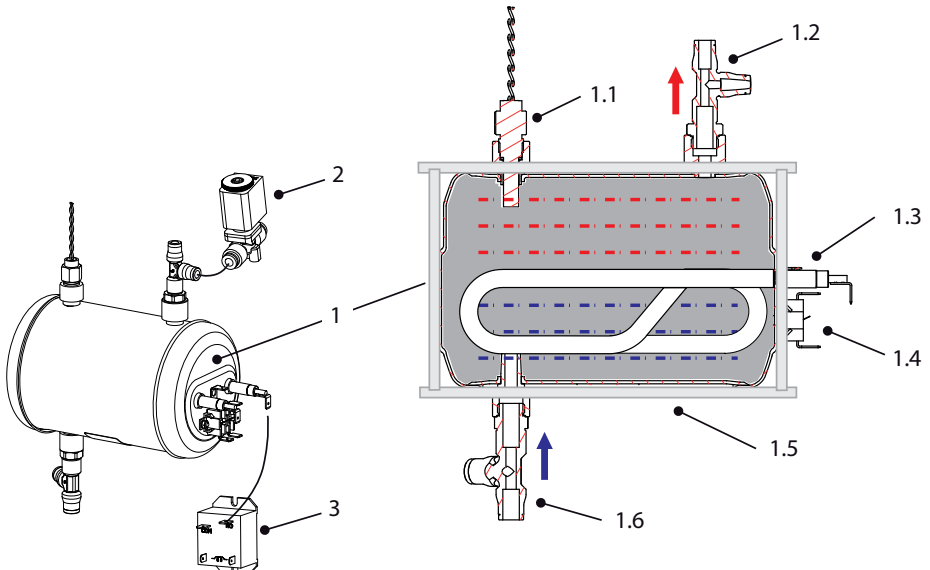
The fan runs as long as the machine is switched on.



3.7 Boiler system

Turn on the device using the ON/OFF switch. The display will light up. If the boiler [1] is empty (at the first installation or after running the shut down menu), the commissioning menu will automatically start and will guide you through the filling-up sequence. If the boiler is filled, the heating element [1.3] will be switched on by the power relay [3]. As soon as the NTC sensor [1.1] measures the set temperature, the heating element [1.3] will be switched off. The insulation [1.5] prevents the boiler from cooling down. The boiler is tested at an overpressure of 13 bar (1.3 MPa) constructed for working pressures of 10 bar (1.0 MPa).

| Major parts | Technical data | Art.No. | Material |
|------------------------------|----------------------------|---------|----------|
| 1. Boiler system | 1.1 Litre | 1000530 | st.st. |
| 1.1 Temperature sensor NTC | 100 kΩ/25 °C / M12x1 | 1000740 | st.st. |
| 1.2 Boiler outlet | G1/4" x Ø 6 mm (2x) | | st.st. |
| 1.3 Boiler & heating element | 230 V 1800 W / art.nr. | 1000530 | st.st. |
| 1.4 Dry boil protection | 230 V 16 A / art.nr. | 1000736 | st.st. |
| 1.5 Insulation | | | PEC |
| 1.6 Boiler inlet | G1/4" x Ø 8 mm (2x) | | st.st. |
| 2. Dispensing valve (3 way) | See 3.7.1 Dispensing valve | 1000699 | |
| 3. Power relay | 24 Vdc / ~250 Vac 30 A | 1004596 | |



Dry boil protection

This double pole dry boil protection [1.4] protects the heating element [1.3] against dry boiling. When the switch detects a temperature above 135 °C, both contacts switch off and disconnect the two heating connections from the electric mains. Reset is only possible after the boiler has cooled down and both contacts are manually reset.



WARNING

- Always disconnect the machine from the mains, the reset buttons are live!

If the dry boiler protection [1.4] is activated, the error 21 appears on the display after 6 minutes.

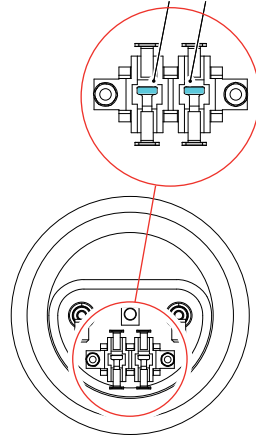
The reason for activating the protection can be caused by air in the water mains, which is transported to the boiler, or another malfunction of the heating system occurs.

Temperature regulation

The heating element [1.3] is turned on when the water temperature falls below the temperature setting. The temperature in the water reservoir is measured using an NTC precision sensor [1.1] mounted through the wall of the boiler.

The heating element always switches off when the maximum boiler temperature of 105 °C is reached. The E6 error will appear on the display.

Reset

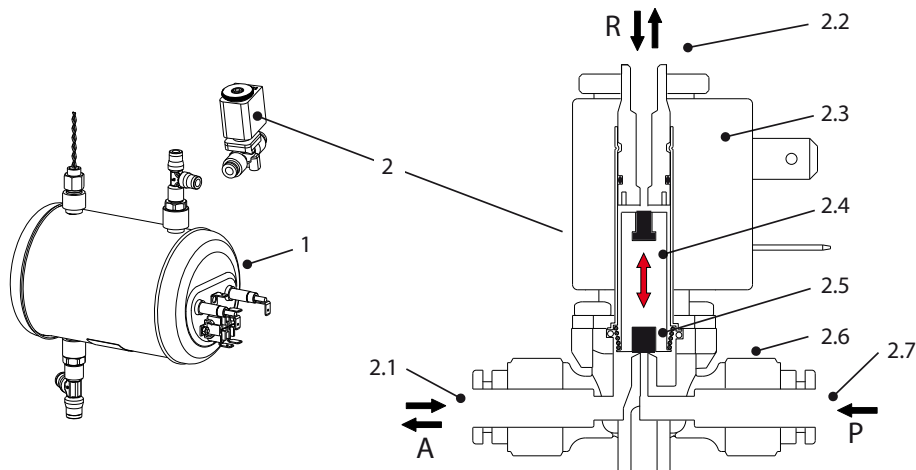


3.7.1 Dispensing valves

The dispensing valves [2] used in the OptiBean are all the same and are called 3-way valves. The brewer valve DV1, mixer valve DV2 and hot water valve DV4 are used as NC (normally closed) valves. The connection P [2.1] is connected to the pressurised side. At a de-energized valve, outlet A [2.7] is in open connection with the outlet R [2.2], so the tubes towards the mixer and hot water outlet always run empty. During a drink selection, one of the dispensing valves [DV] is ACTIVATED and opens. Outlet R [2.2] closes and pressurised water flows from connection P to A.

The (expansion) dispensing valve DV6 is built in as an NO (normally open) valve. Connection A [2.7] is connected to the pressurised side. Expansion water from the boiler can escape from connection R [2.2]. The valve DV6 will be closed when a coffee (10 bar) is made.

| Major parts | Technical data | Material |
|--------------------------------------|---------------------------|----------|
| 1. Boiler system | 1.1 Litre | AISI 316 |
| 2. Dispensing valve 12 bar (3-2 way) | art.no. 1000699 | |
| 2.1 Inlet (P) | Ø 6 mm push fit | |
| 2.2 Aeration (R) | M5 | |
| 2.3 Coil | 24 Vdc - 8.3W - 100% ED | |
| 2.4 Plunger | | St.St. |
| 2.5 Seal | | EPDM |
| 2.6 Body | DN 1.5 (Diameter Nominal) | PPSU |
| 2.7 Outlet (A) | Ø 6 mm push fit | VMQ |



Printed-on black arrow: Flow in direction of the arrow on the valve body ←

3.7.2 Removing/replacing valves

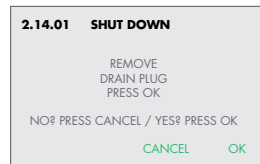
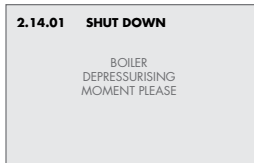
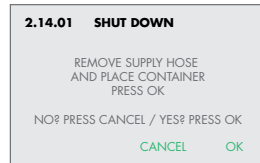


WARNING

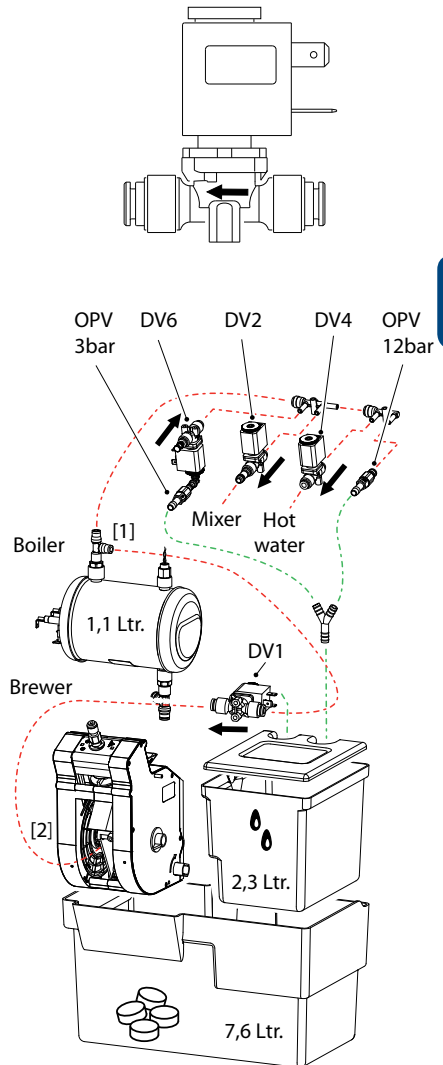
- Pressurised hot water! Do not remove components like valves, couplings, plugs and hoses before you depressurise the boiler system.

Most valves (DV2, DV4, DV6) are accessible by dismantling the back cover. The brewer valve (DV1) is accessible by dismantling the right-side panel of the machine.

1. Activate the shut down menu in the service menu **2.14 Installation / 2.14.01 Shut down** and follow the instructions on the display.
2. For just releasing the pressure in the boiler, it is not necessary to disconnect the supply hose. Press OK.



3. Cancel the process. The boiler is now depressurised. Dispensing valves DV2, DV4 and DV6 can be reached by removing the back. Dispensing valve DV1 can be reached by removing the right-side panel. Remove the brewer so that the valve mounting screws are visible and unscrew them. Remove the valve hose from the boiler [1] and brewer [2].
4. Remove a valve by pressing the outer ring of the push-fit couplings.
5. Replace the valve for a repaired or new one. Check the flow direction before fitting it into place.



Rest water per recipe:

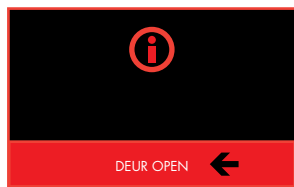
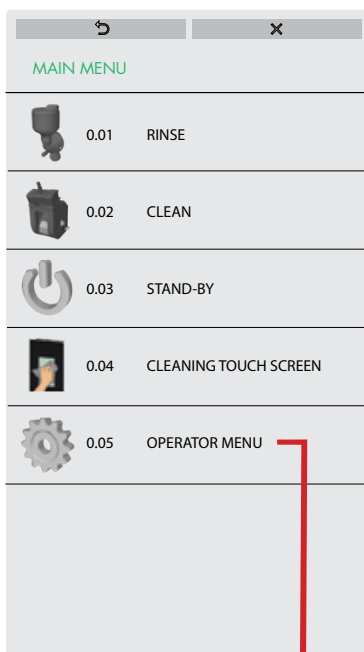
- *Coffee* approximately 21 ml
- *Cappuccino* approximately 26 ml
- *Hot water* approximately 2 ml

4. MENU STRUCTURE / DISPLAY

4.1 The main menu

The main menu can be activated:

- By pressing the text 'MAKE YOUR CHOICE' for 2 seconds.
- By opening the door and pressing on the text 'DOOR OPEN'.



Operator menu
Pin code: 1 1 1 1 1



Most of the settings, including the product settings, are secured by a PIN code. This PIN code is intended to prevent the user from having access to the service menu.

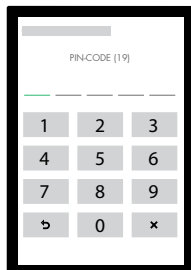


It is recommended not to leave this document with the user after installation and to change the standard factory PIN code.

This chapter describes the various settings that can be changed by **trained authorised service personnel**. How you get access to the **service menu** is described below.

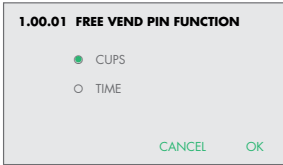

| OPERATOR MENU | |
|---------------|----------------------|
| 1.00 | FREE VEND |
| 1.01 | CLOCK |
| 1.02 | SWITCHING TIMES |
| 1.03 | RECIPE COUNTERS |
| 1.04 | QUICK RECIPE |
| 1.06 | HARDWARE / SOFTWARE |
| 1.07 | SERVICE MENU |
| 1.08 | OPTILIGHT |
| 1.09 | BRIGHTNESS DISPLAY |
| 1.10 | CUP SENSORS |
| 1.11 | SOUND & VISION |
| 1.12 | CHANGE OPERATOR PIN |
| 1.13 | CHANGE FREE VEND PIN |

| SERVICE MENU | |
|--------------|------------------------|
| 2.01 | QUICK RECIPE PRO |
| 2.02 | RECIPE BUTTON SETTINGS |
| 2.03 | RECIPE SETTINGS |
| 2.04 | SETTINGS |
| 2.05 | RESET COUNTERS |
| 2.06 | SERVICE BOILER |
| 2.07 | HARDWARE TEST |
| 2.08 | READ LOG FILE |
| 2.09 | REMOVE LOG FILE |
| 2.10 | LOAD DEFAULTS VALUES |
| 2.11 | SD/USB MENU |
| 2.12 | CHANGE SERVICE PIN |
| 2.13 | OTHER SETTINGS |
| 2.14 | INSTALLATION |
| 2.15 | DESCALING |
| 2.16 | CLEANING MANAGEMENT |



Service menu
Pin code: 2 2 2 2 2

4.2 The operator menu

| Operator menu | | | | | |
|-------------------------|------------------------|---|---------------------|---------------------|--|
| Main item | Subitem | .. | Range | Default setting | Description |
| 1.00 FREE VEND | FREE VEND | | YES/NO | YES | Set the machine for free or paid vending. To disable this item go to the service menu 2.04.14 FREE VEND IN OPERATOR MENU and set to NO. |
| | FREE VEND PIN FUNCTION |  | | | Free vend pin function needs: - Activated payment system (free vend NO) - FREE VEND PIN button programmed and selected - Enter PIN CODE 1 - 2 - 3 - 4 - 5  |
| | FREE VEND PIN: CUPS | | 0-10 | 2 | Cups: Maximum 2 drinks can be taken for FREE. |
| | FREE VEND PIN: TIME | | 5 min. | 0-5 min. | Time: Drinks are FREE for 5 min. |
| 1.01 CLOCK | TIME | | HH:MM | | Set the clock to the correct local time. |
| | DATE | | DD-MM-YYYY | | Set the clock to the correct local date. |
| 1.02 SWITCHING TIMES | MONDAY - FRIDAY | MONDAY - FRIDAY BLOCK 1 BLOCK 2 BLOCK 3 | OPERATION TIME | ON TIME OFF TIME | Operation time: Blocks the keys and switches off. Set the time (max. 3 timers) when the machine is in operation. When the timer switches the machine off, it automatically goes into stand-by and/or energy safe mode (if activated). Time pricing policy: Set On/Off time (max 3 timers.): The machine performs, in this period, the set price choice: Price low or Free . If no time is set, the price high will be used. Price selection: Specify the pricing choice, free, price high or price low , that the machine must handle. |
| | | | TIME PRICING POLICY | ON TIME OFF TIME | |
| | | | PRICE SELECTION | FREE / HIGH / LOW | |
| | SATURDAY | SATURDAY BLOCK 1 BLOCK 2 BLOCK 3 | OPERATION TIME | ON TIME OFF TIME | |
| | | | TIME PRICING POLICY | ON TIME OFF TIME | |
| | | | PRICE SELECTION | FREE / HIGH / LOW | |
| | SUNDAY | SUNDAY BLOCK 1 BLOCK 2 BLOCK 3 | OPERATION TIME | ON TIME OFF TIME | |
| | | | TIME PRICING POLICY | ON TIME OFF TIME | |
| | | | PRICE SELECTION | FREE / HIGH / LOW | |

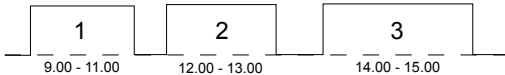
| Operator menu | | | | | |
|----------------------------|---------------------|--------------------|----------------|-----------------|--|
| Main item | Subitem | .. | Range | Default setting | Description |
| 1.02 SWITCHING TIMES | ENERGY SAFE MODE | ACTIVE | YES/NO | YES | Active: After the set time has passed, the machine goes into power save mode (sleep mode) and uses less energy. The product keys remain active, but the boiler cools down in steps of 5 °C. When a product is chosen, the machine 'wakes up' and after a short warm-up period, it is ready for operation again. |
| | | TIME | 15-240 min. | 30 min. | |
| | | LCD | YES/NO | YES | Backlight LCD display during energy safe mode. |
| | | OPTILIGHT | 0-100% | 15% | OptiLight during energy safe mode. 0=off. |
| | | BOILER TEMPERATURE | OFF / 60-80 °C | OFF | Boiler temperature during power safe mode. |

Example:

Three switching times set

The machine automatically switches from Stand-by to ON at 9 a.m. At 11 a.m., it switches back to Stand-by, etc., etc.

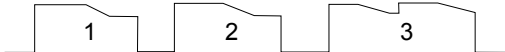
During stand-by, the key panel is switched off and the boiler temperature drops to the set stand-by temperature (menu 2.4 Settings / Stand-by temp / off - 60-80 °C (by default the stand-by temp is set to 'off')).



Three switching times set & Energy safe mode activated.

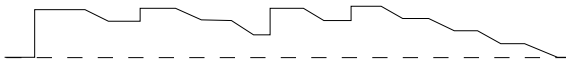
When the machine is ON and is not in use, it switches to power save mode after 30 min.


The boiler temperature decreases by 5 °C every 30 minutes. If a product is chosen after 2 hours, the machine 'wakes up' again. This way, less energy is used if the machine is switched on and not used much or if someone forgot to switch it off.



Energy safe mode activated (no switching times set)

If there is no dispensing, the machine switches to power save after 30 min. The boiler temperature decreases by 5 °C every 30 minutes. If a product is chosen after 2 hours, the machine 'wakes up' again. This way, less energy is used if the machine is switched on and not used much or if someone forgot to switch it off.



| Operator menu | | | | | | |
|----------------------------|--|---|-----------|-----------------|---|--|
| Main item | Subitem | | Range | Default setting | Description | |
| 1.03 RECIPE COUNTERS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | TOTAL | cups | | Total count per recipe (from free till jugs) | |
| | | FREE | cups | | Number of drinks <u>free</u> | |
| | | PAID LOW PRICE | cups | | Number of drinks <u>paid at low price</u> | |
| | | PAID HIGH PRICE | cups | | Number of drinks <u>paid at high price</u> | |
| | | TEST RECIPE | cups | | Number of drinks made by test recipe | |
| | | TOKEN | cups | | Number of drinks <u>paid with a token</u> per recipe | |
| | | JUG | cups | | Number of drinks dispensed in the jug | |
| | RECIPES TOTAL | See above | cups | | Total count for all recipes with the same subdivision as mentioned above | |
| | SERVICE COUNTERS | RINSE | | | | Rinse programme counter |
| | | CLEANING | | | | Cleaning programme counter |
| | RESET COUNTERS | | | | | Reset all counters if activated |
| | SAVE COUNTERS |  | | | | Copy your counter readings into an SD card. - Place an SD memory card in the SD card slot. - Press enter; save as: file.CNT. - Press Enter → please wait → saved. - Remove the SD card. - Place the SD card in your computer and open the file. CNT with notepad or Word pad. Error messages: SD card error: Lock function on SD card is ON No SD card present: No SD card is inserted |
| 1.04 QUICK RECIPE | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | CUP VOLUME | 25-350 ml | 120 ml | This menu item is only visible when it is activated in the service menu. You can easily set the volume and strength of coffee, milk, sugar, cocoa for each recipe (drink key). Only the ingredients for the recipe concerned are visible. | |
| | | COFFEE BEANS | -5 / +5% | 0% | | |
| | | TOPPING | -5 / +5% | 0% | | |
| | | COCAO | -5 / +5% | 0% | | |

| Operator menu | | | | | |
|--------------------------------|-------------------|--|-----------|-----------------|--|
| Main item | Subitem | | Range | Default setting | Description |
| 1.06 SOFTWARE / HARDWARE | SOFTWARE | | | | <div style="border: 1px solid black; padding: 5px;"> <p>1.06.00 SOFTWARE</p> <p>BOOTLADER: V6.0.2253 MAINBOARD: V6.0.2522 ANDROID APP: 0.1.2528 ANDROID BUILD: var_mlx6-eng 5.0.2 1.0.0-ga-var03 20161115 V0.04</p> <p>MDD: 3Bxxxx.MDU RCD: 3Bxxxx.RCU TLF: 3Bxxxx.tlf</p> <p style="text-align: right;">OK</p> </div> |
| | HARDWARE | | | | <div style="border: 1px solid black; padding: 5px;"> <p>1.06.01 HARDWARE</p> <p>ANI-MAIN REV: 0 ANI-MAIN OPT: 0 ANI-TOUCH REV: 0 ANI-TOUCH: 0 OPT: 0</p> <p style="text-align: right;">OK</p> </div> |
| 1.07 PIN CODE | | | 2-2-2-2-2 | | Enter the Pin code |
| 1.08 OPTILIGHT | RED | | 0-100% | 0% | Set your LED lighting colour by setting the colours red, green and blue. |
| | GREEN | | 0-100% | 0% | |
| | BLUE | | 0-100% | 100% | When RANDOM COLORS is set, the LED mood lighting goes through the whole colour spectrum at the set time. 0= off |
| | RANDOM COLORS | | 0-60 min. | 10 min. | |
| 1.09 BACKLIGHT | | | 25-100% | 75% | Set the contrast of the LCD display. |
| 1.10 CUP SENSORS | CUP SENSOR LEFT | | YES/NO | | Yes: Cup sensor is active. No: Cup sensor is not active. |
| | CUP SENSOR MIDDLE | | YES/NO | | |
| | CUP SENSOR RIGHT | | YES/NO | | |

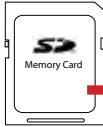
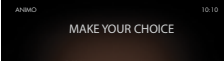

OptiLight colour recipes

| OptiLight | Red | Green | Blue | | OptiLight | Red | Green | Blue |
|-----------|------|-------|------|--|------------|------|-------|------|
| Red | 100% | 0% | 0% | | Light blue | 0% | 100% | 100% |
| Green | 0% | 100% | 0% | | White | 100% | 100% | 100% |
| Blue | 0% | 0% | 100% | | Pink | 100% | 0% | 10% |
| Yellow | 100% | 50% | 0% | | Orange | 100% | 15% | 0% |
| Purple | 100% | 0% | 100% | | | | | |

Table 1

| Operator menu | | | | | | | |
|---------------------------|-----------------------|--|----------------------------|---------------------|-----------------|---|---|
| Main item | Subitem | .. | . | Range | Default setting | Description | |
| 1.11 VISUAL & SOUND | ADVERTISING SCREEN | CHOOSE ADVERTISING SCREEN | | | | Choose what kind of entertainment the display must show. | |
| | | IMAGES <i>Picture specifications</i> PNG 480X800 pixels 24/32 bit | CHOOSE IMAGE | | | Select the .png file from the image directory. | |
| | | | LOAD IMAGE FROM SD OR USB | | | Insert an SD card or USB stick to upload your .png file. | |
| | | | REMOVE IMAGE | | | Select a .png file to remove it from the image directory. | |
| | | VIDEO <i>Video specifications</i> MPEG-4 Landscape 480X272 pixels <i>Portrait</i> 480x800 pixels <i>Video bit-rate</i> ≤500 <i>Audio</i> 44.1 kHz ≤128 kbps | FULL SCREEN VIDEO | YES/NO | | Yes: Video is in portrait mode No: Video is in landscape mode (top of screen) | |
| | | | CHOOSE VIDEO | | | Select the .mp4 file from the video directory. | |
| | | | LOAD VIDEO FROM SD OR USB | | | Insert an SD card or USB stick to upload your .mp4 files. | |
| | | | REMOVE VIDEO | | | Select the .mp4 file from the video directory. | |
| | | | EFFECT DURATION TIME | 0.1 - 3 sec. | 0.5 s. | Time of the effect between the selected images. | |
| | | | DURATION TIME | 1 - 10 sec. | 5 s. | Time between the selected images. | |
| | | SLIDE SHOW <i>Picture specifications</i> PNG 480X800 pixels 24/32 bit | SLIDE SHOW EFFECT | SLIDE IN FADE IN | | Slide in: The images start from the side of the screen. Fade in: The images start from the middle of the screen. | |
| | | | CHOOSE IMAGES | | | Select the files from the slide show directory. | |
| | | | LOAD IMAGE FROM SD OR USB | | | Insert an SD card or USB stick to upload your .png file. | |
| | | | REMOVE IMAGE | | | Select a .png file to remove it from the image directory. | |
| | | | SCREEN SAVER DELAY TIME | | 10-120 s. | 60 s. | |
| | | | SHOW TEXT AND TOUCH SYMBOL | SHOW TEXT | YES/NO | Yes | Yes: Show text <i>Touch screen for your selection</i> at the bottom of the screen. No: Do not show text. |
| | | | | SHOW TOUCH SYMBOL | YES/NO | Yes | Yes: Show symbol. No: Do not show symbol. |

EN

| Operator menu | | | | | | |
|-----------------------------------|---|--------------------------|---|---|---|---|
| Main item | Subitem | .. | Range | Default setting | Description | |
| 1.11 VISUAL & SOUND | SOUNDS | VIDEO SOUND | 0 - 100 | 70 | Set the video sound volume. | |
| | | SYSTEM SOUND | 0 - 100 | 70 | Set the system sound volume. | |
| | LOGO ON CUP? | LOGO ON CUP? | YES/NO | YES | Show the logo on the cup. | |
| | | CHOOSE LOGO | | | Select the .png file from the image directory. | |
| | Picture specifications PNG 120X120 pixels 24/32 bit transparant | LOAD LOGO FROM SD OR USB |  | | | Insert an SD card or USB stick to upload your .png file. |
| | | REMOVE LOGO | | | | Select a .png file to remove it from the image directory. |
| | SHOW REPEAT RECIPE | | YES/NO | NO | If set to YES, it offers the opportunity to repeat a recipe. | |
| | SHOW ALERGENS INFO | | YES/NO | NO | If set to YES, it shows extra alergens information with each chosen recipe. | |
| MENU KEY ACCESS | | YES/NO | NO | If set to YES, it is only possible to access the operator menu after the doorlock is turned. Use this function to prevent unauthorised persons from being able to access the operator menu.  | | |
| 1.12 CHANGE OPERATOR PIN CODE | NEW PIN CODE | REPEAT PIN CODE |  | With this menu item, the PIN code can be changed. The complete operator menu is secured behind this PIN code. This PIN code prevents unintentional changes to the machine settings by untrained personnel. | | |
| 1.13 CHANGE FREE VEND PIN CODE | NEW PIN CODE | REPEAT PIN CODE | | <ul style="list-style-type: none"> •The factory operator PIN code is 1-1-1-1-1. •The factory free vend PIN code is 1-2-3-4-5. PIN code forgotten? In the PIN code input display, a number is displayed on the right. Enter the associated PIN code (see the list in the pin code table) to access the operator menu. | | |
| 1.14 REFILL CANISTERS | 1.14 REFILL CANISTERS CANISTERS REFILLED NOR PRESS CANCEL /YES/ PRESS OK CANCEL OK | | YES/NO | NO | When a Telemetry system (Vendon®) is connected, the user can inform the Telemetry system when all canisters are refilled. To enable this menu item in the operator menu, go to the service menu 2.04.16.01 REFILL CANISTERS IN OPERATOR MENU and set to YES. | |

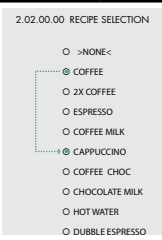
Pin Code Table

| No. | Operator Pin code | | | | | |
|-----|-------------------|---|---|---|---|--|
| 1 | 4 | 2 | 1 | 2 | 2 | |
| 2 | 3 | 3 | 4 | 4 | 3 | |
| 3 | 1 | 4 | 1 | 1 | 3 | |
| 4 | 2 | 4 | 2 | 1 | 2 | |
| 5 | 3 | 3 | 3 | 1 | 3 | |
| 6 | 1 | 4 | 4 | 4 | 1 | |
| 7 | 4 | 1 | 2 | 3 | 1 | |


| No. | Operator Pin code | | | | | |
|-----|-------------------|---|---|---|---|--|
| 8 | 3 | 4 | 3 | 1 | 4 | |
| 9 | 4 | 2 | 1 | 3 | 4 | |
| 10 | 3 | 3 | 3 | 1 | 4 | |
| 11 | 4 | 2 | 3 | 2 | 2 | |
| 12 | 4 | 3 | 2 | 2 | 2 | |
| 13 | 3 | 2 | 2 | 4 | 4 | |
| 14 | 3 | 3 | 1 | 2 | 4 | |

| No. | Operator Pin code | | | | | |
|-----|-------------------|---|---|---|---|--|
| 15 | 3 | 4 | 3 | 1 | 2 | |
| 16 | 3 | 4 | 4 | 2 | 4 | |
| 17 | 1 | 4 | 2 | 2 | 4 | |
| 18 | 1 | 3 | 2 | 4 | 4 | |
| 19 | 3 | 3 | 4 | 4 | 1 | |
| 20 | 1 | 4 | 1 | 3 | 4 | |

4.3 The service menu

| Service menu | | | | | | |
|-----------------------------------|--|------------------|--|-----------------|---|--|
| Main item | Subitem | Item | Range | Default setting | Description | |
| 2.01 QUICK RECIPE PRO | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | CUP VOLUME | 25-350 ml | 120 ml | You can easily set the volume and strength of the coffee, milk, sugar and cocoa yourself for each recipe (drink key). Only the ingredient for the recipe concerned is visible. | |
| | | COFFEE BEANS | 0.0 - 5.00 s | | | |
| | | TOPPING | 0.0 - 5.00 s | | | |
| | | COCAO | 0.0 - 5.00 s | | | |
| | | TEST RECIPE | | | Use this function to stay in the menu and test each drink after changing some settings. | |
| 2.02 RECIPE BUTTON SETTINGS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | RECIPE SELECTION |  | | Change any recipe buttons that have the standard factory settings. All settings that correspond to selected recipes are automatically loaded. See chapter 2.4 How to program a recipe? Instead of a RECIPE, a Free Vend PIN can be programmed. Use this Free Vend PIN to switch on the touch panel on the free vend when a payment system is active. | |
| | | RECIPE ACTIVE | YES/NO | YES | Use this to place the product concerned out of service. | |
| | | PRICE | PRICE HIGH | 0.05-2.00 | 0.10 | For paid dispensing, a <u>price high</u> can be set for each product button. |
| | | | PRICE LOW | 0.05-2.00 | 0.25 | For paid dispensing, a <u>price low</u> can be set for each product button. |
| | | CUP VOLUME | 25-350 ml | 120 ml | Set the desired cup volume. When the cup volume (menu parameter) is increased, instant products like topping and chocolate will be automatically and proportionally increased. The coffee, however, will not be automatically increased! | |
| | | MULTI CUP | 0-10 | 0 | Set the number of cups that should be dispensed when the key switch is in the jug setting. | |

EN

| Service menu | | | | | |
|-----------------------------------|--|----------------------|---|-----------------|---|
| Main item | Subitem | Item | Range | Default setting | Description |
| 2.02 RECIPE BUTTON SETTINGS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | SET RECIPE FUNCTION | 0-1-2-3 | | Set the required operation of the key switch. See table 2. |
| | | PUSH & HOLD | YES-NO | NO | If set to YES, the dispensing of the hot/cold* water starts when this key is held and stops when it is released. Use this option only with DV4 and KW3 in combination with a hot/cold* water recipe key. *Cold water is optional. |
| | | LEAK OUT TIME | 0-10 sec. | 2 sec. | The time that the product continues to run out of the brewer or mixer. After this interval has elapsed, a new drink selection can be made. |
| | | PRE-INFUSION | YES/NO | Yes | Pre-infusion for optimum espresso extraction. Pre-infusion is the prior moistening of the ground coffee just before the coffee is made. This ensures an even better extraction and creaming of the coffee. This option only works for the coffee and espresso recipes. |
| | | ALLERGENS INFO |  | | Select which product is inside the recipe (drink). This information will be displayed on the screen to inform the user. |
| | | POSITION LOGO ON CUP | HORIZONTAL | | The position of the logo on the cup can be corrected horizontally. |
| | | | VERTICAL | | The position of the logo on the cup can be corrected vertically. |
| TEST RECIPE | | | Use this function to stay in the menu and test each drink after changing some settings. | | |











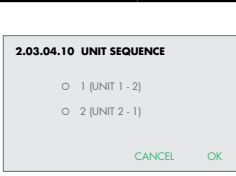
| 2.02 RECIPE BUTTON SETTINGS / 2.02.00.05 SET RECIPE FUNCTION | | | | |
|--|---|---|---|-----------------------|
| SETTING | DRINK | PIN CODE NEEDED | NO PAYMENT SYSTEM CONNECTED | PAYMENT SYSTEM ACTIVE |
| 0 |  JUG COFFEE |  |  | DRINK IS FREE |
| 1 |  JUG COFFEE | NO |  | DRINK MUST BE PAID |
| 2 |  JUG COFFEE | NO |  | DRINK MUST BE PAID |
| 3 |  JUG COFFEE |  |  | DRINK IS FREE |

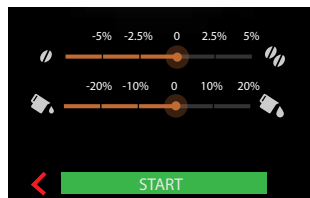
Table 2

| Service menu | | | | | | |
|--------------------------|--|--------|--|-------------|-------------------------------------|--|
| Main item | Subitem | | | Range | Default setting | Description |
| 2.03 RECIPE SETTINGS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | UNIT 1 | BREWER VALVE 1 DELAY TIME (DV1) | 0.0-30.0 s | | Brewer valve 1 delay time |
| | | | BREWER VALVE 1 (DV1) | 0-100 ml | | Dosing volume brewer valve 1 |
| | | | COFFEE BEANS DELAY | 0.0-30.0 s | 0.5 s | Coffee grinder delay |
| | | | COFFEE BEANS | 0.00-5.00 s | | Coffee grinder dispensing time |
| | | | BREWER DELAY 1 | 0.0-30.0 s | 0.5 s | Brewer delay time 1 after grinder dispensing. |
| | | | PRE-INFUSION TIME | 0.0-15.0 s | Stand 1.0 s. XL 1.5 s. | Pre-infusion time. The brewer valve is open for the set PI time and the coffee powder is moistened at water supply pressure (approximately 2 bar). Note: If coffee is still coming out of the brewer, the PI time is too long. |
| | | | PRE-INFUSION PAUSE | 0.0-15.0 s | 2.2 s. | Pre-infusion pause. The brewer valve is kept closed during the set PI pause; the coffee swells up. Note: The pre-infusion function can be turned ON/OFF in menu 2.02 Button settings) / Pre- infusion). |
| | | | BREWER DELAY TIME 2 | 0.0-15.0 s | 3.0 s. | Brewer delay time 2 after making coffee. This affects the moisture that remains in the coffee pellet. |
| | | | PRESSURE DELAY TIME 1 | 0.0-15.0 s | | The delay time between unit 2 and unit 1 is only used for extending the time between the topping and coffee for Latte macchiato (10.5 sec.). |
| | | | PRESSURE TIME | 0.0-15.0 s | | The pressure boiler is brought to low pressure. |
| PRESSURE DELAY TIME 2 | 0.0-15.0 s | | Delay time 2 after the pressure boiler is reduced to low pres- sure again. | | | |

| Service menu | | | | | |
|-------------------------|--|----------------------------------|--------------------------------|--|---|
| Main item | Subitem | | | Range | Description |
| 2.03 RECIPE SETTINGS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | UNIT 2 | MIXER 2 VALVE DELAY TIME (DV2) | 0.0-30.0 s | Mixer valve (DV2) delay time |
| | | | MIXER 3 VALVE (DV2) | 0-100 ml | Dispensing volume mixer valve (DV2) |
| | | | RINSE 2 DELAY TIME | 0.0-20.0 s | Delay time of rinse water (DV2) |
| | | | RINSE 2 | 0-15 ml | Dispensing volume rinsing water automatically deducted from DV2 |
| | | | TOPPING DELAY TIME | 0.0-30.0 s | Topping product delay time |
| | | | TOPPING | 0.00-5.00 s | Topping product dispensing time |
| | | | COCAO DELAY TIME | 0.0-30.0 s | Cocoa product delay time |
| | | | COCAO | 0.00-5.00 s | Cocoa product dispensing time |
| | | | MIXER 2 DELAY TIME | 0.0-30.0 s | Delay time mixer 2 |
| | | | MIXER 2 | | |
| | | RUNNING TIME | 0.0-10.0 s | Mixing time mixer 2 | |
| | | SPEED BLOCK 1 MIXER 2 | 20-100% | 1st speed mixer 2 | |
| | | TIME SPEED BLOCK 1 | 0-100% | Time 1st speed mixer 2 | |
| | | SPEED BLOCK 2 MIXER 2 | 20-100% | 2nd speed Mixer 2 | |
| | | HOT WATER VALVE DELAY TIME (DV4) | 0.0-30.0 s | Hot water valve delay time | |
| | | HOT WATER VALVE | 0-100 ml | Dispensing volume of hot water valve (DV4) | |
| | | DOSING VALVE 5 DELAY TIME (DV5) | 0.0-30.0 s | n.a. | |
| DOSING VALVE 5 (DV5) | 0-100 ml | n.a. | | | |

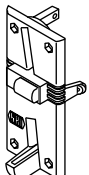
EN

| Service menu | | | | | | |
|-------------------------|--|---|------------|---|---|--|
| Main item | Subitem | | Range | Description | | |
| 2.03 RECIPE SETTINGS | 1 RECIPE 2 RECIPE 3 RECIPE 4 RECIPE ETC. | INGREDIENT RANGE SETTING | | | | |
| | | COFFEE STRENGTH | 0-10% | With the strength range item, an ingredient can be added to the strength control. Ingredient strength control: 0 = off / >1 = on Example: [coffee] 5% Example: [milk] 20% | | |
| | | TOPPING STRENGTH | 0-40% | | | |
| | | COCAO STRENGTH | 0-40% | | | |
| | | UNIT SEQUENCE | | | | |
| | |  | | Set the unit sequence. | For example: Coffee with Milk: Unit 1-2 first Coffee (unit 1) then milk (unit 2). Cappuccino and/or Latte macchiato: Unit 2-1 first Milk (unit 2) then Espresso (unit 1). | |
| | | COLD WATER VALVE 3 DELAY TIME (KW3) | 0.0-30.0 s | Cold water valve 3 delay time * | | |
| | | COLD WATER VALVE 3 (KW3) | 0-100 ml | Cold water valve 3 dispensing quantity * (*Optional cold water dispensing) | | |
| | | OTHER RECIPE SETTINGS | | This menu item is not available for the service technician and can only be accessed with a special PIN code. | | |
| | | TEST RECIPE | | Test here your altered settings by starting the drink without leaving the menu. | | |



| Service menu | | | | | | |
|------------------|-------------|--|------------------|-----------------|---|---|
| Main item | Subitem | | Range | Default setting | Description | |
| 2.04 SETTINGS | LANGUAGE | <div style="border: 1px solid black; padding: 5px;"> <p>2.04.16 LANGUAGE</p> <ul style="list-style-type: none"> <input type="radio"/> NEDERLANDS <input type="radio"/> ENGLISH <input type="radio"/> DEUTSCH <input type="radio"/> FRANÇAIS <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <p style="text-align: right; color: green;">CANCEL OK</p> </div> | | EN | Display language selection. English is the factory setting. | |
| | TEMPERATURE | BOILER TEMPERATURE | | 70-97 °C * | 90 °C * | Boiler temperature |
| | | TEMPERATURE HYSTERESIS | | 0-10 °C | 0 °C | Temperature decreases, after which the boiler must heat up again |
| | | DISPENCE BLOCKING | | 70-80 °C | 70 °C | Boiler temperature at which no more vending can take place. Display: Boiler heating |
| | | DISPENCE RELEASE | | 80-90 °C | 80 °C | Boiler temperature at which vending can be released again |
| | | TEMPERATURE STAND-BY | | OFF / 60-80 °C | OFF | Boiler temperature during stand-by |
| | DISPLAY | SHOW CLOCK | | YES/NO | NO | Show the clock in the display |
| | | SHOW DATE | | YES/NO | NO | Show the date in the display |
| | | DAYLIGHT SAVING TIME | | | | |
| | | | AUTOMATIC | YES/NO | YES | Automatic summer time |
| | | | SUMMERTIME ZONE | EU/USA ZONE | EU | Summer time zone |
| | | | TIME DIFFERENCES | +1 / -1 DST | +1 | Time difference |
| | USE BEEPER | | | YES/NO | YES | Sound signal on or off |
| | VENTILATOR | FAN TIME | | 0-300 sec. | 60 s. | Duration of fan speed 2 after dispensing. |
| | | FAN SPEED DURING REST | | 40-100% | 40% | Fan speed when idle |
| | | FAN SPEED RECIPE PREPARATION | | 40-100% | 70% | Fan speed during dispensing |

EN

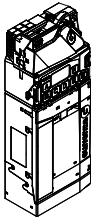

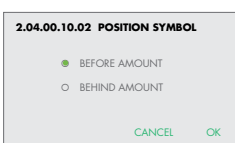
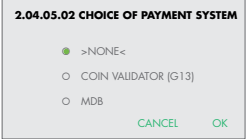
| Service menu | | | | | | |
|--------------------------|----------------|---|------------------------------|-----------------|-----------------|--|
| Main item | Subitem | | | Range | Default setting | Description |
| 2.04 SETTINGS | COIN SYSTEM | COIN VALIDATOR (G13)  | COIN CHANNEL 1 | | € 0.05 | Coin value per channel setting. € 0.05 to € 2.00. 0.00 = free |
| | | | COIN CHANNEL 2 | | € 0.10 | |
| | | | COIN CHANNEL 3 | | € 0.20 | |
| | | | COIN CHANNEL 4 | | € 0.50 | No euros? Please adjust the coin channels for the foreign currencies, see # |
| | | | COIN CHANNEL 5 | | € 1.00 | |
| | | | COIN CHANNEL 6 | | € 2.00 | TOKEN = coffee coin. |
| | | | SINGLE VEND | YES/NO | YES | Yes: Any excess money inserted is not kept for the fol- lowing drink. No: Any excess money inserted is kept for the following drink. |
| | | | MAXIMUM COIN ACCEPTION | 0.05- 100.00 | 2.00 | Insertions higher than, for example, € 2.00 will be refused and returned via the coin slot of the coin mechanism. Set to the highest recipe product price. |
| | | | POINT POSITION | 0-2 | 2 | The position of the decimal point in the amount. |
| | | | SHOW CREDIT | YES/NO | YES | Show credit on the display |

| COIN CHANNEL | Danish Krone | Swedish Krone | Norwegian Krone | South African Rand | Jordanian Dinar |
|-----------------|-----------------|------------------|--------------------|-----------------------|--------------------|
| | DK | SKR | NOK | ZAR | JOD |
| 1 | 0.50 | 0.50 | 1.00 | 0.50 | 0.50 |
| 2 | 1.00 | 1.00 | 5.00 | 1.00 | 1.00 |
| 3 | 2.00 | 5.00 | 10.00 | 2.00 | 25.00 |
| 4 | 5.00 | 10.00 | 20.00 | 5.00 | 50.00 |
| 5 | 10.00 | 1.00 | 10.00 | 5.00 | 1.00 |
| 6 | 20.00 | 0.00 | 20.00 | 0.00 | 0.00 |
| Max coin accep. | 10.00 | 10.00 | 10.00 | 2.00 | 50.00 |

Coin channel settings for foreign currencies

| Service menu | | | | | | | |
|------------------|----------------------------|-----|-----------------|------------------------|-----------------|--------------------|--|
| Main item | Subitem | | | Range | Default setting | Description | |
| 2.04 SETTINGS | COIN VALIDATOR (G13) | | CURRENCY SYMBOL | | | | |
| | | | SHOW SYMBOL | YES/NO | NO | Show valuta symbol | |
| | | | SELECT SYMBOL | | | | |
| | | | POSITION SYMBOL | | | | |
| | COIN SYSTEM | MDB | | SINGLE VEND | YES/NO | YES | Yes: Any excess money inserted is not kept for the following drink. No: Any excess money inserted is kept for the following drink. |
| | | | | MAXIMUM COIN ACCEPTION | € 0.05-100.00 | € 2.00 | Insertions higher than, for example, € 2.00 will be refused and returned via the coin slot of the coin mechanism. Set to the highest recipe product price. |
| | | | | POINT POSITION | 0-2 | 2 | The position of the decimal point in the amount. |
| | | | | SHOW CREDIT | YES/NO | YES | Show credit on the display. |
| | | | | PURCHASE OBLIGATION | YES/NO | YES | Whether money is returned or not when the return handle is pressed. |
| | | | | PRE PAY | YES/NO | NO | Whether or not a selected drink can be made after enough money has been inserted. |
| | | | | CASH AND CARD | YES/NO | NO | Yes: When the Y cable is used for coin system and card system on one MDB connection. |
| | | | | EXTERNAL RELEASE? | YES/NO | NO | Yes: The machine can be released by using a potential-free contact (pulse). |
| | | | | EXTERNAL RELEASE TIME | 0-255 s. | 20 s. | Set the time after which the machine may be released. |

EN

| Service menu | | | | | | | |
|------------------|--------------------------|--|-----------------|---|-----------------|--|---|
| Main item | Subitem | | | Range | Default setting | Description | |
| 2.04 SETTINGS | COIN SYSTEM | MDB  | CURRENCY SYMBOL | | | | |
| | | | SHOW SYMBOL | YES/NO | NO | | |
| | | | SELECT SYMBOL |  | | | |
| | | | POSITION SYMBOL |  | | | |
| | | CASHLESS PAYMENT TIMEOUT | | 0-255 s. | 20 s. | | The time duration for which the payment instruction stays active in the display. When there is no payment within this time, the display shows PAYMENT FAILED. |
| | CHOICE OF PAYMENT SYSTEM |  | | | | None: No coin systems connected Coin validator connected MBD coin changer or cashless payment system connected | |

| Service menu | | | | | |
|------------------|---------------------------------|------|--------|-----------------|--|
| Main item | Subitem | Item | Range | Default setting | Description |
| 2.04 SETTINGS | RESET COUNTERS IN OPERATOR MENU | | YES/NO | NO | Add/remove menu item <u>RESET COUNTERS</u> to the operator menu. |
| | QUICK RECIPE IN OPERATOR MENU | | YES/NO | NO | Add/remove menu item <u>QUICK RECIPE</u> to the operator menu. |
| | DRIP TRAY SIGNAL | | YES/NO | YES | Deactivate the drip tray sensor warning in the software. |

| Service menu | | | | | |
|------------------|------------------------------|-----------------------------------|--------------|-----------------|---|
| Main item | Subitem | | Range | Default setting | Description |
| 2.04 SETTINGS | DEMO MODUS | | YES/NO | YES | This function can be used when the machine is in a showroom or at a trade fair. The machine does not have to be connected to a water supply. In the display, DEMO is shown on the bottom line. The keys, LEDs and display operate normally. |
| | STOP BUTTON | | YES/NO | YES | This function is set to YES by default. To deactivate the stop button, set to NO. |
| | DIRECT CHOICE | | YES/NO | NO | If this function is set to YES, the chosen product will be started immediately without the start key being pressed. Strength setting is not possible anymore. |
| | FREE VEND | | YES/NO | YES | Set the machine for free or paid vending. |
| | FREE VEND IN OPERATOR MENU | | YES/NO | YES | Add/remove menu item 1.01 FREE VEND to the operator menu. |
| | CUP SENSORS | CUP SENSOR LEFT | YES/NO | YES | Yes: Cup sensor is active No: Cup sensor is inactive |
| | | CUP SENSOR RIGHT | YES/NO | YES | |
| | | CUP SENSORS IN OPERATOR MENU | YES/NO | YES | Add/remove menu item 1.10 CUP SENSORS to the operator menu. |
| | OPTILIGHT DURING PREPARATION | BLINK DURING PROCESS | YES/NO | NO | Blinking OptiLight during the dispensing of a drink. |
| | | BLINK RATE | 0.5 - 10.0 s | 0.3 s | Blinking rate setting |
| | | OPTILIGHT | R G B | RED | Colour setting during blinking |
| | TELEMETRY | TELEMETRY INTERFACE | | | None: No telemetry system is connected. |
| | | | | | MDB: Telemetry system is connected via MBD port. Data transfer via MDB connection. DEX-UCS: Telemetry system is connected via DEX port. Data transfer via DEX connection. |
| | | REFILL CANISTERS IN OPERATOR MENU | YES/NO | NO | Add menu item <u>1.14 REFILL CANISTER</u> to the operator menu. |

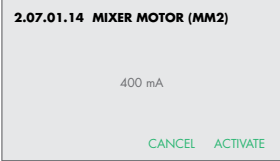
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| Service menu | | | | | | |
|---------------------------|--------------------------|-----------------|----------|-----------------|---|--|
| Main item | Subitem | | Range | Default setting | Description | |
| 2.05 RESET COUNTERS | SERVICE COUNTERS | RINSE COUNTER? | | | Reset the rinse counter. | |
| | | CLEAN COUNTER? | | | Reset the cleaning counter. | |
| | RECIPE COUNTERS | RECIPE COUNTERS | | | Reset the recipe counters for each recipe. | |
| | | TOTAL COUNTER | | | Reset the total counters. | |
| | ALL COUNTERS | | | | Reset all counters at once. | |
| 2.06 SERVICE BOILER | SERVICE MOMENT | CUPS | 0-50,000 | 20,000 | After reaching the set service moment (cups or month), the message Service boiler appears in the display on switching on. See also Chapter 6 Service. | |
| | | MONTHS | 0-18 | 0 | If desired, a point of time can be set when the Service boiler signal should appear. Example: If 12 months is set during installation, the service boiler message will appear on the display 12 months after installation. | |
| | SERVICE COUNTER | CUPS | | | 20,000 ↓ 0 ↓ -20,000 | The total number of vended cups or passed months is counted. It can be checked at any time how far away the machine is from periodic maintenance (boiler descaling or water filter replacement). When the counter reaches 0, it continues with a negative count. |
| | | MONTHS | | | | |
| | RESET SERVICE COUNTER | | | | | After periodic maintenance has been carried out (boiler descaled or filter replaced), the service counter must be set to zero. |



Water hardness table

| Water Quality | Hardness | | | | | Service moment after x (cups) |
|---------------|----------|-------|-------|---------|-----------|-------------------------------|
| | °D | °F | °K | mmol/l | mgCaCo3/l | |
| Very hard | 18-30 | 32-55 | 11-18 | 3.2-5.3 | 321- 536 | 5000 |
| Hard | 12-18 | 22-32 | 7-18 | 2.2-3.2 | 214-321 | 12,500 |
| Average | 8-12 | 15-22 | 5-7 | 1.4-2.2 | 268-214 | 20,000* |
| Soft | 4-8 | 7-15 | 2-5 | 0.7-1.4 | 72-268 | 40,000 |
| Very soft | 0-4 | 0-7 | 0-2 | 0-0.7 | 0-72 | 0 = uit |

* factory setting

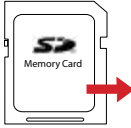
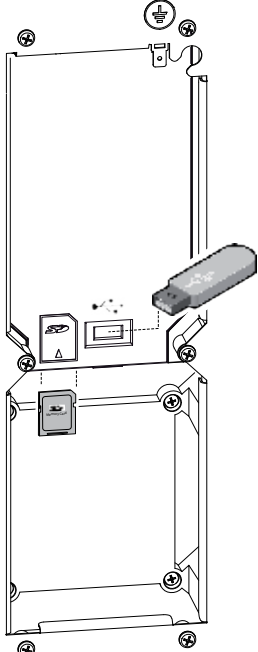
| Service menu | | | | |
|------------------------------|------------------|---|----------------|---|
| Main item | Subitem | Sub | Range | Description |
| 2.07 HARDWARE TEST | INPUTS | TEMPERATURE | Boiler temp °C | Shows the status of the sensors/ switches concerned. |
| | | DRIP TRAY SENSOR | YES/NO | |
| | | WASTE BIN | YES/NO | |
| | | DOOR SWITCH 1 (PIN) | YES/NO | |
| | | BREWER SWITCH 1 (RIGHT) | YES/NO | |
| | | BREWER SWITCH 2 (LEFT) | YES/NO | |
| | | DOOR SWITCH 2 (LOCK) | YES/NO | |
| | | CUP SENSOR LEFT | YES/NO | |
| | | CUP SENSOR RIGHT | YES/NO | |
| | | JUMPER DETECTION | YES/NO | |
| | OUTPUTS | WATER INLET VALVE (KW1) | 500 mA | Press and hold the button ACTIVATE to start the selected output. During test, the display shows the nominal current (mA) from the # outputs. When the nominal current (mA) of an output rises above the set current mentioned in the table, the output will be shut off and an error appears in the display. |
| | | BREWER VALVE (DV1) | | |
| | | MIXER VALVE (DV2) | | |
| | | HOT WATER VALVE (DV4) | | |
| | | EXPANSION VALVE (DV6) | | |
| | | GRINDER MOTOR (IM1) | - | |
| | | INGREDIENT MOTOR (IM3) | # 600 mA | |
| | | INGREDIENT MOTOR (IM4) | # 600 mA | |
| | | BREWER MOTOR (BM) | 900 mA | |
| | | MIXER MOTOR 2 (MM2) | # 2000 mA | |
| | | FAN | - | |
| | | ESPRESSO PUMP (KW2) | - | |
| | | COLD WATER VALVE 3 (KW3) | 500 mA | |
| OPTILIGHT | Red, Green, Blue | | | |
| 2.07.01.14 MIXER MOTOR (MM2) | |  | | |

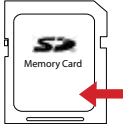
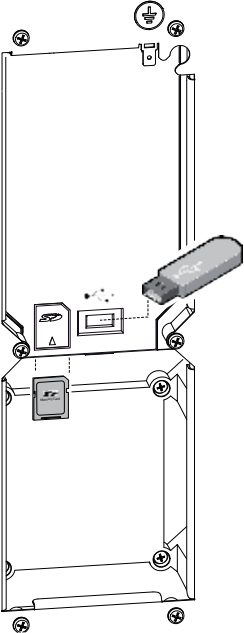
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| Service menu | | | | |
|----------------------|-----------------------|---------------------|---|---|
| Main item | Subitem | | | Description |
| 2.7 HARDWARE TEST | CALIBRATION | FLOW METER | 1,850 p/ml (1,700-2,000) | If necessary, the flow meter can be calibrated. The calibration is not described because the expectation is that it will never have to be carried out. |
| | | KW1 | | |
| | | PUMP |  | <p>Check/set the pump pressure (10 bar). Connect the manometer to the boiler inlet. Caution! First, release the pressure in the boiler using 2.14 Installation / Shut down.</p> <p>Press the test key, activate KW1 (inlet valve), KW2 (pump) and DV6 (NO valve). Adjust the pump pressure (see Section 5.4) with the adjustment screw on the pump housing.</p> <p>Stop measurement: Press any key.</p> |
| | OPERATING HOURS | BREWER/MIXER(S) | BREWER MOTOR (BM/MM1) | <p>CYCLE COUNTER Number x activated</p> <p>— — — —</p> <p>OPERATOR HOURS Day - Hour : Min. : Sec.</p> <p>— — — — 0 - 00 : 00 : 00</p> <p>example</p>  |
| | | | MIXER MOTOR 2 (MM2) | |
| | | INGREDIENT MOTOR(S) | GRINDER MOTOR (IM1) | |
| | | | INGREDIENT MOTOR (IM3) | |
| | | | INGREDIENT MOTOR (IM4) | |
| | | PUMP | ESPRESSO PUMP (KW2) | |
| | | VALVES | BREWER VALVE (DV1) | |
| | | | MIXER VALVE (DV2) | |
| | | | HOT WATER VALVE (DV4) | |
| | | | EXPANSION VALVE (DV6) | |
| | | | WATER INLET VALVE (KW1) | |
| | | HEATER | Element 1 | |
| | | | Element 2 | |
| | OPERATING HOURS TOTAL | | | |


| Service menu | | | |
|--|--|---|--|
| Main item | Subitem | | Description |
| 2.08 READ LOG FILE | ERROR LOG | | Last 20 error messages including time and date will be saved. |
| | CLEANING LOG | | Last 31 cleaning actions including time and date will be saved. |
| | RINSE LOG | | Last 31 rinsing actions including time and date will be saved. |
| 2.09 ERASE LOG | Are you sure? | | Log will be erased. |
| 2.10 LOAD DEFAULTS # See Section 1.2 Model code | Model # OB2 OB3 | <u>TYPE CODE</u> Stand XL 3B2A 3B2B 3B3A 3B3B | The defaults must be loaded when a new circuit board is installed. When loading the defaults, the OptiBean model stated on the type plate must be set. Only after confirming the question 'are you sure?' the right model settings will be loaded. Note: <ul style="list-style-type: none"> • When you confirm this setting, all factory settings are loaded into the control and all changed programmed values are lost. • After loading the defaults, the PIN code is 2-2-2-2 again and the language is set to English again. Change if necessary. |



| Service menu | | | | |
|---|---|-------------------|---|--|
| Main item | Subitem | Item | Description | |
| <p>2.11 SD / USB - MENU</p>  | LOAD DATA / SOFTWARE UPDATE | PERSONAL SETTINGS | <p>With this menu item, personal settings can be loaded into the machine using an SD / USB memory.</p> <p>This file contains the changed personal settings for the following menus: 2.4 Settings / 2.6 Service boiler / 2.13 Additional settings.</p> <p>The data file (3Bxxxx00.MDU) must be on the SD / USB memory.</p> | |
| | <p>Before loading or saving data, place an empty SD / USB memory in the designated slot. This is located behind the stainless steel panel on the inside of the door.</p>  | | LANGUAGE | <p>With this menu item, a non-standard language set can be loaded into the machine. The data file (xxxxxx.TLF) must be on the SD / USB memory.</p> |
| | | | RECIPE | <p>With this menu item, personal recipes can be loaded into the machine using an SD / USB memory.</p> <p>This file contains the changed personal recipes for the following menus: 2.01 Quick recipe / 2.02 Button settings / 2.03 Recipe settings.</p> <p>The data file (3Bxxxx00.RCU) must be on the SD / USB memory.</p> |
| | | | COUNTERS | <p>With this menu item, recipe counters can be loaded into the machine using an SD or USB memory.</p> <p>There must be a data file (3Bxxxx00.CNT) on the SD / USB memory. This file contains all recipe counters from the 1.03 Recipe counters. Use this function only when, for example, a new main PC board must be installed in the machine and the counters must be 'moved' from the old board to the new one. Do not misuse this function!</p> |
| | | | OPERATING HOURS | <p>With this menu item, operating hours can be loaded into the machine using an SD / USB memory.</p> <p>There must be a data file (3Bxxxx00.TMR) on the SD / USB memory. This file contains all the operating hours from the menu 2.07 Hardware test / operating hours.</p> <p>Use this function only when, for example, a new main PC board must be installed in the machine and the counters must be 'moved' from the old board to the new one. Do not misuse this function!</p> |
| | | | MANUAL SOFTWARE UPDATE | <p>With this menu item, a manual software update can be loaded into the machine using an SD / USB memory.</p> <p>Use this function only if you are an experienced and trained engineer.</p> |
| | | | AUTOMATIC SOFTWARE UPDATE | <p>With this menu item, an automatic software update can be loaded into the machine using an SD / USB memory.</p> <p>Follow chapter 5.3 Software installation for a step-by-step instruction.</p> |

| Service menu | | | |
|-------------------------|---|--------------------|--|
| Main item | Subitem | Item | Description |
| 2.11 SD / USB - MENU | SAVE DATA  | PERSONAL SETTINGS | With this menu item, personal settings can be saved on an SD/USB memory and/or copied to another machine. All changed settings made in the menus 2.04 Settings / 2.06 Service boiler / 2.13 Additional settings are saved in a data file (3Bxxxx00.MDU) in the memory. |
| | <p>Before loading or saving data, place an empty SD / USB memory in the designated slot. This is located behind the stainless steel panel on the inside of the door.</p>  | | RECIPE |
| | | COUNTERS | With this menu item, the log (error messages overview) can be saved on an SD memory card. All counter readings from the menu 1.03 Recipe counters are saved in a data file (3Bxxxx00.CNT) on the SD / USB memory. Note: After the counter readings have been saved, you will be asked if the counters in the machine must be reset. Press CANCEL for NO and press OK for YES. |
| | | OPERATING HOURS | With this menu item, the operating hours can be saved on an SD / USB memory. All operating hours from the menu 2.07 Hardware test / Operating hours are saved in a data file (3Bxxxx00.TMR) on the SD / USB memory. Note: After the operating hours have been saved you will be asked if the counters in the machine must be reset. Press CANCEL for NO and press OK for YES. |
| | | LOG | With this menu item, the log (error messages overview) can be saved on an SD/USB memory. All error messages from the menu 2.08 Read log are saved in a data file (3Bxxxx00.LOG) on the SD/USB memory. Note: Depending on your settings, Windows can read this file as a TXT file. |
| | | SAVE ALL | With this menu, all above-mentioned items are saved in one operation and can be saved on an SD/USB memory. |
| | | LOGGING TO SD-CARD | COPY INTERNAL LOG FILES |

EN

| Service menu | | | | | |
|------------------------------------|---|------------------|---|-----------------|--|
| Main item | Subitem | | Range | Default setting | Description |
| 2.12 CHANGE SERVICE PIN CODE | NEW PIN CODE | REPEAT PIN CODE | <p>With this menu item, the PIN code can be changed. The complete service menu is secured with this PIN code. This PIN code prevents unintentional changes to the machine settings by untrained personnel.</p> <ul style="list-style-type: none"> The factory service PIN code is 2-2-2-2-2. <p>PIN code forgotten? In the PIN code input display, a number is displayed on the right. Enter the associated PIN code (see the pin code table) to access the service menu.</p> | | |
| |  | | | | |
| 2.13 ADDITIONAL SETTINGS | WASTE MANAGEMENT | NUMBER OF BREWS | 0-1000 | 80 | After reaching the set number of brewer movements, the vending is blocked and on the display the message Waste bin full is shown. |
| | | HYSTERESIS | 0-100 | 20 | After reaching the set number of brewer movements minus the hysteresis, on the display, the message Waste bin almost full is shown. |
| | | TIME-OUT RESET | 0-50 sec. | 15 s | The time that the waste bin must have been removed from the machine (to empty it). When it is replaced, the internal waste bin counter is reset. All display messages disappear. |
| | | WASTE BIN SIGNAL | YES/NO | YES | Deactivate the waste bin sensor in the software (bypass). |
| | CYCLE COUNTER | xxxxx | 0-100.000 | | The cycle counter counts the number of brews the brewer has made. Tip: The counter can be reset after major maintenance when, for example, the brewer is checked. |
| | RESET CYCLE COUNTER | RESET COUNTER? | | | Reset cycle counter (Brewer). |
| | SERVICE BREWER | | 0-50.000 | 25.000 | When the set number of brews (Brewer) is reached, the display shows the message 'Service brewer'. |
| | RESET SERVICE BREWER | RESET COUNTER? | | | Reset the service brewer signal after maintenance has been carried out on the brewer. |

Pin Code Table

| No. | Service pin code | | | | |
|-----|------------------|---|---|---|---|
| 1 | 3 | 4 | 2 | 4 | 2 |
| 2 | 3 | 1 | 4 | 3 | 4 |
| 3 | 4 | 1 | 3 | 4 | 3 |
| 4 | 4 | 3 | 2 | 3 | 2 |
| 5 | 2 | 3 | 3 | 4 | 1 |
| 6 | 4 | 2 | 1 | 3 | 1 |
| 7 | 2 | 4 | 2 | 4 | 4 |

| No. | Service pin code | | | | |
|-----|------------------|---|---|---|---|
| 8 | 2 | 3 | 2 | 4 | 1 |
| 9 | 2 | 4 | 3 | 2 | 3 |
| 10 | 3 | 1 | 3 | 3 | 2 |
| 11 | 1 | 3 | 3 | 3 | 2 |
| 12 | 1 | 2 | 4 | 1 | 3 |
| 13 | 4 | 3 | 1 | 2 | 1 |
| 14 | 1 | 1 | 1 | 4 | 2 |

| No. | Service pin code | | | | |
|-----|------------------|---|---|---|---|
| 15 | 2 | 1 | 2 | 1 | 1 |
| 16 | 1 | 2 | 2 | 3 | 3 |
| 17 | 3 | 4 | 1 | 4 | 4 |
| 18 | 4 | 1 | 4 | 3 | 3 |
| 19 | 3 | 1 | 2 | 4 | 1 |
| 20 | 2 | 2 | 3 | 2 | 4 |
| | | | | | |

| Service menu | | | | | |
|--------------------------------|---------------|--------------------|--------|-----------------|--|
| Main item | Subitem | | Range | Default setting | Description |
| 2.14 INSTALLATION | COMMISSIONING | | | | When a new machine is switched on, the commissioning menu starts automatically. Follow the instructions on the display. |
| | SHUT DOWN | | | | Start this shut down menu if the boiler system of the machine has to be emptied for transport and/or maintenance. Follow the instructions on the display. |
| 2.15 DESCALING | | | | | Start the descaling menu when the boiler system has to be descaled. Follow the instructions on the display. |
| 2.16 CLEANING MANAGEMENT | RINSING | RINSING OBLIGATED | YES/NO | NO | If rinsing mandatory is set to YES, the machine is locked if it is NOT rinsed after the set number of cups or days. Out of order / rinse After the rinse programme has been completed, the machine is released again. |
| | | CUPS | | 0 | |
| | | DAYS | | 1 | |
| | CLEANING | CLEANING OBLIGATED | YES/NO | NO | If cleaning mandatory is set to YES, the machine is locked if it is NOT cleaned after the set number of cups or days. Out of order / clean After the cleaning programme has been completed, the machine is released again. |
| | | CUPS | | 0 | |
| | | DAYS | | 7 | |

5. SETTINGS AND SOFTWARE

This chapter [5.1 & 5.2] informs you about how to work with files that can be created by the machine. In these files, various machine settings are saved.

The second part [5.3] of this chapter informs you about how the complete machine software can be updated in case of an adjustment.

To get access to the SD/USB slots, remove the cover inside the door.

WARNING

- When using an SD card, the contacts must point upwards and to the back.
- When using a USB memory stick, the door must be left open to prevent damaging the USB slot and memory stick. When during use, the display shows CLOSE DOOR, use the service pin to make sure that the door is closed.

WARNING

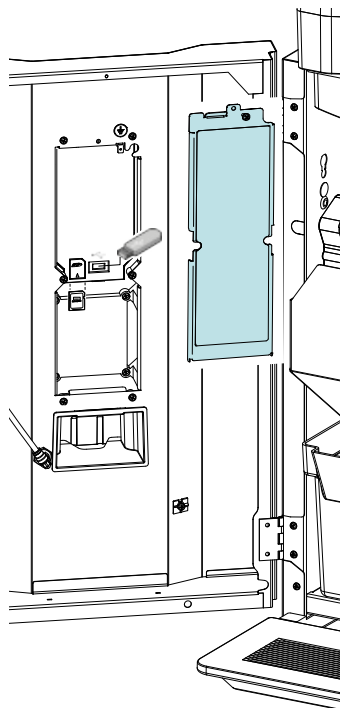
- When a setting file is saved, the first 4 characters and the extension must never be changed. They contain important information which identify the exact machine type.

The file name contains the following information:

| | | | | | |
|-----------|-----------|----|----|------|---------------------------------|
| 3B | 3A | aa | 00 | .ext | |
| | | | | | extension* |
| | | | | | index number (00, 01, 02, etc.) |
| | | | | | internal code |
| | | | | | model code (OB2, OB 3 etc.) |
| | | | | | 3B = Touch version |

* The different files are save with the following extensions:

| | |
|----------------------|-------|
| Personal settings | *.MDU |
| Recipe file | *.RCU |
| Counter file | *.CNT |
| Log file | *.LOG |
| Operating hours file | *.TMR |

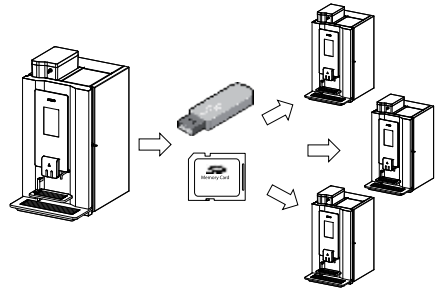


5.1 Save settings

After installing and setting up (fine tuning) a machine, it is possible to copy the most important settings to other machines with the same canister configuration with an SD/USB memory device.



Please write down each file name when the display shows SAVE AS:



Please save the **Personal settings (.MDU)** and **Recipes (.RCU)** only.

1. Place the SD/USB memory.
2. Navigate to 'Save data'
3. Save the personal settings and the recipe settings:

SERVICE MENU

2.11 SD/USB MENU

- 2.11.01 SAVE DATA
- 2.11.01.00 PERSONAL SETTINGS
- 2.11.01.01 RECIPE

| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S</th> <th style="text-align: center;">X</th> </tr> </thead> <tbody> <tr><td colspan="2" style="text-align: center;">SERVICE MENU</td></tr> <tr><td>2.01</td><td>QUICK RECIPE PRO</td></tr> <tr><td>2.02</td><td>RECIPE BUTTON SETTINGS</td></tr> <tr><td>2.03</td><td>RECIPE SETTINGS</td></tr> <tr><td>2.04</td><td>SETTINGS</td></tr> <tr><td>2.05</td><td>RESET COUNTERS</td></tr> <tr><td>2.06</td><td>SERVICE BOILER</td></tr> <tr><td>2.07</td><td>HARDWARE TEST</td></tr> <tr><td>2.08</td><td>READ LOG FILE</td></tr> <tr><td>2.09</td><td>REMOVE LOG FILE</td></tr> <tr><td>2.10</td><td>LOAD DEFAULTS VALUES</td></tr> <tr><td>2.11</td><td>SD/USB MENU ←</td></tr> <tr><td>2.12</td><td>CHANGE SERVICE PIN</td></tr> <tr><td>2.13</td><td>OTHER SETTINGS</td></tr> <tr><td>2.14</td><td>INSTALLATION</td></tr> <tr><td>2.15</td><td>DESCALING</td></tr> <tr><td>2.16</td><td>CLEANING MANAGEMENT</td></tr> </tbody> </table> | S | X | SERVICE MENU | | 2.01 | QUICK RECIPE PRO | 2.02 | RECIPE BUTTON SETTINGS | 2.03 | RECIPE SETTINGS | 2.04 | SETTINGS | 2.05 | RESET COUNTERS | 2.06 | SERVICE BOILER | 2.07 | HARDWARE TEST | 2.08 | READ LOG FILE | 2.09 | REMOVE LOG FILE | 2.10 | LOAD DEFAULTS VALUES | 2.11 | SD/USB MENU ← | 2.12 | CHANGE SERVICE PIN | 2.13 | OTHER SETTINGS | 2.14 | INSTALLATION | 2.15 | DESCALING | 2.16 | CLEANING MANAGEMENT | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S</th> <th style="text-align: center;">X</th> </tr> </thead> <tbody> <tr><td colspan="2" style="text-align: center;">2.11 SD/USB - MENU</td></tr> <tr><td>2.11.00</td><td>LOAD DATA / SOFTWARE UPDATE</td></tr> <tr><td>2.11.01</td><td>SAVE DATA ←</td></tr> <tr><td>2.11.02</td><td>LOGGING TO SD-CARD</td></tr> </tbody> </table> | S | X | 2.11 SD/USB - MENU | | 2.11.00 | LOAD DATA / SOFTWARE UPDATE | 2.11.01 | SAVE DATA ← | 2.11.02 | LOGGING TO SD-CARD | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S</th> <th style="text-align: center;">X</th> </tr> </thead> <tbody> <tr><td colspan="2" style="text-align: center;">2.11.01 SAVE DATA</td></tr> <tr><td>2.11.01.00</td><td>PERSONAL SETTINGS ←</td></tr> <tr><td>2.11.01.01</td><td>RECIPE ←</td></tr> <tr><td>2.11.01.02</td><td>COUNTERS</td></tr> <tr><td>2.11.01.03</td><td>LOG</td></tr> <tr><td>2.11.01.04</td><td>OPERATING HOURS</td></tr> <tr><td>2.11.01.05</td><td>CLEANING LOG</td></tr> </tbody> </table> | S | X | 2.11.01 SAVE DATA | | 2.11.01.00 | PERSONAL SETTINGS ← | 2.11.01.01 | RECIPE ← | 2.11.01.02 | COUNTERS | 2.11.01.03 | LOG | 2.11.01.04 | OPERATING HOURS | 2.11.01.05 | CLEANING LOG |
|---|---|--|---|---|--|------------------|------|------------------------|------|-----------------|------|----------|------|----------------|------|----------------|------|---------------|------|---------------|------|-----------------|------|----------------------|------|--|------|--------------------|------|----------------|------|--------------|------|-----------|------|---------------------|---|---|---|--------------------|--|---------|-----------------------------|---------|--|---------|--------------------|---|---|---|-------------------|--|------------|--|------------|---|------------|----------|------------|-----|------------|-----------------|------------|--------------|
| S | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERVICE MENU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.01 | QUICK RECIPE PRO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.02 | RECIPE BUTTON SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.03 | RECIPE SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.04 | SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.05 | RESET COUNTERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.06 | SERVICE BOILER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.07 | HARDWARE TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.08 | READ LOG FILE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.09 | REMOVE LOG FILE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.10 | LOAD DEFAULTS VALUES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11 | SD/USB MENU ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.12 | CHANGE SERVICE PIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.13 | OTHER SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.14 | INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.15 | DESCALING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.16 | CLEANING MANAGEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11 SD/USB - MENU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00 | LOAD DATA / SOFTWARE UPDATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01 | SAVE DATA ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.02 | LOGGING TO SD-CARD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01 SAVE DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.00 | PERSONAL SETTINGS ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.01 | RECIPE ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.02 | COUNTERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.03 | LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.04 | OPERATING HOURS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01.05 | CLEANING LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> 2.11.00.00 PERSONAL SETTINGS SAVE AS: 3Bxxxx00.MDU OK </td> <td style="width: 50%; padding: 5px;"> 2.11.00.00 PERSONAL SETTINGS SAVED 3Bxxxx00.MDU OK </td> </tr> <tr> <td style="width: 50%; padding: 5px;"> 2.01.00.01 RECIPE SAVE AS: 3Bxxxx00.RCU OK </td> <td style="width: 50%; padding: 5px;"> 2.01.00.01 RECIPE SAVED 3Bxxxx00.RCU OK </td> </tr> </table> | 2.11.00.00 PERSONAL SETTINGS SAVE AS: 3Bxxxx00.MDU OK | 2.11.00.00 PERSONAL SETTINGS SAVED 3Bxxxx00.MDU OK | 2.01.00.01 RECIPE SAVE AS: 3Bxxxx00.RCU OK | 2.01.00.01 RECIPE SAVED 3Bxxxx00.RCU OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.00 PERSONAL SETTINGS SAVE AS: 3Bxxxx00.MDU OK | 2.11.00.00 PERSONAL SETTINGS SAVED 3Bxxxx00.MDU OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.01.00.01 RECIPE SAVE AS: 3Bxxxx00.RCU OK | 2.01.00.01 RECIPE SAVED 3Bxxxx00.RCU OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4. Remove the SD/USB memory.

OptiBean (XL) Touch

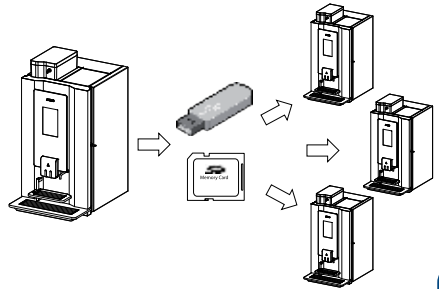
5.2 Load settings

When loading previously saved settings into another machine with the same canister configuration.

If the display shows RDU MDU NOT AVAILABLE, there are no suitable files found on the SD/USB memory.



It is not possible to copy settings from an:
 OptiBean 2 Touch into an OptiBean 3 Touch
 OptiBean 2 Touch into an OptiBean 2 XL Touch
 OptiBean 3 Touch into an OptiBean 3 XL Touch



Please load the **Personal settings (.MDU)** and **Recipes (.RCU)** only.

1. Place the SD/USB memory that holds the previously copied settings in the machine.
2. Navigate to 'Load data'.
3. Load the personal settings and the recipe settings:

EN

SERVICE MENU

2.11 SD/USB MENU

2.11.01 LOAD DATA/SOFTWARE UPDATE

2.11.01.00 PERSONAL SETTINGS

2.11.01.01 RECIPE

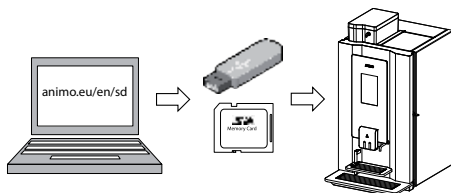
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|---|---|------------|-------------------|-------------------------------------|--------------|------------------|------|--|------------|-------------------|--------|----------|------|----------------|------|----------------|------|---------------|------|---------------|------|-----------------|------|----------------------|------|---------------|------|--------------------|------|----------------|------|--------------|------|-----------|------|---------------------|---|---|---|--------------------|--|---------|-------------------------------|---------|-----------|---------|--------------------|--|---|---|-----------------------------------|--|------------|---------------------|------------|----------|------------|----------|------------|----------|
| ☰ | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERVICE MENU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.01 | QUICK RECIPE PRO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.02 | RECIPE BUTTON SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.03 | RECIPE SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.04 | SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.05 | RESET COUNTERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.06 | SERVICE BOILER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.07 | HARDWARE TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.08 | READ LOG FILE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.09 | REMOVE LOG FILE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.10 | LOAD DEFAULTS VALUES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11 | SD/USB MENU ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.12 | CHANGE SERVICE PIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.13 | OTHER SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.14 | INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.15 | DESCALING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.16 | CLEANING MANAGEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ☰ | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11 SD/USB - MENU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00 | LOAD DATA / SOFTWARE UPDATE ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.01 | SAVE DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.02 | LOGGING TO SD-CARD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ☰ | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00 LOAD DATA/SOFTWARE UPDATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.00 | PERSONAL SETTINGS ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.01 | LANGUAGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.02 | RECIPE ← | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.03 | COUNTERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>2.11.00.00</td><td>PERSONAL SETTINGS</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>3Bxxxx00.MDU</td></tr> <tr><td colspan="2">CANCEL OK</td></tr> </table> | 2.11.00.00 | PERSONAL SETTINGS | <input checked="" type="checkbox"/> | 3Bxxxx00.MDU | CANCEL OK | | <table border="1"> <tr><td>2.11.00.00</td><td>PERSONAL SETTINGS</td></tr> <tr><td colspan="2">LOADED</td></tr> <tr><td colspan="2">OK</td></tr> </table> | 2.11.00.00 | PERSONAL SETTINGS | LOADED | | OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.00 | PERSONAL SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 3Bxxxx00.MDU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CANCEL OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.11.00.00 | PERSONAL SETTINGS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOADED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>2.01.00.02</td><td>RECIPE</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>3Bxxxx00.RCU</td></tr> <tr><td colspan="2">CANCEL OK</td></tr> </table> | 2.01.00.02 | RECIPE | <input checked="" type="checkbox"/> | 3Bxxxx00.RCU | CANCEL OK | | <table border="1"> <tr><td>2.01.00.02</td><td>RECIPE</td></tr> <tr><td colspan="2">LOADED</td></tr> <tr><td colspan="2">OK</td></tr> </table> | 2.01.00.02 | RECIPE | LOADED | | OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.01.00.02 | RECIPE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 3Bxxxx00.RCU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CANCEL OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.01.00.02 | RECIPE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOADED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4. Remove the SD/USB memory.

5.3 Software installation

New software can easily be installed on the machine.
 New software is available in the following ways:

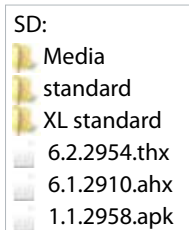
- www.animo.eu/en/sd (no log in needed)
- www.animo.eu/ dealer login: Extranet
- by e-mail from Animo Technical Support



When loading new software, all the existing settings are automatically saved on the SD card or USB memory stick. After the software update, you can decide if you want to work with the factory settings or if you want to use the settings of which you made a back-up before the software update. Please follow the instructions in chapter 5.2. Movies, screensaver picture, counters, log and operating hours will be preserved!

The complete software update takes approximately 5-8 minutes (depending on the bootloader).

1. Download the OptiBean Touch software.
2. Unpack the ZIP file and copy all directories and files (see right) into an empty SD card or USB stick.
3. Leave the machine switched on and remove the cover plate inside the door.
4. Insert the SD card or USB stick into the designated opening in the door.
5. Navigate to the automatic software update:

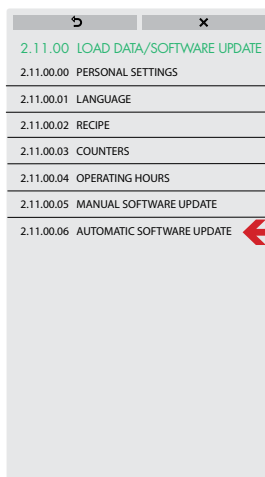
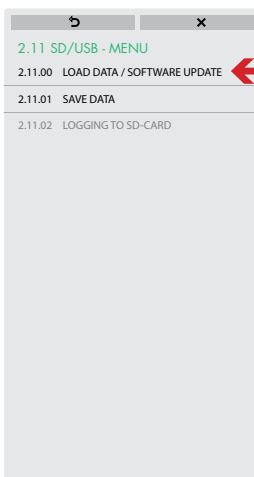
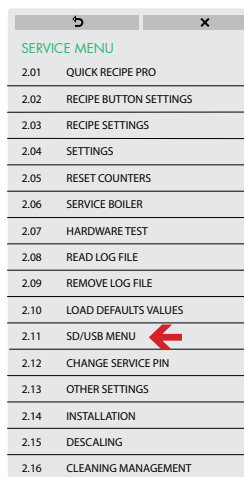


SERVICE MENU

2.11 SD/USB MENU

2.11.00 LOAD DATA/SOFTWARE UPDATE

2.11.00.06 AUTOMATIC SOFTWARE UPDATE

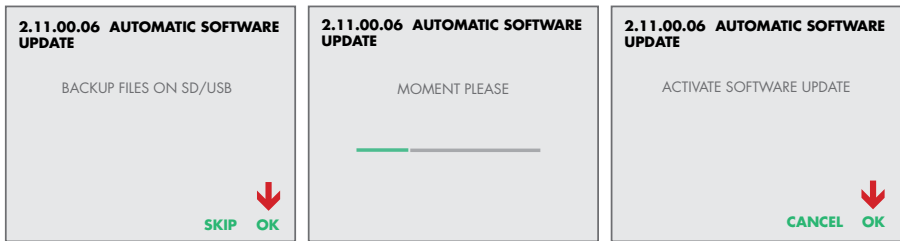


- Press **OK** if you want to save the existing files from the machine (preferred).
Press **SKIP** if you do not want to save the existing files from the machine.



The personal files and recipe files are automatically stored on the SD/USB memory.

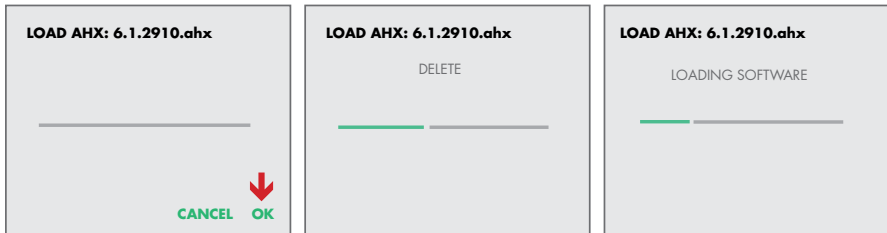
If the machine does not detect files on the SD/USB memory, it will show NO DATA PRESENT ON MEDIA.



- Press **OK** to start the automatic software update.
Press **CANCEL** if you do not want to start the automatic software update.
The machines will start up again.



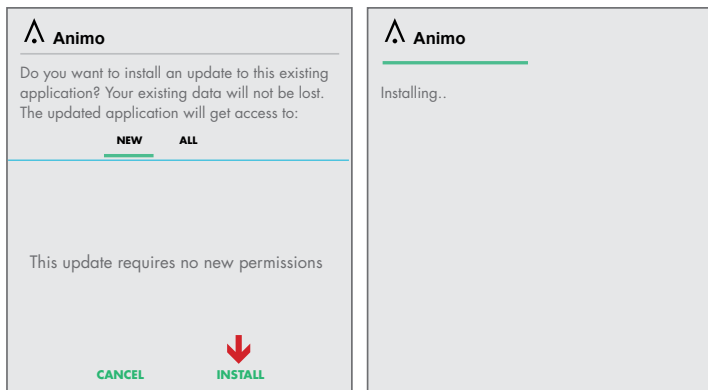
The AHX* or THX* file is being uploaded to the main PC board which is positioned behind the left-side panel. *Depending on the bootloader (bios) which is preinstalled on the main PC board, the AHX or THX file is uploaded.



8. Press **INSTALL** to continue the software update.



The application (APP) is being updated to the PC board behind the display.



9. Select **Standard** or **XL standard** and press the **LOAD** button.



The machine model files, media files and recipe files are copied to the internal storage.

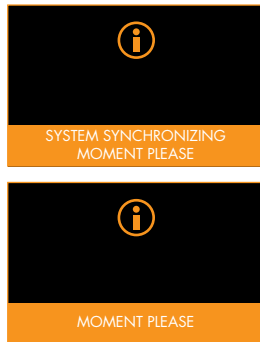
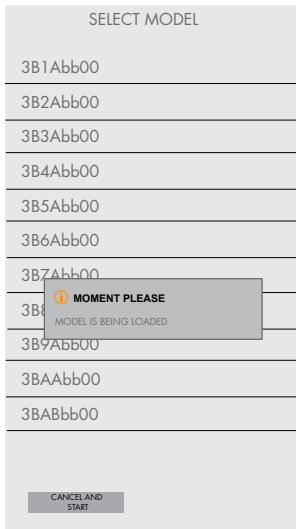


OptiBean (XL) Touch

10. Select the **OptiBean Touch** model of your choice.
To select the right model please go to chapter 1.2 Model code.



- OptiBean 2 Touch = model 3B2A
- OptiBean 3 Touch = model 3B3A
- OptiBean 2 XL Touch = model 3B2B
- OptiBean 3 XL Touch = model 3B3B



11. The software update is successfully updated. The machine operates like a new machine that is straight from the factory.
If you want to load the saved settings (recipes) in the machine, leave the SD/USB memory in place and please follow the next steps.

12. Load the personal settings and the recipe settings, of which you made a back-up on the SD/USB memory before the software update was started, back into the machine.

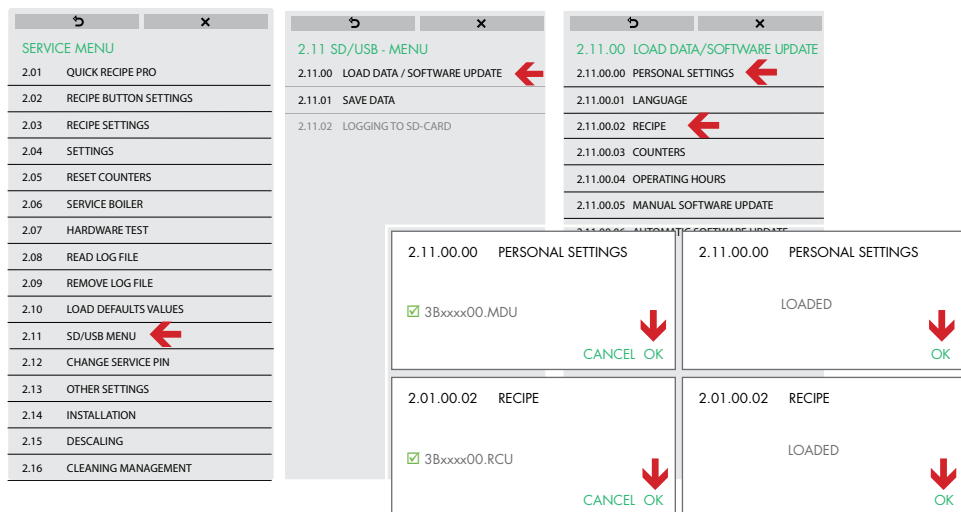
Navigate to the automatic software update:

2.11 SD/USB MENU

2.11.00 LOAD DATA/SOFTWARE UPDATE

2.11.00.00 PERSONAL SETTINGS

2.11.00.02 RECIPE

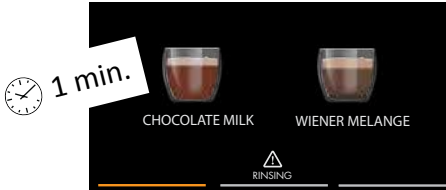


13. Remove the SD/USB from the slot.

6. MAINTENANCE

6.1 Daily rinsing program

After 1 day, the display shows RINSE.
This message will disappear after running the rinsing program.



Start the rinsing program

1. Press the text MAKE YOUR CHOICE for 2 seconds to access the cleaning management menu.
2. Press RINSING and follow the instructions.
3. Press OK to confirm and start the rinsing. The brewer and mixer unit are rinsed with clean hot water.

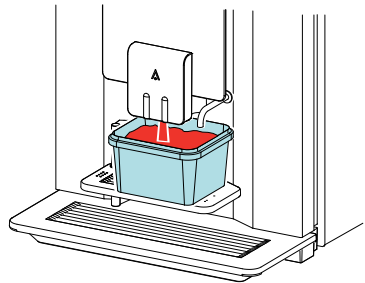
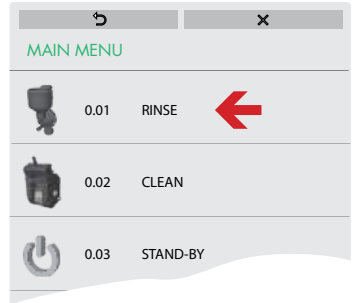
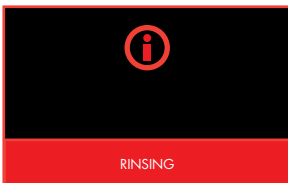


The user can even be obliged to carry out the rinsing program. If the rinsing program was not activated, the machine stops.

2.16 CLEANING MANAGEMENT

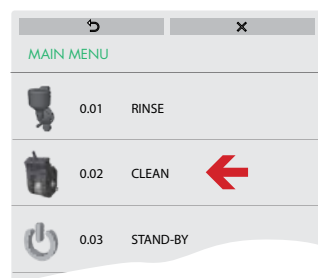
2.16.02 RINSING MANDATORY

YES



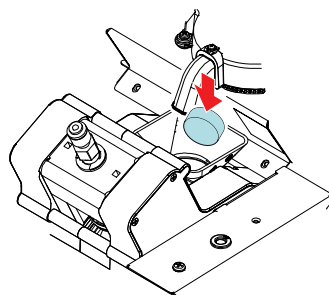
6.2 Weekly cleaning program

After 7 days, the display shows CLEANING. This message will disappear after running the cleaning program.



Start the cleaning program

1. Press the text MAKE YOUR CHOICE for 2 seconds to access the cleaning management menu.
2. Press CLEANING, place an empty container and press OK.
3. Add a coffee cleaner tablet in the brew chamber and press OK to confirm.
4. The cleaning program for the espresso brew unit is started. By adding the coffee cleaner tablet, the brew unit will be cleaned from coffee oils.
5. After the CLEANING program, the RINSING program starts automatically and rinses the brewer and mixer with clean water.

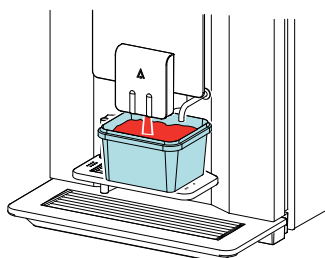
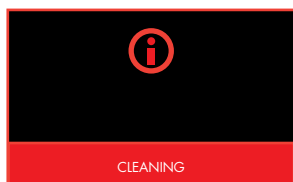


i The user can even be obliged to carry out the cleaning program. If the cleaning program was not activated, the machine stops.

2.16 CLEANING MANAGEMENT

2.16.02 CLEANING MANDATORY

YES



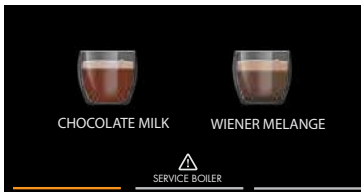
6.3 Periodic maintenance

6.3.1 Service boiler

During installation of the machine, the boiler service moment has been set. See service menu item **2.06 Service boiler / 2.06.1 Service moment**

Service boiler / 2.06.1 Service moment

During use, the drinks are counted. When the boiler service moment is reached, the text [*Service Boiler*] will appear on the display.




1 Descale Boiler

Reaching the service boiler time is an indication that the boiler needs to be descaled. Follow the instructions in section **6.5 Descaling**.

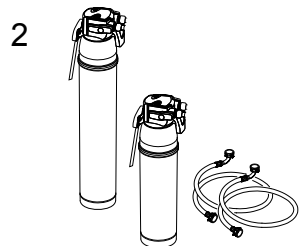
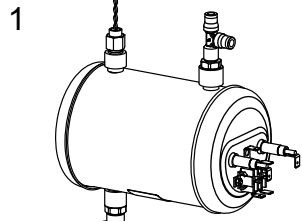
2 Replace water filter

If a water filter is used (advice), this is the signal to replace the filter.

 Reset the service boiler signal service in the service menu after descaling or water filter change:

2.06 SERVICE BOILER

2.06.02 RESET SERVICE COUNTER

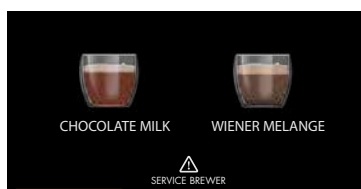


6.3.2 Service brewer

The service moment for the brewer is factory set. See service menu item **2.13 Other Settings / 2.13.2 Service brewer**

During use, the brewer movements are counted. When the service moment is reached the text [Service brewer] will appear on the display.

Reaching the service brewer moment indicates that the brewer needs servicing.



1 Espresso group

After 25,000 cycles, the filter and seals must be replaced. See chapter 6.6 Requirements: Replacement kit 25K

After 50,000 cycles a complete inspection of the espresso group is recommended and any worn parts must be replaced.

2 Drive unit

Service life: 2 years or 50,000 cycles

After 25,000 cycles, check the operation of the drive unit and clean it.

After 50,000 cycles, check the whole drive unit and replace as necessary.

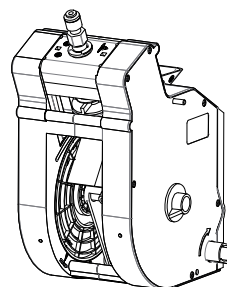


After the brewer maintenance, reset the service brewer signal in the service menu:

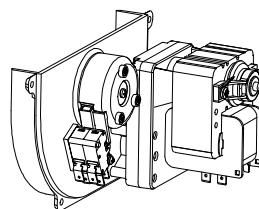
2.13 OTHER SETTINGS

2.13.04 RESET SERVICE BREWER

1



2



6.4 Service contracts

Preface

Preventive maintenance will extend the service life of the machine and reduce the chance of malfunctions. Read the (safety) instructions carefully in the user manual, service manual and on the cleaning agents to be used before carrying out maintenance.

The instructions for use, service manuals and software updates are available on the Extranet part of www.animo.eu. If you do not have access to this, report this via our site for your personal login code.

Water filter

We strongly recommend using a water softener and/or a water filter if the mains water supply is too chlorinated or too hard. This increases the quality of the drink and prevents the need to descale the machine too often.



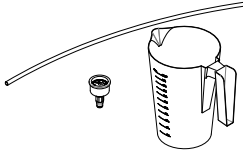
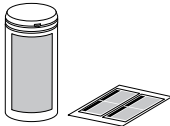
Brewer unit

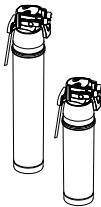

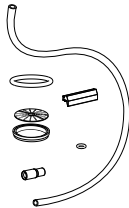


In some cases, an exchange brewer is used during maintenance. The exchanged brewer can then be reconditioned in the workshop and used again for later maintenance.

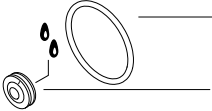


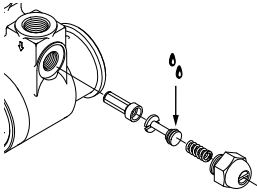
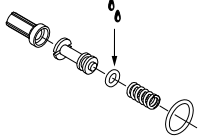
6.4.1 Servicing

With an estimated output of < 25,000 cups/year, maintenance must be once a year.




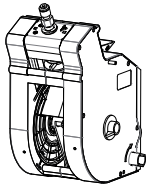
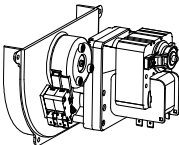
With an estimated output of > 25,000 cups/year, maintenance must be every 6 months.

| Activities | Time | Consumables | Art.no. | OptiBean |
|--|---------|---|------------------------------|----------|
| Boiler 1-2 | 45 min. | | | |
| Descale - Descale the boiler system by starting the descaling program 2.15 Descale . - Reset the 2.6 Service boiler signal in the service menu. - Use the boiler service kit and Animo descaling agent. | |  | 1001365 | |
| | |  | 00009 (can) / 49007 (sachet) | |

| Activities | Time | Consumables | Art.no. | OptiBean | |
|---|---------|---|----------------------------|----------|----|
| Boiler 2-2 | 10 min | | | | |
| <p>Change filter cartridge</p> <ul style="list-style-type: none"> - In case a water filter is installed, replace the cartridge for a new one. - Reset the 2.6 Service boiler signal in the service menu. | |  | | | |
| Grinder | 10 min. | | | | |
| Empty the grinder. Fill with two caps of coffee grinder cleaner, hold a drip tray under the outlet and run the grinder until it is empty. | |  | 1000151 | | |
| Brewer | 20 min. | | | | |
| Clean the brewer. Check for correct operation. | | | | | |
| Build in the replacement kit 25,000 cups. Reset the service brewer signal in the service menu. 2.13 Additional settings / 2.13.4 Reset service brewer. | |  | Standard brewer 1004917 | 1x | 1x |
| | | | XL brewer 1004918 | 1x | 1x |
| Carry out the cleaning procedure using cleaning tablets. | |  | 1001397 | | |
| Mixer(s) | 10 min. | | | | |
| Check the motor shaft for dirt and wear. Replace the mixer when it runs heavily or when the ball bearings are worn out. | | | | | |
| Replace the mixer blade. | |  | 1003569 | 1x | 1x |

| Activities | Time | Consumables | Art. no. | OptiBean | |
|---|---------------|---|---------------------------------------|----------|----|
| Replace the shaft seal and the O-ring in the green mixer mounting ring. Lubricate the inside shaft seal with food grade grease. | |  | 1000742 | 1x | 1x |
| | | | 1003572 | 1x | 1x |
| Lubricate the mixer house water inlet with food grade grease. | |  | | | |
| Clean the mixer components with the Animo cleaning agent. | |  | 00008 (bus) / 49009 (sachet) | | |
| Espresso pump (Yearly) | 5 min. | | | | |
| Lubricate the O-ring yearly with food grade grease. | |  | | 1x | 1x |
| Or install a new bypass valve. Fits on brass and stainless steel pump. | |  | 1004217 | 1x | 1x |
| Checking (general) | | | | | |
| Check the complete machine operation. | | | | | |
| Check parts for damage, wear and leaks. | | | | | |
| Cleaning (general) | | | | | |
| Clean the espresso group brewer and mixer unit for weekly cleaning. | | | | | |
| Complete machine, inside and outside. | | | | | |

EN

| Activities | Time | Consumables | Art.no. | OptiBean | |
|-------------------------------------|---------|---|---------|----------|----|
| Dispensing valves (2 Yearly) | 20 min. | | | | |
| Dispensing valves | |  | 1000699 | 4x | 4x |
| Safety valves (2 Yearly) | 10 min. | | | | |
| Overpressure valves 3 bar | |  | 1000734 | 1x | 1x |
| Overpressure valves 12 bar | | | 1000735 | 1x | 1x |
| Mixer (2 Yearly) | 1 min. | | | | |
| Mixer motor | |  | 1003567 | 1x | 1x |
| Brewer unit (2 Yearly) | 5 min. | | | | |
| Brewer unit reversed standard 37 mm | |  | 1004572 | 1x | 1x |
| Brewer unit reversed XL 44 mm | | | 1004798 | 1x | 1x |
| Drive unit (2 Yearly) | 5 min. | | | | |
| Drive unit 230 Vac | |  | 1004573 | 1x | 1x |



WARNING

- During maintenance activities, stay with the machine.
- When descaling, always follow the instructions for the descaling agent used.
- It is advisable to wear safety glasses and protective gloves while descaling.
- After descaling, allow the machine to complete at least three cycles.
- Wash your hands thoroughly after descaling.
- The machine must never be immersed in or sprayed with water.



WARNING

- Pressurised hot water! Do not remove components like valves, couplings, plugs and hoses before depressurising the boiler system.

EN

Descaling instructions

Animo supplies a descaling agent in the following quantities:

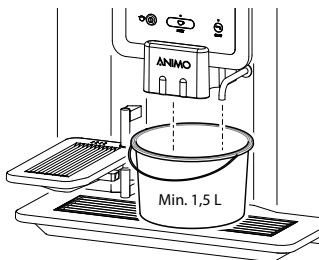
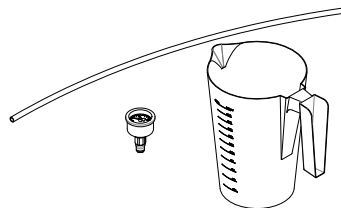
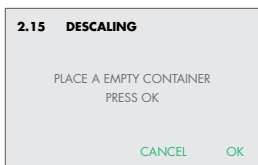
- Descaling agent 48x 50 g sachets art. no. 49007
- Descaling agent 1 kg can art. no. 00009

Time required, agents and tools:

- Time: approximately 45 min.
- Animo Descaling Agent
- Drip tray of approx. 1.5 L
- Crosshead screwdriver
- Service kit [art. no. 1001365] (measurement beaker, hose, manometer)

Descaling

1. Start the descaling programme. **Service menu / 2.15 Descale** and follow the instructions on the display.
2. Close the door and place an empty bucket under both outlets.



3. Prepare 2 litres of descaler solution. Read the warnings and instructions for the Animo descaling agent first.

4. Remove the back panel and connect the suction tube to the tee of the flow meter (remove plug).

2.15 DESCALING

PLACE SUCTION TUBE
IN DESCALER SOLUTION

PRESS OK

OK

5. The first acid solution (approx. 0,8 litre) is pumped into the boiler and heated. A soaking period of 300 sec. follows.*

2.15 DESCALING

PUMPING SOLUTION
THROUGH SYSTEM
MOMENT PLEASE

2.15 DESCALING

BOILER TEMPERATURE
INCREASES:°C

2.15 DESCALING

MOMENT PLEASE
SOAKING: 300 s

SKIP

6. For 12 seconds, the second acid solution (approximately 1 litre) is pumped through each of the dispensing valves. The fresh acid solution is now heated in the boiler again and a soaking period of 600 seconds follows*.

2.15 DESCALING

PUMPING SOLUTION
THROUGH SYSTEM
MOMENT PLEASE

2.15 DESCALING

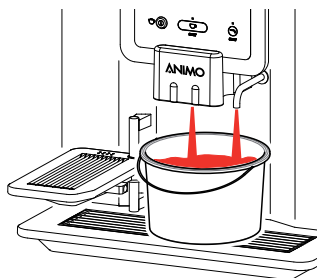
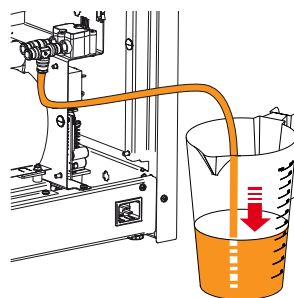
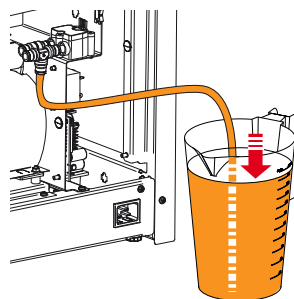
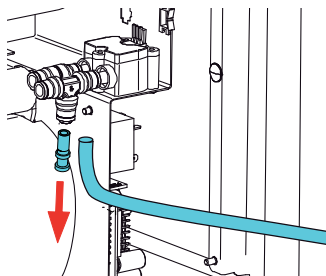
BOILER TEMPERATURE
INCREASES:°C

2.15 DESCALING

MOMENT PLEASE
SOAKING: 600 s

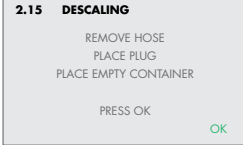
SKIP

* soaking periods can be skipped by pressing the x-button.

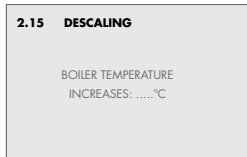
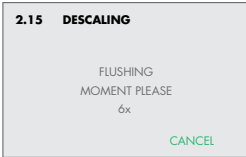


OptiBean (XL) Touch

7. After the soaking interval, the suction hose must be removed and the plug must be refitted.



8. The boiler is flushed (6 times*) with fresh water. In between, empty and secure the drip tray.



9. After descaling, reset the service boiler signal in the service menu:

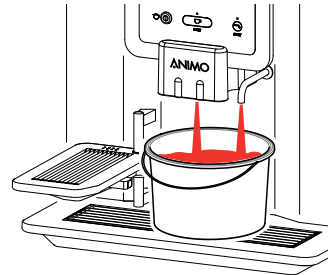
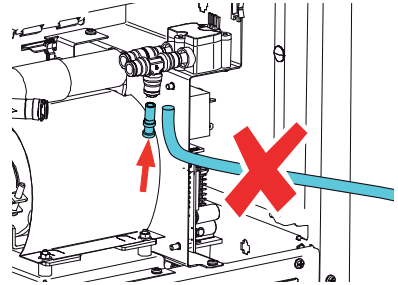
2.06 SERVICE BOILER

2.6.02 RESET SERVICE COUNTER

10. The machine is now ready for use again.



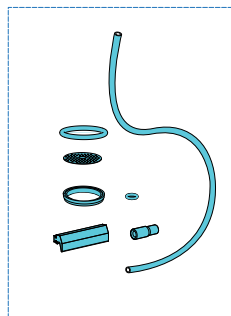
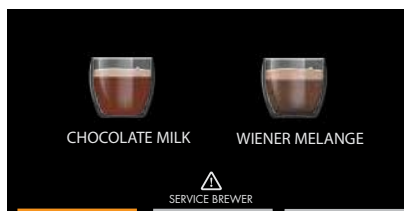
Always make sure that no descaler solution has stayed behind in the heating system. Draw some hot water and mix some coffee milk through it. If the milk curdles, additional flushing of the heating system is required.



6.5 Maintenance espresso group

6.5.1 Brewer replacement kit 25K

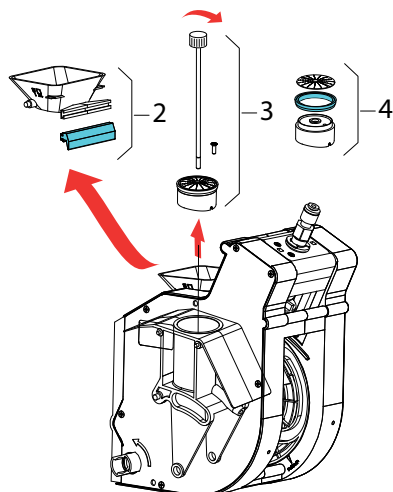
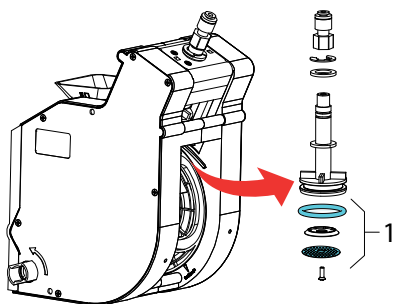
- After 25,000 cycles, the filters and seals must be replaced. The display shows [Service brewer].



| Brewer reversed replacement kit 25K | Brewer | |
|-------------------------------------|----------|---------|
| | Standard | XL |
| Art. No. | 1004917 | 1004918 |
| O-ring big | 1x | 1x |
| Wiper | 1x | 1x |
| Filter 150 µm | 1x | 1x |
| Teflon ring | 1x | 1x |
| O-ring small | 1x | 1x |
| Dispensing hose | 1x | 1x |

- After 50,000 cycles, a complete inspection of the espresso group is recommended and any worn parts must be replaced.

- Replace the O-ring + filter [1] onto the upper piston (leave the piston in place).
- Remove the funnel [2] by pulling it backward from the housing and place a new wiper.
- Unscrew the brewer filter with a small crosshead screwdriver. Use the brewer fixation pin (as a corkscrew) to pull out the lower piston.
- Wait until point 8 before you place a new Teflon ring [4].



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5. To place a new O-ring [8], first unscrew the bolt [5].
6. Pull out the piston rod [6].
7. Unscrew the two screws which hold the lower flange [7].
8. Place a new O-ring [8] and replace all parts in the reversed order.
9. Place a new brewer outlet hose [9].



Always place the outlet hose according to the drawing below.

10. After finishing the brewer maintenance, reset the service brewer signal in the service menu:

2.13 Other settings

2.13.04 RESET SERVICE BREWER

New brewer installed?

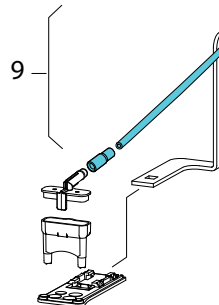
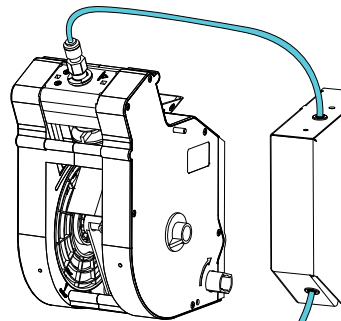
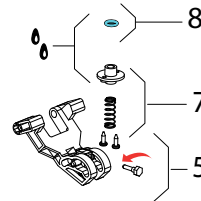
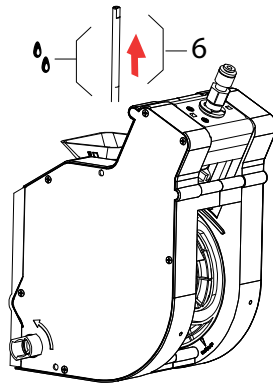
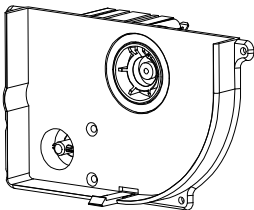
After a new brewer is installed, reset the cycle counter in the service menu:

2.13 Other settings

2.13.04 RESET CYCLE COUNTER

6.5.2 Drive unit

- Remove any coffee dust that may be in the drive unit.

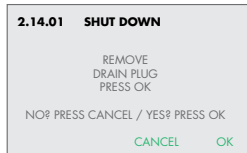
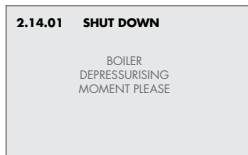
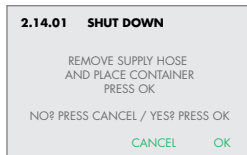


6.6 Check/set the pump pressure



WARNING

- Pressurised hot water! Do not remove components like valves, couplings, plugs and hoses before depressurising the boiler system.
1. Activate the shut down menu in the service menu **2.14 Installation / Shut down** and follow the instructions on the display.
 2. For just releasing the pressure in the boiler, it is not necessary to disconnect the supply hose. Press OK.



3. Stop the process with CANCEL. The boiler is now depressurised.
4. Remove the backplate. Take the drain hose out of the holder and remove the plug (press the metal ring in to unlock the plug).
5. Connect the manometer to the boiler inlet using the 8-mm hose.
6. Activate the menu.

2.07 Hardware test

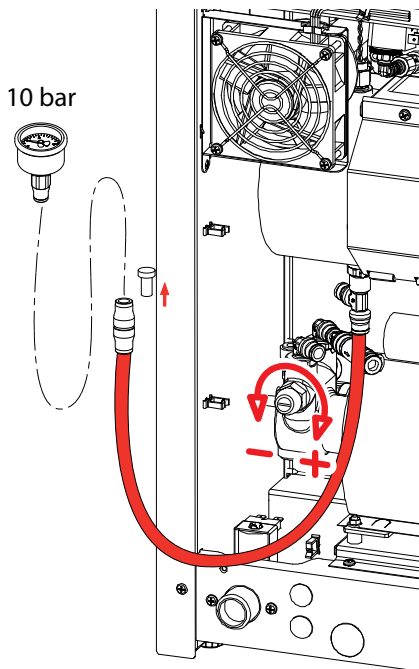
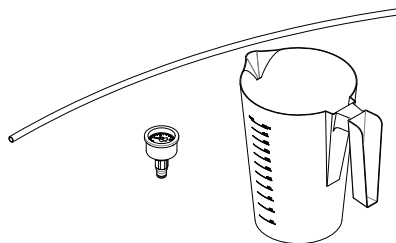
2.07.02 CALIBRATION

Pump

7. Start the pump by pressing the ACTIVATE button on in the pop-up menu.
8. Set the correct espresso pressure (10 bar) with the adjustment screw on the pump housing. Anti-clockwise: Less pressure / Clockwise: More pressure. To stop the measurement, press OK.

Required equipment and tools:

- Crosshead screwdriver
- Service kit [1001365] (measuring cup, hose, manometer)



7. TRANSPORT / SHUT DOWN



WARNING

- Pressurised hot water! Do not remove components like valves, couplings, plugs and hoses before depressurising the boiler system.
- The drain hose becomes HOT!!
- After the boiler has been emptied the pump starts to pump out water from the tubing!

1. Activate the shut down menu in the service menu **2.14 Installation / Shut down** and follow the instructions on the display.
2. Close the water supply tap and remove the water supply hose.

2.14.01 SHUT DOWN

REMOVE SUPPLY HOSE
AND PLACE CONTAINER
PRESS OK

NO? PRESS CANCEL / YES? PRESS OK

CANCEL OK

2.14.01 SHUT DOWN

BOILER
DEPRESSURISING
MOMENT PLEASE

2.14.01 SHUT DOWN

REMOVE
DRAIN PLUG
PRESS OK

NO? PRESS CANCEL / YES? PRESS OK

CANCEL OK

3. Now there is no pressure in the boiler. The shut down menu can be cancelled if necessary. Follow the menu to empty the complete water system.
4. Remove the backplate, remove the drain hose from the backplate and remove the drainage plug. Let the boiler drain into an empty tray (approximately 1.5 litres).

2.14.01 SHUT DOWN

BOILER
DRAINING
MOMENT PLEASE

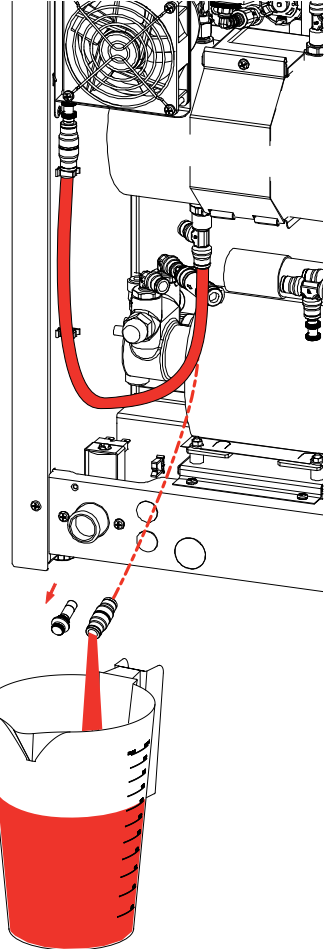
2.14.01 SHUT DOWN

BOILER
IS EMPTY
SWITCH OFF MACHINE

5. The software now knows the water system is empty. If the unit is reinstalled, the commissioning menu will automatically be activated.

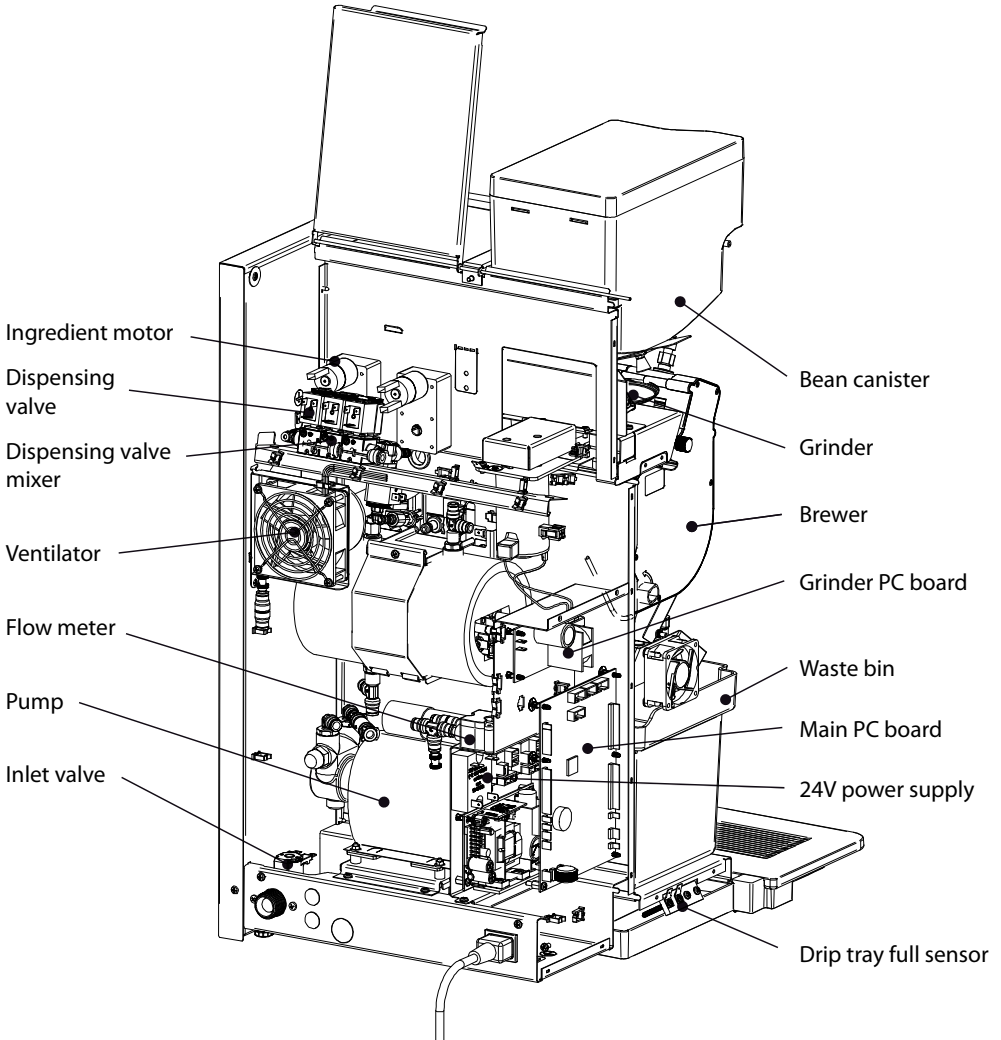
Required equipment and tools:

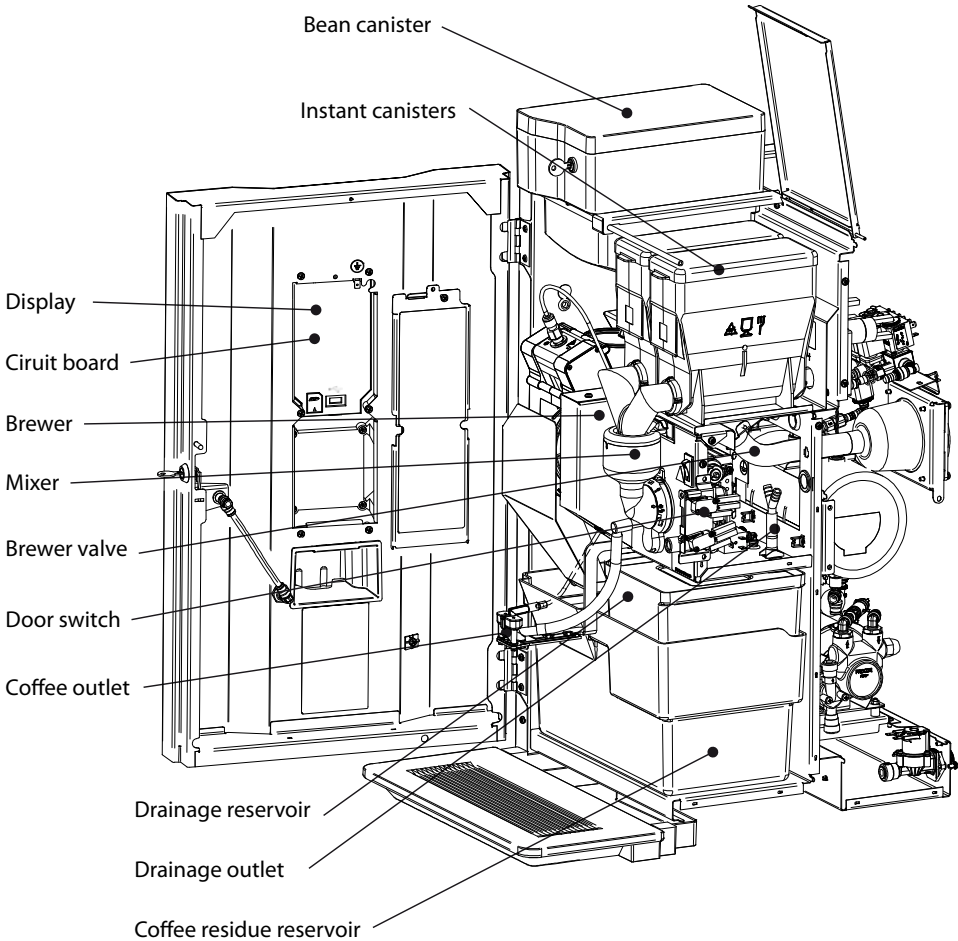
- Crosshead screwdriver
- Tray of approx. 1.5 L



EN

8. COMPONENT ACCESSIBILITY





9. ELECTRONICS OVERVIEW

WARNING

During repair and/or maintenance activities, avoid electrostatic discharges (ESD) to the control.

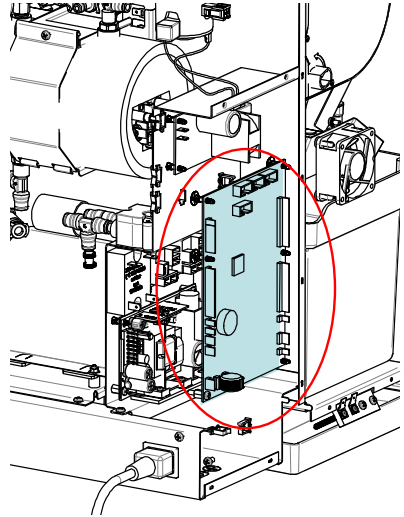
- Main control 9.1
- Interface / Touchpanel / LCD..... 9.2
- Supply 100-240 Vac / 24 Vdc 65 W 9.3
- Grinder circuit board 230 Vac / 230 Vdc 9.4

9.1 Main control

This control is the main control of the machine. The control can be accessed by removing the left-side panel.

On the control are the following major components:

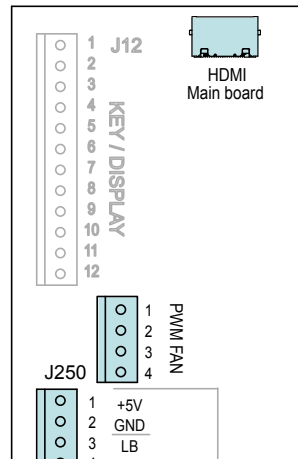
- Fuse 6.3 A S (art.no. 03391): To protect the control supply.
- Battery 3 V Li CR2032 (art.no. 02816): To maintain the clock function when there is no supply to the machine.



9.1.1 Main circuit board inputs

| Connector HDMI | |
|---|--|
| A cable with HDMI plugs connecting the main circuit board and the interface circuit board in the door | |

| Connector J250 (PWM fan) | | | |
|--------------------------|------------|--------|-------|
| Pin | Fan | Colour | Notes |
| 1 | PWM signal | black | |
| 2 | | - | |
| 3 | pos | red | |
| 4 | neg | blue | |



| Connector J7 (Inputs) | | | |
|-----------------------|---------------|--------|---|
| Pin | Sensor | Colour | Notes |
| 1-2 | - | - | |
| 3 | LB Drip tray | Yellow | Level sensor drip tray |
| 4 | GND Drip tray | Black | Level sensor ground drip tray |
| 5 | - | - | |
| 6 | GND | Black | Ground brewer switch 2 |
| 7 | - | - | |
| 8 | GND | Black | Ground brewer switch 1 |
| 9 | AS waste bin | Pink | Waste bin in position; contact closed |
| 10 | - | - | |
| 11 | DS Door 1 | Orange | Door closed; contact closed |
| 12 | GND | Black | |
| 13 | - | - | |
| 14 | IN1 Brewer 1 | Blue | Brewer in fill position; contact 'open' |
| 15 | IN2 Brewer 2 | Grey | Brewer in fill position; contact 'open' |
| 16 | IN3 Door 2 | Pink | Door lock locked; contact closed |
| 17 | GND | Black | Ground door switches and waste |
| 18 | - | - | |

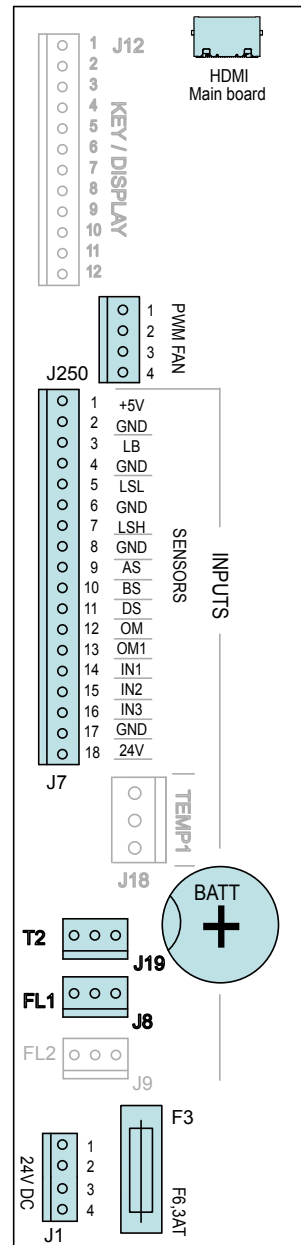
| Connector J19 / T2 (NTC sensor) | | | |
|---------------------------------|------------|--------|-------|
| Pin | Sensor | Colour | Notes |
| 1 | NTC sensor | Violet | |
| 2 | - | - | |
| 3 | NTC sensor | Violet | |

| Connector J8 / FL1 (Flow meter) | | | |
|---------------------------------|--------|--------------|-------|
| Pin | Sensor | Colour | Notes |
| 1 | Pulse | Brown | |
| 2 | Ground | Earth shield | |
| 3 | Pulse | White | |

| | | |
|-------------------|------------------------|---------------|
| Battery B1 | Lithium 3V Type CR2032 | art.no. 02816 |
|-------------------|------------------------|---------------|

| | | |
|----------------|------------|---------------|
| Fuse F3 | 6.3 A slow | art.no. 03391 |
|----------------|------------|---------------|

| Connector J1 (Supply) | | | |
|-----------------------|--------------|--------|-------|
| Pin | | Colour | Notes |
| 1 | Ground (GND) | Black | |
| 2 | Ground (GND) | Black | |
| 3 | +24 Vdc | Red | |
| 4 | +24 Vdc | Red | |

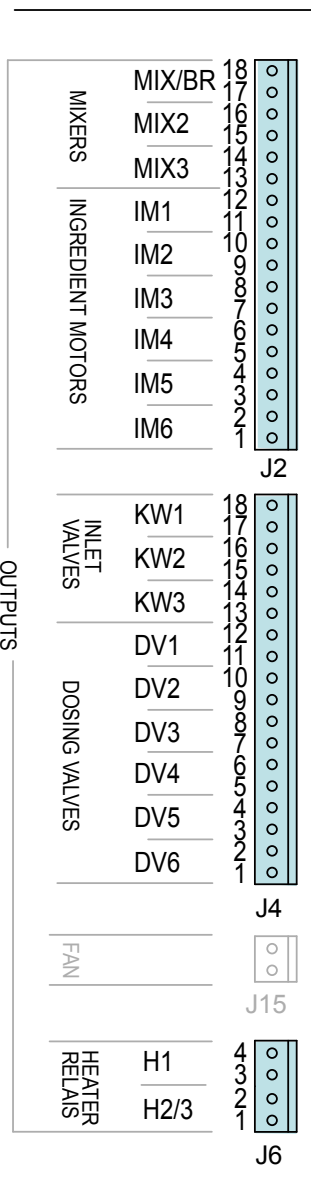


9.1.2 Main circuit board outputs

| Connector J2 | | | |
|--------------|--------------------|--------|---|
| Pin | Motor | Colour | Notes |
| 17-18 | Brewer motor BM | Black | Pay attention to the right direction! Common +24 Vdc (red wire) to red point on Brewer, Mixer and Ingredient motor. |
| 15-16 | Mixer motor MM2 | Violet | |
| 13-14 | - | - | |
| 11-12 | Grinder signal 1 | Brown | |
| 9-10 | - | - | |
| 7-8 | Ingredient Motor 3 | White | |
| 5-6 | Ingredient Motor 4 | Yellow | |
| 3-4 | - | - | |
| 1-2 | - | - | |

| Connector J4 | | | |
|--------------|-----------------------|--------|---------------------------------------|
| Pin | Valve | Colour | Notes |
| 17-18 | Inlet valve (KW1) | Violet | Red wire is common +24 Vdc connection |
| 15-16 | Espresso pump (KW 2) | Rose | |
| 13-14 | KW 3 (optional) | Blue | |
| 11-12 | Brewer valve (DV1) | Brown | |
| 9-10 | Mixer valve (DV2) | White | |
| 7-8 | - | - | |
| 5-6 | Hot water valve (DV4) | Green | |
| 3-4 | DV 5 | Grey | |
| 1-2 | Expansion valve (DV6) | Orange | |

| Connector J6 | | | |
|--------------|---------------------------|--------|-------|
| Pin | Relay | Colour | Notes |
| 4 | - | - | |
| 3 | - | - | |
| 2 | H2/H3 Element via = relay | Red | |
| 1 | | White | |

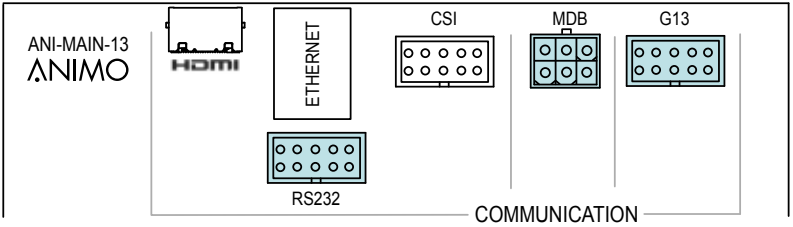


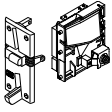
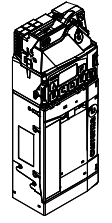
9.1.3 Main circuit board communication

The machine has standardized vending machine connections for connecting the coin mechanism, coin changer or cashless payment systems.

These connectors meet the MDB protocol for vending machines.

For further information or advice, please contact our support department.



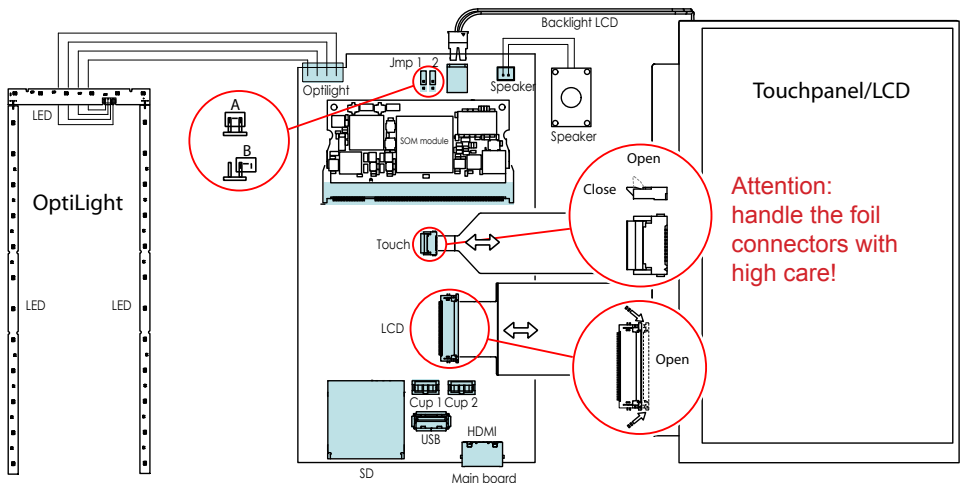
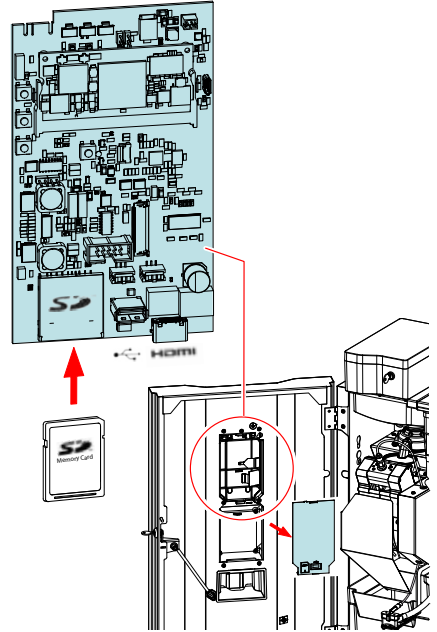
| Communication | | |
|---------------|---|---|
| Conn | Protocol | Notes |
| G13 | Parallel interface  art. no. 04025 03267 | <ul style="list-style-type: none"> - Coin acceptor NRI G13 - External release contact* <i>*the machine can be released by using a potential-free contact (pulse).</i> - G13 Cable 1 metre art. no. 03392 - Extern release contact; cable 1004237 |
| MDB | Serial interface MDB (Multi Drop Bus)  art. no. 03433 | <ul style="list-style-type: none"> - Coin changer NRI C² - Cashless payment system - Telemetry EVA DTS - MDB cable 1 metre art. no. 03479 - MDB cable 1 metre art. no. 1004564 (2x male connector) - MDB Y-cable art.no. 1002008 |
| RS232 | Serial interface DEX UCS | <ul style="list-style-type: none"> - Telemetry EVA DTS / DEX UCS |

9.2 Interface / Touchpanel / LCD

The interface connects all the components located in and on the door and is connected by an HDMI cable to the main control.

9.2.1 Connections

| Interface and display | | |
|-----------------------|-----------------------------|------------------------------|
| Conn | | Notes |
| OptiLight | Connection to Optilight | |
| Jmp 1 | Jumper 1 | Cup sensor A= Yes / B= No |
| Jmp 2 | Jumper 2 | No function |
| Backlight | Backlight Touchpanel | |
| Speaker | Loudspeaker | |
| SOM | System on module | |
| Touch | Connection touch surface | See dismantling instructions |
| LCD | Connection LCD | See dismantling instructions |
| Cup 1 | Cup sensor left (optional) | Coffee spout position |
| Cup 2 | Cup sensor right (optional) | Hot water spout position |
| SD | SD card holder | |
| USB | USB stick connection | |
| HDMI | Connection to mainboard | |



OptiBean (XL) Touch

9.3 Power supply

The 24 Vdc supply consists of a 24 Vdc – 65 W switched power supply and can be accessed by removing the backplate.

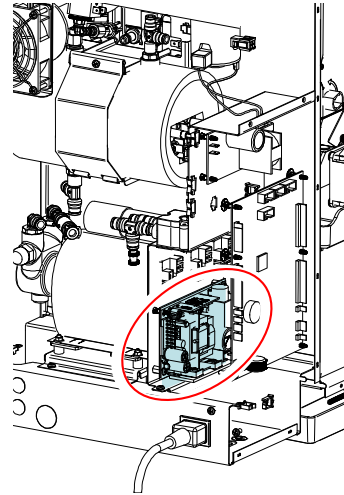
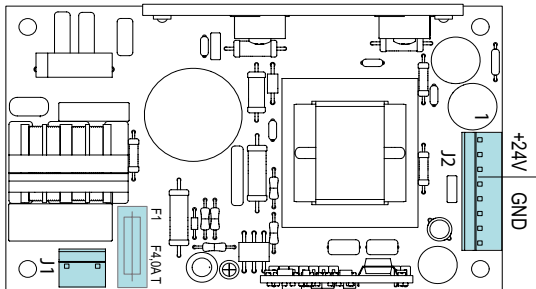
- During an overload, the power supply switches off automatically. Reset the power supply by turning the main switch off and on again.
- Main fuse 4 A Slow art.no. 1004957: To protect the power supply.

9.3.1 Connections

| Connector TB2 | | 24 Vdc | |
|---------------|----------|--------|----------|
| Pin | | Colour | Comments |
| 1-3 | 24 Vdc + | Red | |
| 4-7 | 24 Vdc - | Black | |
| 8 | - | - | |

| Connector TB1 | | 100-240 Vac | |
|---------------|-----------------|-------------|----------|
| Pin | | Colour | Comments |
| 1 | 230 Vac Neutral | Blue | |
| 3 | 230 Vac Phase | Yellow | |

| Fuse F1 | 4A slow | art.no. 1004957 |
|---------|---------|-----------------|
|---------|---------|-----------------|



9.4 Grinder print 230Vac / 230Vdc

This grinder circuit board converts 230 Vac (alternating current) into 230 Vdc (direct current) with a rectifier to drive the grinder motor.

The IM1 signal (24 Vdc) from the main control is connected to connection J5-J6 (the red LED lights). This signal controls the grinder motor with a triac.

This control can be accessed by removing the rear wall.

- Fuse 3.15 A S art.no. 02580: To protect the grinder motor.

9.4.2 Connections

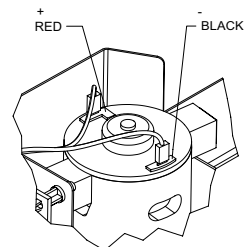
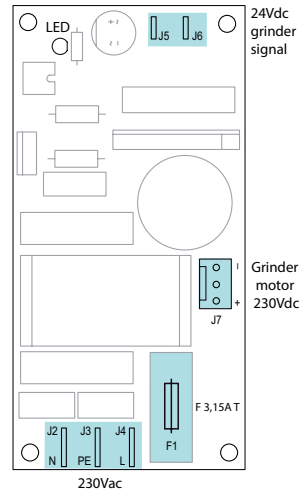
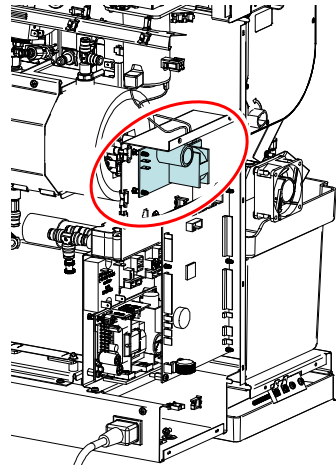
| 24 Vdc ingredient 1 signal | | | |
|----------------------------|----------|--------|------------------------|
| Pin | | Colour | Notes |
| J5 | 24 Vdc + | Red | polarity not important |
| J6 | 24 Vdc - | Brown | |

| 230Vdc | | | |
|--------|-----------|--------|------------------------|
| Pin | | Colour | Notes |
| 1 | 230 Vdc + | Red | polarity is important! |
| 3 | 230 Vdc - | Black | |

| 230Vac | | | |
|--------|---------------|----------------|-------|
| Pin | | Colour | Notes |
| J2 | 230 Vac Zero | Blue | |
| J3 | PE (ground) | Green / Yellow | |
| J4 | 230 Vac Phase | Brown | |

| Fuse F1 | |
|------------------|---------------|
| 3.15 A slow blow | art.no. 02580 |

| Grinder motor 230Vdc | | | |
|----------------------|-----------|--------|---|
| Pin | | Colour | Notes |
| | 230 Vdc + | Red | Note the right direction! +24 Vdc (red wire) according to drawing |
| | 230 Vdc - | Black | |



10. FAULT RECTIFICATION



WARNING

- When there are defects and/or (cleaning) activities in the machine, the plug must be removed from the wall socket before the machine is opened.

Introduction

Check, before troubleshooting, whether all the components are still in the correct location. To do this, remove the backplate of the machine and make sure that all circuit boards, connectors, wiring looms and hoses are still properly mounted.

After a general inspection of the components, use the fault analysis table below to check what the possible cause of the problem is.

#) If the 'solution' column advises replacing the component concerned, there is always the possibility that the defect is caused by another problem. Therefore, test the machine thoroughly for operation to check whether the defect occurs again.



10.1 Read log

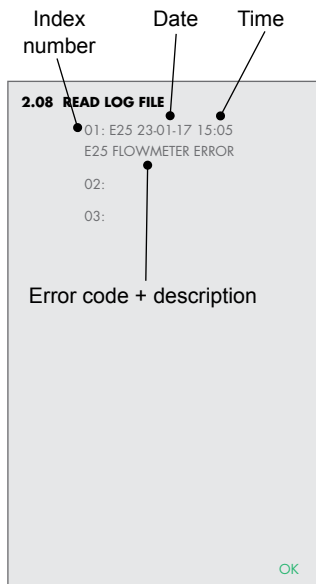
During use, the last 20 error messages displayed are registered and saved.

To read these error messages, activate the menu item Read log (menu 2.08) in the service menu. The first error displayed is the most recent error message.

- The 1st line shows the error code, the date and time at which the error occurred.
- The 2nd line shows the error number and description used in the fault analysis table (see chapter 10.4).












10.2 Erase log












Use the clear log function (service menu 2.9) to clear the log.







Numéro de séquence | Date | Temps /

10.3 Display messages during use


| Display | Possible cause | Solution |
|--|---|---|
|  RINSING | Rinse program is not activated in time. |  <p>Run the rinse program and follow the instructions in the display. See chapter 6. Maintenance / 6.1 daily rinsing program.</p> |
|  CLEANING | Cleaning program is not activated in time. |  <p>Run the cleaning program and follow the instructions in the display. See chapter 6. Maintenance / 6.2 Weekly rinsing program.</p> |
|  SERVICE BOILER | Boiler needs maintenance. | See chapter 6.3 Periodic maintenance / 6.3.1 Service boiler. |
|  SERVICE BREWER | Brewer needs maintenance. | See chapter 6.3 Periodic maintenance / 6.3.2 Service brewer and 5.4.4 Servicing. |
|  WASTE BIN ALMOST FULL | Waste bin must be emptied shortly. | If you wait too long, the machine stops when the bin is full. |
|  BOILER FILLING | When used for the first time, the boiler is still empty and is being filled. | No action needed. Follow the instructions on the display. When the boiler is filled, 'Boiler heating' follows. |
|  BOILER HEATING | The boiler temperature is temporarily too low because too much water has been used. | Once the temperature is restored, the message automatically disappears and the drink selection buttons are reactivated. |
|  DRIP TRAY FULL | Drip tray full. | Once the drip tray is emptied, the message automatically disappears and the drink selection buttons are reactivated. |
|  WASTE BIN FULL | The maximum number of coffee cups that the waste bin can hold has been reached. | Empty the waste bin. The cup counter is automatically reset when the waste bin is replaced. |

| Display | Possible cause | Solution |
|---|---|---|
|  WASTE BIN MISSING | The waste bin is not detected. | Check the waste bin. |
|  DOOR OPEN | For safety reasons, the machine automatically switches off if the door is opened. | The machine can be operated with the door open by using the door pin. |
|  STAND-BY | The machine is on standby. | This function can be set manually or automatically. Touch the screen and enter the pin code 1 1 1 1 1 to unlock it. |
|  ENERGY MODUS | The machine is in energy mode. | Touch the screen to activate. |
|  CLOSE DOOR | Door lock is not closed properly. Dispensing of hot water not possible. | Close the door lock. |
|  RINSING | The rinse program is not activated in time. The machine locks up. |  Run the rinse program and follow the instructions in the display. See chapter 6. Maintenance / 6.1 daily rinsing program. |
|  CLEANING | The cleaning program is not activated in time. The machine locks up. |  Run the cleaning program and follow the instructions in the display. 6. Maintenance / 6.2 Weekly rinsing program |
|  PLACE CUP | No cup is placed under the spout. | Place a cup under the spout. |
|  PLACE CUP UNDER CORRECT OUTLET | The cup is not placed under the correct spout. | Place a cup under the correct spout. |

EN

| Display | Possible cause | Solution |
|---|--|--|
|  YOUR DRINK HAS CANCELED | The cup was taken away too quickly. | Keep the cup in position during the drink preparation. |
|  CUP SENSOR LEFT ERROR | The cup detection sensor as shown in the display is defective. The cup detection window is dirty. | The fault can be temporarily be neutralized by pressing the stop button. After 20 reset attempts, the error will be registered in the log menu. Clean the cup detection sensor windows. Replace the cup detection sensor. |
|  CUPSENSORMIDDLE ERROR | | |
|  CUP SENSOR RIGHT ERROR | | |

10.4 Troubleshooting

| Display | Possible cause | Solution |
|---|--|--|
|  E3 FILL ERROR | The boiler is filling up too slowly. During commissioning, the inlet valve KW1 must have filled the boiler within 180 seconds. | Check the water pressure, fully open the water supply tap, check the connecting hose for kinks. Switch the machine off and on again. |
| E5 BREWER ERROR | Brewer does not run to BREW position (closed) during the brewing process. | Check whether the brewer is properly positioned in the motor unit. Check the brewer switches for correct operation in the service menu 2.07 Hardware test . |
| E6 HIGH TEMPERATURE | Temperature sensor measures a temperature over 105 °C. | Check the water supply for air. |
| | | Check the temperature sensor operation in the service menu 2.07 Hardware test . |
| | | Check whether the boil-dry protection was activated. Reset if necessary. |
| E8 MIXER 2 ERROR | Mixer 2 motor stalled. Mixer 2 motor outputs overloaded (current too high). The control has disabled the output. | Check whether mixer 2 is contaminated or incorrectly mounted. Clean and/or check whether the rotor turns freely. Switch the machine off and on again. |
| E10 VALVE ERROR | Valve outputs overloaded (current too high). The control has disabled the output. | Check the valves and wiring for short circuits. Switch the machine off and on again. |
| E11 INGREDIENT MOTOR ERROR | Ingredient motors stalled. Ingredient motor outputs overloaded (current too high). The control has disabled the output. | Check the operation of the drive motors in the service menu 2.07 Hardware test . Empty the canisters and clean thoroughly. Switch the machine off and on again. |
| E13 MIXER GROUP ERROR | Brewer and mixer output group overloaded (current too high). The control has disabled the output. | Carry out the checks as specified for E7 and E8. Switch the machine off and on again. |
| E14 OUTPUT ERROR | Ingredient motor output group overloaded (current too high). The control has disabled the output. | Carry out the checks as specified for E11. Switch the machine off and on again. |
| | Valve output group overloaded (current too high). The control has disabled the outputs. | Carry out the checks as specified for E10. Switch the machine off and on again. |

| Display | Possible cause | Solution |
|---------------------------------|--|--|
| E17 MDB ERROR | There is no communication between the machine and the MDB payment system. | Check the connection between the machine and the MDB payment system. |
| E18 MIXER GROUP FET ERROR | Brewer or mixer motor output remains activated. | Brewer or mixer motor output (FET) is defective. Replace the control. |
| E19 OUTPUT FET ERROR | Ingredient motor / valve / fan output remains activated. | Ingredient motor / valve / fan output (FET) defective. Replace control. |
| E21 BOILER TIMEOUT | Heating element is active for 6 minutes. If the boiler has not come to the set temperature after that, this error is the result. | Check the water supply for air. |
| | | Check the boil-dry protection on the boiler. |
| | | Check the log menu. If E6 boiler temperature error occurs, the boiler has boiled dry. Check the NTC sensor and wiring/connection and check the relays. |
| | | Check the heating element. |
| E22 BREW TIMEOUT | Maximum preparation time exceeded (120 sec). The time for preparing a recipe has been exceeded. | Switch the machine off and on again. Run the rinsing program. |
| | | Switch the machine off and on again. Run the cleaning program. |
| | | Switch the machine off and on again. Check the pump pressure (10 bar). |
| | | Switch the machine off and on again. Check that the coffee grind is not too fine. |
| | | Replace the brewer filters. |
| E23 INLET VALVE ERROR | Flow meter registers water flow while the inlet valve is electrically closed. | Switch the machine off and on again. Check the operation of the inlet valve. |
| E24 BREWER ERROR | The brewer switches do not arrive in the correct position during the brewing process. | Check whether the brewer is properly positioned in the motor unit. Check the brewer switches for correct operation in the service menu 2.07 Hardware test . |

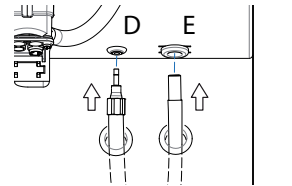
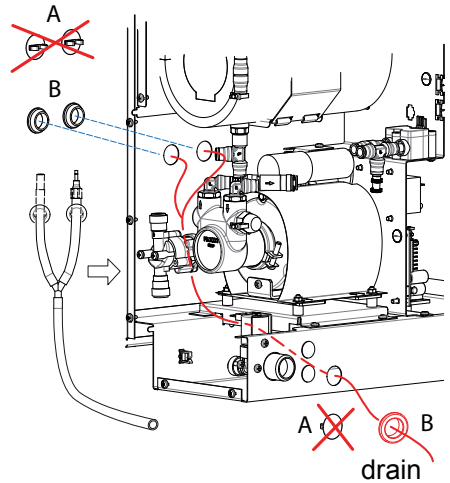
| Display | Possible cause | Solution |
|----------------------------------|--|---|
| E25 FLOW METER ERROR | The inlet valve is open but the flow meter does not register a water flow. | Check the water pressure, fully open the water supply tap and check the connecting hose for kinks. Check the operation of the inlet valve and the flow meter. Switch the machine off and on again. |
| | The water pressure is low or the water tank (stand alone set) is empty. | Check after which recipe the error occurs and check if the following dispensing valve functions are involved with the recipe: DV1 brewer, DV2 mixer, DV4 hot water recipe. Replace if necessary. Switch the machine off and on again. |
| E26 LOW TEMPERATURE | Temperature sensor measures a boiler temperature below 0 °C. | Boiler and/or NTC sensor is below 0 °C. Let the machine warm up to room temperature. |
| E27 NTC SHORT CIRCUIT | Temperature sensor measures a temperature higher than 125 °C or has a short circuit. | Boiler overheated. First, let the boiler cool down. Check if dry-boil protection was triggered. Check the NTC sensor and wiring / connection. |
| E28 NTC NOT DETECTED | Temperature sensor is not detected. | Check the NTC sensor and wiring / connection. |
| E29 BREWER LEAVE HOME TIMEOUT | The brewer did not leave the starting position. | Check if the brewer motor runs. Check if the brewer unit is blocked. |
| E30 BREWER REACH BREW TIMEOUT | The brewer has left the starting position but did not reach the brewer position. | Check if the brewer motor runs. Check if the brewer unit is blocked. |
| E31 BREWER LEAVE BREW TIMEOUT | The brewer did not leave its brewing position. | Check if the brewer motor runs. Check if the brewer unit is blocked. |
| E32 BREWER REACH HOME TIMEOUT | The brewer has left its brewing position but did not reach its starting position. | Check if the brewer motor runs. Check if the brewer unit is blocked. |

11. SPECIAL OPTIONS

11.1 Installation of drain set

Required equipment and tools:

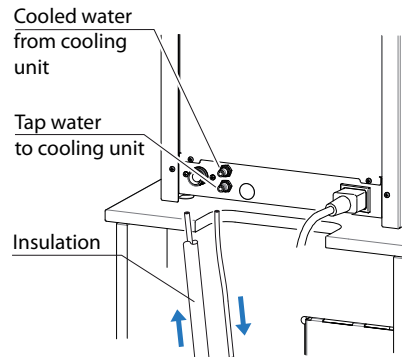
- Crosshead screwdriver
 - Drain hose kit OptiBean NG[1004945]
1. Remove the plastic plugs [A] and position the plastic sleeves [B].
 2. Feed the drain hose kit behind the pump to the sleeves [B].
 3. Press the tubes in the push-in fittings [D] and [E].
 4. Connect the drain hose to a drain or jerry can.
 5. Remove the drainage reservoir from the machine.
 6. Check whether the installed drain set drains the residual water properly to the drain by making a number of test drinks.



11.2 Installation Hot & Cold

Required equipment:

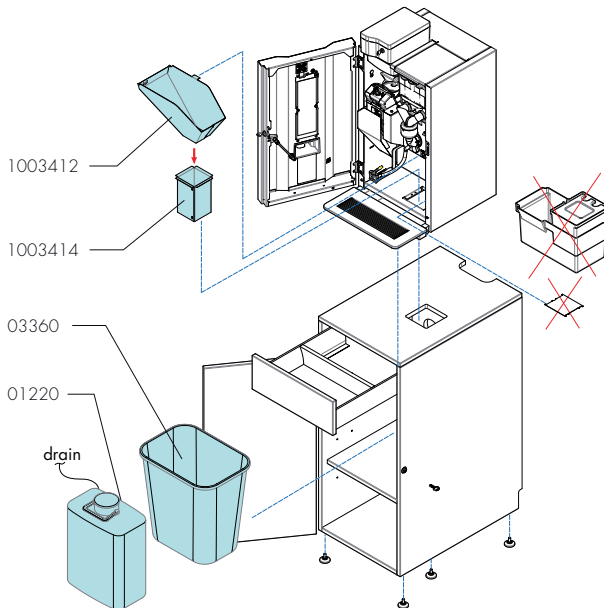
- OptiBean H&C
 - Base cabinet with cooling unit.
1. Build the cooling unit in the cabinet according to the instructions supplied.
 2. Connect the OptiBean to the water (incl. water filter) and electricity. Connect the cooling system to the electricity.
 3. Connect the tube that comes from the cooling unit to the push-fit connectors at the back of the OptiBean.
 4. Program the cold water recipe onto one of the empty buttons.
 5. Flush and vent the cold water system by dispensing an amount (in litres) of water.



11.3 Installation of waste to litter bin

Required equipment:

- OptiBean Touch
- Base cabinet with access to litter bin



- Install the drain set that is supplied with the cabinet. See chapter 11.1.
- Change the cup amount counter: Service menu / 2.13 Other settings / Waste bin management / cup amount between 300 to 500 cups.

2.13 Other settings

2.13.0 Waste bin management

2.13.00 Cup amount



We recommend to NOT switch off the waste bin signal. By taking out the stainless steel funnel [1003412] and casing [1003414] regularly for cleaning, the counter will be reset automatically.

12. PAYMENT SYSTEMS

12.1 Coin mechanism (optional)

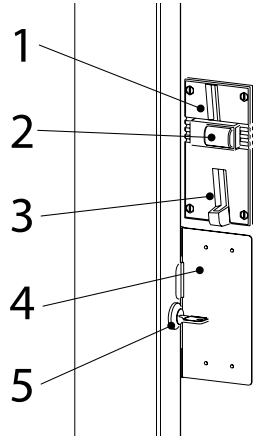
The OptiBean is available with an optional coin mechanism suitable for euros (€ 0.05 to 2.00). Other currencies are available on request.

The coin mechanism can also be easily programmed for a token (coffee coin).

Retroactively fitting a machine with a coin mechanism is also possible.

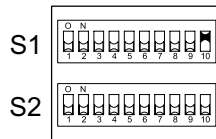
The right-side plate is replaced with a wide side plate into which the coin mechanism and money drawer is built.

1. Coin slot
2. Return button
3. Return groove
4. Money drawer
5. Door lock (locks the money drawer at the same time)



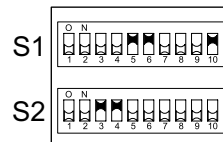
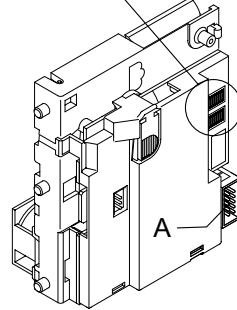
12.1.1 Standard configuration

The figure shows the standard configuration of the DIL switches: S1-10 ON. The coin mechanism is connected to the machine by connector A.



12.1.2 Blocking coins

If required, certain euro coins can be blocked using DIL switch blocks S1 + S2.



| Coin € | S1 | S2 |
|--------------------------|------|------|
| € 0.05 | S1-1 | S1-7 |
| € 0.10 | S1-2 | S1-8 |
| € 0.20 | S1-3 | S2-1 |
| € 0.50 | S1-4 | S2-2 |
| € 1.00 | S1-5 | S2-3 |
| € 2.00 | S1-6 | S2-4 |
| Token 607 | - | S2-5 |
| Token Eagle | - | S2-6 |
| Token new | - | S2-7 |
| Token new | - | S2-8 |
| ON = locked / OFF = free | | |

| Coin £ | S1 | S2 |
|-------------|------|------|
| £ 0.05 | S1-1 | - |
| £ 0.10 | S1-2 | - |
| £ 0.20 | S1-3 | - |
| £ 0.50 | S1-4 | S2-1 |
| £ 1.00 | S1-5 | S1-7 |
| £ 2.00 | S1-6 | S1-8 |
| £ 0.05 new | S1-4 | - |
| £ 0.10 new | S1-5 | - |
| Token 607 | - | S2-6 |
| Token Eagle | - | S2-7 |
| Token new | - | S2-8 |

For example, to block € 1.00 and € 2.00 coins

- S1-5, S2-3 -> ON (€ 1.00 blocked)
- S1-6, S2-4 -> ON (€ 2.00 blocked)

12.1.3 Activate an existing token

The token shown in the illustration is already programmed as a standard token in the coin mechanism.

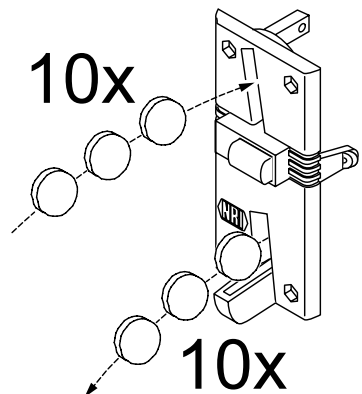
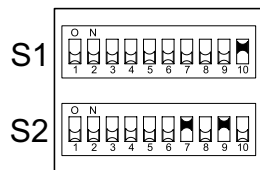


Set the service menu as described in the following section from step 4.

Art. No. token 03344

12.1.4 Programming a new token

- Required: 10 tokens
 - Note: Remember the *DIL switch positions for any blocked coins. Leave S1-10 set to ON.*
1. Set the following DIL switches on the switch block S2 upwards to ON.
 - a) First, set S2-9 Teach mode (learn) to ON.
 - b) Then set S2-7 coin channel 6 (TM) to ON.
 2. Insert at least 10 different tokens (not the same one 10 times). After inserting 10 tokens, the internal blocking coil activates once.
 3. Complete the programming by setting the DIL switch S2-9 downwards to OFF. If the storage was successful, the blocking coil activates once again. Set the switch S2-7 back to OFF. (To interrupt programming, first set S2-7 and then S2-9 to OFF).
 4. Service menu: Change coin channel 6 (menu item 2.5 Payment system) from € 2.00 to TOKEN.
 5. The token will now be accepted by the coin mechanism as payment.



12.1.5 Accepting euros and tokens

Do the steps in sections 12.1.3 and 12.1.4 first.

- Open the service menu.
- Set a price in menu 2.2 Button settings / Button 1-12) / Price (e.g. € 0.50).
- The recipe keys are released when sufficient euros or a token is inserted!

12.1.6 Other currencies (no euros)

If foreign currencies are used, your coin system is adapted. In the software, the coin channels sometimes need special attention! If a new software is uploaded, the coin channel settings are in euros. See **Service menu / coin systems / G13 / Coin channel 1-6.**

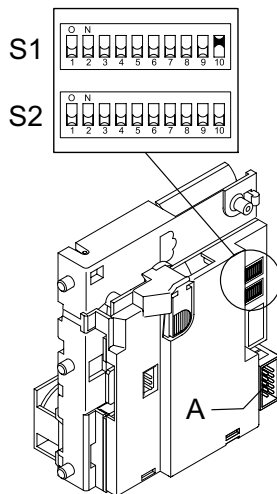
12.1.7 Accepting tokens only (no euros)

Do the steps in sections 12.1.3 and 12.1.4 beforehand.

1. Open the service menu
2. Set to TOKEN using menu 2.2 Button settings / Button 1-12 / Price.
3. Block the € 0.05 - € 2.00 coins using the coin mechanism DIL switches and the table below.
4. The recipe buttons are only activated after a token is inserted!

| Coin € | S1 | S2 | Coin £ | S1 | S2 |
|--------|------|------|------------|------|------|
| € 0.05 | S1-1 | S1-7 | £ 0.05 | S1-1 | - |
| € 0.10 | S1-2 | S1-8 | £ 0.10 | S1-2 | - |
| € 0.20 | S1-3 | S2-1 | £ 0.20 | S1-3 | - |
| € 0.50 | S1-4 | S2-2 | £ 0.50 | S1-4 | S2-1 |
| € 1.00 | S1-5 | S2-3 | £ 1.00 | S1-5 | S1-7 |
| € 2.00 | S1-6 | S2-4 | £ 2.00 | S1-6 | S1-8 |
| | | | £ 0.05 new | S1-4 | - |
| | | | £ 0.10 new | S1-5 | - |

ON = locked / OFF = free



12.1.8 Coin channel cleaning

From time to time, the coin mechanism should be cleaned with a light, damp cloth (lukewarm water containing a mild cleaning agent).

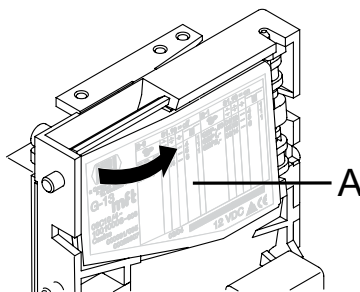
No further maintenance is necessary.



WARNING

- The cloth must not be so wet that liquid enters into the system, causing the circuit board to be damaged.
- Do not use any solvents and/or abrasive cleaning agents that could damage the plastic.
- We advise to use a water-free surface cleaner (e.g., Surface 95) to remove grease and dirt from the coin channel.

1. Turn off the device.
2. Take the coin mechanism out of the side panel.
3. Carefully open the coin holder valve and hold it open.
4. Clean the coin holder with a cloth and close the valve again.
5. Turn on the device again.



12.2 Coin changer (optional)

The OptiBean is available with an optional coin changer suitable for euros (€ 0.05 to € 2.00).

Other currencies are available on request.

The changer has 6 change tubes (€ 0.05 / 2 x 0.10 / 0.20 / 0.50 / 1.00).

- | | |
|------------------|---------------------------|
| 1. Return button | 6. Coin insert funnel |
| 2. Coin slot | 7. Display |
| 3. Door lock | 8. Key panel |
| 4. Change | 9. Cassette removal Lever |
| 5. Return lever | 10. Tube cassette |

12.2.1 Tube filling

We advice to fill the coin tubes by inserting coins via the coin slot.

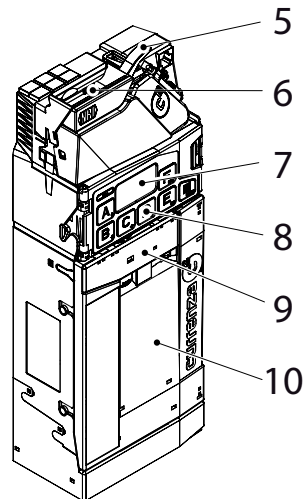
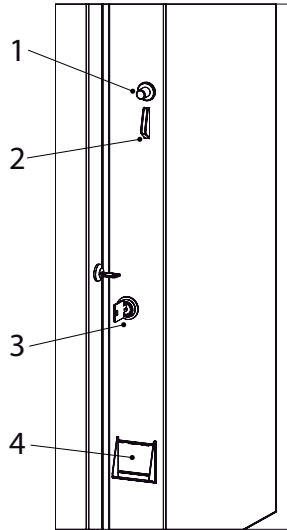
1. Activate filling mode: Main menu > F = Filling mode.



2. Insert coins individually into the opening [2] or [6].
3. The tubes are full if the machines displays [*insert money*]. If the display shows [*insert exact money*], the coin tubes do not contain enough coins for change.
4. Go back to the operator mode by pressing the MENU key twice.

12.2.2 Tube emptying

Remove the complete tube cassette [10] by pulling it out with the cassette removal lever [9].



12.2.3 Programme a new token

The token shown in the illustration is already programmed in the coin changer [Token A].

For programming a new token [B], see the detailed token teach instructions in the NRI technical documentation.

Attention: Switch the machine OFF/ON twice after a new token has been programmed.



12.2.4 Coin channel cleaning

Only the coin path, flight deck and sorter cover of the changer must be cleaned from time to time.



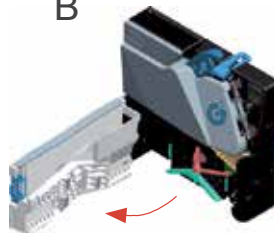
ATTENTION

- The cloth must not be so wet that liquid enters into the system, causing the circuit board to be damaged.
 - Do not use any solvents and/or abrasive cleaning agents that could damage the plastic.
 - We advise to use a water-free surface cleaner (e.g., Surface 95) to remove the grease and dirt from the coin channel.
1. Turn the power OFF.
 2. Unlatch the sorter cover (blue latch on the right of the display) and swing it open [A & B].
 3. Open the flight deck at the insert funnel and hold it open [C].
 4. Remove any debris. Dust off any accumulation with a small brush or compressed air.
 5. Clean the complete coin path, front and back, with a slightly wet cloth.
 6. Allow to dry.
 7. Close the flight deck and latch sorter cover.
 8. Turn the power ON.

A



B



C

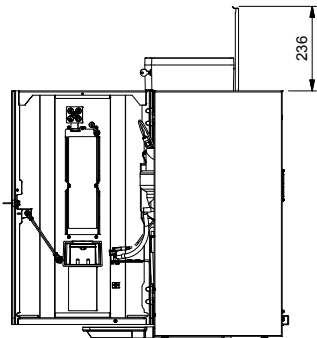
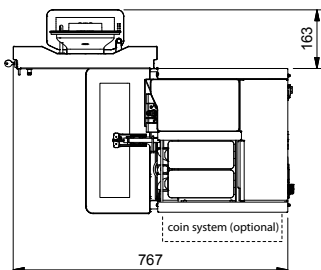
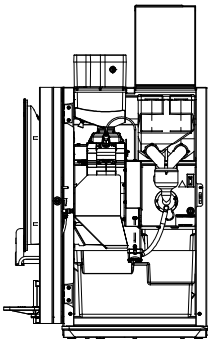
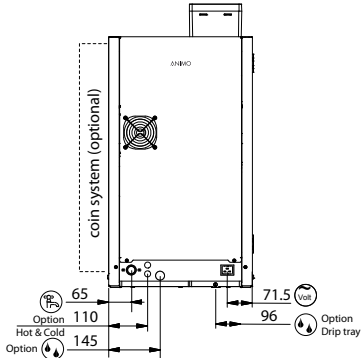
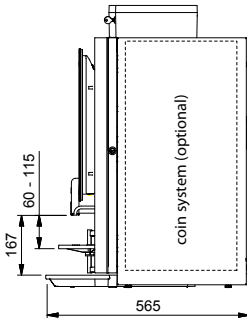
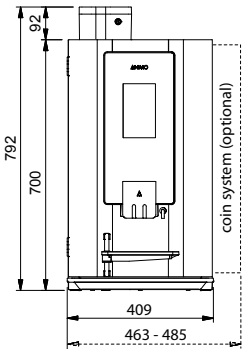
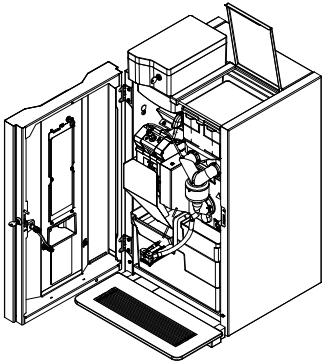
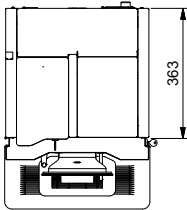
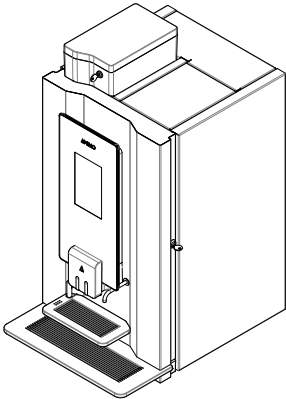


12.2.5 Fault analysis

For a detailed diagnosis of the fault, see the NRI technical documentation.

OptiBean (XL) Touch

EN



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